Infor BI DeltaMiner

Version 11.0.0

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Contents

1 Installation Tips 3

Software Requirements 3

2 Fact Sheet System Requirements 5

Introduction 5

Server Configuration 5

Requirements Client 5

Database Interfaces 6

3 DeltaMiner deltas 5.3.0 8

(1) New Design 8

(2) Upgrading DeltaMiner 5.0/5.1/5.2 to DeltaMiner 5.3 8

(3) Pivot Tables: Pivot Navigation 8

(4) Pivot Tables: Waterfall Charts 10

(5) General: Logo Display (Only in User-Defined Backgrounds) 10

(6) ReportServer: Updated Metadata Database Schema 10

(7) ReportServer: Temporary Folder 11

(8) Cockpits: Show Dependencies Among Cockpits 11

(9) Cockpits: Change Dimension Order in the Cockpit Definition 11

(10) Flexreport: Conditional Formatting with Comparisons of Cell Values 11

(11) Flexreport: Changing the Color Scheme 11

(12) Flexreport: Creating a New Hierarchy Structure 12

(13) Flexreport: Display in SparkTicker 12

(14) Flexreport: Format Connected Cells 12

(15) My View: Reference to Time and Case Dimensions 13

(16) Microsoft Analysis Services 2005: Treating Parallel Hierarchies Like Dimensions 13

(17) Options: Folders for Log Files 14

1 Installation Tips

Software Requirements

Software supported	Minimum Requirements
Operating System	Windows NT4 Service Pack 6.0 a, Windows 2000, Windows XP, Windows Server 2003
MS Office	Required, if Infor10 ION BI DeltaMiner publishing functions to Word, PPT or Excel are used. The versions supported are MS Office 97, 2000, XP
Microsoft Internet Explorer	Version 5.01 or higher
Microsoft .NET Framework	Version 2.0 (dotnetfx.exe)
Microsoft Data Access Components	Version 2.7 (mdac_typ.exe) or higher
Client-Components when using MIS Alea 4.1	Installation of MIS Alea ODBO Provider
Client-Components when using Microsoft Analysis Services 2000	Recommended Client Components (PivotTable Service): Service Pack 3
Client-Components when using Microsoft SQL Server	SQL Server and Analysis Services

What do I have to consider before installation?

Before you start the installation, access the databases to be analyzed by Infor10 ION BI DeltaMiner (e.g. MIS ALEA or MS SQL/AS2K) using the client. This is necessary, because the available data sources are scanned during the installation process, and the interfaces will only be installed, when they are available.

How do I install Infor10 ION BI DeltaMiner?

Install .Net Framework before you install Infor10 ION BI DeltaMiner (DeltaMiner5.msi). The complete installation of Infor10 ION BI DeltaMiner is guided by a wizard that only requests the installation path.

How can I update?

Prior to an update, we recommend to remove Infor10 ION BI DeltaMiner entirely using the de-installation wizard. Use the Remove Software routine in Windows System Control. The removing process applies to *program* files only, i.e. the *user* files (e.g. analysis templates) remain. Use the same installation directory as before. Keep in mind that updating from MIS DeltaMiner 4.1.5. to version 5.x requires new license codes.

How do I start Infor10 ION BI DeltaMiner?

After the installation, you will find the MIS DeltaMiner 5.3 directory in the **Start** menu. To start the application, click the Infor10 ION BI DeltaMiner icon.

How do I use Infor10 ION BI DeltaMiner?

Using DeltaMiner requires “Analysis Models”. The menu items to generate these analysis models can be found under “File-New Analysis Model”.

How do I get a license?

The first Infor10 ION BI DeltaMiner installation includes an evaluation license valid for 30 days. It allows you to make full use of the functionality of Infor10 ION BI DeltaMiner (Decisive Version). For any further use, you will need a license, once the 30 days trial period is over.

How can I remove Infor10 ION BI DeltaMiner?

Use the Remove Software routine in Windows System Control or start the file DeltaMiner5.msi. The removing process applies to *program* files only, i.e. the *user* files (e.g. analysis templates) remain. To delete the *user* files as well, open the Windows Explorer and delete the DeltaMiner directory on your hard disk.

Contact Infor

If you have questions about Infor products, go to the Infor Xtreme Support portal at www.infor.com/inforextreme.

2 Fact Sheet System Requirements

Introduction

This document provides an overview of the hardware and software components required to use the analysis and reporting solution DeltaMiner within a client–server environment. We distinguish four scenarios, which - depending on the amount of data - describe the demand for small to very large analysis systems.

Of course, these values are to be understood as mere recommendation. Apart from the data volume, the following contributory factors are to be taken into account:

- Complexity of the OLAP models (number of dimensions, number of elements in the dimensions, and number of analysis values)
- Number of data records in the fact table
- Number of users, who access the analysis model at the same time.

Server Configuration

System	Very large	Large	Medium	Small
Operating System	Windows Server 2003/2008 x64, Windows Server 2008 R2, Cluster	Windows Server 2003/2008 x64, Windows Server 2008 R2	Windows Server 2003/2008 x86	
Processors	8-16 and more	4-8	2-4	2
Main Memory	>= 64 GB	32-64 GB	8-32 GB	4-8 GB
HD System	SAN (Storage Area Network), RAID, SSD (for OLAP)	Multi-channel RAID, SSD (for OLAP)	RAID	SCSI
Database (relational)	Powerful scalable relational database, e.g. SQL Server 2005/2008/2008 R2, Oracle, DB/2			Also others, e.g. MS Access
OLAP Database	Microsoft Analysis Services 2005/2008/ 2008 R2, Oracle OLAP 10g/11g, Oracle Hyperion Essbase ab 9.3, IBM Cognos (Applix) TM1 ab 8.3 or others		Microsoft Analysis Services 2005/2008/2008 R2, Infor PM OLAP (MIS Alea) ab 4.1 or others	

Requirements Client

Components	Description
Operating System	Windows 2000*, Windows XP, Windows Vista (32 oder 64 Bit), Windows 7 (32 or 64Bit)
Processors	x86 oder x64, recommended: Dual-Core, 1,5 GHZ or faster
Main Memory	1 GB for Reader, Viewer 2 GB for Pivotizer, Analyzer 2 GB – 4 GB: Miner-Professional, Miner-Expert

Harddisk	Ca. 150 MB of free disk storage
Software	Microsoft .NET Framework 2.0 Microsoft Internet Explorer 6 or higher Client component of the used database: • Microsoft SQL Server 2005/2008/2008 R2 Analysis Services – ADOMD.NET 10.0, wird mit DeltaMaster installiert • SAP BW: Treiber „librfc32.dll“ für OLAP BAPI oder „OLE DB for OLAP Provider“ • Infor PM OLAP (MIS Alea), IBM Cognos (Applix) TM1 – „OLE DB for OLAP Provider“ • Oracle Olap 10g/11g • Oracle Hyperion Essbase 9.3 Microsoft Office 2000 or higher for export from DeltaMiner
Network	Fast network connection (100 Mbit/s)

Database Interfaces

The analysis client of DeltaMiner is completely based – without any need for additional adjustment – on one of the OLAP databases mentioned below. All enumerated databases use a wide range of import possibilities to retrieve data from the most various upstream systems. Hence, the choice of the database does not depend on technological criteria in the first place, but on the specific analysis requirements of our customers, as well as on their information infrastructure.

Direct Interfaces to OLAP Databases (ODBO Interface)

- Microsoft Analysis Services 2000 and cube files
- SAP BW 3.x/7.0
- MIS Alea 4.1
- Applix TM/1 8.3/8.4/9.0
- MIS Alea 5.x
- Microsoft Analysis Services 2005 (ADOMD.net Interface)

Access to Relational Data During of Prior to Analyses with DeltaMiner

Via ODBC or SQL native:

- DeltaMiner analysis module Associator, Selector, SQL punch-through
- Import and modelling tools ImportWizard, ImportMaster, Analysis Manager

Access to Data from Standard Software

As a rule via ODBC, in conjunction with ETL tools, if need be:

- SAP R/2, R/3 and BW, Navision Financials etc.
- Microsoft SQL Server, Oracle, AS/400 etc.
- Access, Excel, Dbase, Foxpro, Paradox etc.

3 DeltaMiner deltas 5.3.0

What's new in version 5.3? Find out in this overview of the March 2007 release!

(1) New Design

DeltaMiner sports a completely new look and feel in version 5.3. The first noticeable change is the new color scheme for the user interface, reports and analyses. This change, however, does not automatically apply for Flexreports, as we will explain in Feature #11.

In this release we have also relocated a few functions to improve readability. What's New! And Known Issues, for example, have moved from the tabs in the main application window to the Help menu. The large background image and the functions to quickly switch among the user modes in the lower left-hand corner have been replaced with a small, omnipresent bar below the main menu.

(2) Upgrading DeltaMiner 5.0/5.1/5.2 to DeltaMiner 5.3

Since you can have parallel installations of versions 5.0, 5.1, 5.2 and 5.3, you do not need to remove older DeltaMiner versions before installing 5.3. During the installation process DeltaMiner 5.3 inherits the configured paths for export templates, maps and trace files from the previous versions (Extras menu, Options, Folders). Please verify which folders DeltaMiner uses before removing the older installation.

If you have previously worked with a named license, please copy the "lservrc" and "AnalysisFiles.xml" files from the directory of the previous installation (e.g. C:\Program Files\DeltaMiner 5.2) to the DeltaMiner 5.3 folder.

You can open analysis files that were saved in DeltaMiner (or ReportServer) 5.0 and 5.1 with no further ado in DeltaMiner 5.2 and 5.3. However, if you need to open DeltaMiner or ReportServer 5.2 and 5.3 files in older versions of the software, you will need to install the following Microsoft hotfix for .NET Framework 2.0:

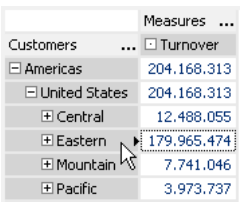
http://support.microsoft.com/kb/914460/en-us/

If you use an Access database ("ReportServer.mdb") for the ReportServer definition database in the DeltaMiner folder, you may also have to adjust the DSN under Start, Settings, Control Panel, Administation, Data Sources (ODBC) from your Windows desktop.

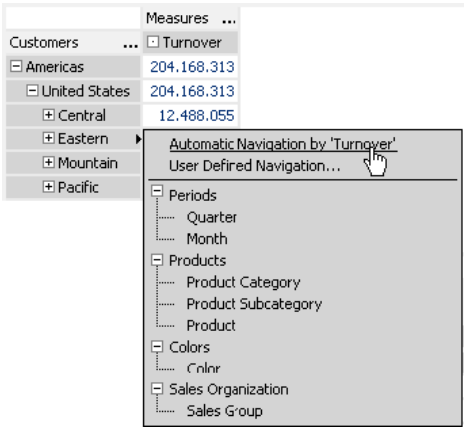
(3) Pivot Tables: Pivot Navigation

As a DeltaMiner user, you know that tables are a key component in creating meaningful reports and sophisticated analyses. DeltaMiner 5.3 now offers a completely new way to work with pivot tables: the Pivot Navigation. This feature lets you drill down on your table to examine interesting aspects of your data on a column for column basis. The following example illustrates how this works:

Let's start with a "normal" pivot table showing the turnover by customer region. After looking at the numbers, you now want more information about the Eastern time zone which has the highest numbers. If you move the mouse pointer over the member name, a small black arrow will appear.

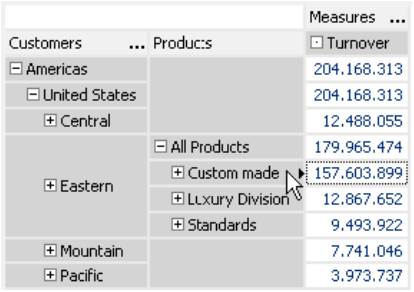


If you then move the mouse pointer over the arrow, the new Pivot Navigation menu will open with three options for your next drill-down:

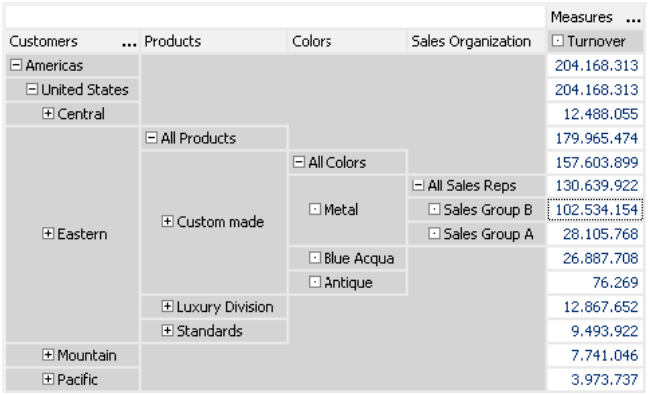


- If you select Automatic Navigation, DeltaMiner automatically searches for the dimensions offering the best background information and then displays these findings in the next column. This feature uses the same algorithm as the Navigation analysis module.
- If you choose User-Defined Navigation, you select what should be displayed in the next column. This dialog box is very similar to the Axis Definition function that you know from working with pivot tables. You can also select into which dimensions you should branch off.
- Finally, you can simply drill down on the data by selecting one of the dimensions listed in the menu.

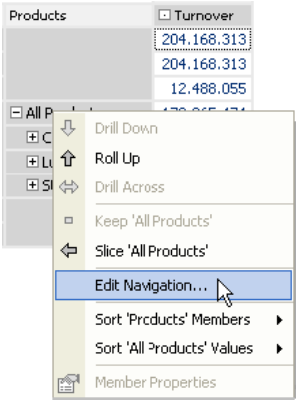
If you select *Automatic Navigation*, you will see a result similar to the screenshot on your right. The pivot table now has an additional column but only for the member “All products: Custom made”. This precision is what makes this technique so exceptional. If you had used a regular pivot table, you would have seen the customer and product dimensions – but in an “expanded” form. This results in very large and unmanageable tables, but in most cases only of fraction of the information is really interesting.



A wedge, shown in the screenshot to your right, is typical for Pivot Navigations. This ensures that you can detect the turnover drivers in just a few mouse clicks (2 in this case). Since the pivot table opens only one member at a time, you can easily compare each individual value to the aggregated value.



If you use the automatic navigation or select a level from the list in the context menu, DeltaMiner simultaneously calculates a ranking of the top 10 members in descending order (“Ranking: TopCount/10“). DeltaMiner uses this default setting so you can focus your attention on the most important information. If you prefer a different selection, select Edit Navigation in the context menu of the top member of each column. If your personal navigation step no longer contains a member that was drilled before editing, DeltaMiner will delete all columns following the current one.

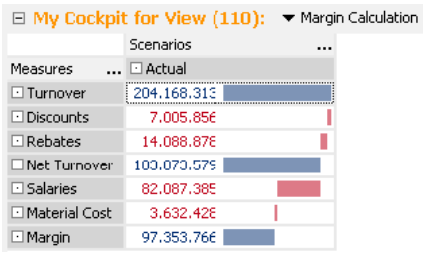


To retrieve the original table and remove the column(s) created with the Pivot Navigation, click the minus (-) sign next to the top member of the column.

The sample above was kept simple to illustrate the role of the Pivot Navigation. However, you can utilize all of the regular pivot table functionality in the navigation as well. For example, you can position multiple measures on the columns, visualize relationships through bar charts, use sparklines to place numbers in their proper context, calculate row and column aggregations, and much more.

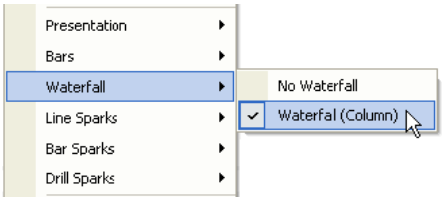
(4) Pivot Tables: Waterfall Charts

DeltaMiner 5.3.0 now offers Waterfall charts as a new form of graphic tables. This chart type visualizes how one figure evolves into another by adding or subtracting other values. The sample waterfall chart on your right shows a typical example of an additive measure. The shifted bars graphically explain a simple margin calculation by showing the relationship of the individual measures to the initial and final measures in what resembles a tilted stair analysis.



The column ranking plays an important role in determining the length of the bars. The principal value serves as the starting point and the subsequent measures alter this value until the final value has been calculated. DeltaMiner automatically recognizes subtotals (e.g. net turnover) and aligns these bars on the left-hand side.

To display the waterfall chart in a pivot table, simply activate the appropriate option in the context menu. The chart is always displayed column by column. Waterfalls can be combined with drill sparks, but only when the rows contain dimension members and not measures as in the example above.



Using the Table Properties (context menu, I want to…), you can determine the maximum width of the bars.

(5) General: Logo Display (Only in User-Defined Backgrounds)

DeltaMiner 5.3 no longer has a standard background image. As a result, the option to change the background image is now only visible in the View menu if you have used the logo.xml file to display an individual background image. This same file determines if the Display logo when starting

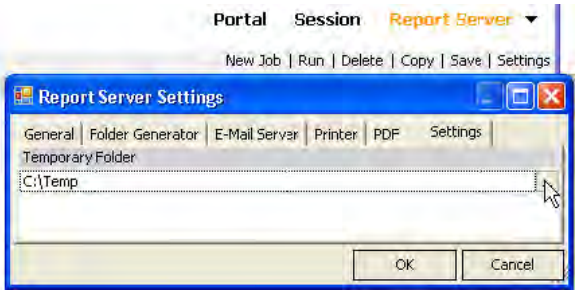
DeltaMiner switch is visible under the Extras, Options, General. The structure of these properties has changed as well; a separate documentation is available upon request.

(6) ReportServer: Updated Metadata Database Schema

Since ReportServer 5.3.0 now supports the use of temporary folders (see Feature #7 for further information), its metadata structure has changed. If you are using Microsoft SQL Server to store your ReportServer metadata, you can update this change by running the “reportserver.sql” script. If you use an Access database, the metadata structure will be updated automatically.

(7) ReportServer: Temporary Folder

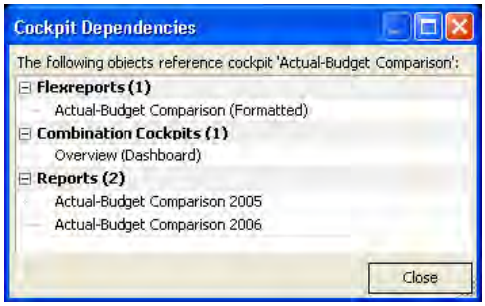
You can now add a Temporary Folder (e.g. for exported Office files pending e-mail distribution) under the Settings of the ReportServer. DeltaMiner temporarily stores these files to the installation folder (e.g. C:\Program Files\DeltaMiner 5.3). If the user executing this command from ReportServer does not have write access to this folder, he can save these files to another location. Temporary files will be deleted automatically after job execution.



(8) Cockpits: Show Dependencies Among Cockpits

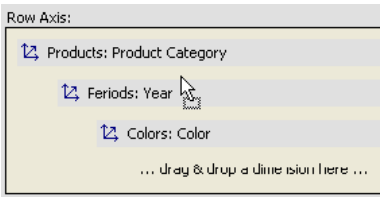
A new dialog box provides an overview of which objects reference to the current cockpit. This allows you to verify if any Flexreports, combination cockpits or reports use the current cockpit before you delete it.

To view and check your Cockpit Dependencies, select the Change menu from the My Cockpit window.



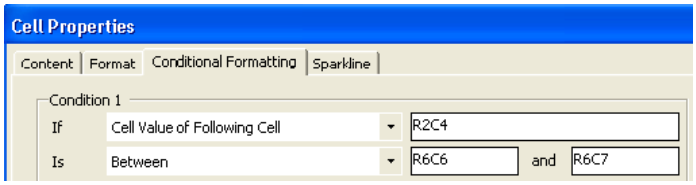
(9) Cockpits: Change Dimension Order in the Cockpit Definition

Changing the order of the dimensions used in the pivot cockpit is now a lot easier than before: Simply drag and drop the dimensions to the desired position in the Cockpit Definition (context menu, Change). You can also drop the dimensions on another entry or in the space between entries.



(10) Flexreport: Conditional Formatting with Comparisons of Cell Values

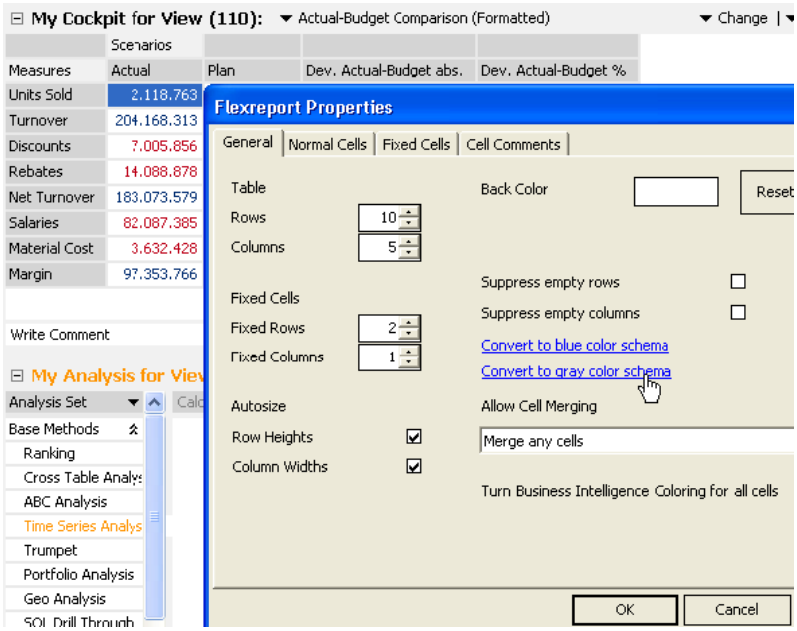
Using the rules for conditional formatting, you can compare one cell value with another in a FlexReport. Instead of entering a concrete value in the Cell Properties, you may now also add a cell reference [i.e. RxCy (Row x Column y) for absolute coordinates or R(x)C(y) for relative cell coordinates].



(11) Flexreport: Changing the Color Scheme

The new design in DeltaMiner 5.3 applies for all saved cockpits and reports (with the exception of Flexreports) from your analysis sessions. Flexreports were not automatically updated to the new color scheme, because user feedback shows that many of you have invested significant time and effort in customized designs. The 5.3.0 release accommodates these requirements by making it easy to change the color scheme if desired.

The Flexreport Properties (context menu, I want to…) offers links to convert to the new gray color scheme or revert to the classic blue color scheme of 5.2.1 and older versions. To revert a Flexreport to the original color scheme, simply select the appropriate link under Properties. If you have reverted the color scheme but then click Cancel, the conversion will not be fully revoked and you will need to convert the color scheme a second time. Provided that you haven't saved a modified cockpit, you can always open the cockpit list or briefing book to revert to the last saved version and annul the color conversion or any other modifications.



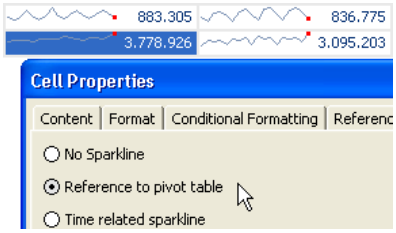
(12) Flexreport: Creating a New Hierarchy Structure

If a Flexreport is based on a pivot table containing cell references, you can transfer the current hierarchal structure of dimension members from the pivot table to a Flexreport at any time. This ensures that you can restore indents that were previously removed by deleting the level format. This Create new level formats for hierarchy columns option, which is located in the context menu of the Flexreport, applies for all hierarchy columns within the report. If you choose this option, the new level formats will replace any existing ones in the hierarchy columns.

You cannot, however, restore the structures of Flexreports without cell references since there is no "connection" to a pivot table.

(13) Flexreport: Display in SparkTicker

You can now publish Flexreports to SparkTicker. All cells containing a word graphic defined as a Reference to a pivot table will be displayed in the rolling ticker. The fastest and easiest way to publish several cells like these is to create a pivot table, configure it, add sparklines and then Convert [it] to Flexreport with cell references (Change menu).

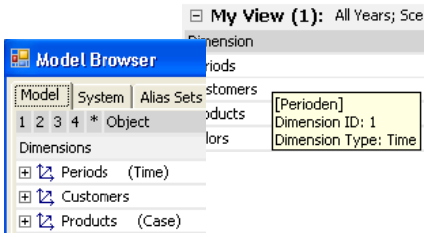


(14) Flexreport: Format Connected Cells

By connecting cells across several rows and/or columns, you can drastically simplify your formatting tasks. When you now apply formatting in DeltaMiner 5.3.0, it makes no difference which cell is active in the connected area. This applies for background and font colors, borders and other design parameters.

(15) My View: Reference to Time and Case Dimensions

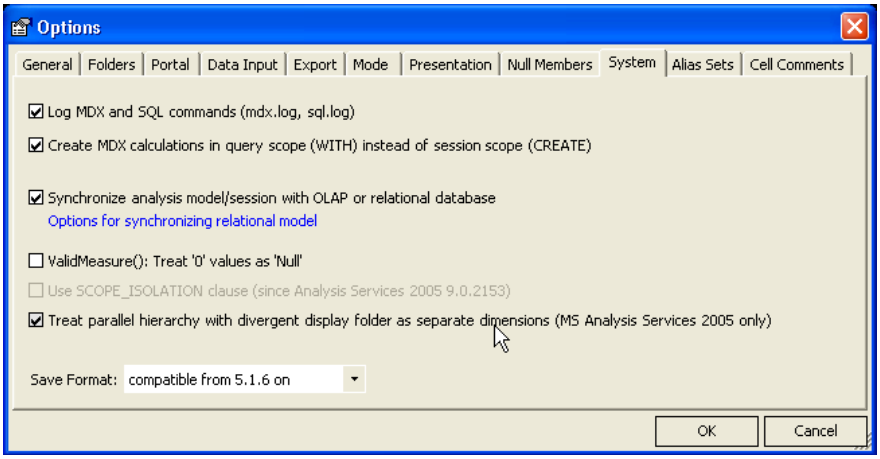
If you move the mouse over a dimension name in the My View window while holding the Alt key, DeltaMiner will display additional information about that dimension. In Version 5.3.0, the tool tip also contains the MDX name, the internal ID as well as the dimension type (time or case). This information is also available in the model browser.



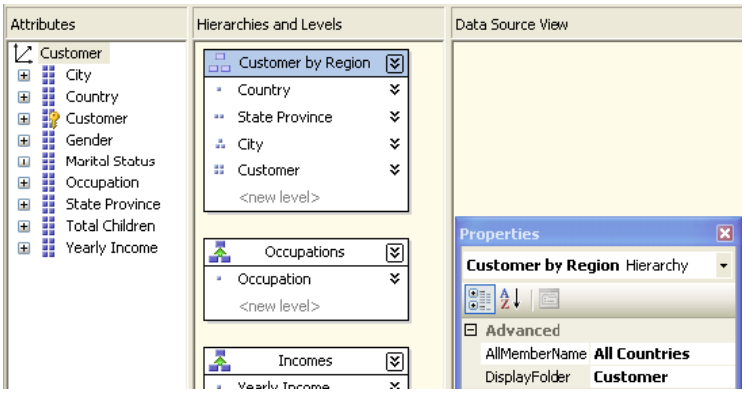
(16) Microsoft Analysis Services 2005: Treating Parallel Hierarchies Like Dimensions

Analysis Services allows users to compare and contrast parallel hierarchies of a dimension as a cross table. This function in Analysis Services 2005 also works in DeltaMiner, where parallel hierarchies are treated as separate dimensions.

Many times, it makes sense to only offer a few (and not all) selected parallel hierarchies as dimensions. In the Extras menu under Options, System, you can choose if you want to Treat a parallel hierarchy with divergent display folder as separate or not.



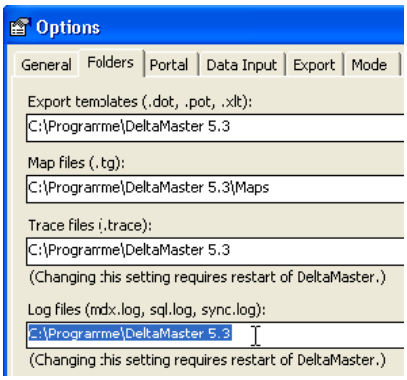
The display folder, which is a hierarchal property in Analysis Services 2005 databases, determines if DeltaMiner should display a hierarchy as such or as a dimension. If the display folder value of a hierarchy deviates from the value of the first hierarchy, DeltaMiner will present the hierarchy as a dimension. If the value coincides with that of the first hierarchy, DeltaMiner will interpret and treat the parallel hierarchy as such.



If the option described above has been deactivated, no hierarchies will be treated as dimensions regardless of the display folder. Please note that when you are importing a model (Model menu, Model browser, Import tab), the source and target file must have the same properties for this option.

(17) Options: Folders for Log Files

This new option lets you determine where to save DeltaMiner log files. The installation folder (e.g. C:\Program Files\DeltaMiner 5.3) is listed as the default setting. If a DeltaMiner user, however, does not have write access to this folder, he can change the default location under Extras, Options, Folders.



DeltaMiner can run three different protocols:

- mdx.log – MDX commands to the OLAP database
- sql.log – SQL commands to the relational database
- sync.log – Model synchronization

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4 DeltaMiner deltas! 5.3.1

What's new in version 5.3.1? Find out in this overview of the May 11, 2007 release!

(1) Action Titles for Presenting Reports

(2) General: Uniform Naming Conventions for Sparklines

(3) General: Name and Description of a Calculated Member in a MDX Definition

(4) General: Changing the Contrast of your Computer Screen

(5) Measure Properties: MDX Editor for Formatting and Data Entry

(6) Measure Chart: Placing Measure Names to the Right or Left

(7) Measure Charts: Convert to Pivot Tables

(8) Briefing Book: MDX in Folder and Report Names

(9) Briefing Book: Miniature Report Views

(10) Report Server: Updated Metadatabase Scheme

(11) Report Server: Define a Cube in MDX Expressions

(12) Report Server: Dynamic Member Lists

(13) Report Server: Avoiding Naming Duplications in the Folder generator

(14) Descriptor: 2D and 3D Chart Views

(15) Export: Export Action Titles to Word, Excel and PowerPoint

(16) Export: Page Numbers in Reports with Several PowerPoint Slides

(17) Flexreport: MDX Editor for User-Derfined Sparklines in Cell Properties

(18) Geo Analysis: Updated Map of Germany with Five-Digit Zip Codes

(19) Performance Monitor for DeltaMaster, Network and Database

(20) Model Browser: Importing Cockpit Folders

(21) Modeling: Treating Attribute Hierarchies as a Dimension

(22) Modeling: Named Sets

(23) Modeling: Setting a Factor Through Member Properties

(24) Modeling: MDX Editor

(25) Pivot Table: 100-Percent Bars

(26) Pivot Table: Individual Total Scale for Percent and Absolute Values

(27) Pivot Table: Hiding Hierarchy Names

(28) Pivot Table: MDX Editor for Axis Definition

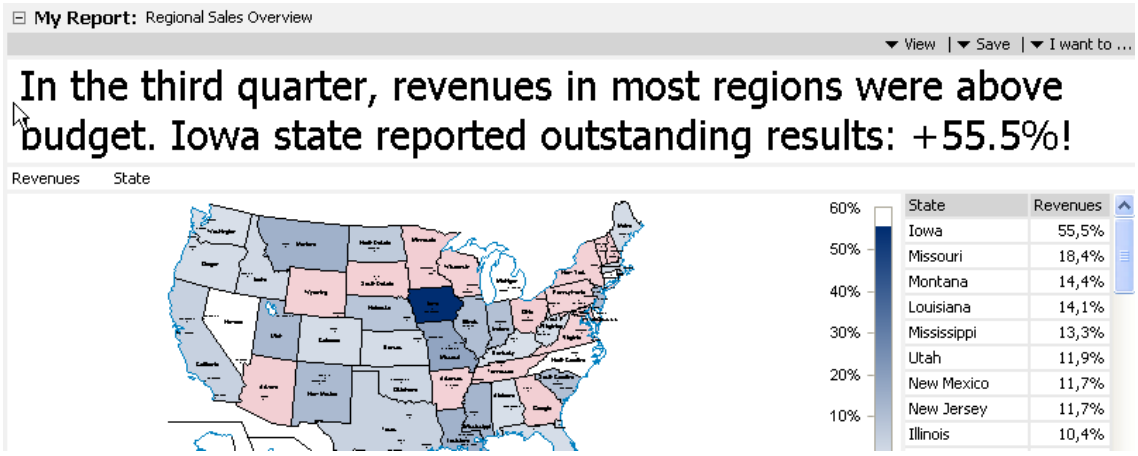
(29) Pivot Table: Reference Column

(30) Pivot Table: Columns for Graphic Tables

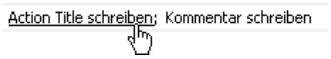
(31) Pivot Table: Setting the Row Height

(1) Action Titles for Presenting Reports

Version 5.3.1 makes it easier for you utilize DeltaMiner in meetings and presentations through action titles, descriptive headlines that summarize the core message of your report in a complete sentence.



Creating and editing *action titles*



Working with *action titles* is very similar to using the comment function located below your reports. To create a new headline, click the *Write action title* link at the bottom of the *My View* or *My Analysis* window. (If the report already has a headline, click *Read action title* to open and edit the existing one.) This opens a new window at the top of your report where you can enter a descriptive headline.

You can use the toolbar to edit the font, size, style and color of your headline. Unlike comments, however, *action titles* typically use large font sizes. To increase your work space, simply drag the thin line between the entry window and the report. The height of this window, however, is irrelevant for the actual report; the report automatically accommodates the size of the headline.

Before you can enter an *action title*, you must first save the cockpit view as a report. These descriptive headlines, therefore, are linked to the report and not the cockpit.
Since *action titles* are incorporated into *alias sets*, you can translate them - just like your comments - into multiple languages (*Model* menu, *Model* browser, *Alias sets*)[1].

Users working in Pivotizer, Analyzer or Miner mode can create and modify *action titles*. In adherence to the multi-level user concept, users in the Pivotizer or Analyzer modes can only edit the headlines of reports that can be created on this level. These users only have read access to the other reports.

Viewing *Action Titles* in *DeltaMiner* and Office files

DeltaMiner always displays *action titles* in Reader, Viewer, Pivotizer and Analyzer modes. In contrast, report comments are displayed *Only on user command* if this option is selected under *Extras*, *Options*, *General*.

[1] See *DeltaMaster clicks!* 4/2007 for more information!

Action titles can be exported with your reports to Word, Excel and PowerPoint. But first, you will need to make a few changes in the "DeltaMaster.xlt" and "DeltaMaster.pot" templates (see feature (15) for more information).

Tips for using *action titles*

Although an *action title* looks like a normal headline at a first glance, its purpose is completely different. Presentations often contain generic titles like "Sales Revenue: Budget/Actual Variance" that don't express complete thoughts. They indicate the topic but don't communicate a message. Each member of the audience, therefore, makes his own conclusions – if any. If you are presenting a chart, you have a reason for doing so. Fortify this with a clear message: *The Southern region exceeded its sales targets for the second straight month*. Central Europe's leading data visualization expert Professor Rolf Hichert says: "Neither your topic nor target can replace the message of your presentation. The message is simply the answer to a question that interests your audience[2]."

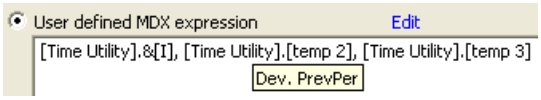
If you create meaningful *action titles* for every report, your readers can understand the core messages of a complete presentation by merely reading the headlines. This way, you can ensure that your decision-makers receive important information even when they don't have the time or energy to sit down and examine a full presentation in detail. *Action titles*, therefore, deliver much more value than a typical headline.

(2) General: Uniform Naming Conventions for Sparklines

Previous versions of *DeltaMiner* sometimes used the expression "word-sized graphics" in place of "sparklines", a term coined by Edward Tufte. Over time, however, the term "sparklines" has become so widely used that we have renamed some of the elements on the *DeltaMiner* user interface for conformity. The items in the context menu of a pivot table, therefore, are now called *Line*, *Column* and *Drill sparklines*, and the tabs in the cell properties have been renamed *Sparkline, Sparkline format,* and so on. In addition, *bar sparks* are now called *Column sparklines*.

(3) General: Name and Description of a Calculated Member in a MDX Definition

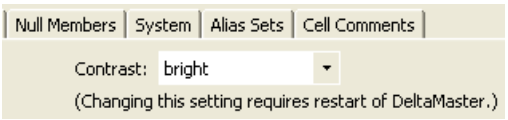
You can view the name and the description of calculated members and measures in the new MDX editor (see feature (24)) as well as in all edit fields for MDX expressions. Simply press the *Alt* key and mouse over the expression in the data entry field of the dialog box.



(4) General: Changing the Contrast of your Computer Screen

To improve the readability of your computer screen, *DeltaMiner* now offers a second contrast level.

To change the current contrast level, go to *Extras*, *Options*, *General* and select the desired contrast from the pull-down menu. The contrast level that was introduced in version 5.3.0 is the "bright" setting. The new "dark" option allows you to create a stronger color contrast to the white background.



If you edit this setting, you will need to restart *DeltaMiner* to view the changes.

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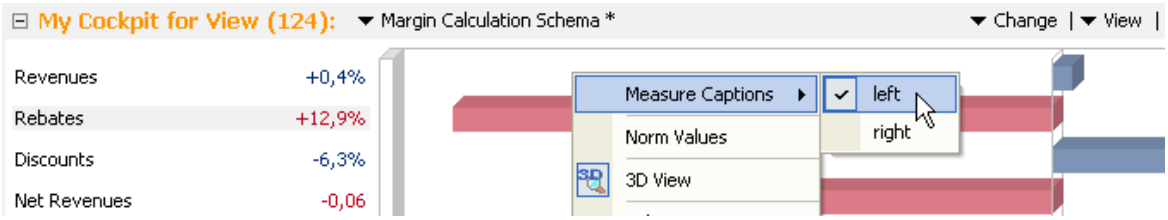
[2] Professor Hichert offers a 40-page document of tips and tricks for successful presentations at: http://www.hichert.com/61727/62056.html (German language).

(5) Measure Properties: MDX Editor for Formatting and Data Entry

You can easily create and modify MDX expressions for user-defined properties under *Measure properties* on the *Formatting* and *Data entry* tabs. To open the editor, click *Edit* in the upper right-hand side of the data entry field for the MDX expression. See feature (24) for a complete description of this editor's functionality.

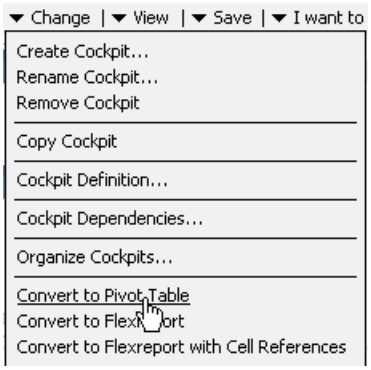
(6) Measure Chart: Placing Measure Names to the Right or Left

DeltaMiner now allows you to display measure names to the right or left of a chart. Previously, names were only displayed on the right. If you choose to display these names to the left, the member's name and value will be placed next to another as seen below. This option is located in the context menu and *I want to…* menu.

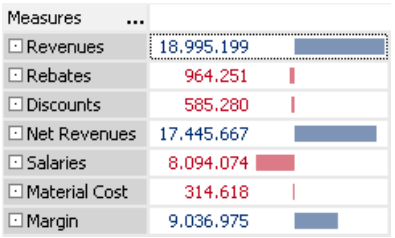


(7) Measure Charts: Convert to Pivot Tables

DeltaMaster's graphic tables allow you to present the information located in a measure chart just as effectively in a pivot table. In fact, you could say even better, because a pivot table offers many more options (e.g. sparklines) to visualize and work with these measures. To simplify the "migration" of an existing measure chart to a graphic table, *DeltaMiner* now offers a command to automatically *Convert to pivot table* in the *Change* menu.



If you select this command, *DeltaMiner* will create a new pivot table cockpit. The table's rows contain the same measures listed in the measure chart. The default settings are *Bars (columns)* that are drawn *to the left and right* – based on the known options in the pivot table context menu and the *table properties*. Norm values will not be converted.



The initial cockpit and the measure chart remain completely intact and are not automatically deleted. As a second step, you should check which reports are based on the measure chart that should be deleted and which combination cockpits they use. These *cockpit dependencies* are summarized in the *Change* menu.
If there are no further dependencies, you can delete the cockpit with the measure chart that is no longer needed (*Change* menu or *Cockpit* browser).

(8) Briefing Book: MDX in Folder and Report Names

You can now use MDX expressions to create dynamic names for folders and reports:

- Use braces **{** ... **}** to add an MDX expression to the name of a folder or report. If the view shows April 2007, a folder called "Monthly reports {[Period].CurrentMember}" would be displayed as "Monthly Reports 2007-Q2-4" in the briefing book.

- If you want to add time dimension members to the names, you can also use the same variables that you use in the *editor for time-calculated members*:

    - {cp} current period

- {pp} previous period (= {pp1})
- {ppX} previous period with gap X
- {np} next period (= {np1})
- {npX} next period with gap X
- {apY} ancestor period on level Y
- {apY,X} ancestor period on level Y, gap X
- {pyaY,X} periods to year ago with level Y and gap X

You could also create the same name as in the example above by using the expression “Monthly Reports {cp}“.

- Using **<view**X**>**, you can enter the current member of dimension X, where X stands for the dimension’s internal ID. If you press and hold the *Alt* key and while mousing over the dimension, you can view this ID as a tooltip in the *Model* browser (*Model* menu) or the *My view* window. If the ID for the time axis were “1”, you could create the same name as above by using the expression “Monthy reports <view1>“.

This functionality provides another important step towards automating your reporting process. The names of reports and folders will be automatically updated when you refresh the briefing book folders. In addition, report names will also be automatically updated if you save the changed reports using the menu commands.

With folders, however, the variables that refer to the view will only be replaced if the folder contains a referenced or inherited view. You can see and modify the view of a folder under *Folder properties*.

Variable report names are very useful in combination with the Report Server. Here, the members that will be changed by a *report update*, *report generator* or *Folder generator* per output report or iteration step can be added to the names of the folders and reports. With a click of a mouse you can then create a perfectly labeled briefing book in which the name reveals the current data view.

In order to use this feature, you will first need to make a small change in the Report Server configuration (see feature (13)).

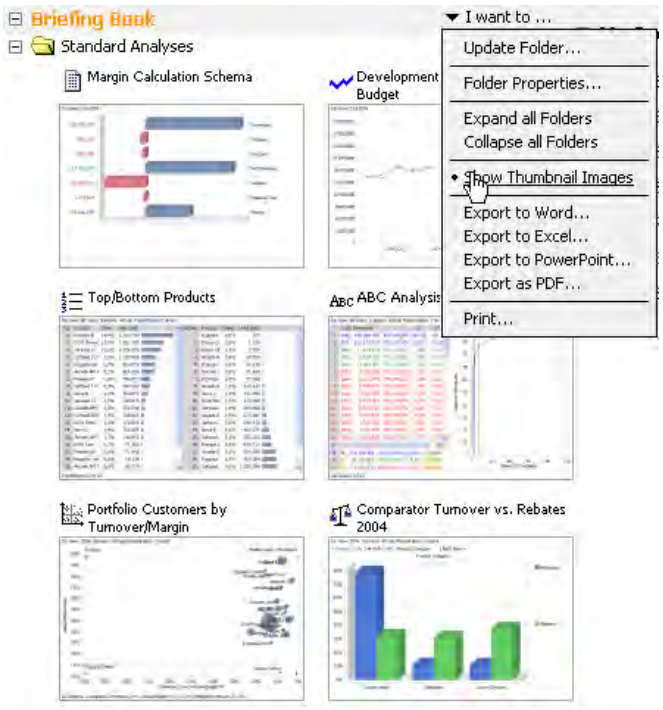
(9) Briefing Book: Miniature Report Views

To ensure that users can quickly find the information they need in a briefing book, you can activate the option to display *Thumbnail images* of your reports.

You can enlarge or reduce the size of these previews by clicking the “+“ or “-“ signs of the *zoom* function on the bottom right-hand corner or by holding the *CTR* key while scrolling the wheel of your mouse (just as you would in Microsoft Office files, Internet Explorer or Adobe Reader).

To use this feature, however, you must first administer the miniature views for the current analysis session under *Extras*, *Options*, *General*.

When you activate this option, *DeltaMiner* will ask again if you would like to *Create miniature views for all (calculated) reports*. From this point on,



DeltaMiner will create and save these views to the .das file. The miniature views will be automatically updated if you:

- Save a report in My Cockpit or My Analysis
- Refresh a report or folder in a *briefing book*

The miniature views will be removed automatically if you

- Change the view for the *briefing book* in the Viewer mode
- Explicitly reset the report results by hitting F9 or selecting the *Reset* option when you refresh folders (*I want to…* menu).

You can determine whether *DeltaMiner* should *Show miniature views* or report names (as you currently do) in the *I want to…* menu. This option, however, is only available if you have already activated the administration of miniature views (*Extras*, *Options*, *General* as explained previously). If some miniature views remain empty, these reports have not yet been calculated. In this case, simply refresh the briefing book (or the folder) with the respective command in the *I want to…* menu. Miniature views currently do not have their own context menu. Use the *I want to…* menu or switch to the familiar name display if you want to rename or export these views.

To remove the images from the .das file, simply deactivate the miniature view administration under *Extras*, *Options*, *General*.

(10) Report Server: Updated Metadatabase Scheme

The metadata structure in Report Server has changed in Version 5.3.1. If you use Microsoft SQL Server to administer metadata, please run the “reportserver.sql“ script to accommodate these changes. If you use an Access database, the metadata structure will be updated automatically.

(11) Report Server: Define a Cube in MDX Expressions

If you work with analysis models that are comprised of multiple cubes, you can write the name of the cube before the MDX expression. This way, you can specify which cube the *report generator* and/or *Folder generator* should use for the analysis. Simply write the name of the cube that should be accessed with a colon but without brackets before the MDX expression.

Example: **Fact:**[Dimension].Levels(1).Members

(12) Report Server: Dynamic Member Lists

When determining the member list of the *report generator*, you can use MDX expressions such as:

Filter([Customers].Levels(1).Members,([Periods].[2006],[Measures].[Revenues])>500000)

This expression refers to all customer groups that generated more than €500,000 in revenues in the previous year. To ensure that these types queries work properly, you must use the correct analysis view. The *report generator* automatically accounts for the current *report update* member (if given) and the view of the first report folder in the analysis session (if inherited or specified).

In the *Folder generator,* you can also use the <view> variable to refer to the current member of the *report generator*.

For example: The *report generator* should scan over all customer groups and create an analysis file or an Office file for each customer group, while the *Folder generator* should iterate the individual customers for each

customer group. In this case, you would enter an expression such as “<view>.Children” for the *Folder generator*.

(13) Report Server: Avoiding Naming Duplications in the Folder generator

By using a new option in the *Folder generator*, you can now prevent that the name of an iterator member will be attached to the name of a created report or folder. This option is related to feature (8): if a report or folder has a dynamic name in which the MDX expressions reflect the current view properties, the name could be changed through the iteration. However, the standard behavior of the *Folder generator* would cause a duplication, as it adds the name to the iterator member. Therefore, you can set the *Folder generator* so that it does not add anything to the title. Simply deactivate the default *Append Caption* option.

The *Folder generator* tab is located in the *Properties* of the Report Server. Its job is to duplicate and customize reports and folders within an analysis session. In addition, you can also define iterators that can be nested together[3].

(14) Descriptor: 2D and 3D Chart Views

Descriptor, one of the analysis methods in the Mining mode, now offers your choice of two- or three-dimensional charts (*View* menu). The default setting is two-dimensional. You can switch to 3D views in the *I want to…* or context menus.

(15) Export: Export Action Titles to Word, Excel and PowerPoint

You can export a*ction titles*, as described in detail in feature (1), to Microsoft Office applications. The procedure varies slightly depending on whether you want to export these headlines to Word, Excel or PowerPoint.

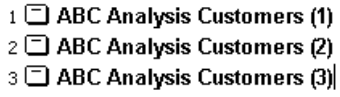
- *Word:* The *action title* will be exported between the report name and the actual report. No changes to the “DeltaMaster.dot“ template are necessary.
  The formatting is based on the properties in the *DeltaMiner* report.

- *Excel:* The *action title* will be exported to the cell that contains “_ActionTitle_“ in the “General” sheet of the .xlt template. “DeltaMaster.xlt“, the standard template that is delivered with *DeltaMaster*, already contains this cell entry. If you work with your own templates and would like to show *action titles* in your Excel reports, enter “_ActionTitle_“ in the desired cell on the “General“ sheet for an automatic export. The formatting is based on the chosen Excel formatting and not that of the *DeltaMiner* report.

- *PowerPoint:* The *action title* will be exported as a variable called “txtActionTitle“ that can be used on all slides of the .pot template. The name is an internal setting that cannot be accessed from the PowerPoint user interface. “DeltaMaster.pot“, the standard template that is delivered with *DeltaMaster*, does NOT contain variables for *action titles*. Please send us your slide template, so that we can make this change for you.
  Action title formatting (font, color, style) is based on the *DeltaMiner* report. The variable in the .pot file only regulates the font size so that the page layout is not affected by the amount of text.

(16) Export: Page Numbers for Reports Requiring Several PowerPoint Slides

If *DeltaMiner* has to divide a report among several PowerPoint slides, it will number every slide that contains a component of that report (as shown in the screenshot to your right).



[3] See *DeltaMaster clicks!* 06/2006 for more information

(17) Flexreport: MDX Editor for User-Derfined Sparklines in Cell Properties

You can easily create and modify user-defined sparklines using a new MDX editor located in the *Cell properties* of flex reports. To open the editor, click on the *Edit* link above the data entry field for the MDX expression. The functionality of this editor is described in detail in feature (24).

(18) Geo Analysis: Updated Map of Germany with Five-Digit Zip Codes

An updated map of Germany containing five-digit zip codes is now available (last update: December 2006). This map will be saved to the “Maps” directory under *DeltaMaster’s* program files (e.g.. C:\Program Files\DeltaMaster 5.3\Maps) upon installation. You will have to re-calculate existing reports for the changes to take effect. If you have saved map files to a different location using the function *Extras*, *Options*, *Folder*, simply copy the “DPLZ0612.ltg“ file to that folder.

(19) Performance Monitor for DeltaMaster, Network and Database

A performance monitor is now available in the *DeltaMiner* column heading panel (i.e. where you can switch among user modes). This way, you can clearly see how high the load is for different components of your system environment. For example: how busy your local computer is with *DeltaMiner* calculations, how the network processes the data transfer from the server to your computer and how high the load is on the database server. If the database also runs on your local computer, the network display will remain idle. *DeltaMiner* measures the CPU load for the user’s individual PC, the database server and the number of network packages per second. If you mouse over the columns, a tooltip will display the exact number.

You can show or hide this display under *Extras*, *Options*, *General*.

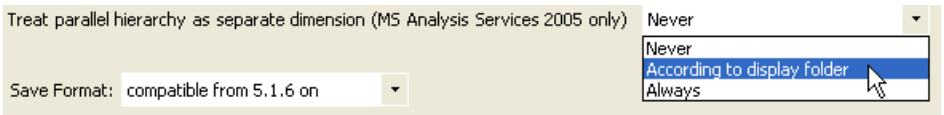
To use the performance monitor, you will require certain user rights regarding Windows Management Instrumentation (WMI) and DCOM. A compete list of instructions is available at: http://msdn2.microsoft.com/en-us/library/aa393266.aspx. If you have any questions regarding the configuration, please do not hesitate to contact your Bissantz team.

(20) Model Browser: Importing Cockpit Folders

Cockpit folders, a feature that was introduced in version 5.1.6, are now displayed in the *Import* tab of the *Model* browser (*Model* menu). Therefore, you can now transfer complete cockpit folders during imports.

(21) Modeling: Treating Attribute Hierarchies as a Dimension

With a new switch under *Extras*, *Options*, *System* you determine when *DeltaMiner* should treat parallel hierarchies as a separate dimension: *always*, *never* or when the *display folder* of a hierarchy differs from the first hierarchy.

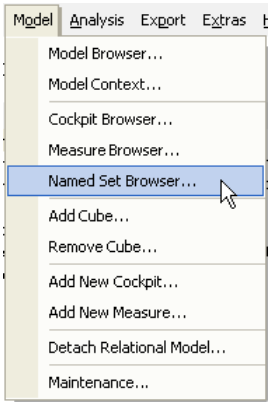


This new switch extends the behavior that we introduced in Version 5.3.0. Here, you can choose if *DeltaMiner* should treat parallel hierarchies in Microsoft Analysis Services 2005 as a separate dimension or as a parallel

hierarchy[4]. *DeltaMiner* uses the *DisplayFolder* field in Analysis Services to select which hierarchies can be used as dimensions. This behavior is still available in version 5.3.1 under the *According to display folder* option. All parallel hierarchies, however, can now also be understood as separate dimensions, so you no longer need the selection in Analysis Services.

Another difference to version 5.3.0 is that hierarchies can be classified with *DeltaMaster's* same *DisplayFolder* value in the same dimensions.

(22) Modeling: Named Sets



DeltaMiner 5.3.1 also supports named sets that have already been defined in the database or can be created and maintained in *DeltaMaster*.

A named set is an MDX expression that returns a set of dimension members or measures. This aggregation allows you to reuse complex MDX expressions in many different places.

DeltaMiner allows you to use named sets wherever you can directly work with MDX expressions, for example:

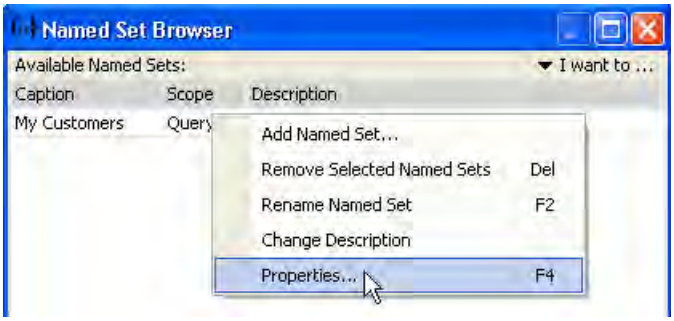
- in calculated members and user-defined measures
- in the *axis definition* of pivot tables
- in texts and user-defined sparklines in flex reports
- in the *report generator* and the *Folder generator* of the Report Server

Named sets are very similar to the virtual and user-defined hierarchies that you already know from *DeltaMaster*. From a technical standpoint, these constructs were also implemented as a named set. The hierarchy selection dialog is more compact, however, because named sets are not displayed as hierarchies in *DeltaMaster*.

Named sets can also contain members from several dimensions. You can, for example, place nested hierarchies on the axes of a pivot table. You can even recycle these nests as a name set!

If the data model contains named sets, these will be displayed in the object browser of the MDX editor (see feature (24)) and in the related MDX data entry fields.

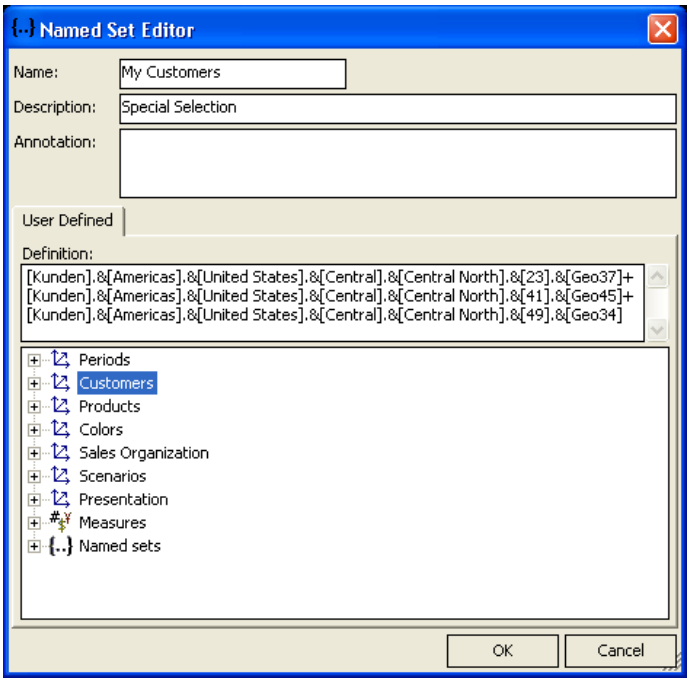
DeltaMiner offers a separate *named set browser* to administer named sets in the *Model* menu.



[4] See *DeltaMaster deltas!* 5.3.0, point 16 for more information.

In this browser you can create new as well as view, rename, delete and edit existing named sets. These commands are available in the context menu or the *I want to*… menu. The browser also displays the validity of the volume definition. Volumes that you have created in *DeltaMiner* can have a “query scope“ or “session scope“. Objects from the database always have a “global scope“.

For modifying a volume definition *DeltaMiner* also offers a new *Editor for named sets* which has a similar usability to the other MDX entry functions (see feature (24)).



(23) Modeling: Setting a Factor Through Member Properties

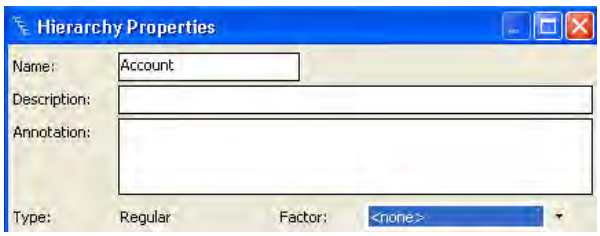
DeltaMiner can automatically adjust the business factor in data models with an account dimension. You simply need an additional member property in this dimension. *DeltaMiner* sets the factor of a member as positive when the property value is +1 and as negative when the value is -1. You can select which member property should drive the factor under the *Hierarchy properties* of the “account” dimension.

This principle is easy to visualize using the example of Microsoft’s Foodmart database. Here, the “account” dimension is located in the “budget” cube. The different cost and revenue types are modeled as dimension members and not as separate measures. The actual sums are located in the “account” measure. As you can see in this illustration, we have added a new “account_factor” column to determine the factor as a member property. If +1 is listed, the factor (i.e. the business effect) is positive; –1 is negative.

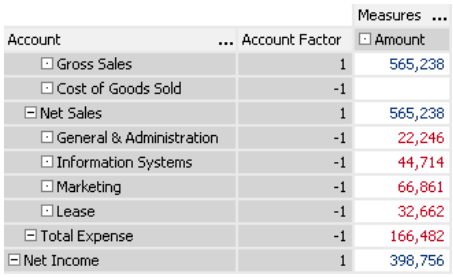
account : Tabelle

account_id	account_parent	account_description	account_type	account_rollup	account_factor
1000		Assets	Asset	~	1
2000		Liabilities	Liability	~	1
3000	5000	Net Sales	Income	+	1
3100	3000	Gross Sales	Income	+	1
3200	3000	Cost of Goods Sold	Income	-	-1
4000	5000	Total Expense	Expense	-	-1
4100	4000	General & Administration	Expense	+	-1
4200	4000	Information Systems	Expense	+	-1
4300	4000	Marketing	Expense	+	-1
4400	4000	Lease	Expense	+	-1
5000		Net Income	Income	+	1
0	0				0

Datensatz: 12 von 12



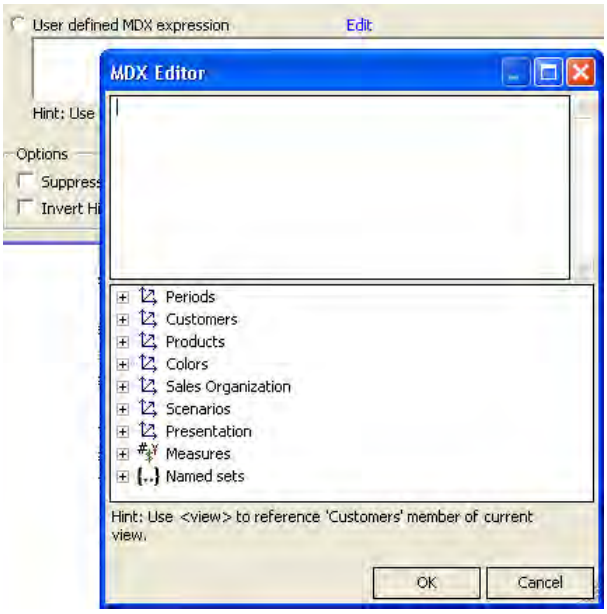
You now select the *hierarchy properties* of the "account" dimension from which the factor of the "account_factor" member property is derived.



Account	Account Factor	Measures … Amount
Gross Sales	1	565,238
Cost of Goods Sold	-1	
Net Sales	1	565,238
General & Administration	-1	22,246
Information Systems	-1	44,714
Marketing	-1	66,861
Lease	-1	32,662
Total Expense	-1	166,482
Net Income	1	398,756

DeltaMiner can automatically determine the factor from the database and even automatically incorporate Business Intelligence color coding (e.g. blue for positive effects and red for negative ones) in the pivot table.

(24) Modeling: MDX Editor

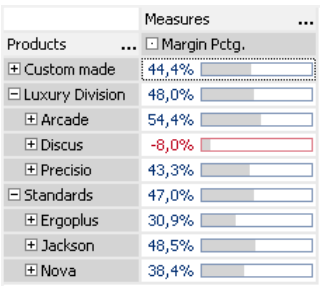


DeltaMiner 5.3.1 offers an advanced MDX editor with a more spacious data entry field and object browser. Using this browser, you can access several different data model components including dimensions, their members, measures and named sets (see feature (22). By double-clicking an entry, you will transfer the object's MDX name into the data entry field. Alternatively, you can drag and drop the object into the data entry field and then enter the desired MDX code. If you mouse over an object while holding the *Alt* key, the MDX definition will appear as a tooltip. This same principle works conversely for the MDX code of calculated members and measures. If you mouse over the expression in the entry field of the dialog box, *DeltaMiner* will show the respective name in the *DeltaMiner* analysis model.

This editor can be accessed from the following dialog boxes:

- Pivot table: axis definition
- Measure properties: formatting, data entry
- Flex report: cell properties and user-defined sparklines

(25) Pivot Table: 100-Percent Bars



Products …	Measures … Margin Pctg.
Custom made	44,4%
Luxury Division	48,0%
Arcade	54,4%
Discus	-8,0%
Precisio	43,3%
Standards	47,0%
Ergoplus	30,9%
Jackson	48,5%
Nova	38,4%

Bars (total, 100%) is a new option for visualizing quotas, efficiency, level of goal achievement and other relationship measures. *DeltaMiner* displays an outlined bar, which represents 100 percent, and fills it with the respective values. Values that exceed 100 percent will always be displayed as a completely filled bar. Negative values will also be displayed to the right but are outlined in red. If 100-percent bars have been activated, the *reference column* option (see point (29) will not available.

You can activate 100-percent bars under the *Bars/Columns* option in the context menu. The default bar width is set at 80 pixels, but you can customize this setting in the *Table properties*.

(26) Pivot Table: Individual Total Scale for Percent and Absolute Values

DeltaMiner offers bars to visualize size relationships among values in pivot tables. The *Total*, *Row* and *Column* values determine which values can be viewed together and drawn in the same scale. Using the new *Total* option, you can now determine if the values refer to absolute or percent values. If both values are used in a table, *DeltaMiner* will determine the length of the bar for both absolute and percent values. The differentiation between absolute and percent values primarily depends whether the measure or the (calculated) member is formatted as a percentage.

	Presentation ...					
Measures ...	Current	PrevPer	Dev. PrevPer %	PrevYr	Dev. PrevYr %
Revenues	39.725.447	56.826.329	-30,1%	51.559.926	-23,0%
Rebates	4.000.153	4.299.220	-7,0%	5.845.694	-31,6%
Discounts	1.406.765	2.059.543	-31,7%	1.935.050	-27,3%
Net Revenues	34.318.529	50.467.566	8,6%	43.779.182	35,9%
Salaries	14.800.406	22.429.691	-34,0%	23.272.231	-36,4%
Material Cost	669.902	992.408	-32,5%	876.187	-23,5%
Margin	18.848.221	27.045.467	75,1%	19.630.763	95,9%

The screenshot above illustrates the *Bars (total)* option. Here, the values in the “actual”, “previous period” and “previous year” are viewed as a group and are all displayed in the same scale. The relative variance for the previous period and previous year are regarded as a second group which has its own common scale.

(27) Pivot Table: Hiding Hierarchy Names

You can hide hierarchy names in *DeltaMaster* in the *Table properties* (context menu, *F4* key, *I want to…* menu). If you display these names, your users can immediately see which members belong to which dimension. Hiding them, however, saves valuable space on your computer screen.

	Measures ...
Products ...	Revenues
Custom made	29.463.746
Luxury Division	4.832.575
Standards	5.429.126

	Revenues
Custom made	29.463.746
Luxury Division	4.832.575
Standards	5.429.126

(28) Pivot Table: MDX Editor for Axis Definition

An MDX editor for creating and modifying user-defined axes is now available in the *Axis definition* of pivot tables. To open the editor, click on the *Edit* link above the data entry field for the MDX expression. The functionality of this editor is described in feature (24).

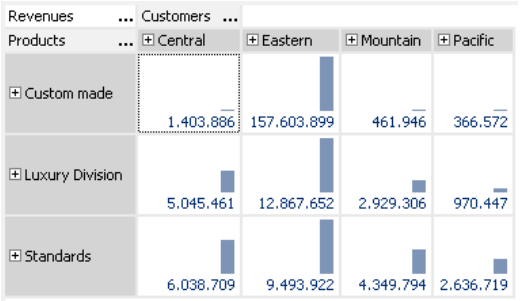
(29) Pivot Table: Reference Column

Margin ...	Plan	Actual
All Products	31.954.956	18.848.221
Custom made	22.667.698	12.461.587
Luxury Division	4.124.092	2.900.448
Standards	5.163.166	3.486.186

You can now define a reference column to better compare values in various columns. *DeltaMiner* then draws the bars of the selected column as an outline in the second column. In the screenshot to your right, we selected the budgeted margin as the reference. When you compare this to the actuals, you can quickly see that the total margin is under budget – especially for the custom made products. Only the standard models performed better than expected albeit slightly.

Before you can select a reference column, you must ensure that the *Bars* are activated in the context menu. Then simply choose the respective option in the context menu of the column headline. This option is only available for the *total* scale and *column* scale when the bars are NOT drawn *from left to right* (*Table properties*).

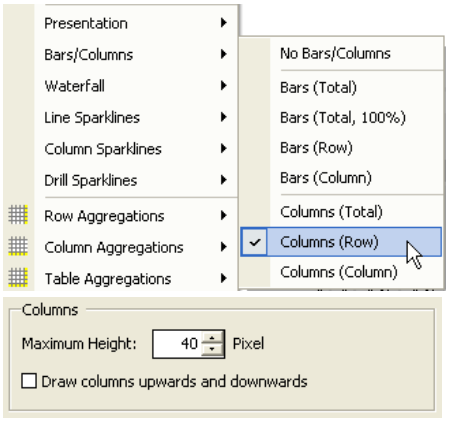
(30) Pivot Table: Columns for Graphic Tables



In addition to bars, you can also display columns as a further graphic table option for visualizing values in a pivot table.

This feature is particularly useful when the table content is typically is read row by row, because the columns stand on the same horizontal base line.

To display columns, simply use the respective option in the context menu of the pivot table. Using the *Total*, *Row* and *Column* scaling options, you can determine which values you want to view together. *DeltaMiner* then draws them using the same scale, just as it does with *Bars*. *DeltaMiner* also differentiates between absolute and percent values for the total scale (see feature (26) for more information).



The default maximum column height, which is set at 40 pixels, can be changed in the *Table properties*. Here, you can also determine if the columns should be drawn from the top and bottom when the table contains positive and negative values. This option should not be used in combination with a *column* scale, because the common base line is then located somewhere within the column, which makes it difficult for the user to understand.

(31) Pivot Table: Setting the Row Height

In the *Table properties* of pivot tables (context menu, F4 key, *I want to…* menu) you can set a *user-defined row height* in order to make the table grid wider or more narrow. Based on your choice, the sparklines in the cell will be drawn larger or smaller. The default setting is 18 pixels. This option is not available when columns are displayed. In this case the row height will automatically be based on the values for the maximum column height listed in the same tab.

5 DeltaMiner deltas!5.3.2

What's new in version 5.3.2? Find out in this overview of the August 14, 2007 release!

(1) Hyperion System 9 BI+ Analytic Services 9.3 ("Hyperion Essbase")

(2) Oracle OLAP 10g

(3) Analyzer: Dragging & Dropping Measures

(4) Analyzer: Pivot Navigation Now Available

(5) View: Built-In Web Browser

(6) Report Server: Updated Metadata Scheme

(7) Report Server: "XLS" Exports

(8) Report Server: Additional License Key for Exports to Microsoft Office

(9) Export: New Output Component for Excel Files

(10) Geo Analysis: Coloring Regions Based on Member Property Values

(11) License Manager: Current Version

(12) My View: Displaying Descriptions Instead of Names from Selection Lists

(13) My View: Displaying the Number of Members in Dimensions

(14) Microsoft Analysis Services: "NonEmptyBehavior"

(15) Microsoft Analysis Services 2005: Accessing Local Cube Files

(16) Model Browser: Copying Model Properties to the Clipboard

(17) Pivot Table: 100-Percent Columns

(18) Pivot Table: Displaying/Hiding All Presentation Options

(19) Pivot Table: Using Traffic Lights to Arrange Current Values in a Scale

(20) Pivot Table: Formatting Columns

(21) Pivot Table: Sorting Member Selection and Measures Manually

(22) Pivot Table: New Axis Definition Dialog

(23) Pivot Table: New Cockpit Definition Dialog

(24) Pivot Table: Hiding Columns Row by Row

(25) Pivot Table: Changing Font Size

(26) Pivot Table: Coloring Cells

(27) Planning Option: Now Standard in Miner

(28) Miscellaneous: Updated Download Area

(29) Miscellaneous: Opening Reports Through Command Line Parameters

(30) SQL Drill Through: Hyperlinks

(31) Search: Direct Access to Report Objects through IDs

(32) Search: Keyboard Commands

(33) Stairs Analysis: Rotating Presentation/Displaying as Waterfall

(34) Time Series Analysis: New Selection of Time Frames

(1) Hyperion System 9 BI+ Analytic Services 9.3 (“Hyperion Essbase“)

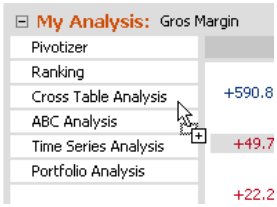
DeltaMiner now supports Hyperion System 9 BI+ Analytic Services 9.3 (“Hyperion Essbase“) through an ADOMD.NET 8.0 interface. Since *DeltaMiner* generally uses ADOMD.NET 9.0 (for Microsoft Analysis Services 2005), you will need to replace the “Server.dll” and “Microsoft.AnalysisServices. AdomdClient.dll” files in the *DeltaMiner* program directory. Contact your Bissantz team for more information.

(2) Oracle OLAP 10g

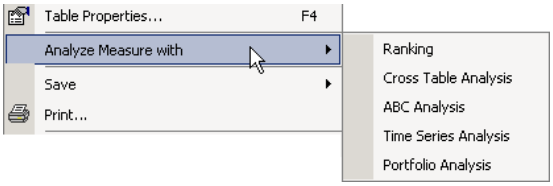
DeltaMiner now supports Oracle OLAP 10g. Contact your Bissantz team for a detailed documentation.

(3) Analyzer: Dragging & Dropping Measures

Investigating measures from cockpit reports in the *briefing book* is now easier in the *Analyzer* mode. Now you can simply drag and drop measures from saved pivot tables, measure charts, flex reports and/or combination cockpits to the analysis methods that are listed in the left frame of the *My Analysis* window. If the selected measure is not yet available in the analysis model, *DeltaMiner* will automatically create *it.*



In addition, a new context menu entry called *Analyze measure with…* allows you to transfer the selected measure to a different analysis method and, if applicable, create a new measure.



In the *Portfolio analysis* the transferred value will be placed on the X axis. You then select the measures for the Y and/or Z axes (e.g. for bubble charts) from the menus as usual.

For cross table analyses *DeltaMiner* enters the transferred value into the filter.

This new functionality does not apply for the *Pivotizer* method.

(4) Analyzer: Pivot Navigation Now Available

Pivot navigation, which was previously reserved for the *Miner* level, is now also available in the *Analyzer* mode.

Using the pivot navigation, you can extend pivot tables with additional columns similar to a drill down to deliver differentiated information to the selected members. For more information on this functionality, please refer to *DeltaMiner deltas!* 5.3.0, feature #3.

(5) View: Built-In Web Browser

You can now access the built-in Web browser, which *DeltaMiner* uses to display the *What's new* page and external Web sites, from the *View* menu. This menu command is visible if you have used the internal browser during your current session. The *Back to (analysis) session* link is located in the upper left-hand side of the browser window.

(6) Report Server: Updated Metadata Scheme

Report Server has a new metadata structure in version 5.3.2. If you use Microsoft SQL Server for metadata administration, please execute “reportserver.sql” to update these changes. If you use an Access database, *DeltaMiner* will update it automatically.

(7) Report Server: “XLS” Exports

The Report Server now supports a second way to export to Excel. In addition to the previous “remote control” access, the Report Server now supports an additional option that does not require a local Excel installation or license to build Excel workbooks. This new method is faster and, therefore, more efficient for producing complex reports and/or publishing larger volumes. It does not, however, currently support sparklines or macros (e.g. AfterExport(); see *DeltaMiner deltas!* 5.1.5, #18) and cannot be used to create PDFs directly.

If you want to use the new component to generate Excel files, please select “xls” as the *report format*. If you want to use Microsoft Excel, select “excel” or “pdf-excel” (as before).

If you currently use customized Excel templates, you will need to add another empty row at the top of your .xlt file(s) to support this feature. In other words, rows 1 and 2 of the sheet will be empty. No changes are necessary for the “General” and “PivotTable“ sheets.

This functionality can also be used for individual exports. See feature #9 for more information.

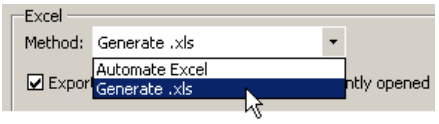
(8) Report Server: Additional License Key for Exports to Microsoft Office

You now need an additional license key to run exports from Report Server to Word, Excel or PowerPoint or PDF format. Customers with a current update, service, and maintenance contract can receive this license free of charge. Simply send a short e-mail listing your current computer ID (e.g. 4-xxxxx or 10-xxxxx) to support@bissantz.de so that we can generate the proper license.

Without an additional key you can only export to .das files; exports to Microsoft Office formats, however, are not possible.

The reason for this change is that the Report Server is now offered as an “Office” version that enables exports to Microsoft Office formats and as a standard version which does not. The previous edition of Report Server is equivalent to the new Report Server Office version. Upon updating the current license key, current customers can resume using the full functionality.

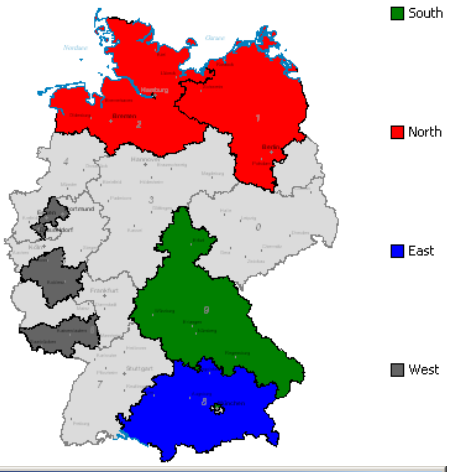
(9) Export: New Output Component for Excel Files



Similar to the Report Server, *DeltaMiner* also supports an additional method to export files in Excel format. When you select *Extras* (menu), *Options*, and then the *Export* tab, you can choose if the export should be executed by automating Excel (as in the past) or by directly creating an .xls file. This setting will apply for all *DeltaMiner* analysis sessions that run on a particular computer.

Please refer to feature #7 for more information on the new .xls functionality.

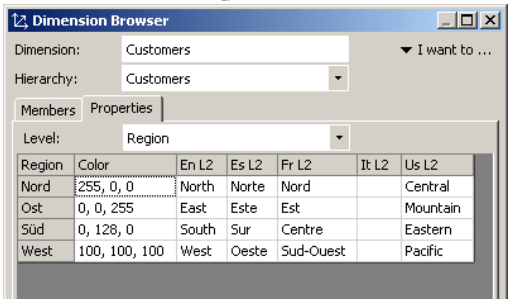
(10) Geo Analysis: Coloring Regions Based on Member Property Values



Regions in *Geo analysis* maps can now be filled with a separate color for each member. This makes sense when a set color is designated for a particular region and all readers can quickly recognize the different objects as such. You can then add bar or pie charts to display the measures of interest.

You can determine which color should coincide with which member under the property value of each dimension that is used in the *Geo analysis*. The colors are then administered on each level just as with aliases or translations.

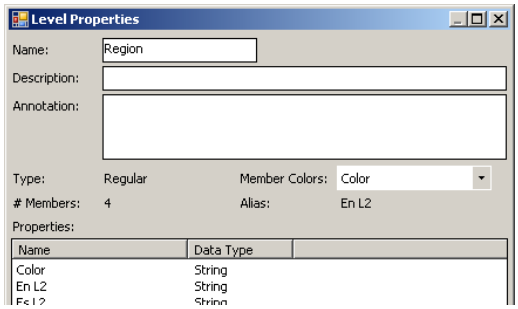
The *Dimension browser* displays the properties (attributes) in the appropriate tab. In our example, color information is displayed under the *Color* property. This is saved as a string and can be coded as:



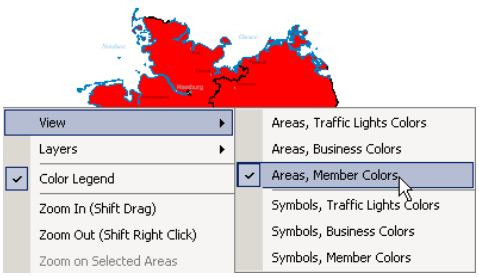
Region	Color	En L2	Es L2	Fr L2	It L2	Us L2
Nord	255, 0, 0	North	Norte	Nord		Central
Ost	0, 0, 255	East	Este	Est		Mountain
Süd	0, 128, 0	South	Sur	Centre		Eastern
West	100, 100, 100	West	Oeste	Sud-Ouest		Pacific

- RGB values separated by a comma or semicolon, such as “178, 14, 182” or “178; 14; 182“. (The parentheses here are simply for explanatory purposes.)
- The official color names defined for the .NET Framework.
  (See: http://msdn2.microsoft.com/en-us/library/system.drawing.color_members.aspx).

To inform *DeltaMiner* where the color values are stored, select the attribute name from the *Member colors* list under *Level properties*. You can access this window from either the *Members* tab in the *Levels* context menu or the *I want to…* menu in the *Dimension browser* when the *Properties* tab is active.



After having completed this setup, you can then access an additional *View* option in the *Geo analysis*. Whereas *Traffic light* and *Business colors* project the geographical distribution of the measure on the map, *Member coloring* always uses the shade that is set for the member on the selected level. If the color information stored in the properties does not exist or is invalid, the space will remain white.



If the color fill of a region is constant and no longer depends on a single measure, you should instead present the measure as bar or pie charts by using the switches on the *Charts* tab in the *Geo analysis properties* (see also *DeltaMaster clicks!* 5/2005).

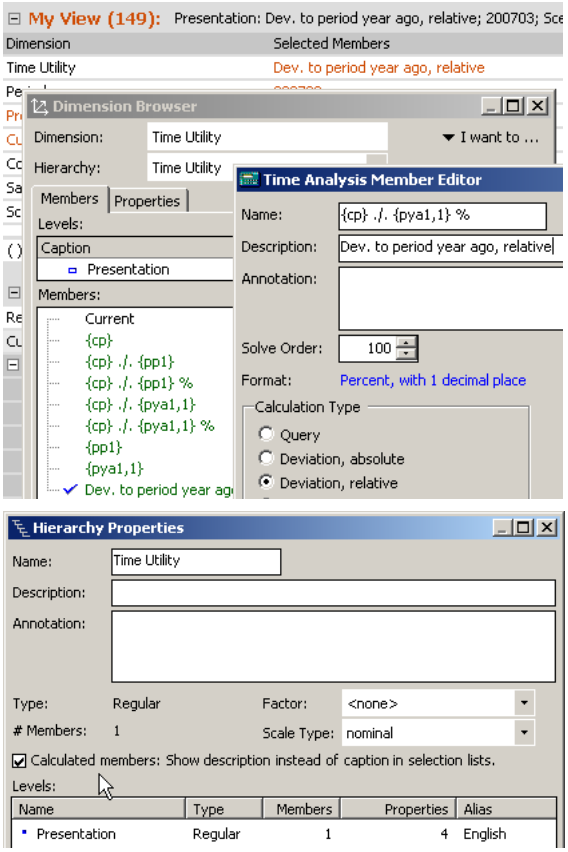
The same procedure also applies for *symbols* (instead of *areas*).

(11) License Manager: Current Version

The license manager, a free plug-in that displays the current and used licenses, now supports the new licensing modules and reflects the new “white” look and feel of *DeltaMaster*. If you would like to receive the updated plug-in, just contact us at support@bissantz.de.

(12) My View: Displaying Descriptions Instead of Names from Selection Lists

If *DeltaMiner* offers calculated members in selection lists, you can opt to display the *description* in place of the *name*. This makes it easier to work with *Time analysis members* that contain one or more variables in their names. These variables, which produce dynamic headlines with the appropriate time reference in pivot tables, are otherwise difficult to read in the *Dimension browser* or the *My View* window (for example: "{cp} ./. {pya1,1} %"; see also *DeltaMaster clicks!* 8/2007).



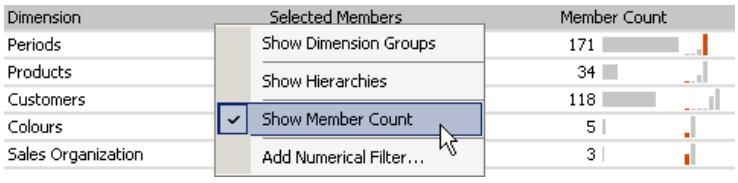
If a member has a clear text *Description* of the calculated member, you can choose to display it *Instead of the caption in selection lists* by activating this option under *Hierarchy properties* (*I want to…* menu in the *Dimension - browser*).

Renaming always applies to the displayed field in the *Dimension browser*. Therefore, if the description is used in place of the name and you decide to rename it, you will change the description and not the name.

If a member does not contain a description, *DeltaMiner* will simply display the name. This option does not affect the displayed results (e.g. in cockpits) and is not planned for use with virtual members (e.g. in ABC analyses).

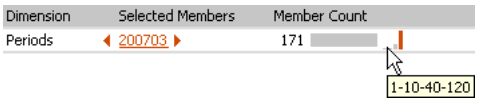
(13) My View: Displaying the Number ofMembers in Dimensions

Using the context menu of the *My view* window, you can display the number of members in the individual dimensions.



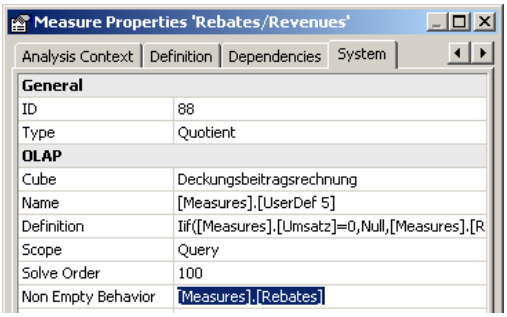
This feature counts all members of the hierarchy regardless of their level. In addition, a bar chart visualizes the number of members. The miniature column chart behind the bars describes the distribution of the members on different hierarchy levels; when you mouse over the columns, the exact numbers are displayed as a tool tip. The level of the currently selected member is highlighted in color.

In the screenshot to your right, you can see that the time dimension has a total of 171 members. There is one member on the first level, 10 (years) on the second, 40 (quarters) on the third and 120 (months) on the fourth. The currently selected member is located on the month level.



(14) Microsoft Analysis Services: “NonEmptyBehavior”

If you are defining measures with MDX, Microsoft Analysis Services allows you to enter a so-called “non-empty behavior” property to improve query speed. The non-empty behavior value specifies the names of the regular measures that are zero and are only zero when the calculated measure is also zero.



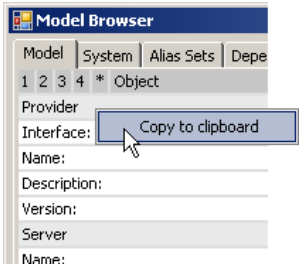
The non-empty behavior can be modified in *DeltaMiner* for quotient and user-defined measures under *Measure properties* on the *System* tab.

(15) Microsoft Analysis Services 2005: Accessing Local Cube Files

DeltaMiner can now access local cube files that were created in Microsoft Analysis Services 2005. We recommend using the ADOMD.NET/XMLA interface. If you use cubes that were, for instance, created with Analysis Services 2000 or the *ImportWizard*, please continue to use the ODBO interface.

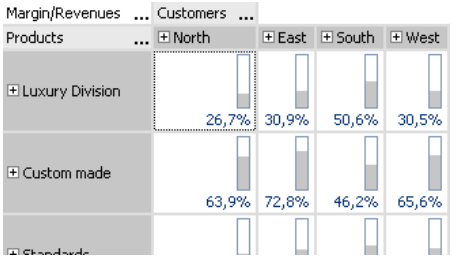
(16) Model Browser: Copying Model Properties to the Clipboard

The *Model* tab of the *Model browser* (*Model* menu) contains the most important settings regarding your model. You can copy the complete settings to the clipboard from the context menu of this tab; columns are separated by tab characters.



(17) Pivot Table: 100-Percent Columns

DeltaMiner introduced 100-percent bars in the previous release to help you better visualize quotas, capacity loads, achieved goals percentages and other measures showing relationships (see also *DeltaMiner deltas!* 5.3.1, Nr. 25). Now, you can also present these measures as columns in the table.



DeltaMiner draws a column outline that represents 100 percent and fills these with the appropriate values. Values exceeding 100 percent will be displayed as a completely filled column. Columns displaying negative values will have the same size and position as positive ones but will be shown in a different color.

You can activate the 100-percent columns in the context menu under the *Bars/Columns* option. You can set the measurements of the columns under *Table properties*. See feature #20 for more information.

(18) Pivot Table: Displaying/Hiding All Presentation Options

To expedite the selection of cell charts on a column by column basis, you can display or hide all *Column properties* with a single action under the context menu of the column headlines.

In pivot tables you can combine up to five different presentation options for graphic tables: bars/columns/waterfall charts, line/column sparklines, drill sparklines, trend barometers and the new traffic light (see feature #19). These visualization options are generally activated for the entire table; you can then specify

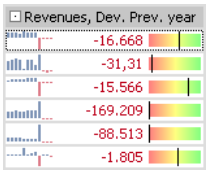
for each individual column which of them should or should not be displayed. Since the trend barometer and the traffic lights are dependent on sparklines, these options will be deactivated when the sparklines are as well.

(19) Pivot Table: Using Traffic Lights to Arrange Current Values in a Scale

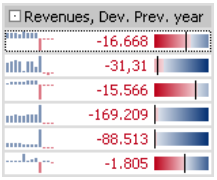
The values displayed in the pivot table can be arranged in a scale through a dynamic, purely data-driven traffic light. When used in connection with sparklines, this visualization helps create optical comparisons of measures. It focuses more on the "situation" of the current value in relation to the others in the reference range and less on the development of one or more KPIs. Thresholds are not required.

The traffic light is available in three graphical variations:

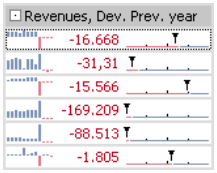
- *Bars with traffic lights using a color gradient from red to green*
  A thin vertical line marks the current value. The color fill is always the same and it is independent of the range and the scaling of the sparkline. It is also independent of the sign if both positive and negative values occur in the cell. You will not be able to recognize where the zero is located when the series shows a mix of positive and negative or purely positive or negative values.



- *Bars with red and/or blue business colors in different gradients (similar to those in the Hyperbrowser or Geo analysis)*
  Here again, the vertical line marks the cell value. The sparkline's range and scale will affect the coloring of the bars. If the series of a bar contains positive and negative values, the transition from red to blue represents zero. In strictly positive or negative values, however, you cannot identify the zero point. In this case, the start and end of the bar will be determined according to the scaling rules described below.



- *Scales with a triangular marking and standard values on the range of the visualized series*
  The scale does not have different color tones and only marks the "algebraic sign" of the range with a single blue and/or red tone. As with the business colors, you can only identify the zero point when the series contains positive as well as negative values; otherwise the rules listed below will apply. The scale is divided into four sections in which three small lines represent 25%, 50% and 75% of the range. Although all axis markings of the column are aligned through the standardization, they represent different absolute values.



All three varieties incorporate a factor which specifies if a measure has a positive (e.g. revenues) or a negative (e.g. material costs) effect on business. This factor is stored under *Measure properties*.

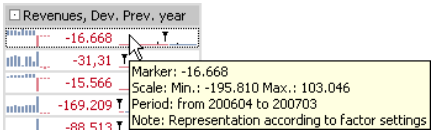
In the following section we will refer to all three of these visualizations simply as scales.

In order to interpret the scale, you first need to understand how it is calculated. The scaling of the line or column sparklines, which must be previously activated, plays an important role in doing so.

- If the scale applies for the entire *Table*, the left ends of all scales will represent the smallest value and the right ends the largest value of the entire table. This includes all values that are coded in the sparklines, in other words, all "current" values that are reported in numbers as well as all historical ones that are condensed into sparklines. The ends of the scales will be identical for the entire table.

- If the scale is set for each *Column*, the ends will represent the smallest and largest value of all sparklines in a given column. In this case, the ends of the scales will be identical for the entire column.

- If the scale of the sparkline is based on the *Cell*, each individual scale will be based on the smallest and largest value of the sparkline in that given cell.



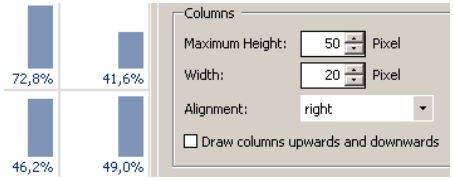
You can view the exact numbers in a tooltip by simply mousing over the traffic light.

If you activate traffic lighting, this will generally apply for all columns of the table. You can hide this visualization for individual columns under *Column properties* in the context menu of the column headlines (see feature #10). If you choose to deactivate sparklines, you will also hide the traffic lighting and trend barometer.

Since the traffic light works with the values displayed in the sparklines, the option is only available for the pivot table when line or column sparklines are activated.

(20) Pivot Table: Formatting Columns

You can format column charts and 100-percent columns (see feature #17) by changing their width or alignment (i.e. left, centered or right) within the table cell. These options are located in the *Table properties* of pivot tables.



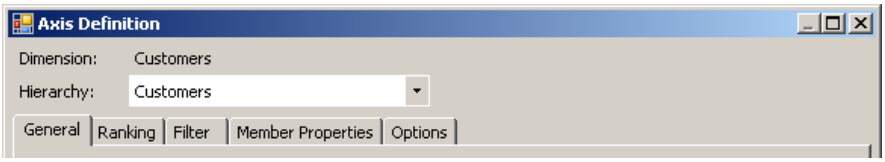
(21) Pivot Table: Sorting Member Selection and Measures Manually

If an axis contains measures or is defined as *a member selection* (previously known as pick lists, see feature #22), you can sort the axis directly in the pivot table without having to switch to the *Axis definition.* Simply press and hold the *Alt* or *Ctrl* key while dragging and dropping the appropriate members.

This feature only works when the axis is not nested (i.e. only contains one dimension) or sorted (*Axis definition*, *Ranking* tab; see feature #22).

(22) Pivot Table: New Axis Definition Dialog

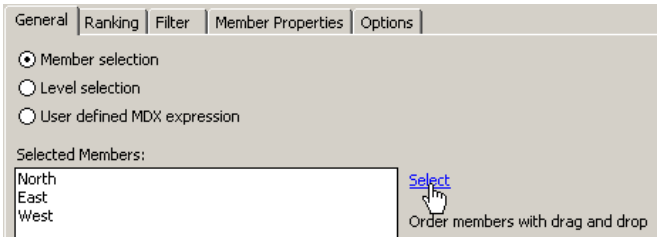
The *Axis definition* dialog box has new functionality which has been sorted into tabs in version 5.3.2.



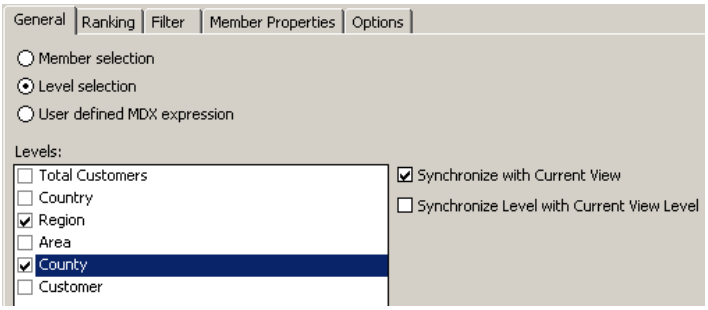
General: Member selection instead of pick lists, level section in place of descriptives

In the *General* tab, you determine which members should be placed on the axis; this selection can be restricted on the subsequent tabs. The following options are either new or have been modified:

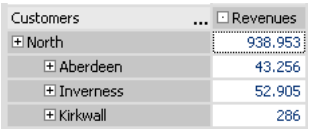
- *Member selection* is equivalent to the former *Pick list*. To *Select* the desired member, click the appropriate link to the right of the *Selected members*. This will open the standard *Dimension browser* in which you can make your selection. You can sort the list by drag and drop and remove members by pressing the *Del* key.



- The *Level selection* is equivalent to the former *Descriptive*s box. This option selects all members located on one or more specified levels (and not just individual members, like in *member selection*). Since you can now mark several levels at once (*Ctrl* key), the previous *Include ancestors* option has been omitted. If you want to display parent levels, simply select these levels. You can also skip in-between levels.

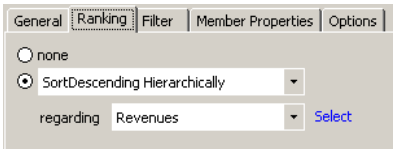


The example on the previous page shows an axis for the customer dimension in which we have only selected the “Region” and “County” information. This information is displayed in the screenshot to your right, while the “Country” and “Area” levels are hidden.



Ranking: Sorting the member selection and user-defined MDX expressions

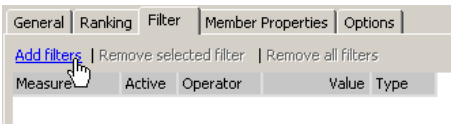
The sorting criteria for the axis (*Ranking* tab) now also applies for the *Member selection* (pick list) as well as the members from a user-defined MDX expression. The sort set in the *Ranking* tab will override those created by drag and drop on the *General* tab or in user-defined MDX expressions.



In previous versions, a sort was only possible for level selection. To learn more about creating rankings in a pivot table, please refer to *DeltaMaster clicks!* 3/2007.

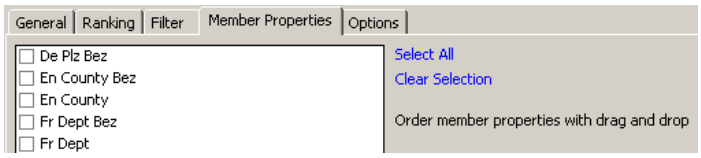
Filter: For member selection and user-defined MDX expressions

The filter rules administered on the *Filter* tab also apply for the members in a *Member selection* and user-defined MDX expressions. These filters will be used prior to rankings. In past versions, filtering was only possible for level selection.



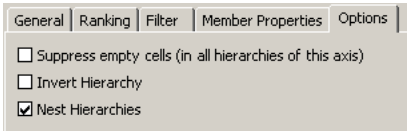
Member properties: Displayed for user-defined MDX expressions

You can select *Member properties* which will be displayed as additional columns in the pivot table. In addition to the *Member selection* and *Level selection*, this now works for user-defined MDX expressions.



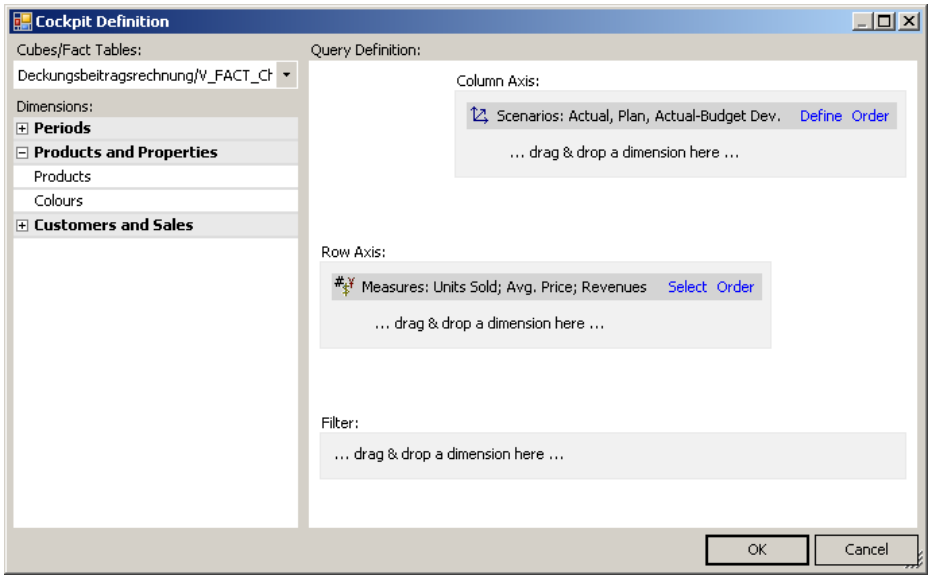
Options: Nesting hierarchies

The *Option* tab allows you to nest multiple hierarchies on the same axis. As a result, the members of an inner hierarchy will be placed in a ranking for each member of an outer hierarchy.



(23) Pivot Table: New Cockpit Definition Dialog

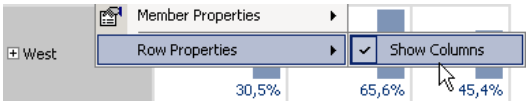
The *Cockpit definition* dialog box has been redesigned so that it matches the “look and feel” of the *My view* window.



Using the context menu, you can activate the *Dimension groups* that are defined in the *My view* window. This is particularly useful in models with many dimensions. If the models have multiple *Cubes*, only the dimensions and measures of the selected cube will be displayed.

(24) Pivot Table: Hiding Columns Row by Row

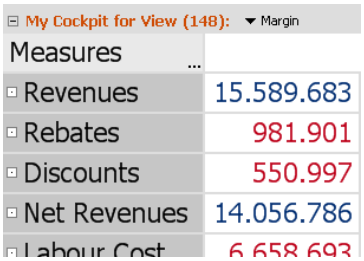
You can now hide column charts for individual rows of the pivot table. This *Row properties* option has been added to the context menu of the hierarchy columns.



(25) Pivot Table: Changing Font Size

You can change the font size in the pivot table. Simply activate the window with the pivot table and either:

- Turn the wheel of your mouse while holding the *Ctrl* key.
- Use the shortcuts *Ctrl* and "+" or *Ctrl* and "-".



You may recognize these zoom shortcuts from Microsoft Office, Adobe Reader, Internet Explorer and Firefox.

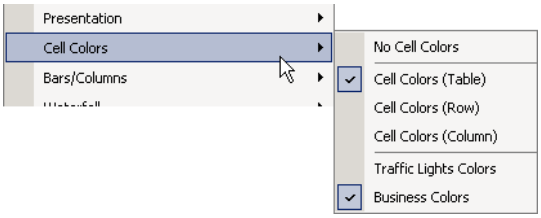
The font size will be saved per table or cockpit in the .das file and can be changed in all *DeltaMiner* modes, whether you are using *Miner Expert* or *Offline Reader*.

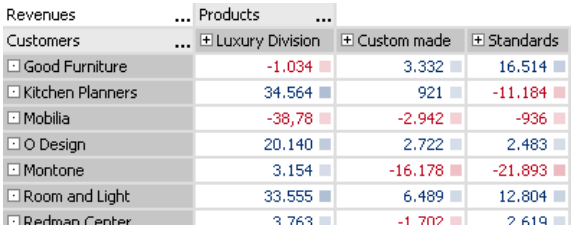
This functionality is also available for cross table analyses.

(26) Pivot Table: Coloring Cells

The *Cell colors* option, which is located under the context menu of the pivot table, now contains additional features and analytic functions.

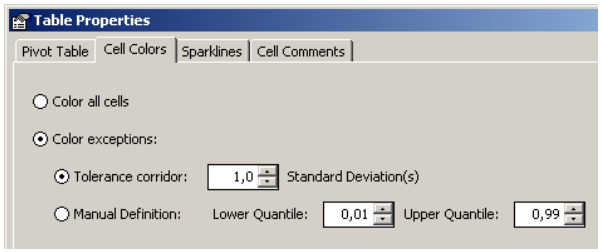
In addition to traffic light colors, you can now highlight table cells using the blue and/or red business color scheme.





To determine the color of a cell, *DeltaMiner* sets its value in relationship to the other values of the table or the appropriate row or column. (In the past, *DeltaMiner* always used the values of the entire table.) When transposing a table with cell coloring by rows or columns, *DeltaMiner* automatically switches to column or row references.

DeltaMiner assigns the extremes of the color scale to the smallest or largest value of the reference area and takes the business factor (*Measure properties*) into account: The largest revenues would be dark blue while the largest discount would be dark red (if using business colors). Values between the minimum and maximum receive a color gradient that reflects their value.



On the new *Cell colors* tab under *Table properties* (*I want to…*, context menu), you determine if *DeltaMiner* should *Color all cells* or just the *Exceptions*. Exceptions are all values outside of the specified boundaries which can be determined in one of two ways:

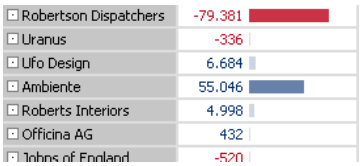
- *Tolerance corridors* are placed symmetrically around the mean. The entered value is a multiple of the standard variance that will be carried to both sides. (The corridor, in other words, is twice as large as listed.)
  In a normal distribution, approximately 68 % of the values lie to the right and left of the arithmetic mean within 1 standard variance. For two-times the standard variance, the percentage will rise to about 95 %. The six sigma method in quality management requires a tolerance of 6 standard variances or approximately 99,9997 %.

- M*anual definition*. In this case, you select an upper and lower quantile for the boundary. The values outside of these boundaries are then marked as an exception. A quantile is a point in a sorted series. The 0.5 quantile is the median and is greater than or equal to the half of all values or less than or equal to the other half.

Let's assume that a table containing 100 cells with various values has a setting with a lower quantile of 0.20 and an upper quantile of 0.90. In this case 30 cells would be highlighted: the 20 smallest and the 10 largest.

Cells within the corridor are taken into account but are displayed in neutral gray.

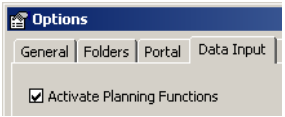
Unlike in previous versions, *DeltaMiner* will not color the entire cell background.



- If bars, columns or waterfalls are activated, these charts will be colored. Their options concerning the reference (table, row, column) will supersede the reference settings for the cell coloring.

- Otherwise, *DeltaMiner* will display and color small squares.

(27) Planning Option: Now Standard in Miner



Miner now contains the full planning functionality as part of the standard license. If you want to use planning functionality in the current analysis session, activate it in the *Data Input* tab under *Options* (*Extras* menu). This feature is deactivated by default to avoid unintentional changes in the data.

This option must be activated for any *DeltaMiner* planning application, even for your existing ones. This is a one-time adjustment only; the setting will be saved in the .das file.

Separate planning licenses are still required for the *Viewer* through *Analyzer* modes.

(28) Miscellaneous: Updated Download Area

The download area of our homepage (http://www.bissantz.com/login/en/) now only contains the current 5.3.2 version of *DeltaMaster*. If you require versions 5.1.7 (the last *DeltaMiner* version based on .NET 1.1) or 5.2.1 (the last "blue" version), please send an e-mail to support@bissantz.de.

(29) Miscellaneous: Opening Reports Through Command Line Parameters

You can now simplify the start of an application through a new option for opening *DeltaMaster.* If a .das file is listed in the command line, you can automatically open a certain report (and not simply the first *Briefing book* folder) through the "**Report**X" command line parameter. " X" represents the report ID under *Report properties*.

The syntax for the command line reads as follows:

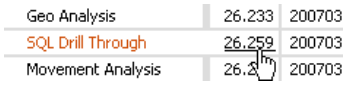
client.exe [<.das file> [-Report<ReportId>]]

With this option you can spoil your *Reader* or *Viewer* users by creating a Windows desktop shortcut that opens *DeltaMaster*, the listed .das file and the desired report with a single mouse click. This option also simplifies the integration into portals, content management systems or other applications because users can now directly open a specific report from outside the *DeltaMiner* system.

In order for the shortcut to work, "client.exe" must be listed in the target link. If you create a direct link to the .das file without referencing which program should be executed, Windows will open *DeltaMiner* and transfer what file should be opened but without any additional parameters.

(30) SQL Drill Through: Hyperlinks

You can now add hyperlinks to result table fields of an SQL drill through. If you click on a cell containing a hyperlink, *DeltaMiner* will open the respective target. Cells containing links are underlined when you mouse over them and the mouse pointer will change.

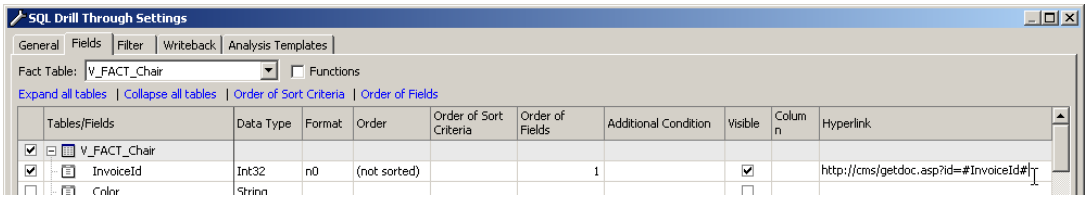


The target can either be a static entry or contain content from one or more fields of the same SQL record. These can be:

- Internet links (Uniform Resource Identifiers, URIs): *DeltaMiner* transfers the target to the appropriate application, such as the URLs of Web sites to a Web browser and e-mail addresses to the standard e-mail application. You will need to enter the scheme, in this case "http://" for Web sites or "mailto:" for emails, so that the link can be processed correctly.

- Folders in the file system: This will open Windows Explorer and display the given folder. The path must begin with a drive letter. UNC paths are currently not supported.

- Files: The entered file is opened with the application that is linked with its file type, for example, "invoice0815.doc" will be opened in Microsoft Word. The file path must begin with a drive letter. UNC paths are currently not supported.



To add a hyperlink to a cell, go to the *Fields* tab in the *Settings* dialog and add the target (without delimiters!) in the *Hyperlink* column on the right. By using variables, you can use the content of fields from the same data record (row). The variable is the name of the field as displayed in the *Tables/Fields* column surrounded by number signs: #field_name#. As a result, each data field that is displayed in the result table has a dynamic hyperlink that refers to its individual target.

A hyperlink entry may contain several of these variables which can also be combined with static text. If you click on a link, *DeltaMiner* will replace the expression through the content of the listed field in the same row and will transfer it to a Web browser, Windows Explorer or an external application as described above.

(31) Search: Direct Access to Report Objects through IDs

You can directly open reports, cockpits, views and briefing books by entering one of the following key words in the search field (in the upper-right corner of the *DeltaMiner* application window) and hitting *Enter*.

Keyword	Object type
#Cx	Cockpit
#Fx	Folder
#Rx	Report
#Vx	View

Here, “x” stands for the unique ID of the object; keywords are case-insensitive.

You can access cockpit, report or folder IDs by pressing and holding the *Alt* key and mousing over the desired object in the *Briefing book* or the cockpit selection list in the *Cockpit browser*. The views are recorded in the *History* window and are marked by their respective number.

(32) Search: Keyboard Commands

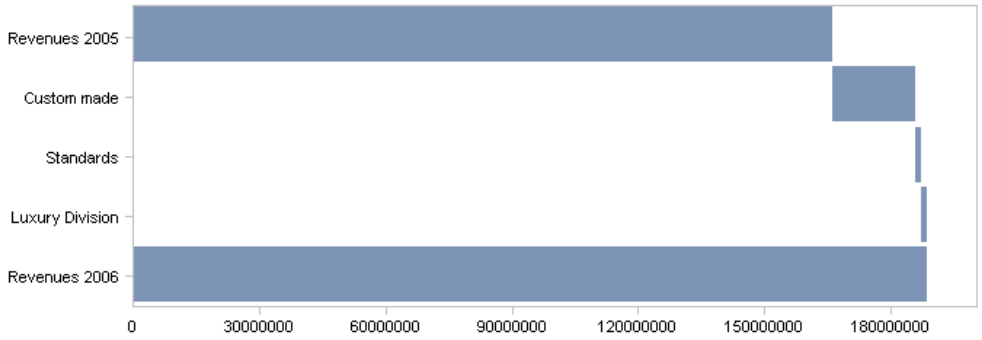
By using new shortcuts, you can save time in the universal search function.

- If the search window is open, press *Ctrl+F* to switch to that window. The text in the entry field is already marked so that you can immediately overwrite the search expression.
- With *Ctrl+Shift+F* you switch to the search field in the upper-right corner of the *DeltaMiner* window. If this field contains search terms, they will automatically be highlighted.

Read *DeltaMaster clicks!* 12/2006 for more information about searching in *DeltaMaster*.

(33) Stairs Analysis: Rotating Presentation/Displaying as Waterfall

You can rotate stairs analysis charts by 90 degrees so that the bars run horizontally to resemble a waterfall.

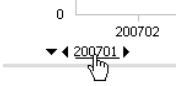


To rotate the graphic, simply follow these steps:

- Activate the *Toolbar* and select horizontal bars as the chart type.
- Deactivate the *Staggered* presentation in the context menu of both axes.
- Go to *Chart properties* (context menu of the chart - not the axes!), switch to the *X axis* tab and activate the *Rotate axis* option.
- In the same dialog box, change the *Position* of the *Y axis* to *Top*.

(34) Time Series Analysis: New Selection of Time Frames

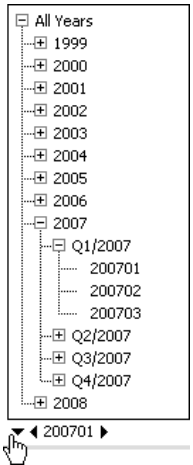
To improve working with the time axis, version 5.3.2 has updated the menus with which you can select the start and end time frames in the *Time series analysis*.



The biggest difference to the past versions is that when you click on a time member, *DeltaMiner* will now expect manual data input.

Use your keyboard to enter the desired time period; incorrect entries will be ignored. Hit *Enter* to activate the entry and *Esc* to cancel and end the keyboard entry mode. You can also use the keyboard to quickly browse among members or levels. By holding *Ctrl* and hitting the cursor keys, you can navigate through members or levels like you would move through lines or paragraphs in a word processing application.

Short cut	Switches to
Ctrl+left arrow key	Previous member on the same level e.g. from August 2007 to July 2007
Ctrl+right arrow key	Next member on the same level e.g. from August 2007 to September 2007
Ctrl+up arrow key	Parent member e.g. from August 2007 to Q3/2007
Ctrl+down arrow key	First element on the child level e.g. from Q3/2007 to July 2007



If you navigate using the wheel of your mouse, you can save even more time. If you turn the wheel while the manual entry mode is activated, you can browse through the previous or following members on the same level. If you hold the *Ctrl* key while doing so, you can leaf through the levels.

To open the menu with the time hierarchy, point the mouse to the first downward arrow next to the time period. This will open only the branch where the current member is located.

Similar to the *My view* window, you can now use the left and right arrows to browse through members in a *Time series analysis*.

This same functionality is also available in *Trumpet curves* and *Movement analyses*.

6 DeltaMiner deltas! 5.3.4

What's new in version 5.3.4? Find out in this overview of the February 15, 2008 release!

(1) Analysis Services: Using Display Folders as Dimension Names

(2) Analysis Services: Support for Microsoft SQL Server/Analysis Services 2008

(3) Named Sets: Usage in Cockpits, Analysis Templates, Reports and Views

(4) Calculated Members: Usage in Cockpits, Analysis Templates, Reports and Views

(5) Briefing Books: New Report Symbols

(6) Briefing Books: New Folder Symbols

(7) Report Server: Overwriting the Source Analysis Session

(8) Flex Reports: Inheriting Bars, Columns and Waterfall Charts from Pivot Tables

(9) Model Import: Support for Oracle OLAP

(10) New Module Names: ABC → Concentration

(11) Pivot Charts: Point Labels for Individual Data Rows

(12) Pivot Chart: Showing and Hiding Headers and Markers in the Data Editor

(13) Pivot Table: Faster Queries for Line and Column Sparklines

(14) Pivot Table: Manual Sorting With Nested Axes

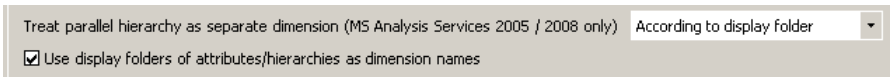
(15) Portfolio Analysis: Area Values

(16) History: View Properties

(17) Web Option: Access to OLAP Databases Without Windows Authentication

(18) Time Series Analysis: Auto and User-defined Size of Series Legends

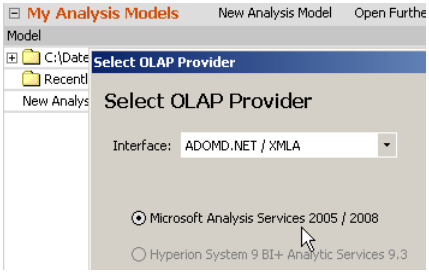
(1) Analysis Services: Using Display Folders as Dimension Names



Since *DeltaMiner* 5.3.0, you can treat parallel hierarchies as separate dimensions (see DeltaMiner deltas! 5.3.0, #16 and DeltaMiner deltas! 5.3.1, #21). This functionality was implemented by applying the “display folder” property of an attribute or attribute hierarchy.

Previously, this property was only used to select or group the hierarchies that should be displayed as independent dimensions. If you now decide to *Use display folders of attributes/hierarchies as dimension names* (*Extras* menu, *Options*, *System* tab), *DeltaMiner* will name the dimension according to the entry in the display folder.

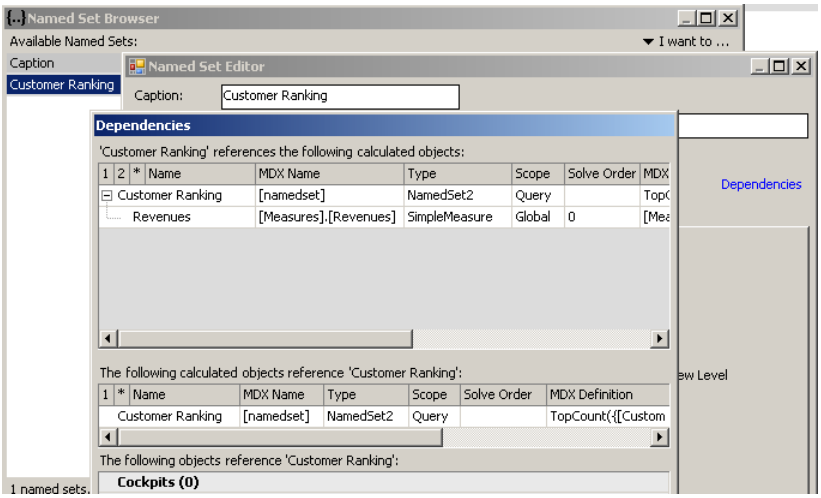
(2) Analysis Services: Support for Microsoft SQL Server/Analysis Services 2008



DeltaMiner 5.3.4 supports access to Microsoft SQL Server/Analysis Services 2008, which is scheduled for release in Q3 2008 and currently available as a beta edition (Community Technology Preview, CTP).

Based on our internal testing, DeltaMiner will be able to access Analysis Services 2008 using the installed ADOMD.NET 9.0 interface. If you want to use ADOMD.NET 10.0 (i.e. the library supplied with Analysis Services 2008), you will have to copy the “Microsoft.AnalysisServices.AdomdClient.dll“ file into your DeltaMiner program file and activate the “<dependentAssembly>“ section in the “Client.exe.config“ configuration file. This also applies for “Microsoft.AnalysisServices.dll”, the AMO library required to map relational metadata.

(3) Named Sets: Usage in Cockpits, Analysis Templates, Reports and Views

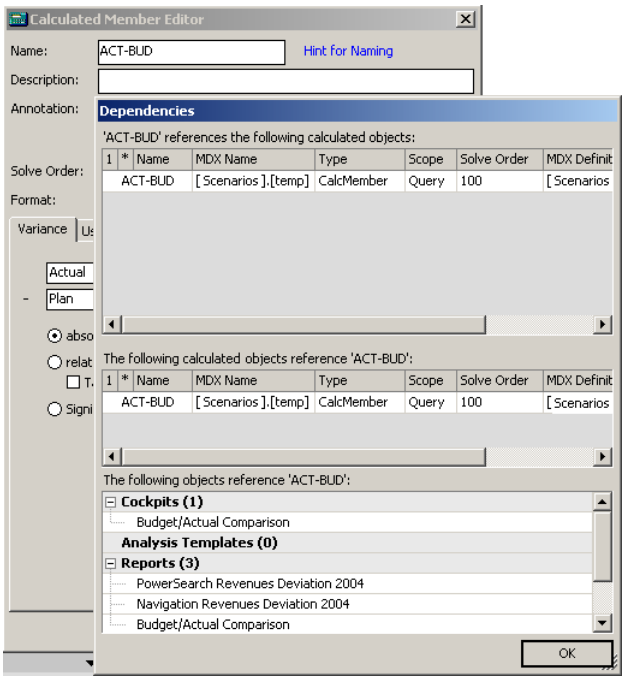


Version 5.3.4 provides a clear overview of the cockpits, analysis templates, reports and views that use a particular named set. As in previous versions, you can see which calculated objects are used in the respective definition of the set. To access this overview, simply open the set *Properties* from the context menu of the *Named set browser* (*Model* menu).

(4) Calculated Members: Usage in Cockpits, Analysis Templates, Reports and Views

Similar to named sets (see #3), you can now see which cockpits, analysis templates, reports and views are using a particular member under the Dependencies for calculated members and time-analysis members.

To open this overview, click on the Dependencies in the Calculated member editor or Time analysis member editor.



(5) Briefing Books: New Report Symbols

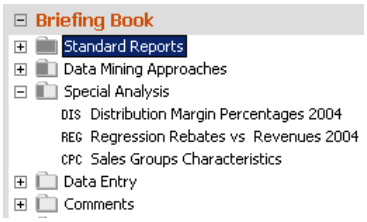
DeltaMiner 5.3.4 has now replaced the ornamental icons from past editions with informative symbols containing acronyms for the report in question.

	English		German
PCT	Pivot Table, Pivot Chart	PCT	Pivottabelle, -grafik
MCH	Measure Chart, Measure List	MCH	Analysewertgrafik, -liste
F_H	Flexreport	FLH	Flexreport
CMB	Combination	CMB	Kombinationscockpit
RNK	Ranking	RNG	Rangfolge
CTB	Cross Table Analysis	KTB	Kreuztabellenanalyse
CNC	Concentration Analysis (previously: ABC Analysis)	ABC	ABC-Analyse
TIM	Time Series Analysis	ZTB	Zeitreihenanalyse
TRM	Trumpet	TRM	Trompetenkurve
PFL	Portfolio Analysis	PFL	Portfolioanalyse
GEO	Geo Analysis	GEO	Geo-Analyse
SQL	SQL Drill Through	SQL	SQL-Durchgriff

	Movement Analysis		Bewegungsanalyse
	Distribution Analysis		Verteilungsanalyse
	Regression		Regression
	CompClass		Klassenvergleich (bisher: CompClass)
	Concentration CompClass		ABC-Klassenvergleich (bisher: ABC CompClass)
	PowerSearch		PowerSearch
	Navigation		Navigation
	Waterfall Analysis		Treppenanalyse
	Comparator		Comparator
	Descriptor		Descriptor
	Profiler		Profiler
	Interdependency Analysis		Interdependenzanalyse
	Dependency Analysis		Dependenzanalyse
	Selector		Selector
	Association Analysis		Assoziationsanalyse

These symbols have also been incorporated in the *Analysis* menu of the *Miner* mode.

(6) Briefing Books: New Folder Symbols



Replacing the ornamental folder icons previously used in *Briefing books*, the symbols in version 5.3.4 now illustrate how many reports and subfolders each folder contains. This follows the same principles for displaying the horizontal bars of a pivot table. The folder with the most reports and subfolders will be shown with a bar stretched across the entire folder icon. In other folders, the bars will be proportionally smaller, because they reflect the relationship of the number of reports in this folder to that of the “thickest” one. Additional subfolders as well as their underlying reports are also taken into account.

(7) Report Server: Overwriting the Source Analysis Session

A new option in the Report Server job allows you to overwrite the report source (.das file) upon which the job is based. A report update, for example, would then replace the existing file instead of creating a new one.

If you want to enable the overwriting of a source file, simply enter an asterisk (*) behind the file name in the Address field.

Overwriting is only relevant if you have selected “das” as the Report format and “file” for the Distribution type. In addition, the source file must be consistent with the target file (*Report source* = *Address*) and no report generators should be defined.

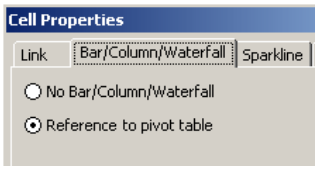
PLEASE NOTE: Overwriting is not recommended if a Briefing book is selected in the job and the Remove other folders option is activated. In this case, DeltaMiner would delete all other folders in the analysis session when the job is run - and the work invested in these briefing books would be futile.

Since the metadata structure of the Report Server has not changed in version 5.3.4, you do not have to run the “reportserver.sql“ script.

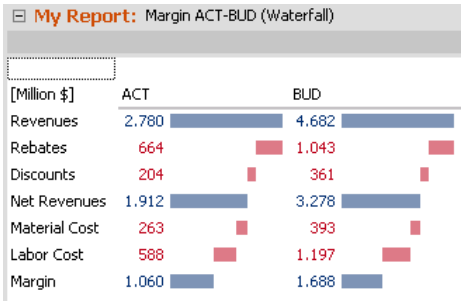
(8) Flex Reports: Inheriting Bars, Columns and Waterfall Charts from Pivot Tables

Using a new tab under *Cell properties* (context menu, *F4* key), you can now display bars, columns and waterfall charts in flex report cells that contain a reference to a pivot table.

If you select Reference to pivot table, the graphical elements will appear in a flex report as they are shown in the referenced cell of the pivot table. The pivot table properties such as scaling (e.g. table, column, row), width and height also apply in the flex report.



The report on your right has been created using this option. The values and the bars stem from a reference to the pivot table in the flex report. The grids and the background colors in the pivot table have been removed to create a table that meets our famous office dog Bella’s strict reporting standards. (Learn more at http://www.bella-consults.com/).



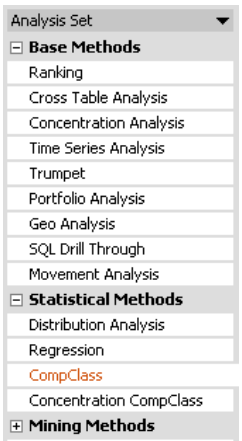
Past editions of DeltaMiner have also supported the inheritance of sparklines from a referenced pivot table in a flex report. This option is located on a separate tab.

(9) Model Import: Support for Oracle OLAP

Companies using Oracle OLAP applications can now use the model import function (*Model* menu*, Model browser*) to easily copy reports from one analysis file to another.

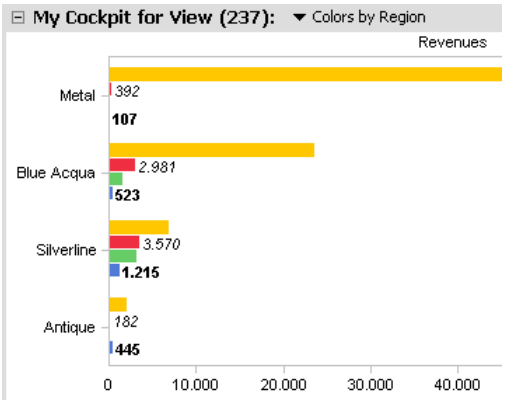
(10) New Module Names: ABC → Concentration

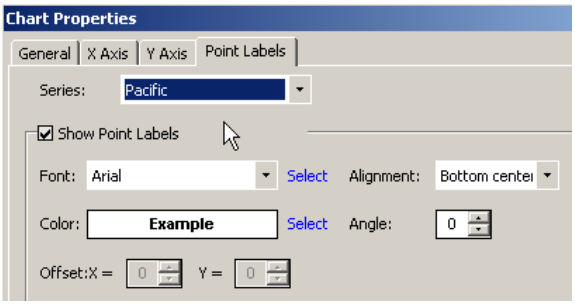
The *DeltaMiner* modules containing the acronym "ABC" have been renamed to avoid any confusion with the term "Activity-Based Costing". In the base methods, ABC Analysis is now also called *Concentration Analysis*. In the statistical methods, *ABC CompClass* function is now known as *Concentration CompClass*.



(11) Pivot Charts: Point Labels for Individual Data Rows

You can now determine if labels should be shown or hidden for each data row of a pivot chart. In addition, you can also customize the formatting for each individual row.

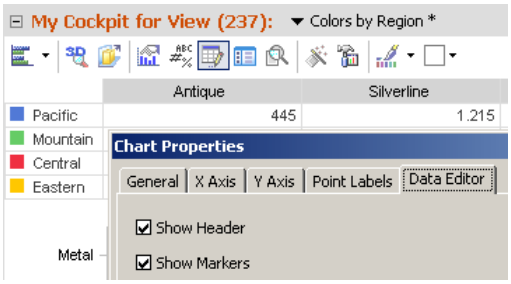




The *Chart properties* (chart context menu, *I want to…* menu, *F4* key) now contain a new tab called *Point labels*. Here, you can choose if each row should be labeled and how the text format should appear. The *Offset,* or the space between the graphical elements and the label, can only be set for *All rows*.

(12) Pivot Chart: Showing and Hiding Headers and Markers in the Data Editor

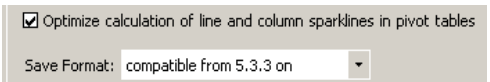
The *Chart Properties* now contain a new tab to customize the *Data editor*. Here, you can determine if the *Header* or the *Marker* should be displayed or not. In the example on your right, for example, deactivating the *Markers* would remove the colored boxes and deactivating the *Header* as well would remove the entire column (i.e. Pacific, Mountain, Central, Eastern). These options help avoid redundancy when the chart structure already gives adequate reference information.



You can open the *Chart properties* using the chart context menu, the *I want to…* menu or the *F4* key.

(13) Pivot Table: Faster Queries for Line and Column Sparklines

DeltaMiner 5.3.4 now calculates line and column sparklines faster than before. This has been implemented through a change in the database query, which now only accounts for the values specified in the *Table properties* on the *Sparklines* tab. While *DeltaMiner* previously queried all data following the first data value but only displayed those requested (e.g. length: 12 periods), it now only retrieves the desired data.



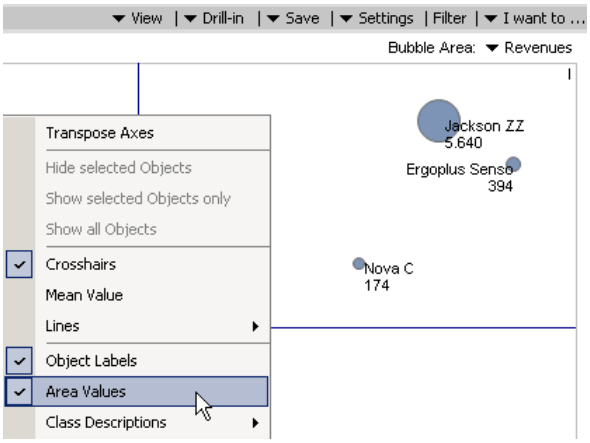
You can determine if this faster option should be used or not by activating an option under *Extras*, Options under the *System* tab. If you create a new analysis session in *DeltaMiner* 5.3.4, this option will be activated in the default setting. It is, however, deactivated for existing analysis sessions. To profit from the faster calculations, simply activate this option during your session. Please verify that the sparklines are displayed in the desired length.

(14) Pivot Table: Manual Sorting With Nested Axes

Since the DeltaMiner 5.3.2 release, you can change the order of selected measures and members using the *Member selection* option in the *Axis definition* by drag and drop while holding the *Alt* key (see *DeltaMiner deltas!* 5.3.2, #21). This feature now also works in nested axes.

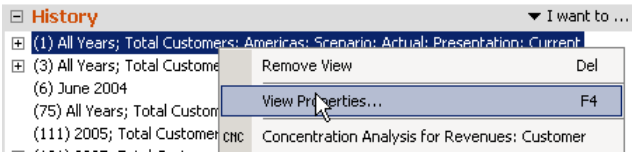
(15) Portfolio Analysis: Area Values

DeltaMiner can also display the numerical values used for the *Bubbles* of a Portfolio Analysis. To display these *Area values*, simply choose the appropriate option in the context or *I want to…* menus. Please note that the *Object labels* must be activated in order for this feature to work.



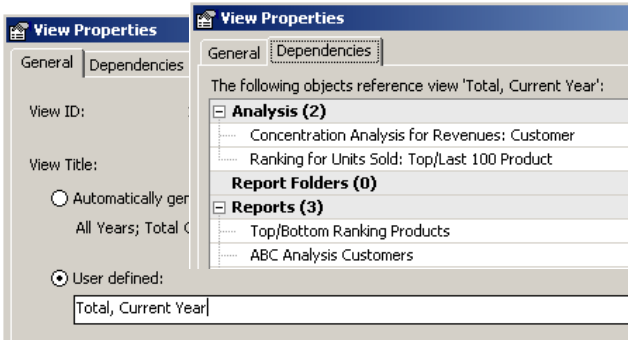
(16) History: View Properties

In *Miner* mode, you can track the changes to your view in the History window. Now, you can see and edit the View properties by opening the new context menu or hitting the F4 key.



On the General tab, you can enter a User-defined name, for example, to replace a very long view description containing a complete row of selected members with one that is short and concise. You can easily switch back to the default status by activating the Automatically generated name (which usually contains the names of all settings which differ from the default).

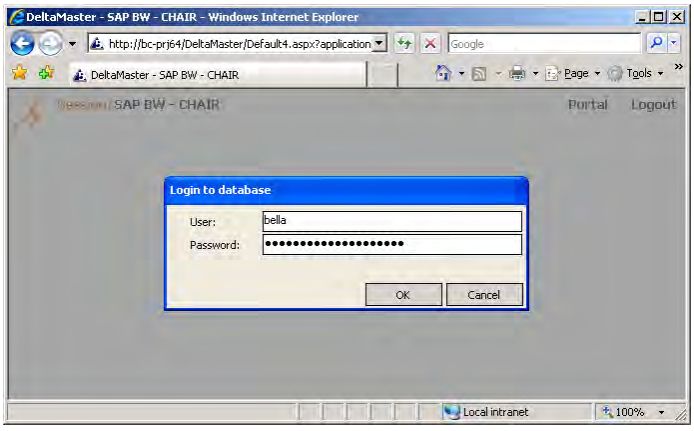
On the Dependencies tab, DeltaMiner shows which analyses, report folders and reports use the selected view. This allows you to see which objects would be deleted if you removed this view from the tree.



(17) Web Option: Access to OLAP Databases Without Windows Authentication

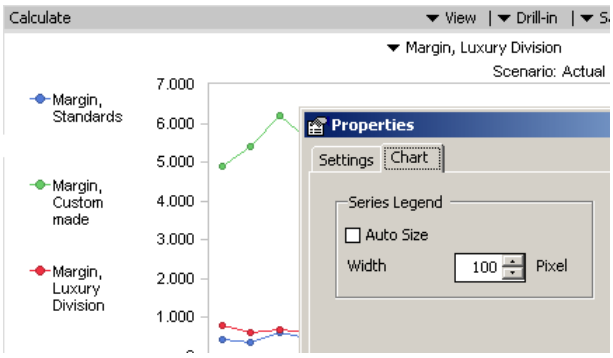
You can now use the Web Option to access OLAP databases that do not support Windows authentication, such as SAP BW, Infor PM 10 or Applix TM1.

After you select an application in the portal, DeltaMiner will open a dialog box in which you can enter the user and password for the OLAP database.



(18) Time Series Analysis: Auto and User-defined Size of Series Legends

DeltaMiner now automatically measures the space for the legends corresponding to the data rows. If you are working with very long names, you can set the size to avoid awkward word breaks. This option is located under *Properties* (context and *I want to…* menus) in the new *Chart* tab.



7 DeltaMiner deltas! 5.3.5

What's new in version 5.3.5? Find out in this overview of the May 16, 2008 release!

(1) Notation: Common Display of Business Meanings in Graphical Tables

(2) Format Templates for Number Formats

(3) General: Opening Analysis Sessions with Ctrl + O

(4) General: Accessing Diagnosis Files Through the Menu

(5) Measure Properties: Scale on the Formatting Tab

(6) Excel Export: File Name Prompt for Generated .XLS files

(7) Excel Export: Exporting Numbers With Extreme Accuracy and Formatting Them

(8) Flexreport: References Integrate Pivot Table Presentations

(9) Flexreport: Returning from a Linked Report

(10) Modeling: Date Measures

(11) Pivot Charts: Box Plot with Minimum, Maximum, Median and Quartiles

(12) PivotTable: Setting Column Width

(13) Planning Option: Limited Changes in Cell Fixation to Miner Users

(14) Universal Search: Supporting Report Symbol Acronyms

(15) WebOption: Updating Reports Upon Request

(16) WebOption: Data Entry

(17) WebOption: Support for Oracle OLAP

(18) WebOption: Single-Sign-On Using Kerberos

(19) WebOption: Updating Analysis Files in the Repository Without Interrupting Users

(20) Time Analysis Members: Using Measure Definitions for Aggregation

(21) Information on Downward Compatibility and Installation

(1) Notation: Common Display of Business Meanings in Graphical Tables

Business Intelligence should be serious, straightforward, and most importantly, simple. Here, charts play a decisive role. When creating management reports, you should avoid random decoration that adds little or no information. What managers need are information-dense visualizations that clearly explain what they are seeing as well as what is important and why based on the background context. You can already create these types of reports using *DeltaMiner's* graphical tables, which are a major step towards "industrial reporting"- our ideal for efficient, automated reporting.

In *DeltaMiner* 5.3.5, we have now extended this concept with a new, exciting feature called *notation*.

Objective

You can now add business meanings to the visualizations in graphical tables so that your readers can mentally digest the information in your reports more quickly and easily. In this release, you can use notations in two important aspects of management reporting:

- Comparisons of different value types (e.g. budget, actuals, variance)
- Time (e.g. months, quarters, years)

When you look at a table, you should be able to know intuitively where the budget data, actuals and variances are respectively located. You should also be able to tell if the content is referring to months or quarters without needing to read a legend. In addition, the terms used to describe the budget value or variance in the OLAP database might not be the same ones that your company should use for enterprise reporting.

Using the new notation feature, you can manage these matters in one central location for all graphical tables in your application so that you don't need to adjust each one manually.

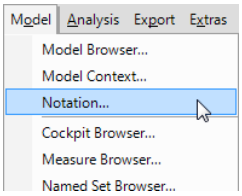
	Scenarios ...			
Measures ...	ACT	BUD	ACT-BUD	ACT-BUD %
Revenues	15.590	15.113	476	3,2%
Discounts	551	535	16	2,9%
Rebates	982	984	-2	-0,2%
Net Revenues	14.057	13.594	463	3,4%
LaborCost	6.659	6.459	200	3,1%
Material Cost	302	292	10	3,3%
Margin	7.096	6.843	253	3,7%

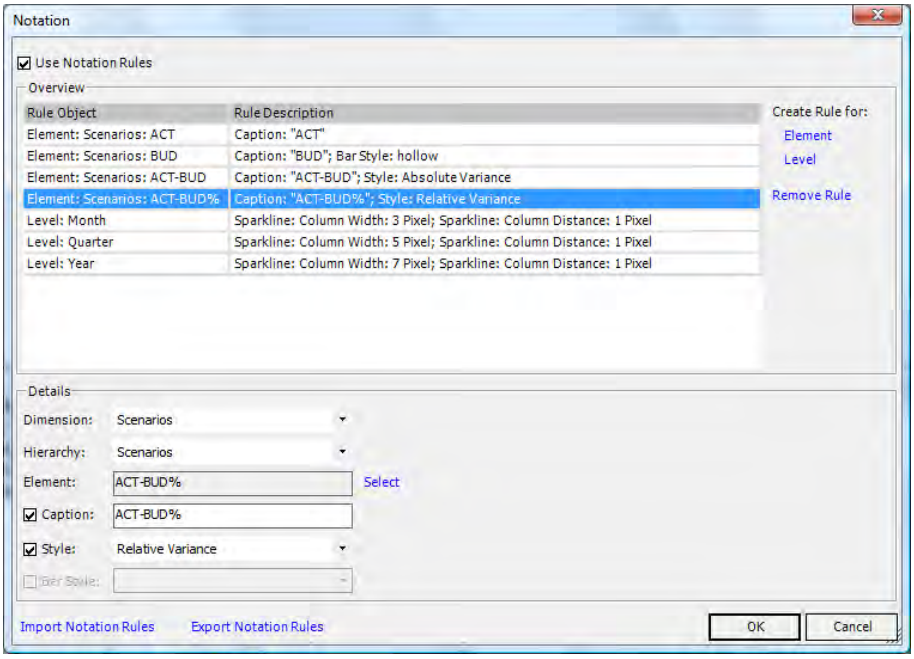
The screenshot above shows a budget-actual variance for a profit margin calculation. Each column represents a different business context: the actuals (ACT), the budget data (BUD), the absolute variance (ACT-BUD) and the relative variance (ACT-BUD %). You can see this difference based on the unique graphical elements. And if your readers recognize this notation, they don't even have to read the column headlines.

In order for DeltaMiner to use these design rules, you first must define which design applies for which members (or levels, as we will later explain). You can define these functions in a new editor.

Defining notation rules

If you are working in Miner, Analyzer or Pivotizer mode, you can open the notation editor from the *Model* menu. If you are working in *Reader* or *Viewer* mode, you will be able to see but not change these notation rules.





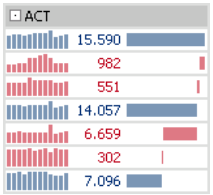
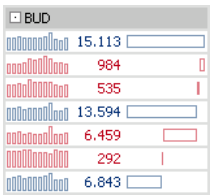
In the editor dialog box, you will see an *Overview* of all currently defined rules. You can see the *Rule objects*, which are the respective levels or member types, on the left-hand side and the Rule description on your right.

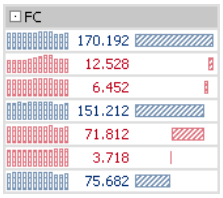
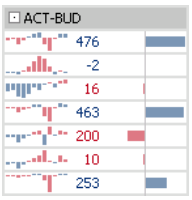
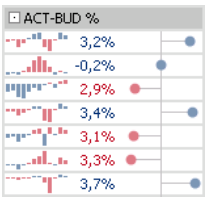
Using the hyperlinks on the right side of the overview, you can Add rules for two types of rule objects (i.e. dimension members or levels) as well as delete existing rules. To change an existing rule, simply click on its name in the Overview. Now you can review and edit the Details.

Rules for members – for value types such as budget, actual or variance

Member rules are designed for use in value type and scenario dimensions such as budget, actual, forecast, absolute variance or relative variance (in percent). These rules determine how all measures containing these value types are displayed in bars, columns, pivot tables as well as certain analysis modules.

DeltaMiner 5.3.5 offers five different styles:

Value Type	Example	Bars, Columns, Waterfall elements	Column Sparklines
Actual		filled	filled
Budget		hollow	hollow

Forecast		shaded	shaded
Absolute variance		Bars to the left and right of a target line representing zero variance	filled
Relative variance (in percent)		Lines with dots to the left and right of a target line representing zero variance	filled

In order to define a rule, choose the desired Dimension and Hierarchy as well as the Member which should be formatted. To activate the setting, simply tick the check box that appears before the respective option:

- Changing the Name: In the screenshot on the previous page, we have replaced the full names with the abbreviations ACT, BUD, ACT-BUD and ACT-BUD %. If you enter a new name, this will replace all names including aliases in multilanguage applications to ensure that a common corporate language is used in all reports.

- Style: You can switch between relative and absolute variance as shown in the screenshots above. This option displays bars or lines to the left and right of a line representing zero variance.

- Bar style: You can define if bars, columns, waterfall members and column sparklines are filled, hollow or shaded. Since the default setting for this option is “filled”, this option is not listed. As a result, you do not need to create a separate rule for actuals.

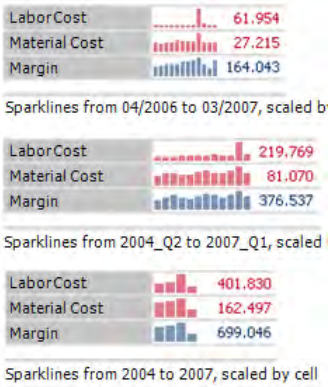
Rules for levels – for time dimensions

Level rules are designed for use in column sparklines, in other words, time dimensions. Since a quarter is longer than a month, a column that represents a quarter should be wider than one that stands for a month. Although the size does not need to be three times larger, a difference should be visible. (After all, when reading a map, you simply want to differentiate between interstate highways, state highways and country roads. The number of lanes, however, is irrelevant.)

Level rules, therefore, only have two parameters: Column width and Column spacing, which are both measured in pixels. In previous editions of DeltaMiner, you could also customize these options under the Table properties of pivot tables and flexreports but only, of course, for a given cockpit. DeltaMiner now automatically adjusts the width depending on which time level is currently displayed in the report.

The default setting in DeltaMiner without notation rules is a width of two pixels with one-pixel spacing. If you want to combine level and member rules to visualize the development of budget figures over time, for example, you should place the setting at three or more pixels so that the hollow columns of the sparkline can be properly displayed.

In the screenshot to your right, the setting for months is three pixels, while quarters have five, and years have seven; all have one-pixel spacing. Although these pixel sizes are very close, you can still easily see a difference.



In order to define custom widths and/or spacing, simply activate the check box that appears before the respective option. DeltaMiner will then apply this setting to all pivot tables. Please note that you cannot deactivate or change this option in individual reports because the respective option in the Table properties will be locked.

If you deactivate an option by removing the tick from the check box, DeltaMiner will not control this parameter centrally. In this case, you would have to customize these options in every individual pivot table.

Where can you use notations?

DeltaMiner supports notation rules in pivot tables as well as flexreports that reference pivot tables containing these rules. You can also export all styles to Microsoft PowerPoint. Microsoft Word supports all styles if you use the Export as image option (Extras menu, Options, Export). If you do a normal export, however, Word only supports bar styles (i.e. filled, hollow, and shaded).

In addition to cockpits, these rules also apply in Cross-table analyses, Rankings and PowerSearch. The advantage is that *DeltaMiner* takes the information regarding value types directly from the ranking.

Top	Customer	Revenues, Dev. %
1.	Good Furniture	6,2%
2.	The Edge Office	4,5%
3.	SuperOffice	4,0%
4.	Room and Light	3,6%
5.	Uranus	3,6%

Saving, importing and exporting notation rules

Notation rules are stored in analysis sessions (.das files) and analysis models (.dam files). Although older DeltaMiner versions cannot display these rules, they will not be destroyed (see feature #21).

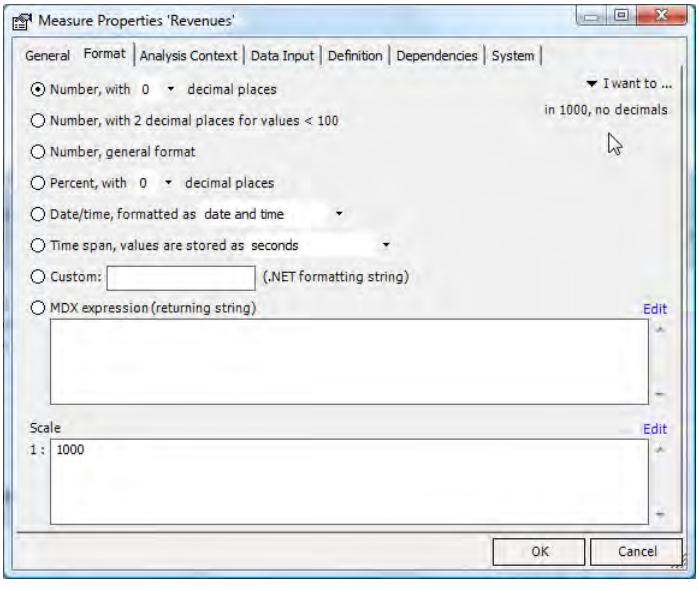
In order to promote common corporate notations, you can also exchange these rules among the analysis files of a data model. Simply export and import these rules as XML files by using the respective links at the bottom of the dialog box.

(2) Format Templates for Number Formats

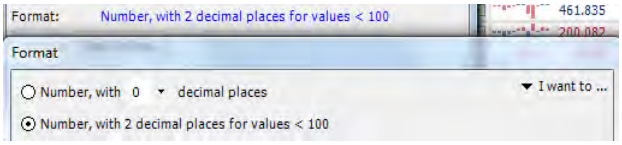
You can now reuse saved format and scale settings in measures and calculated members. If you decide to change the format template at a later time, DeltaMiner will automatically update these changes in all measures and members based on the same template. This new feature is another way to simplify the reporting process.

If you want to scale sizes depending on the displayed view, you will need to add the respective MDX expression for a measure, save it is a format template and then use it for the other measures.

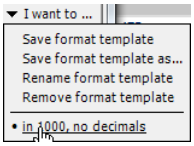
To access the format templates, open the Formatting tab of the Measure properties and then open the new I want to… menu. If the measure uses a format template, its name will be displayed under this menu.



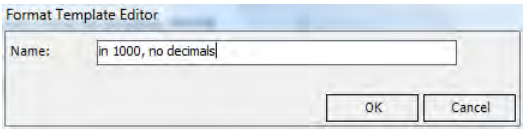
For calculated members, the I want to… menu is located in the Formatting dialog box which you can open by clicking the link that describes the current formatting. Again, DeltaMiner will only display the name if the member uses a format template.



In the I want to… menu, you can save the current setting as a template, as well as rename and remove existing ones. In the second section of the menu, you can chose from existing templates. If you select a template, DeltaMiner will apply it to the current measure or member. If you click the currently selected template a second time, DeltaMiner will deactivate the template for the value or member.



When you save a setting, DeltaMiner will prompt you to enter a name in the Editor for format templates. The same dialog will appear if you rename an existing template or save one under a different name using the Save format template.



If you Delete a template, you will remove it completely and not just deactivate the connection to a current measure or member. The saved settings will then be applied as individual settings for all measures and members. You won't see the difference at first. Since the affected measures are not linked to a template, however, you can format them individually.

When you change the settings of a value or member that uses a format template, DeltaMiner will ask if you want to apply the change to the template – and, therefore, all other objects formatted with this template.

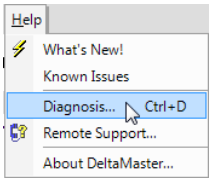
DeltaMiner stores format templates in analysis sessions (.das files) and analysis models (.dam files). Since previous DeltaMiner versions do not support format templates, you should only use them if all users throughout your company use DeltaMiner 5.3.5 or subsequent releases.

(3) General: Opening Analysis Sessions with Ctrl + O

You can now open an analysis session using Ctrl+O, a function that you may already know from other Windows applications. You can use this short cut in the Portal, a Session, all plug-ins, as well as the Report server.

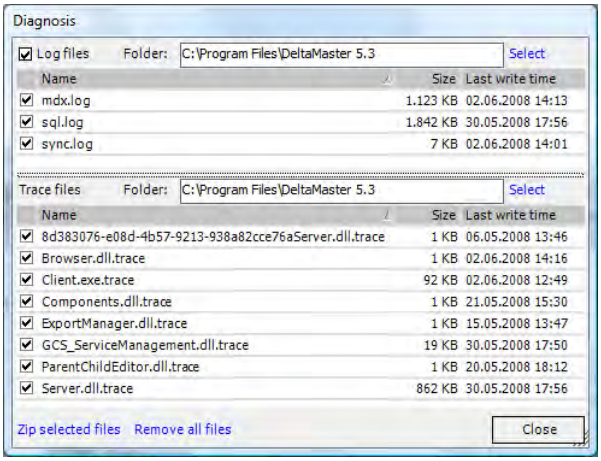
(4) General: Accessing Diagnosis Files Through the Menu

When you open the Help menu and select Diagnosis (short cut: Ctrl+D), you can access the log and trace files that DeltaMiner creates to diagnose the system.



In the upper half of the dialog box, DeltaMiner shows the log files which you can use to protocol query commands in MDX, DML and SQL or the results of the model synchronization. The lower half shows all .trace files in the respective directory.

DeltaMiner displays the respective Folder above the respective file lists. These are the same folders that are defined in the Extras menu under Options on the Folder tab for trace and log files. You can either change the folder under Options or in the Diagnosis dialog box. In version 5.3.5, the changes now automatically take effect; previously, you needed to restart the entire program.



Although trace files are always recorded, you can define if the log files should be documented or not by activating or deactivating the checkbox in front of the Log files. This option is identical to the Log query commands function on the System tab under Options (Extras menu) which turns the protocol function on or off. Here, too, you can change this option under Options as well as in the Diagnosis dialog box.

To view the diagnosis file, simply click on the file name. DeltaMiner automatically opens the file in Notepad or your default Windows application for the file ending.

If you require assistance from our support team, DeltaMiner can now create a .zip file containing all selected files so that it is easier to send them to support@bissantz.com. If you click on the link Save selected files as .zip, you will be asked to enter a file name and storage location for the zip archive.

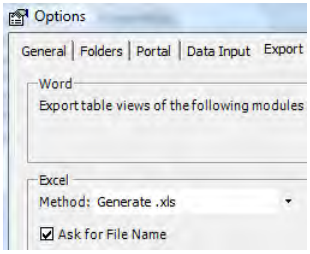
By clicking the Delete all files link, you immediately remove all displayed files.

(5) Measure Properties: Scale on the Formatting Tab

You can now access the Scale options on the Formatting tab (see first screenshot under feature #2); these options were previously stored under General.

You can also manage the scale and formatting in a view similar to Excel's Cell format dialog box. The format templates (see feature #2) save all of the settings in this tab.

(6) Excel Export: File Name Prompt for Generated .XLS files



If you have selected the Generate .xls file option to export data to Microsoft Excel, DeltaMiner will prompt you to name the file and storage location before exporting it. This takes place in the standard Windows dialog for saving files. DeltaMiner suggests that you use the same name as the cockpit, report or the report folder that you are exporting. The default location is the folder set under Options (Extras menu) on the Folder tab for Export files.

You can activate the option to prompt for file names in the Extras menu, under Options on the Export tab.

If the option is not activated, DeltaMiner will simply save the .xls file to the defined Folder for export files under the same name as the cockpit, report or folder that you are exporting.

In both cases, DeltaMiner will automatically open the generated file in Excel after the export.

(7) Excel Export: Exporting Numbers With Extreme Accuracy and Formatting Them

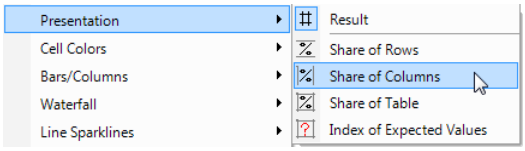
When you export pivot tables, flexreports und cross-table analyses to Microsoft Excel, DeltaMiner precisely places all of these numbers into the Excel cells and then formats them so that they look identical to those in DeltaMiner.

As a result, you can use the exact original values for further calculations even if you have selected a simplified presentation form (e.g. in thousands and without decimals). In addition, you can further customize the cell format using normal Excel tools after the export.

The format that you have selected in DeltaMiner, therefore, now influences the format of the values that are transferred to Excel - and no longer the values themselves. If the measures are scaled, DeltaMiner will precisely export the original values and set the format provided that the scale factor is a "clean" decimal power such as 1:10, 1:100, or 1:1000.

(8) Flexreport: References Integrate Pivot Table Presentations

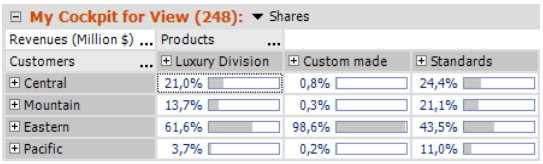
Flexreport cells that reference a pivot table now use the same Presentation that is defined in the referenced pivot table. Also, when you change the presentation of the pivot table, these changes will be immediately visible in the flexreport. If you transform a pivot table without cell references to a flexreport, you will receive the same results as before regardless of the presentation.



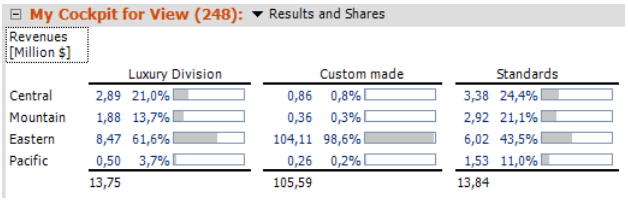
The Presentation option determines if DeltaMiner displays the values alone or as a share. This new function makes it easier to integrate features for analyzing shares in flexreports.

For example: Let's create a pivot table in the standard view and save it as a cockpit.

Next, we will change the Presentation to Share of columns and activate the Bars (Table, 100 (see DeltaMiner deltas! 5.3.1, feature #25).

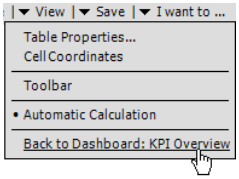


Then, we will save this table as a cockpit and create a flexreport with cell references. Although the shares and bars are immediately available in the flexreport, the absolute results are still missing. To integrate them, we need to Add columns and Add references to the cockpit containing the results. After a few small format adjustments, we end up with the report to your right which unites shares and results.



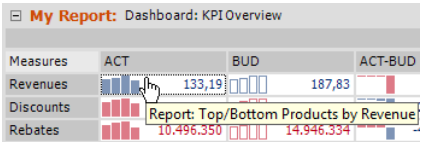
(9) Flexreport: Returning from a Linked Report

If you click on a link in a flexreport that transfers you to another report, you can now go back to the previous one using the Return to <previous report> function located in the I want to… menu of the My report, My cockpit or My analysis windows.



This function is very practical in applications that use a dashboard as the central gateway into different detailed reports. Due to the very flexible presentation options, many DeltaMiner users base their dashboards on flexreports and combine them into a combination cockpit. This new function makes it much easier to switch from detailed views back into the main dashboard.

Since analysis templates and cockpits are only available in Miner mode, Miner users can see the links to these objects while Reader, Viewer, Pivotizer and Analyzer users cannot. If you want to create interactive reporting paths for users on these levels, please ensure that the link target is always a Report.

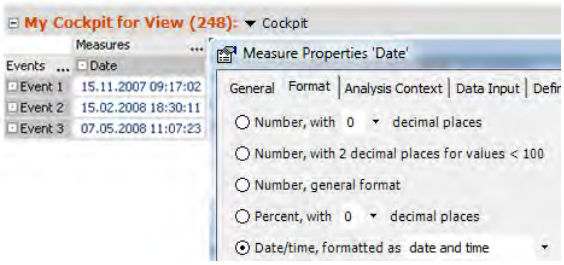


(10) Modeling: Date Measures

DeltaMiner can process data entries that are stored as "date" data types in an OLAP database. The upper screenshot on your right shows three timestamps in Microsoft SQL Server Management Studio, while the lower one shows three in DeltaMiner.

	Event	Date
▶	Event 1	15.11.2007 09:17:02
	Event 2	15.02.2008 18:30:11
	Event 3	07.05.2008 11:07:23
*	NULL	NULL

To format dates in DeltaMiner, you can choose from the options located under Measure properties.



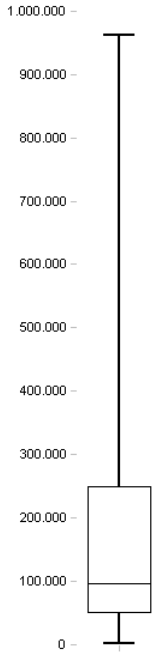
(11) Pivot Charts: Box Plot with Minimum, Maximum, Median and Quartiles

Version 5.3.5 has now added a new chart type called a box plot (also known as box-and-whisker plot) for pivot charts.

This type of chart visualizes the position and distribution of values in a sample by using five statistical measures: the minimum, the lower quartile, the median, the upper quartile and the maximum.

Building and interpreting box plots

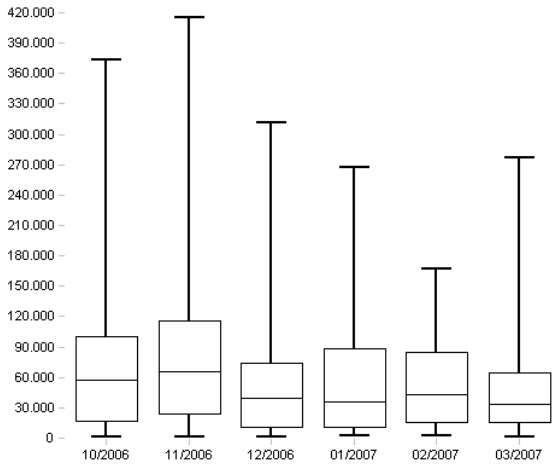
These five measures can easily be distinguished in a box plot. The upper/lower edge of the box represents the upper/lower quartile, the line in the middle symbolizes the median, and the horizontal lines at the very top and bottom indicate the maximum and minimum.



Let's assume that the chart on your right illustrates total sales revenues for each single customer. In this case, the revenues (in other words, the size of the customers) vary between zero and just under one million. The spread is strong because the box displaying the median revenues is relatively small in comparison to the range and it is much closer to the minimum than the maximum. In fact, the mid-50% range of all customers lies between 50,000 and 250,000. The median divides the box at around 100,000 which is below the box's midpoint. The distribution is lopsided. The 25% of the midsize and smaller customers that are in the lower quartile are more similar than the 25% midsize and large customers in the upper quartile.

What differentiates the box plot from other pivot chart types? While line, column and other charts usually display all data values, the box plot only visualizes a few statistical measures that represent and characterize a large number of values. Let's stay with the example on customer revenues. In a bar diagram you would display all - or at least the most important - customers sorted by highest to lowest revenues. A box plot, however, summarizes and simplifies the distribution. Here the focus is on the size of the revenue spread or whether there are more big customers than small ones in terms of revenue - and not which customer produced the highest revenues.

Box plots are even more informative when you place them next to each other so that you can compare their development over time (see screenshot on your right). The width of a box plot is irrelative.



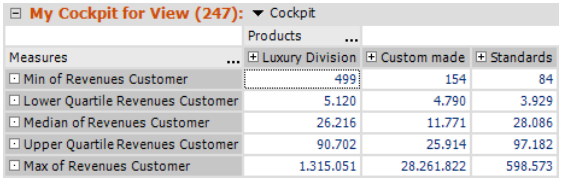
Data foundation in DeltaMiner

Like all pivot charts, the box plot is based on a pivot table. Specifically, however, it must contain five rows as described below:

- Row 1: the minimum value of the sample
- Row 2: lower quartile

- Row 3: median
- Row 4: upper quartile
- Row 5: the maximum value of the sample

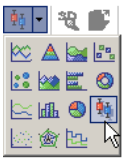
These five measures alone cannot calculate the pivot chart. Instead, they must be defined as measures and presented in the pivot table. You can easily create minimum, maximum and median values in DeltaMiner as Univariate statistical measures (Model menu, Create new measure). To calculate the quartiles, however, you must currently use MDX. Simply contact the Bissantz and Company team to request the necessary code.



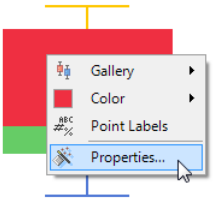
My Cockpit for View (247): Cockpit			
	Products ...		
Measures ...	Luxury Division	Custom made	Standards
Min of Revenues Customer	499	154	84
Lower Quartile Revenues Customer	5.120	4.790	3.929
Median of Revenues Customer	26.216	11.771	28.086
Upper Quartile Revenues Customer	90.702	25.914	97.182
Max of Revenues Customer	1.315.051	28.261.822	598.573

When you use the column axis, DeltaMiner will create a separate box plot for each member and present these alongside each other in a single chart. The screenshot on the previous page already illustrated this over a period of time. The screenshot on your right, however, compares the product dimension. If the column axis remains empty, you'll get just one single plot. But it also tells more about our base measure (revenues). By identifying the median, minimum, maximum, etc., the analysis always takes place alongside a single dimension, for example, customers.

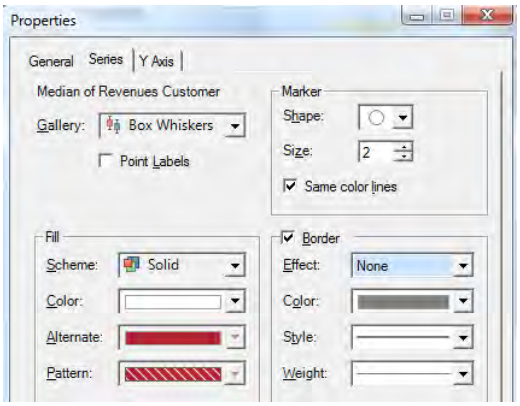
Formatting and graphical editing



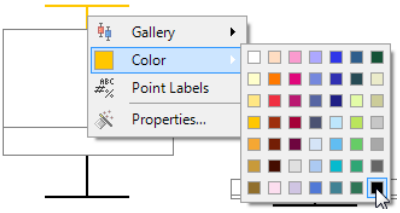
From the pivot table built and described in the section above, you can switch to a Chart in the View menu and open the toolbar (context menu, I want to… menu). Now, you can now select the box plot from the list of chart types.



The Standard view requires some fine tuning to attain the desired presentation. To create the typical outline image, you will need to change the Settings (context menu) of the rows.

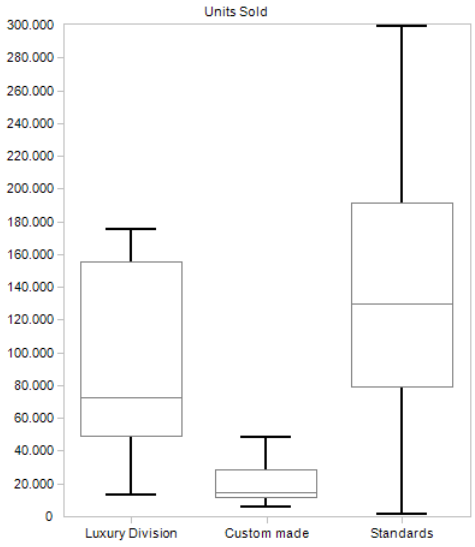


Let's start with the red row. Due to the standardized construction of the table, this always represents the median. We recommend using a white Fill. Mark the Border check box to activate it but choose no effect and gray or black for the color. Repeat this step for the lower quartile which is green in the standard view.



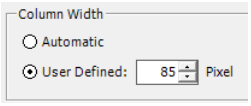
You can change the color of the minimum and maximum value from the context menu.

By following these steps, you can turn a pivot table into a box plot chart which compares the distribution of customer revenues by main product groups.



(12) PivotTable: Setting Column Width

You can also define a user-defined column width for pivot tables. DeltaMiner will then break the column headlines that are longer than the defined width into separate rows. This option is located under the Table properties (context menu, I want to… menu) on the Pivot table tab.



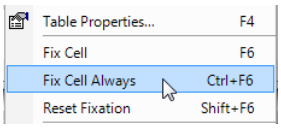
The user-defined width applies for all data columns except those with static hierarchies on the left-hand corner of the table. If the content of a data cell is wider than the setting on account of sparklines, for example, DeltaMiner will automatically adjust the column width to ensure that no data cells are broken or cut off.

(13) Planning Option: Limited Changes in Cell Fixation to Miner Users

DeltaMiner now offers a second, stricter way to prevent changes in the cells of pivot tables and flexreports. Only Miner users can activate or deactivate this new cell fixation option; Viewer, Pivotizer and Analyzer users cannot.

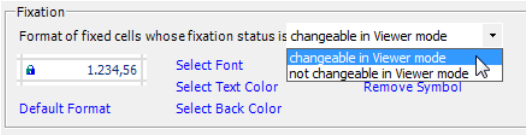
As a result, a Miner user with an administrative role in the planning process can define data entry restrictions for operative users, who often work in Viewer mode. If desired, operative users can also fix their own cells so that they can allocate value changes based on certain parameters. As mentioned above, however, they cannot change cells that were fixed in Miner mode.

To activate or deactivate fixation, simply use your mouse to highlight the desired cell in the pivot table or flexreport and press Ctrl + F6 on your keyboard. Alternatively, you can select the Fix cell always option in the context menu.

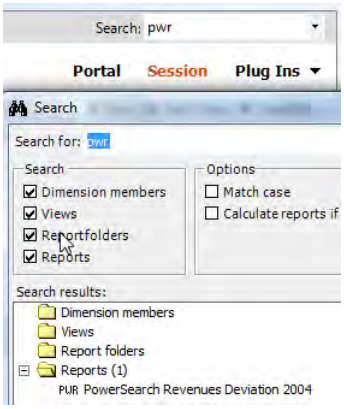


You can deactivate all changeable fixations at once (excluding the new Miner fixations) by selecting the Reset fixation option. If you have Miner access and would like to deactivate the fixations, mark the cell and then select the Don't fix cell always option or hit Ctrl + F6.

You can designate cells that have been fixed by an administrator with a special symbol or format. This option is located under the Extras menu (Options, Data entry tab) so that you can alter the appearance of the changeable and non-changeable fixations in Viewer mode. The default setting is a black lock for non-changeable fixations and a blue lock for the changeable ones.



(14) Universal Search: Supporting Report Symbol Acronyms



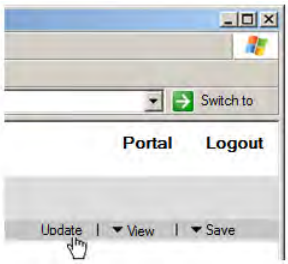
DeltaMiner 5.3.4 introduced new icons composed of three-letter acronyms, such as PUR for PowerSearch and CMP for Comparator, for briefing book reports (see DeltaMiner deltas! 5.3.4, feature #5). Now, you can use these acronyms in the universal search function to quickly locate a certain type of reports.

If you activate the Match case option, please type the acronym in all capital letters. This search also identifies reports in all languages, regardless if the acronym is identical or not.

Past versions also supported searches using complete or partial names of analysis modules (see DeltaMiner deltas! 5.1.5, feature #28). In order to list all PowerSearch reports in a briefing book, check that the Match case option is deactivated and search for “powersearch“, “power“ or (now) “pwr“.

You can access the Search dialog box from the Edit menu or pressing Ctrl+F on your keyboard. Alternatively, you can simply enter the search expression in the field on the upper-right corner of the main DeltaMiner toolbar.

(15) WebOption: Updating Reports Upon Request



Users can now request updated Web reports using the Refresh link located to the left of the View menu in the Reader and Viewer modes. This functionality is identical to the F9 reset/recalculate function, which automatically recalculates the report with data from the database, available in the Windows version.

Refresh in this instance has nothing to do with the option available in the menu options of Microsoft Internet Explorer or Firefox. These commands simply request the Web page again from the Web server. In order to retrieve the latest data from the database, therefore, you must use the Refresh function in the DeltaMiner menu.

Users who access Web applications in Offline Reader mode will not able to view this link because their reports are defined without database access; those Online reader access, however, can.

(16) WebOption: Data Entry

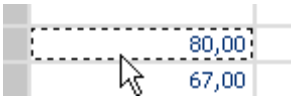
DeltaMiner WebOption now supports Web-based data entry to simplify the creation and deployment of decentralized planning solutions. As a result, colleagues who only use DeltaMiner to enter budget data no longer need to locally install the Windows client.

The requirements for enabling Web-based data entry are identical to those in Windows:

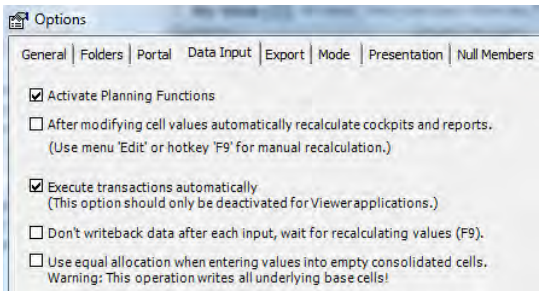
- Your company has the necessary Planning Option licenses.
- The Planning functions were activated in the analysis session (Extras menu, Options, Data entry) and you have saved this session to the repository under the File menu.
- The report in question Allows data entry (Briefing book, Report properties, Data entry),
- The underlying OLAP database authorizes write access.
- The user logged into the Web browser has write access.

Entering data through WebOption is very similar to the procedure in Windows. Click the Start link on the upper left-hand side of the data entry pivot table. (DeltaMiner currently does not support Web-based data entry in flexreports.)

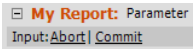
If you click on the desired cell, DeltaMiner will mark the cell with a dotted line. Now, you can enter the value using your keyboard. You can also enter value changes (e.g. “10%+” for a 10% increase) just as you can in the DeltaMiner Windows client. Instead of using a mouse, you can also navigate using the arrow keys. To edit the cell, just hit F2.



The transaction behavior depends on the settings that apply in the DeltaMiner analysis session (Extras menu, Options, Data entry tab). When you save these parameters, they will be automatically transferred to the repository (see feature #19). In WebOption, however, you cannot manage the transactions using the F9 key. Use the Refresh link located in the report toolbar (see feature #15).



If you want to exit the data entry mode and write back budget data to the database, click the Apply link in the report toolbar. If you click the Cancel link, DeltaMiner will not save your work.



If you open another report from the briefing book in the data entry mode, DeltaMiner also will ask if you want to Apply your current entries.

The Windows version has slightly more data entry features - such as adding cell comments, copying and moving data and fixing cells – than WebOption. At the present time, WebOption also supports data entry into pivot tables but not flexreports.

(17) WebOption: Support for Oracle OLAP

DeltaMiner WebOption now fully supports Oracle OLAP applications.

(18) WebOption: Single-Sign-On Using Kerberos

To ensure the role-based security of DeltaMiner WebOption in a Microsoft Analysis Services 2005 database, you previously could activate the Use EffectiveUserName option in the repository user interface under the File table. This setting, however, requires that the Windows account on which the Web service runs has comprehensive access rights to the OLAP database (see “DeltaMiner WebOption – Installation and Set Up Documentation“, Chapter 4.2).

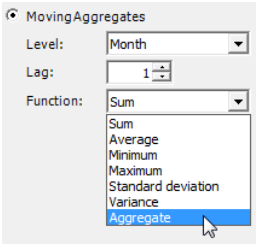
Alternatively, you can now use a Kerberos authentication protocol to transfer a user identify from the Web browser via the Web client and Web service to the OLAP database. This new feature makes it possible to implement a single-sign-on policy. The Windows account of the Web service, therefore, only needs read access to the metadata in the OLAP database.

The configuration and activation of Kerberos is outlined in a separate document which we can send to you upon request.

(19) WebOption: Updating Analysis Files in the Repository Without Interrupting Users

If you want to refresh analysis files from DeltaMiner or the Report Server to update changes, for example, Web users can now work with the application without interruption. Users who have already logged on will use the previous version of the application. The next time that they log onto the portal, however, they will see the updated version.

(20) Time Analysis Members: Using Measure Definitions for Aggregation



In the Editor for Time analysis members, DeltaMiner now supports Moving aggregations. This option allows you to condense measures with the relative Aggregation that was defined in the underlying database. This feature is based on the MDX function “aggregate()“.

(21) Information on Downward Compatibility and Installation

You can open analysis sessions (.das and .dam files) saved in DeltaMiner 5.3.5 in older versions of the software.

Three new options, however, will not be displayed in earlier releases. These are: format templates (feature #2), box plots (feature #11) and notation (feature #1). As a result, please consider the following information:

- Reports and cockpits that use Format templates cannot be displayed in DeltaMiner versions 5.3.4 and older. Since these templates, however, are designed to format several (and, ideally, all) measures and members, this affects a very large part of the application. As a result, you should really only use format templates if your entire company uses version 5.3.5. (Considering that the concept drastically improves the efficiency of the reporting process, a full enterprise update is highly recommendable.)

- Box plots also cannot be displayed in older versions. This, however, only really affects a few reports and cockpits that are highly customizable anyway. In DeltaMiner versions 5.3.4 and older, these would remain empty. Otherwise, there are no major side effects.

- Finally, the graphical Notations are also unknown in DeltaMiner 5.3.4 and older versions. Bars, columns, waterfall charts and sparklines will appear as they did before – not hollow, not with a target line, not with circles at the ends, etc. The effects of the notation rules, in other words, would be invisible. Reports and cockpits, however, would work as usual.

Since Report Server‘s metadata schema of is unchanged in Version 5.3.5, you do not need to run the “reportserver.sql” script. You should, however, update the “ReportServer.exe“ file and the respective DLLs so that they correspond with the new DeltaMiner version.

WebOption updates:

Before you update DeltaMiner WebOption, be sure to make a backup copy of the configuration files! These are “web.config“ for the Web client, “DeltaMiner.Service.exe.config“ for the Web service and “DeltaMiner.Repository.exe.config“ for the repository GUI.

If you customized the Web client’s appearance to reflect your corporate design or integrate it in a portal, please also save a backup of the “DeltaMiner.css“ file, which contains all stylesheet rules as well as custom image files (for example, “Master_Top.png“ in the “Image” folder).

The repository database, the repository GUI, the Web service and the Web client have all changed in DeltaMiner 5.3.5.

- To update the database schema, please run the new “Repository.sql“ script against the existing database. Your previous settings will remain intact. In order to run the script, you need exclusive database access, in other words, all database connections must be closed in addition to DeltaMiner Web service.

- You can update the repository GUI, Web service and Web client by copying the new files into the respective directories. Once again, please ensure that you have saved a backup copy prior to doing so. A separate setup is not required.

- The installation package contains new configuration files for the repository GUI, the Web service and the Web client. These can contain structural elements and default settings that did not existing in previous versions. As a result, you should only use the new .config files and simply repeat your individual settings there. The “DeltaMiner.css“ stylesheet also contains new rules that are required for displaying the proper screen layout in Version 5.3.5. If you have customized your stylesheets, please transfer these changes into the new .css file.

To compare these text files, you may wish to use Microsoft’s Windiff.exe tool or WinMerge, an open source program (http://winmerge.org/). If you need assistance in updating WebOption, our support team will be happy to help. Just send us a mail at support@bissantz.com.

8 DeltaMiner deltas! 5.3.6

What's new in version 5.3.6? Find out in this overview of the August 15, 2008 release!

(1) Measure Browser: Copying Measures 3

(2) Measure Brower: Search 3

(3) Displaying Measures with Hierarchical Relationships 4

(4) Displaying Measures with Notations 4

(5) Measures: Assistant for Upper and Lower Quartile..... 5

(6) Calculated Members: Significance Is Now Weighted Variance..... 5

(7) Briefing Book: Show Number of Folders, Reports and Subfolders..... 5

(8) Briefing Book: View Context for Members..... 6

(9) Report Server: Updated Metadata Schema 6

(10) Report Server: Save E-mail Attachments After Sending..... 7

(11) Report Server: Exception Reporting..... 7

(12) Report Server: New HTML Export Format 8

(13) Display Options: Saving Values and Member Names in the Analysis Model. 12

(14) Copying Data: Copying Calculated Measures to Measures..... 12

(15) Dimension Browser: Copying Calculated Members 13

(16) Dimension Browser: Formatting Members Defined in the Database..... 13

(17) Dimension Browser: Hiding Default Members in View Descriptions 13

(18) Dimension Browser: Hiding Names of Dimension Levels in View Descriptions14

(19) Flexreport: Conditional Data Entry Authorization in Flexreport Cells..... 14

(20) Geo Analysis: Uniform Scaling for Column Charts 15

(21) Cross Table Analysis: Automatic Formatting in a Reduced White Style 16

(22) Notation in Portfolio, Navigation, Waterfall Analysis, Comparator and Profiler 16

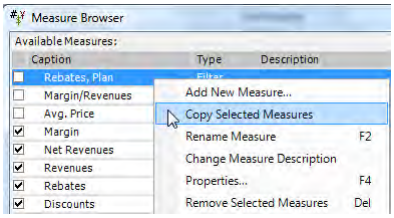
(23) Pivot Tables: Automatic Formatting in a Reduced White Style 17

(24) Web Client: Data Entry in Flexreports 18

(25) Web Client: SQL Drill Through Reports as HTML Tables 18

(26) Notes: Compatibility with Previous Versions and Installation 18

(1) Measure Browser: Copying Measures



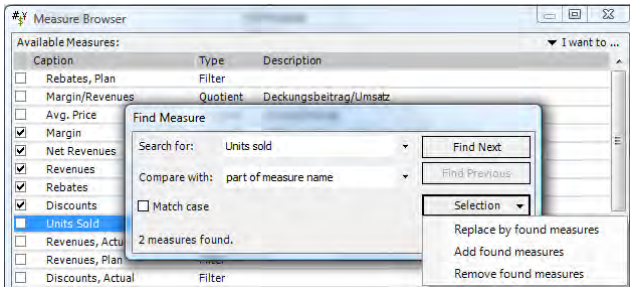
You can now directly copy measures in the *Measure browser* by clicking the respective option in the context measure. *DeltaMiner* will the duplicate the selected measure and display the copy below the original. This copy function takes place immediately without needing to paste it separately. Since the new measure is completely independent, you can modify all of its properties without affecting the original measure. Notation rules defined for the original measure (see Feature # 4) will not be copied.

This copy function does not apply for “simple” measures that originate directly from the database, “FlowLink” measures (GM flow by Link) and “FlowStructure“ measures (GM flow with hierarchical mix flow) which are viewed as a related group of measures.

You can, however, use this function to copy calculated members (see Feature #15).

(2) Measure Brower: Search

A search function simplifies the process of finding and selecting measures. This new feature in the measure browser works exactly like its counterpart in the dimension browser (see *DeltaMiner deltas!* 5.3.3, Feature #4). To open the search, hit *Ctrl + F* or select the respective command in the context menu or the *I want to*… menu.



Simply enter the search term in the *Search for* field and click on *Find next* to start. In the bottom-left corner, *DeltaMiner* will display the number of found measures. By clicking the *Select* button, you determine how *DeltaMiner* should proceed with the selection:

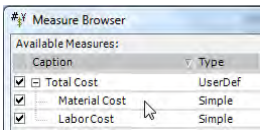
- *Replace by found measures:* This choice will reset the selection and will only select the found measures.
- *Add found measures:* This function will keep the current selection but add the found measures to it. As a result, the selection will either be larger or stay the same (if you had already previously selected all of the matched items).
- *Remove found measures:* This option will remove all found measures from your current selection. The selection, therefore, will either be smaller or will remain unchanged (if none of the matched items were in your previous selection).

As in all other search dialogs, you can also choose if *DeltaMiner* should *Match [the] case* as well as how it should compare your search term with the measure name. This way, you can limit the search to the exact word or merely the beginning or the end of the name.

Since the dialog box is not a modal window, you can continue working in the *Measure browser* without having to close the search function first.

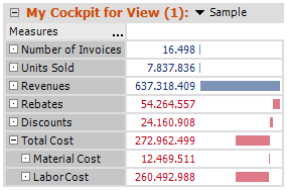
(3) Displaying Measures with Hierarchical Relationships

In the *Measure browser*, you can correlate two measures in a hierarchical relationship and display them in the pivot table. As a result, you can visualize compound measures (for example, total costs from different cost types) as clear, compact reports. An indentation emphasizes the hierarchal dependency in the pivot table. If you are using *Pivotizer* or a higher mode, you can also expand or collapse the compound measure using the plus or minus sign.



You can create a measure hierarchy in the *Measure browser* (*Model* menu) by holding the *Alt* key and dragging one measure (X) and dropping it on another one (Y). This action will convert the target measure (Y) to the parent node. If a hierarchy does not already exist under measure (Y), *DeltaMiner* will create one. The dragged measure (X) will be entered as a child node in the hierarchy. You can also create multi-level measure hierarchies, which *DeltaMiner* identifies with an indentation, by adding measure hierarchies to other hierarchies.

When you drag a measure or a measure hierarchy into a hierarchy, *DeltaMiner* will only display this measure or measure hierarchy in its structure - and not separately in the *Measure browser*. You can only use each measure in one hierarchy.



By hitting the *Del* key or clicking the *Removed selected measures* command in the context menu, you can remove the respective child measure(s) from the hierarchy. This will not, however, remove the measure(s) from the model. Before permanently deleting a measure, *DeltaMiner* will ask you to confirm if the measure should really be deleted. This prompt, however, will not appear when you remove a measure from the hierarchy, because it simply is moved to another section of the list.

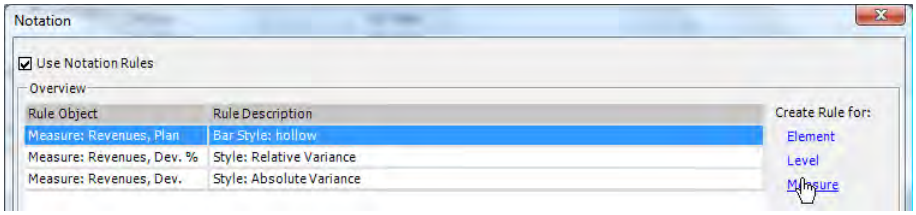
The *Waterfall* presentation in the pivot table incorporates this measure hierarchy by cutting the bar of the parent element (e.g. “Total cost” in the screenshot on your right) and displaying the breakdown in the indented, subordinate rows.

In theory, you can create hierarchies using any measures you wish. In reality, however, this only makes sense when the relationship is backed by both business and mathematical rules - in other words, the sum of the children nodes equals the value of the parent node. Since *DeltaMiner* cannot monitor these relationships in content, report authors must ensure that their man-made hierarchies are, in fact, correct. The hierarchy does not substantiate new calculation rules; it simply affects the handling and the presentation of measures in reports.

(4) Displaying Measures with Notations

You can also use the notation on measures to uniformly display business significance in graphical tables.

Using this feature, for example, you can clearly visualize absolute and relative budget-actual variances if the variance was already defined in the database (and not just as a calculated member in *DeltaMiner*). You do not need to use this method of defining notations for filter values that are generated in *DeltaMiner*; these still are affected by rules for members.

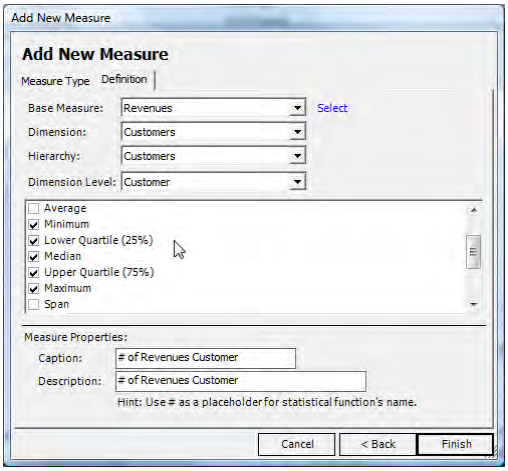


If a *measure* that has a notation rule is combined with a *member* that follows a separate one, the rule of the measure will prevail.

For more information about notations, please see *DeltaMiner deltas!* 5.3.5, Feature #1.

(5) Measures: Assistant for Upper and Lower Quartile

You can now use the wizard to create measures for lower and upper quartiles as *univariate statistical measures.* These measures are necessary to create the box-whisker chart which was introduced version 5.3.5 (see *DeltaMiner deltas!* 5.3.5, Feature #11).



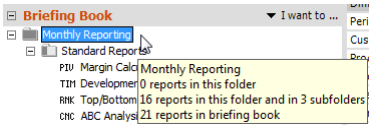
(6) Calculated Members: Significance Is Now Weighted Variance

In the Calculated member editor and Time analysis member editor, the term Significance is now called Weighted variance.

Weighted variance is defined as the product of absolute and relative variance.

(7) Briefing Book: Show Number of Folders, Reports and Subfolders

In Version 5.3.4 we introduced new folder symbols to give you an idea how "thick" a folder is (see *DeltaMiner deltas!* 5.3.4, Feature #6). As of Version 5.3.6, you can now view the exact numbers.

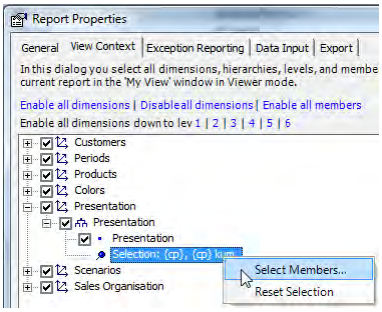


When you press and hold either the *Shift* or *Ctrl* key and mouse over a folder, *DeltaMiner* will display a tooltip showing how many reports are in the current folder and briefing book as a whole. If there are subfolders as well, *DeltaMiner* will also list the number of these folders and the total number of reports that they contain.

If you press and hold *Alt* instead of the *Shift* or *Ctrl* key, you can view the internal *Report folder ID* and the *View ID* as usual.

(8) Briefing Book: View Context for Members

Under *Report properties* and *Folder properties*, you can now determine if *DeltaMiner* displays specific members in the *Dimension browser* of *Viewer* mode or not. In previous versions, you could hide dimensions, hierarchies and levels – but not individual members – from *Viewer* users.



This function is most evident in single-level dimensions, for example, value types or time types (i.e. Time Utility). Previously, you could only offer *Viewer* users all or none of these options. Now, however, you give them access to “current” or “cumulated” but not to “variance to last year”.

The purpose of this function is to create user access rules for calculated members that are not known in the database. Restricting access to members, however, should remain a job for your database.

You can access the member selection features in the context menu on the last entry in the dimension tree. This option is either called *All members* or shows a list the names of the currently selected members. When you click on the member selection, the *Dimension browser* opens and you can select the members as usual. Please note that you must always select one hierarchy and at least one level so that *DeltaMiner* can display the members properly.

The respective tab under *Folder* and *Report properties* is now called *View context*.

The view context is **not compatible with previous DeltaMiner versions when** members are selected. Analysis files that contain a view context that uses a member selection can only be opened in **DeltaMiner 5.3.6** and subsequent versions. When you choose *Clear selection* and save the analysis file, you can open the file in older versions again.

(9) Report Server: Updated Metadata Schema

The metadata structure of Report Server has changed in Version 5.3.6. If you use Microsoft SQL Server to administer metadata, please run the “reportserver.sql“ script to update the changes. If you use an Access database, the metadata structure will be updated automatically.

(10) Report Server: Save E-mail Attachments After Sending

When Report Server generates a job and distributes attachments by e-mail, you can now opt to save these attachments after they are sent instead of deleting them. This feature is located in the job definition under the extended *E-mail attachment* function which also manages how the attachments are named (see *DeltaMiner deltas!* 5.2.0, Feature #8).

If you enter a path before the file name followed by an asterisk (*), ReportServer will save the attachment in the listed directory. You can also use the known variables of ReportServer (e.g. “@IMN“)

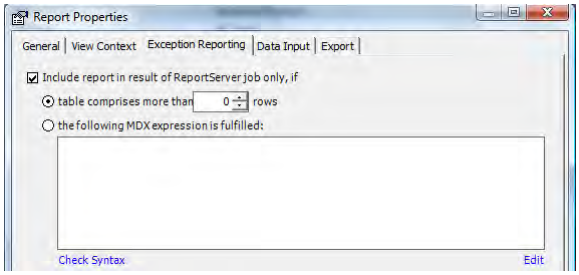
In other words, if you enter:

C:\Files\Monthly_Reports_@IMN.doc*

for the *E-mail attachment* and iterate a report generator in the job for North and South sales regions, ReportServer will create two Word files: “Monthly_Reports_North.doc“ and “Monthly_Reports_South.doc“. It will then distribute these files by e-mail and archive them under “C:\Files”.

(11) Report Server: Exception Reporting

It is now much easier to use Report Server for exception reporting. You simply define rules that state when each individual report should be part of the results of Report Server jobs. If according to the conditions no reports are left in the report folder, *DeltaMiner* will exclude the entire folder from the result. And if the tests show in a borderline case that the job does not deliver a single report, Report Server will end the job without any further actions. No reports will be generated or sent. That is the concept of exception reporting.



You determine the conditions whether a report will be part of the job result or not in the *Analysis Session*, or to be precise in the *Report properties* of each report. You can also specify that ReportServer should only include a report if it is “not empty” or when a certain type of condition has been met.

- A report is “not empty” when it contains more than a set number of rows.

  To ensure that this exclusion also applies in pivot tables, you should always *Hide empty rows* (This option is located in the *Axis definition*, the context menu or the *I want to…* menu). Otherwise, if a query doesn’t deliver any values, the table could contain rows that were defined, for example, in the *Member selection*. In this case, ReportServer would include this table, because it refers to the existence of rows and not the existence of values.

  You cannot, however, logically determine the number of rows for all report types, for example, Flexreports and combination cockpits. In this case, you can only use the *MDX conditions* that are described below.

- Alternatively, you can also define an MDX expression as a criterion to define conditions that do not hinge on the respective report or its length. If the expression returns the value “true”, the report will be accepted into the result of a Report Server job. If it is “false”, it will not.

To *Edit* the expression more easily, you can click the link on the bottom right-hand side of the MDX editor. This is the same function that is available for calculated sets, user-defined measures, etc.

Unlike other areas where *DeltaMiner* supports MDX entries, Report Server does not immediately use the expression but saves it for later usage. As a result, this feature has an extra *Check syntax* option. *DeltaMiner*, therefore, verifies if the expression is formally correct and shows if the condition is met for the view that is saved in the report. Later during the ReportServer job processing, however, a report update or report generator could take effect and produce other results.

Since this functionality allows you to deal with individual reports (not entire report folders) in Report Server, it is a huge improvement for regular reporting. There are many different reasons for this. Let's say that you have saved the reports "Budget – Domestic" and "Budget – International" in a report folder but you haven't yet started the planning process for your international business. With this new feature, you can automatically exclude the international report from distribution. Another common usage scenario deals with varying access rights. If report does not return any values for a certain user based on his or her access rights, Report Server can skip the report entirely.

When a job verifies the specified conditions and, as a result, does not produce a report, this function can be classified as exception reporting when all reports in the briefing book depend on this type of rule: A report folder that does not contain a report after all conditions have been checked will not be included in the job results. And if the job does not contain any folders or reports, ReportServer has nothing to do and the job ends with the message: No result generated because all reports are discarded.

DeltaMiner still supports MDX in the report generator. The new interface function, however, makes this old method obsolete in most cases. What is definitely not obsolete, however, is a general warning that Norbert Szyperski, a pioneer in the field of business information systems, made about exception reporting back in 1978:

"Specified thresholds in combination with the fictional management by exception are dangerous. A manager should be an inquiring mind who searches for new relationships in information – not a watchman who dozes at the switchboard."

(quoted by Mertens/Griese in "Integrierte Informationsverarbeitung 2", Wiesbaden 2002).

(12) Report Server: New HTML Export Format

ReportServer now supports HTML as an output format.

As a result, you can now place the desired information directly in an e-mail so that the report consumers can read it without needing to open a separate attachment.

You can use this option for modern cell phones, smartphones, PDAs and other mobile devices because you no longer need a separate program to view e-mail attachments. The devices only need capabilities to access e-mail and render HTML.

You can use this new feature to publish reports in the Intranet. Unlike *DeltaMiner's* service-oriented Web Option, these HTML exports are static and offline, meaning that they are not connected with the database.

The actual report content (i.e. tables and charts) are generally saved as JPEG images which are then referenced in the HTML file.

Exporting files into HTML requires a license for Report Server Office ("DM-RPSO"; see *DeltaMiner deltas!* 5.3.2, Feature #8).

Export template

In order to export files, you need an *Export template* - a sample (X)HTML file containing variables that state where Report Server should enter the various components of the exported report. During the export process, for example, each occurrence of "##database##" will be replaced by the current OLAP database in the output HTML file.

In the job definition under *Export template,* you can state which file should be used for the template. If this information is missing, Report Server will choose the "DeltaMaster.htm" file in the same directory where the "ReportServer.exe" file is stored. *DeltaMiner* includes a sample file which you can edit and customize to your corporate requirements.

Each of the following variables embedded in "##...##" will be replaced in the template.

Variable („##...##")	Meaning (if not evident)
lang	Language – "en" = English, "de" = German, …
shortdate	
longdate	
shorttime	
longtime	
author	
version	DeltaMiner / Report Server version
database	Name of the OLAP database
cube	Name of the (first) cube

Variable („##...##“)	Meaning (if not evident)
folderbegin	Beginning of the iterative code for each folder
folderid	
folderlevel	In the briefing book, first level = 1
foldertitle	
folderend	End of the iterative code for each folder
reportbegin	Beginning of the iterative code for each report
reportid	
reporttype	Three letter acronym as used in the briefing book
reporttitle	
reportview	
reportstatus	Report comment
reportimage	
reportimage[bmp|png|jpeg|tiff|gif]	Please use brackets [ ]
reportimagewidth	
reportimageheight	
reportactiontitle	
reportcomment	
reportend	End of the iterative code for each report

The tags for the beginning and end of a folder or report (“##folderbegin##”, “##folderend##”, “##reportbegin##“ and “##reportend##“ have a special meaning – they must appear together, but only one

time, in the template. The text embedded between them will be displayed in each report folder or report. The text located outside of these tags will only be written once in the target file. In the HTML file, the folders and reports will appear in the same order as in the expanded briefing book. As a result, "##folder[begin|end]##" and "##report[begin|end]##" cannot be nested in each other.

Since *DeltaMiner* does not export HTML comments ("<!-- ... ->"), you can use them for internal documentation.

You can define specific stylesheet rules (CSS) for select report elements by using the variables that produce technical properties (e.g. "reportid" and "reporttype").

Distribution type

The HTML export is useful for distributing information as a file, by e-mail or through FTP. The distribution type determines which parameters are necessary in the job definition.

- *file:* Enter a file name (.htm) or a directory under *Address*. If you enter a directory, *DeltaMiner* will automatically use the name of the analysis session plus the ending ".htm" as the file name. The report images have the name "imgXYZ.jpg" and are stored in the same directory as the HTML file. They are integrated into the page as such:

  <img src="##reportimage##">

- *mail:* Enter one or more e-mail addresses separated by a comma under *Address*. Under *E-mail subject*, enter the subject of the message; if desired, you can also use the known variables in Report Server (e.g. "@IMN"). You do not need to type an *E-mail text* because this will be generated automatically from the export template.

  When you send an e-mail, the images displayed in the reports could be located in one of two places. You can either directly embed them in the e-mail message or store them on a Web server from where the mail client may load them.

  If you use embedded images, you also need to include the URI scheme "cid" (Content ID, see RFC 2392; URI = Uniform Resource Identifier):

  <img src="**cid:**##reportimage##">

  If the images are stored on a Web server and need to be reloaded from the e-mail, the template must contain the name of the server, the directory where the image is saved as well as further components – everything except the image name that is automatically generated during the export:

  <img src="http://server/folder/##reportimage##">

  When you store images on the Web server, ReportServer needs additional information on how it can upload the generated image files on the Web server via FTP. This information is stored under *E-mail attachment*. Please enter the login information for the FTP server in the following format:

  ftp://user:password@server/folder

- *ftp:* For the *Address* please enter a URI either with or without a file name just as you would for *file*:

ftp://user:password@server/folder/file.htm or
ftp://user:password@server/folder

If only the directory name is listed, Report Server will automatically use the name of the analysis session plus ".htm" as the file name. The images for the reports will be stored in the same directory.

Image references

Regardless of the distribution type, the HTML standard specifies that images should have an alternative text, in this case, the name of the report. The browser that will display the report can load the pages more quickly if it knows the measurements before loading the image. A reference for this information could look like this:

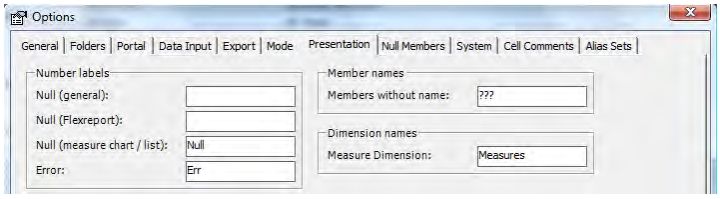
```
<img src="##reportimage##" alt="##reporttitle##" width="##reportimagewidth##"
height="##reportimageheight##">
```

If the images should be embedded in the e-mail, simply add "cid:" before the "##reportimage##" variable as described above.

Some e-mail clients have a default setting that block images from a Web server. Most, however, offer one-time as well as universal display options.

(13) Display Options: Saving Values and Member Names in the Analysis Model

Under *Options* (*Extras* menu) on the *Presentation* tab, you can enter various display names for missing values or member names. As of Version 5.3.6, these names will now be stored in analysis models and sessions - not under the Windows registry.



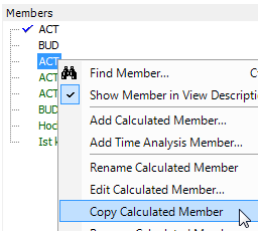
In the past as well, the entries on this tab apply for the entire analysis model or session - but not the computer as a whole.

This change helps unify reporting because all settings on this tab apply for the respective session. As a result, they will also appear in the Web Client just as the report author intended.

(14) Copying Data: Copying Calculated Measures to Measures

When you *Transfer data* through the respective dialog (*Edit* menu) or drag and drop it into pivot tables and Flexreports, you can now use calculated measures as a source. As in the past, the target cells had to reference a regular measure.

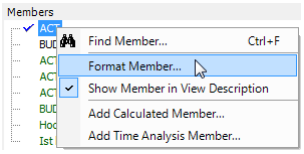
(15) Dimension Browser: Copying Calculated Members



You can now also copy calculated members in the *Dimension browser*. Simply select the respective option from the member's context menu. *DeltaMiner* will then duplicate the selected measure and display the copy below the original. This copy function takes place immediately, so you do not need to paste it separately. Since the new measure is completely independent, you can modify all of its properties without affecting the original measure. Notation rules defined for the original measure will not be copied.

You can copy calculated members and time analysis members but not virtual ones (e.g. a class from a virtual hierarchy). Measures can be copied in the same way (see Feature #1).

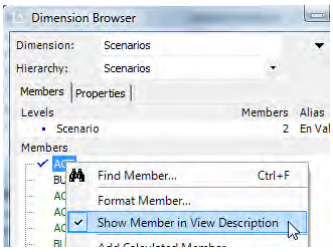
(16) Dimension Browser: Formatting Members Defined in the Database



You can now format members that that are defined in the database (i.e. are not stored as a calculated member in *DeltaMiner*). Using the respective option in the member's context menu, you can open the same dialog box that you use to determine the format of numbers in calculated members. You can also use *Format templates* here as well (see *DeltaMiner deltas!* 5.3.5, Feature #2).

The default setting is *No formatting*, a non-existing option for calculated members. It is designed to reset (i.e. deactivate) user-defined formatting for database members.

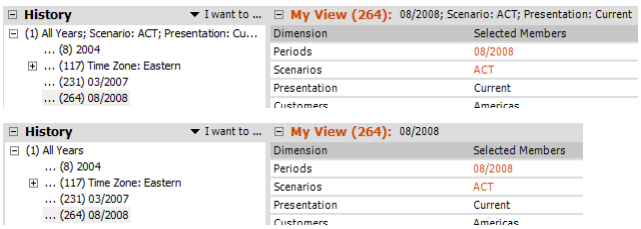
(17) Dimension Browser: Hiding Default Members in View Descriptions



You can hide members in view descriptions so that they are shorter – and easier – for users to understand (See Feature #18).

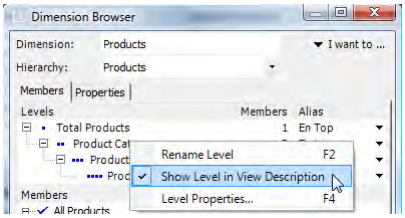
This option is designed for standard or default members such as "actuals", "not cumulated" or "current". If nothing is listed to the contrary, you probably want your report consumers to understand the numbers as actual, not cumulated and current. If this basic assumption is universally accepted, you don't need to repeat these names in every report. You only need to label varying views (e.g. "budget", "cumulated ", "variance to the previous month").

In the screenshot on your right, you can see the shortened view description in *DeltaMiner* 5.3.6. The standard member "current" was hidden from both the value type and time type dimension. For a further example, please refer to Feature # 18.



Hiding the view description is effective when only that member is selected in the dimension. In a multiple selection such as "actual, budget", *DeltaMiner* will display all members to avoid confusion.

(18) Dimension Browser: Hiding Names of Dimension Levels in View Descriptions



You can now hide the names of dimension levels in the view descriptions to make them more compact. (see Feature #17).

This option is particularly useful when the report consumers can either easily identify which level the selected members are referencing or do not need to know the exact hierarchy. If customers are grouped by countries, for example, the term “Germany” is much shorter and easier to understand than “Country: Germany”. If “Germany”, however is used in several dimensions (e.g. when a logistics company differentiates between the originating country and the destination country), you should continue to display this level.

The default setting is identical to the previous behavior. *DeltaMiner* displays the level name in all dimensions except the time dimension. To show or hide these levels, simply use the respective option in the context menu

My View (267): United States; Luxury Division; Sales Group A; 08/2008

Dimension	Selected Members
Customers	United States
Products	Luxury Division

My View (267): 08/2008; Scenario: ACT; Presentation: Current; Country: United States; Product Category: Luxury Division; Sales Group: Sales Group A

Dimension	Selected Members
Customers	United States
Products	Luxury Division
Sales Organisation	Sales Group A

In the first screenshot above, you can see the shortened view description in *DeltaMiner* 5.3.6. Here, *DeltaMiner* has hidden the level names for “Country“, “Product Category” and “Sales group“. The value type and presentation (time utility) dimensions are also missing in the view description because they were also hidden as described in Feature #17. The second screenshot shows the standard setting for comparison.

This option has no effect on MDX expressions (“{<viewX>}“), for example, in names of reports or folders.

View descriptions are always present in *DeltaMiner*. In *Reader* mode, for example, they are located at the top of all reports, in Miner they are stored under *History*, and in other levels they are located behind *My view* in the menu bar. It makes sense, therefore, to check which level names the readers really need to understand what the report is about. In many cases, condensed view descriptions improve readability.

(19) Flexreport: Conditional Data Entry Authorization in Flexreport Cells

You can use conditions to determine if users can make entries into a planning application or not.

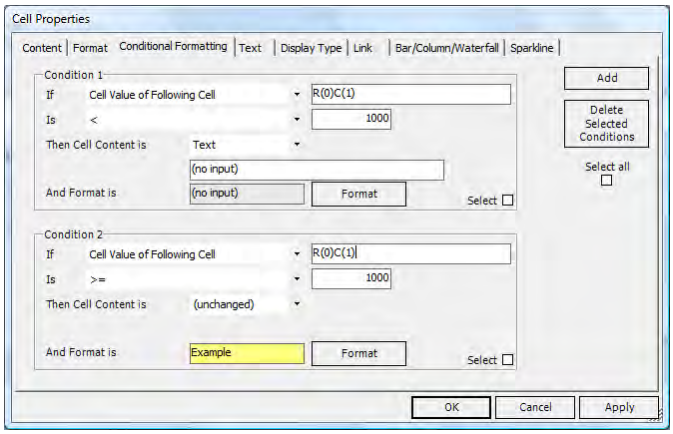
This feature combines two tabs under *Cell properties*. Under *Conditional formatting,* you list the condition that should be verified. Under *Data entry, DeltaMiner* offers a new option that only enables data entry into a cell when the selected condition has been met. Until that point, users cannot enter data in these cells.

For example: Let’s assume that you are about to create a first draft of your 2009 revenues budget broken down by main product groups. At this stage you only want to collect budget data for the most important groups, specifically, those in

My Cockpit for View (267): Revenues Budget

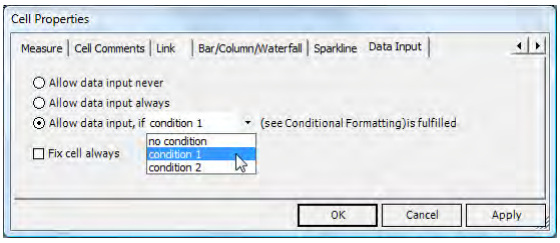
Customer: Idea		
	Budget 2009	Actual 2007
Luxury Division	(no input)	0
Custom Made	17.557	59.225
Standard Models	901	1.719
All Products	19.006	60.944

which you generated revenues of € 1,000 or more per customer in 2007. The Flexreport contains fields for the 2009 budget values as well as 2007 revenues. Your users, therefore, should only be able to enter data for the main product group, if the minimum sales target had been reached in 2007.



To implement this, you will first need to create to *conditional formats* that are mutually exclusive: Condition #1 for revenues under 1,000 and Condition #2 for revenues greater than or equal to 1,000. We have assigned different formats for these alternatives so that the users can clearly see where they can make an entry and where they cannot in the data entry form. Rule 1 makes the background gray and overstrikes the actual cell content with the message “(no input)”. Rule 2 makes the background color yellow and frames the cell to make it stand out. Both rules examine the values in other cells, namely “R(0)C(1)“, which is the relative reference for the value located in the same row one the column to the right.

In the next step you need to define that *DeltaMiner* should only *Allow data entry* when Condition #2 has been meet.

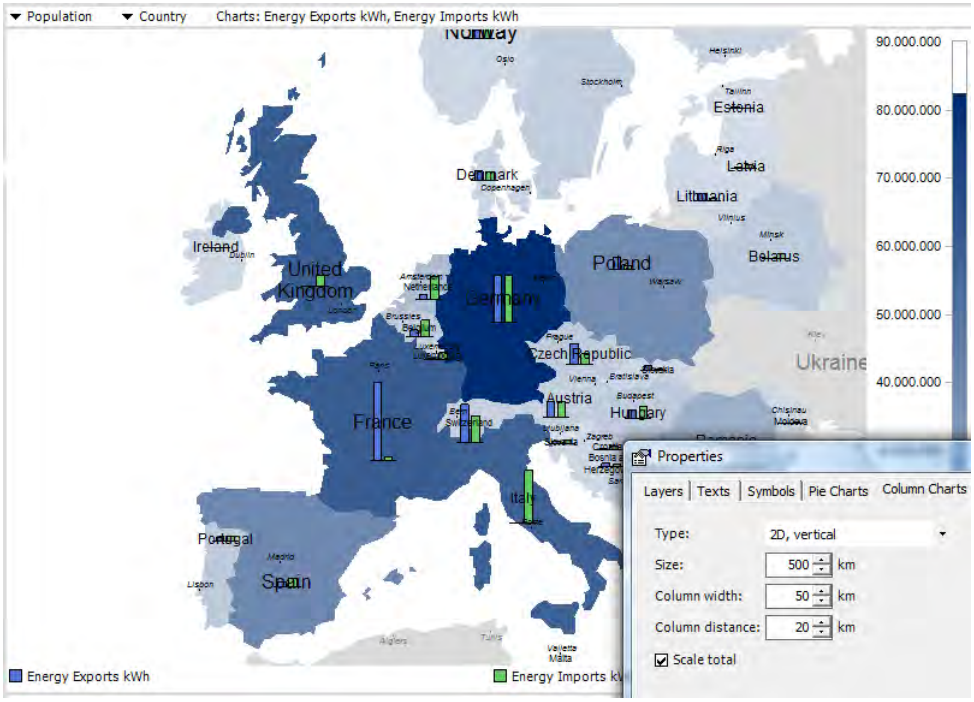


By linking *conditional formatting* and *data entry* you only need to administer conditions at a single place in the *Cell properties*. In addition, user interfaces typically display write protected fields in gray to show the users where they cannot enter data. With *DeltaMiner*, this formatting is easy to replicate.

Of course, adding special formatting is not necessary. The data entry depends on the condition – even if you did not select a special format.

(20) Geo Analysis: Uniform Scaling for Column Charts

In *Geo analysis,* you can create column charts based on a common scale. Go to *Properties* (context menu, *I want to…* menu), click on the *Column charts* tab, and activate *Scale Total.* By using this new option you can compare differences within as well as between the different groups of columns. As in the past, the default setting uses a separate scale for each column group.



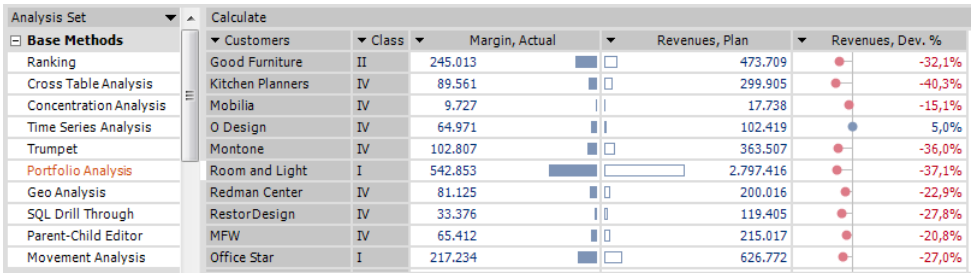
(21) Cross Table Analysis: Automatic Formatting in a Reduced White Style

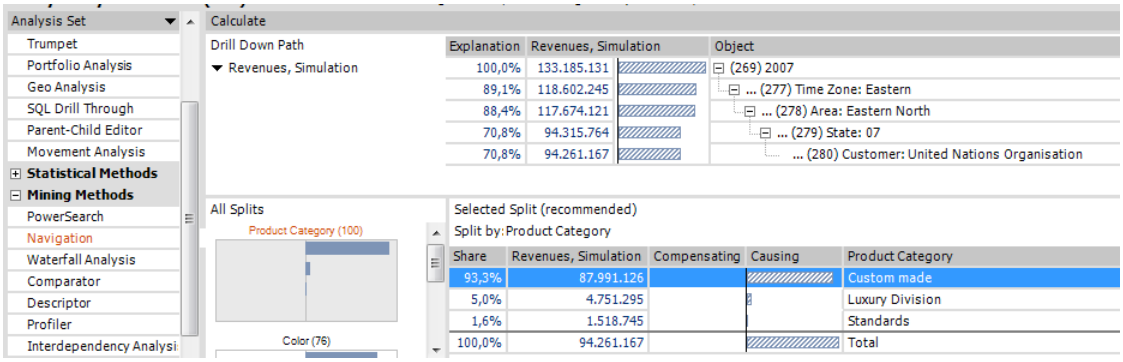
You can now automatically display reports from a *Cross table analysis* in a “white style” depending on the current user level. This same feature is available for pivot tables as described in detail under Feature #23.

(22) Notation in Portfolio, Navigation, Waterfall Analysis, Comparator and Profiler

You can now use notation in the table presentation (*View* menu) of the following analysis methods: *Portfolio*, *Navigation*, *Waterfall Analysis*, *Comparator* and *Profiler*. As a result, users can clearly see the business significance of the presented measures in these reports.

The screenshots below show examples in *Portfolio analysis* and *Navigation*.





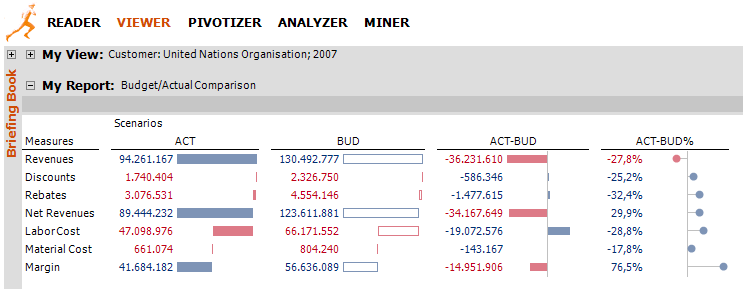
For more information about notation, please refer to *DeltaMiner deltas!* 5.3.5, Feature #1.

(23) Pivot Tables: Automatic Formatting in a Reduced White Style

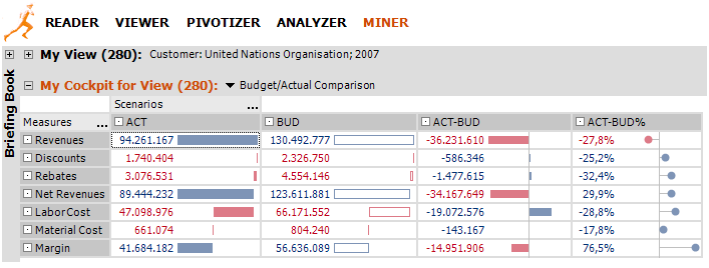
You can now display pivot tables in “white style”, a sleek, elegant design without frames or background colors for hierarchy columns. You no longer need Flexreports to achieve this matter-of-fact style.

How the white style is displayed depends on the current user mode. Although you can apply the white style in reports for *Offline Reader*, *Reader* and *Viewer* users, those with *Pivotizer* access or higher will view them in the usual look and feel. As a result, report consumers with or without the desire for interaction (up to *Viewer*) see reports in the minimal design. In levels that offer more sophisticated analytics and allow users to actively design and customize the tables, *DeltaMiner* offers the regular controls (e.g. grids). If desired, users in these advanced levels can also apply the white style to all functions.

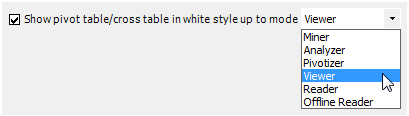
The screenshot on your right shows a pivot table in white style which was automatically selected for the *Viewer* mode.



In contrast, this screenshot shows a view from *Miner* mode, in which the regular style is applied to the table.



You can activate the white style display under *Options* (*Extras* menu) on the *Presentation* tab. When you activate this option, *DeltaMiner* will display pivot tables in white style for users working in *Offline-Reader* to the selected level in the list. The other levels will display the “normal” presentation. The default setting for this option set up to *Viewer*.



DeltaMiner treats and displays pivot tables that are embedded in combination cockpits identically to those in *Reader* mode. As a result, the white style will also apply in combination cockpits for users working in a higher level than the one specified.

This setting applies for all reports and cockpits in the current session that are based on pivot tables or *Cross table analyses*.

(24) Web Client: Data Entry in Flexreports

The Web Client now supports the entry of budget data in Flexreports. In the past, users could only enter data into pivot tables from the Web. Now you can publish individually designed data input templates for users. The same features apply as in pivot tables (see *DeltaMiner deltas!* 5.3.5, Feature #16 for more information).

(25) Web Client: SQL Drill Through Reports as HTML Tables

Instead of images, the new output form of SQL Drill Through Reports is an HTML table. This accelerates the availability of these reports and allows you to further use these values, for example, by copying them to a clipboard.

(26) Notes: Compatibility with Previous Versions and Installation

You cannot open analysis sessions containing individually selected members for the *View context* (see Feature #8), with previous versions of *DeltaMiner*. If you do not use the member selection feature in the *View context,* you can open analysis files (.das and .dam files) that were saved in *DeltaMiner* 5.3.6 in older versions of the software.

The metadata schema of **ReportServer** has changed in this version. As a result, you should refresh “ReportServer.exe” and the respective DLL files (so that they match the current *DeltaMiner* version) as well as update the metadata schema as described in Feature #9.

The **Web Option** components (i.e. Repository, Web Client und Web Service) are also available in the new version. An update is recommended.

Before you update these files, however, please save a backup copy of the configuration files! These are “web.config” in the Web Client, “DeltaMaster.Service.exe.config“ for the Web Service and “DeltaMaster.Repository.exe.config“ for the Repository GUI. If you have customized the appearance of Web Client so that it fits your corporate design or can be integrated in a portal, please also create a back up of “DeltaMaster.css“ which contains all stylesheet rules as well as any changed images (in the “Images“ folder, e.g. “Master_Top.png“).

You can update the Repository GUI, Web Service and Web Client by copying these files into the respective directories. Once again, please make a backup copy of these files before doing so. A separate setup is not necessary.

There were no changes to the database schema of the repository or the configuration files in Web Service and Web Client (*.config). As a result, you do not need to transfer your existing configuration into the new files. Nevertheless, you should always create backup copies of the previously used files. This ensures that you can easily restore your settings in the unfortunate case that someone would accidently replace your previous configuration files with the standardized ones that come with the new release.

9 DeltaMiner deltas! 5.3.7

What's new in version 5.3.7? Find out in this overview of the Nov. 14, 2008 release!

(1) Small Multiples 2

(2) Dimension Browser: Limiting a Search to Specific Levels 11

(3) Flexreport: MDX Variables in URLs of Linked Images 12

(4) Flexreport: White Style When Converting a Pivot Table 12

(5) Geo Analysis: Removing Mapping Errors in Scales and Color Coding 12

(6) Hyperbrowser: Hiding 0, Empty and Filter Nodes 12

(7) Pivot Tables: Exporting Bars, Columns and Water Fall Charts to Excel 13

(8) Pivot Tables: Tuple Editor for Nested Axes 13

(9) PowerPoint Export: New Template DeltaMaster.pot 15

(10) Ranking: White Style Design 16

(11) WebClient: Copying data (Planning Option) 16

(12) WebClient: Dimension Groups 17

(13) WebClient: 'session.aspx' 17

(14) WebClient: Portal Integration 17

(15) WebClient: White Style in Pivot Tables 17

(16) WebClient: Back from Linked Reports 17

(17) Notes: Compatibility with Previous Versions and Installation 18

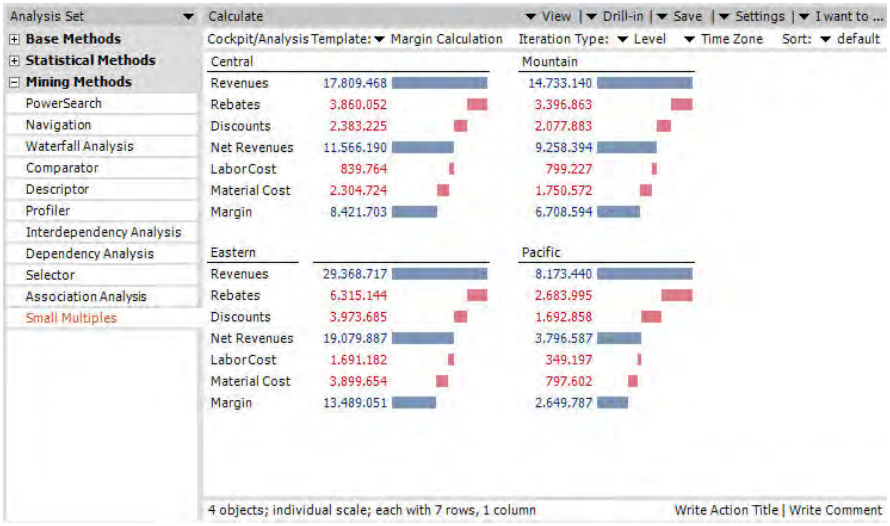
(1) Small Multiples

DeltaMiner‘s Miner Expert mode now contains a new analysis module under Mining methods called ‘Small Multiples’, a visualization that consists of many similar tiles or parts.

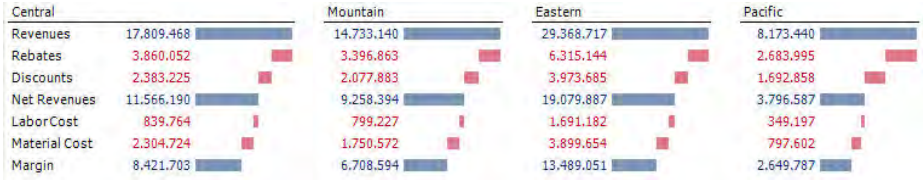
This method automatically creates a report containing several ‘multiples’ or similar report parts. For example, it could contain pivot tables with the same structures or several rankings with the same construction. Similar to a combination cockpit, an analysis template or cockpit serves as the template. DeltaMiner then iterates the calculation of this template for multiple measures, members or dimensions to answer the same question for different report components. It automatically formats these multiples and displays them on the screen. Visualization elements may be used globally or individually for each part of the report.

(a) Usage scenario

Before we explain how to use this method in section (b), let’s first look at an example of how it works. In our ‘Chair’ reference model, we created a pivot table with a waterfall visualization to show the margin for a specific region. Using Small Multiples, you can create a report that shows the margin for each of our customer regions (Central, Mountain, Eastern, and Pacific time zone) with just a few clicks of a mouse.

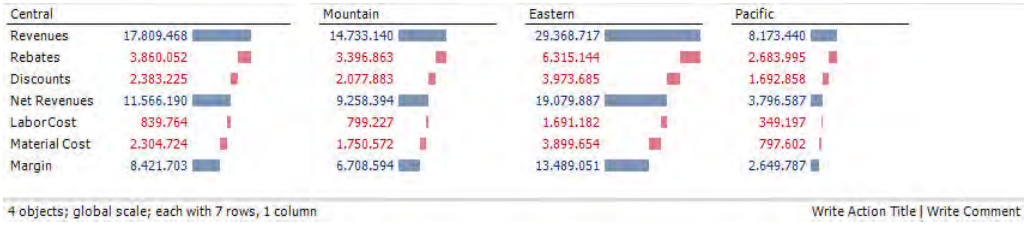


DeltaMiner automatically groups these four report components into the allotted space on your screen. Depending on how you partition your screen, you could view four multiples in a single row.

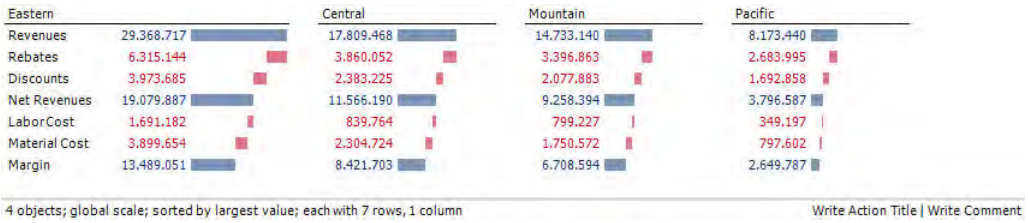


To save space, DeltaMiner automatically omits redundant labels. The seven measures, therefore, only appear at the beginning of each row because they would be identical in all four multiples in that row.

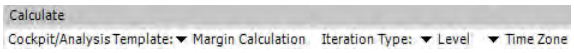
In order to visualize the relative size of each bar's length in relation to all multiples in that report and not just a single one, you could also apply a uniform, global scale to the bars of the waterfall charts. For more information about these scaling options, please refer to section (f).



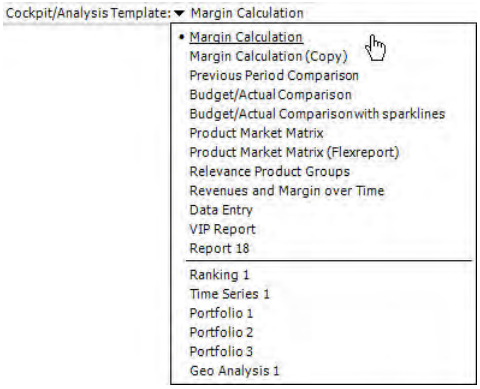
Finally, you could also organize the report parts based on their values so that the strongest region – in this case, Eastern – appears first and the weakest one – Pacific – comes last. Please read section (e) for more information about rankings.



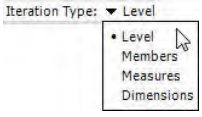
(b) Selecting the cockpit/analysis template and iteration type



Although these reports transport a tremendous amount of information in an extremely small space, they are very easy to generate. You can create all of the necessary settings in three simple steps all within the header of the My analysis window.

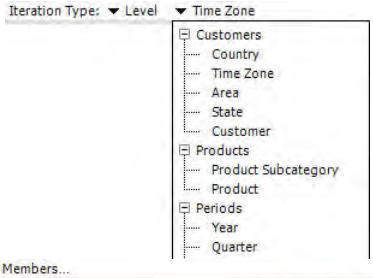


Step 1: Under Cockpit/Analysis Template, you simply select the template that should be repeated (i.e. iterated) for the multiple. Here you can choose either an existing cockpit (based on a pivot table or Flexreport) or an analysis template (where DeltaMiner saves the settings of the analysis methods). The upper part of the list displays the possible cockpits while the bottom section shows the analysis templates. Analysis templates that are not currently supported will not be displayed in this list.

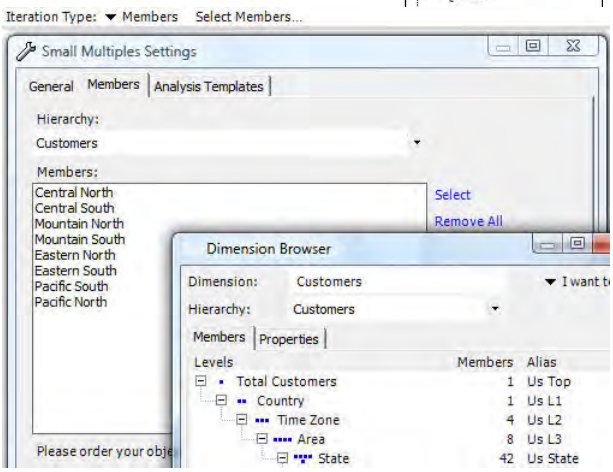


Step 2: Under Iteration type, you then determine what type of repetition you would like to use. DeltaMiner can calculate each part of the report for a different member or measure. To repeat the tiles for multiple dimension members, select either Levels or Members. If you want to calculate the template with different measures – for example, sales, revenues and margin – select Measures. If you choose to repeat by Dimensions, each tile will contain a calculation based on a different dimension. With this option, therefore, you could combine separate analyses of your top ten customers, products and sales channels in a single report.

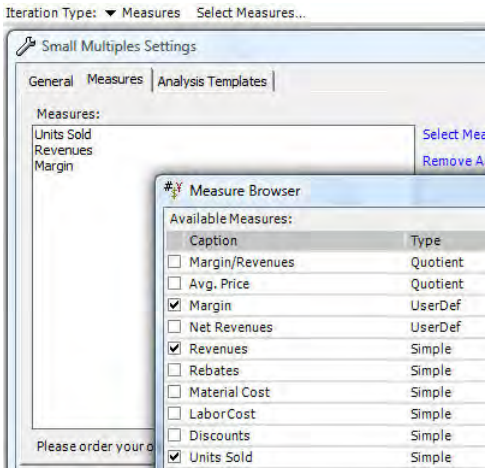
Step 3: Now you select which members or measures you would like to use in your report. The available options, which depend on the selected iteration type, are identical to those in other areas of DeltaMiner:



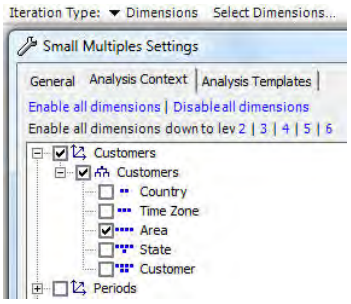
- Levels: In the header, DeltaMiner will display a hierarchy menu in which you can select the desired dimensions and hierarchy levels. The template will be calculated for each member on this level under the current view.



- Members: DeltaMiner will display a Select Members link in the header. When you click on this link, you will open a settings dialog box. If you then click on the Select link, you will then open the Dimension browser. The usability is very similar to selecting a member in the axis definition of a pivot table. To change their order, simply drag and drop the members in the Settings dialog box.



- Measures: DeltaMiner will display a Select measures link in the header. By clicking on this link, you will open a settings dialog box. Now, if you click on the Select measures link in this box, you will open the Measure browser. Here, too, you can change the order of the measures in the Settings dialog box through drag and drop.



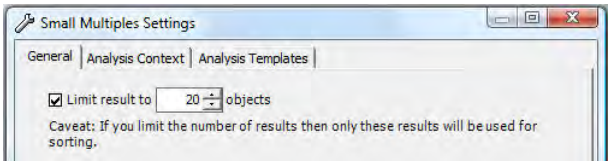
- Dimensions: Here, you select the hierarchy levels (i.e. the Analysis context) in which DeltaMiner should calculate the analyses. In each dimension only the highest of the selected levels will be taken into account.

You can change your current selection of members, measures and dimensions at any time under Settings (menu line). If you want to change the levels, you will need to do this from the header.

(c) Calculation and settings

Once you have selected a cockpit or analysis template, the iteration type, as well as the desired levels, members, measures or dimensions, you have all of the important parameters for creating a Small Multiples report. When you now click Calculate, DeltaMiner will generate the report.

To generate the report, DeltaMiner again takes the selected cockpit or analysis template, internally changes the view piece by piece in each of the selected members or inserts each of the selected measures, calculates the multiples, formats them, and combines them into a single, new Small Multiples report.



Under Settings (menu bar), you can limit the number of multiples that you wish to create. In addition to helping you focus on what is most important, this option also protects you from unintentional and overly complex calculations, for example, when you run Small Multiples for a level containing many members. Please note that the ranking of the multiples, as described in section (e), takes place after the limitation. As a result, this is a simple upper limit based on a number and not something along the lines of ‘top count’ logic.

(d) Supported types of cockpits and analysis templates

You can use the following types of cockpits and analysis templates as a basis for Small Multiples:

- Pivot tables
- Flexreports
- Rankings
- Cross table analysis
- Time series analysis
- Portfolio analysis
- Geo analysis
- PowerSearch

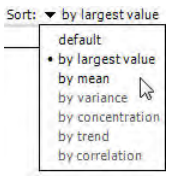
The following table shows which combinations of small multiple templates and iterations DeltaMiner currently supports:

		Levels	Members	Measures	Dimensions
PIV+	Pivot tables	+	+		
FLX+	Flexreports	+	+		
RNK	Rankings	+	+	+	+
XTB	Cross table analysis	+	+	(+)[1]	+
TIM	Time series analysis	+	+	+	
PFL+	Portfolio analysis	+	+		+
GEO+	Geo analysis	+	+		
PWR+	PowerSearch	+	+	+	+

[1] cross tables containing only one measure

In the pivot table as well as in all of the listed analysis methods, you can switch your View (menu in the My cockpit or My analysis windows) to show a Table, Chart or a combination of the two. DeltaMiner will save this selection in the analysis template. In general, Small Multiples supports both pure tables as well as pure chart views with the exception of geo analysis, which can only be iterated as a chart. It does not, however, supported combined views for any of these methods.

(e) Sorting



DeltaMiner can sort the individual multiples based on pre-defined criteria so that the most important ones appear first (i.e. in the upper-left corner) and the least important ones come last (i.e. bottom-right corner).

Depending on what type of cockpit or analysis template you have selected, DeltaMiner will offer different criteria for sorting the multiples.

- Standard arranges the tiles without further comparisons either in the order produced by the database or created by drag and drop. This is the only option for Flexreports.

- By largest value applies the largest value from each multiple. If the multiples contain multiple measures, DeltaMiner will observe these across the board and use these ‘ local maximas’ to create the sequence. This option is available for all template types except Flexreports.

- By mean: DeltaMiner calculates the arithmetic mean of all values for each multiple. If each multiple contains several measures, it will observe all of them and arrange the values starting from the mean value downward.

- By variance and by concentration: DeltaMiner can only calculate these measures in templates that examine just one single measure. All of the displayed values – in other words, only the top, only the bottom or the top and bottom – will then be used in the ranking. In a portfolio analysis, DeltaMiner will only take the bubbles into account, whereas in a geo analysis, it will apply the first measure which is also used to determine the area coloring.

- You can sort time series analyses by trend if the Trend lines option is activated in the analysis template.

- You can also sort by correlation for portfolios as well as time series analyses if the Trend lines option is activated.

The following table shows which sorting options are available for the different types of templates.

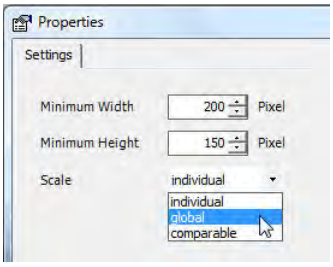
		Standard	Largest value	Mean	Variance	Concentration	Trend	Correlation
PIV	Pivot tables	+	+	+				
FLX	Flexreports	+						
RNK	Rankings	+	+	+	+	+		
XTB	Cross table analysis	+	+	+				
TIM	Time series analysis	+	+	+			+	+
PFL	Portfolio analysis	+	+	+	+	+		+
GEO	Geo analysis	+	+	+	+	+		
PWR	PowerSearch	+	+	+				

Since you can sort the information without running a new database query, you can quickly switch among the different options – even when using Offline reader mode.

(f) Scales: Individual, global or comparable

Using Small Multiples, you can automatically scale bars, complete pivot charts or other visualization elements. With other tools, that is nearly impossible! To facilitate comparisons within as well as across several multiples, you can then either apply a common scale or color scheme.

You can define the scale under Properties (I want to… menu). If the underlying cockpit or the analysis template uses pure graphics and not tables, you can define the minimal width and height here as well.



The Scale is a special feature that is only available for time series. It ensures that DeltaMiner uses the exact same angles of line segments for the same percentage changes of the presented values. In other words, if the slopes are equal, the relative changes are as well.

(g) Examples and notes about analytic methods

Pivot tables

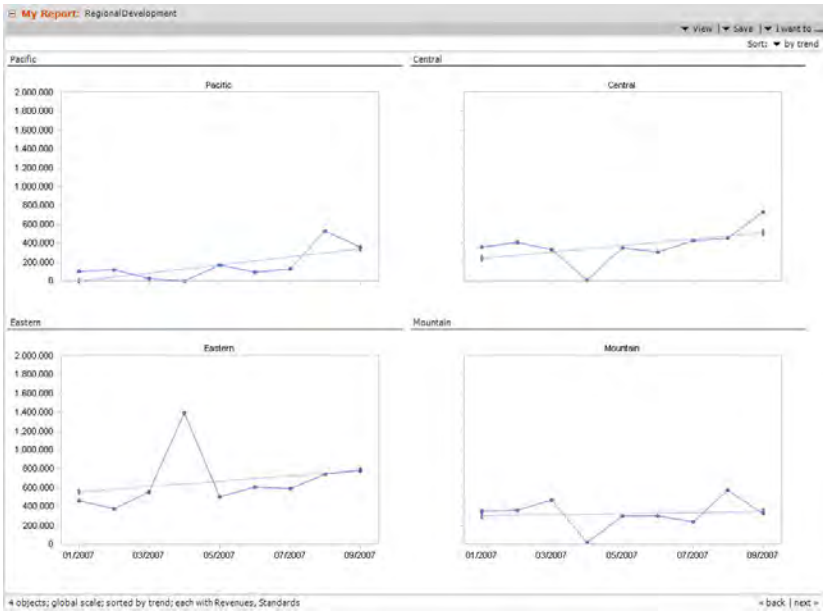
Section (a) includes examples for the iteration of pivot tables. If you have selected a global scale for your Small Multiples report, DeltaMiner will automatically apply the scale options of the bars, columns, waterfall elements and sparklines:

- If the bar/column/waterfall elements in the base pivot table refer to the table, DeltaMiner will apply the same scale in and across all multiples. If the reference is either based on individual rows or columns, however, it will create a uniform scale for the same rows/columns in the multiples. In other words, although the scale will still reference individual rows or columns, DeltaMiner will observe the respective rows and columns across all multiples.

- Sparklines that are scaled within a given cell will keep that format even when you apply a global scale to the Small Multiples. The sparklines that are scaled by tables or columns, however, act the same way as the options for bars do. In short, the scaling for the time series will be based on all cells from all multiples or on all cells of the respective columns.

Time series analysis

Time series analyses are the only type of template that supports Comparable scaling. This feature ensures that DeltaMiner will visualize the same percentage changes in values with identical slopes between the points of data.



If you use a Global scale, DeltaMiner will omit any redundant axis labels. It will label the tiles on the left and bottom corners of the chart. This scale applies for all other tiles. If you have chosen an iteration over levels, members and dimensions, DeltaMiner will only account for one measure which it will specify in the status bar at the bottom of the report. If you select an iteration over measures, it will state the names with the chart.

Ranking

The following example shows a ranking that was iterated over the ‘Revenues’ and ‘Margin’ measures.

My Report: Top 10 Products by Revenues and Margin

03/2007

Revenues

Top	Product	Share	Revenues
1.	DCW Plywood	51,4%	8.008.523
2.	Softpad 117	13,3%	2.067.215
3.	Softpad 217	7,3%	1.139.121
4.	Softpad 208	7,3%	1.130.799
5.	Jackson 10	6,8%	1.061.384
6.	Precisio LF	3,9%	609.640
7.	Arcade AM 44	2,8%	433.960
8.	Arcade AM 55	2,3%	363.482
9.	DCW Steel	1,7%	271.105
10.	Jackson ZZ	1,2%	180.267

Margin

Top	Product	Share	Margin
1.	DCW Plywood	42,4%	3.009.846
2.	Softpad 117	27,8%	1.970.212
3.	Jackson 10	4,7%	330.863
4.	Softpad 217	4,6%	329.280
5.	Softpad 208	4,2%	295.572
6.	DCW Steel	3,6%	258.552
7.	Precisio LF	3,4%	241.788
8.	Arcade AM 44	2,6%	183.950
9.	Jackson ZZ	2,3%	165.910
10.	Arcade AM 55	1,9%	133.483

In this example, however, we have used the Dimension iteration type to combine the sales by customer (on state level), by products and by calendar months in a single report.

My Report: Top 10 States, Products, Months

2006

State

Top	State	Share	Units Sold
1.	Maine	36,8%	1.007.905
2.	Connecticut	18,5%	505.963
3.	Pennsylvania	5,4%	148.453
4.	Nebraska	3,7%	101.418
5.	Maryland	3,6%	99.495
6.	New York	3,6%	97.771
7.	California	3,1%	86.144
8.	Texas	2,6%	71.674
9.	Vermont	2,1%	56.225
10.	Tennessee	2,0%	55.870

Product

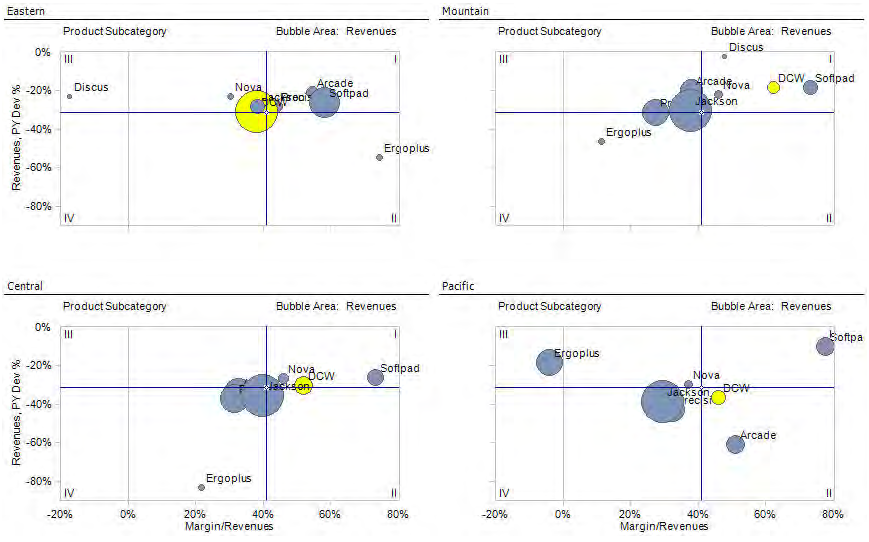
Top	Product	Share	Units Sold
1.	Precisio JK	20,3%	555.249
2.	Jackson 10	12,2%	334.829
3.	DCW Plywood	11,3%	308.752
4.	Softpad 217	11,2%	306.781
5.	Ergoplus Nova	11,2%	306.532
6.	Arcade AM 44	7,4%	203.261
7.	Softpad 117	5,1%	138.547
8.	Precisio LF	4,8%	130.723
9.	Nova B	4,0%	109.183
10.	Jackson ZZ	2,3%	61.703

Month

Top	Month	Share	Units Sold
1.	12/2006	29,6%	811.448
2.	08/2006	9,4%	256.545
3.	11/2006	7,4%	203.156
4.	10/2006	7,0%	191.133
5.	09/2006	6,6%	181.391
6.	05/2006	6,5%	178.633
7.	01/2006	6,5%	176.776
8.	03/2006	6,3%	172.567
9.	06/2006	6,2%	168.519
10.	02/2006	5,7%	157.245

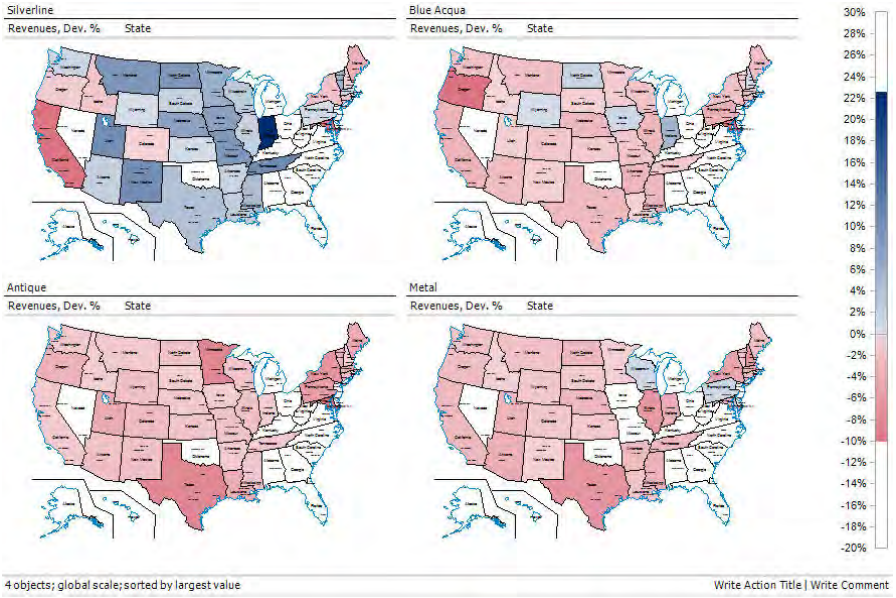
Portfolio analysis

If you click on one or more objects in one of the multiples to highlight it, DeltaMiner will apply this coloring to the other multiples as well. As a result, the reader can clearly see how these objects react in the different standpoints.

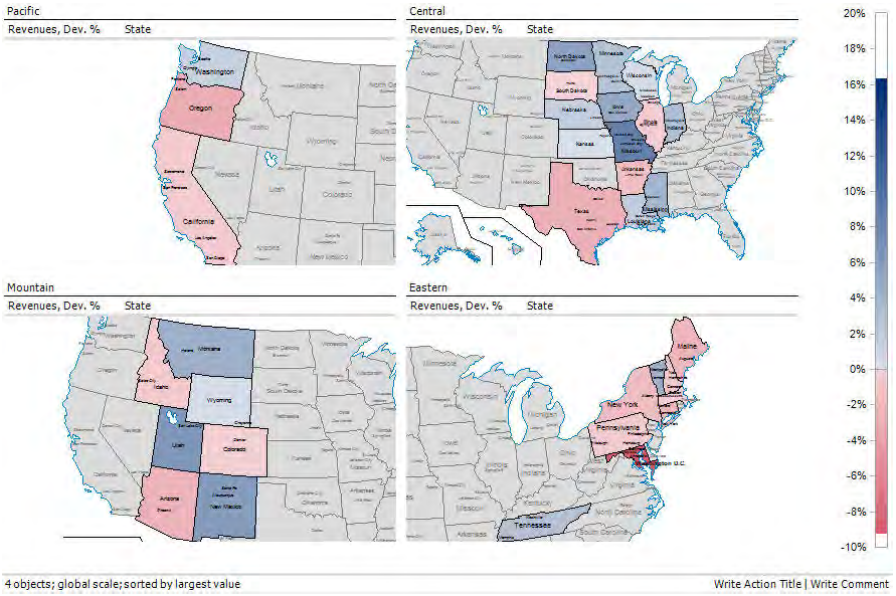


Geo analysis

If you select a global scale, DeltaMiner will apply the uniform color legend from the multiples and display a single scale on the right-hand side.



If you iterate over the dimension used in the geo mapping (to assign model and map levels), DeltaMiner will zoom each sub-report to display the viewed map section.



(h) Differences to combination cockpits

Small Multiples resemble combination cockpits in many ways. Both report types, for example, allow you to visualize cockpits and analysis templates next to each other in order to combine different vantage points into a single report. Both tools, however, share many differences especially in the following factors:

- In a combination cockpit, each report component is presented independently from the others. This especially applies to visualization elements. DeltaMiner measures the length of bars in pivot tables and rankings individually and applies colors for each individual map in a geo analysis. In a Small Multiples report, however, you can observe the values in the sub-reports together using one common scale and

color scheme across all components. The visualization, therefore, simplifies comparisons both within a single tile as well as across multiple tiles.

- You can use a combination cockpit to combine different report components – for example, a pivot table with a ranking and geo analysis – in a report. A Small Multiples report, however, is always based on a single template. In other words, it is based only on either pivot tables, rankings, or geo analysis, etc.

- In a combination cockpit, you must clearly define the number, positioning and the measurements of the report components which you would like to present. With Small Multiples, however, the number of report components changes dynamically based on the underlying data while DeltaMiner takes care of the order and the scaling of the parts. You can, however, set limits to define these measurements as described in section (f).

(i) Miscellaneous

As with all other report forms, you can add comments and an action title to a Small Multiples report, export it to Microsoft Word, Excel, PowerPoint, or a PDF, and transfer it into the DeltaMiner WebOption repository where DeltaMiner users can open it regardless if they only have Offline Reader or full Miner Expert rights. You only need Miner Expert access to create and modify these reports.

In the Briefing book, Small Multiples reports are marked with the icon of the respective template and a small '+'sign to represent the iteration as displayed in the tables of sections (d) and (e). The search function (data entry field in the main menu bar) treats Small Multiples reports like their underlying templates. If you search for 'PIV', for example, DeltaMiner will retrieve simple pivot tables and all Small Multiples that are based on a pivot table. In the analysis menu, this method is marked with the acronym (Small Multiples).

Edward Tufte, a pioneer in the field of data visualization, first coined the term Small Multiples in his book 'Envisioning Information' (Graphics Press: Cheshire 1990, p. 67-79). Tufte wrote, "Small multiple designs, multivariate and data bountiful, answer directly by visually enforcing comparisons of changes, of the differences among objects, of the scope of alternatives. For a wide range of problems in data presentation, Small Multiples are the best design solution."

(2) Dimension Browser: Limiting a Search to Specific Levels

Now you can limit a search for members in the Dimension browser to specific hierarchy levels. As a result, the search dialog (Find members in the context menu of the Dimension browser and in the I want to… menu, shortcut Ctrl+F) now contains a list in which you can select which levels of the current dimension or hierarchy you wish to include.

This extended feature is very useful in combination with a Selection using the respective button (see DeltaMiner deltas! 5.3.3, feature#4). If you limit the search to a level, you will not be able to select that member's parents or its children because this isn't permitted in the My view window. If you can eliminate the non-relevant levels from the start, the search will be faster in large dimensions.

(3) Flexreport: MDX Variables in URLs of Linked Images

DeltaMiner can dynamically select which image should appear in the cell of a Flexreport based on the current view. It does this by interpreting MDX expressions that are enclosed in curly brackets { }. For example, the expression

{[Customers].CurrentMember.Properties("Logo")}

refers to the value of the member property ‘logo’ of the selected member in the customer dimension. If this attribute contained the file names of the customer logos that are stored on an Intranet server, DeltaMiner could display the respective logo in a Flexreport when you select a customer in the My view window.

MDX variables are only relevant for Linked – and not Embedded images. Linked images also do not support previews because each image changes dynamically with the view.

Prior to this release, DeltaMiner already supported MDX expressions in External links on the Link tab (for all Contents except for Empty) as well as on the Text tab (for Content that is Text). Now, it also supports MDX for Image Content as well.

(4) Flexreport: White Style When Converting a Pivot Table

The white style, which was introduced in Version 5.3.6 (see DeltaMiner deltas! 5.3.6, feature #23), will now be automatically applied in Flexreports when you Convert [the pivot table] to a Flexreport either with or without cell references. As a result, the new Flexreport will contain no background colors or grid lines.

To use this feature, please ensure that the white style is displayed up to Miner mode. You can check and edit this setting in the Extras menu, under Options on the Presentation tab.

(5) Geo Analysis: Removing Mapping Errors in Scales and Color Coding

If you calculate the color scheme and scale of a displayed column chart in a geo analysis, you can remove the objects which cannot be assigned to the map. This happens, for example, when zip codes for customers do not correspond with those the map. Since the values that correspond with these members cannot be displayed in the chart, you may wish to ignore them in the color selection and column scale. When DeltaMiner omits objects like these, it will list them in the Mapping errors window (View menu).

(6) Hyperbrowser: Hiding 0, Empty and Filter Nodes

You can now hide hyperbolic tree nodes that have no value, a value of 0, or values that lie outside of those defined in the filter rules. As a result, the Hyperbrowser only visualizes the section of the entire data model that is relevant to the selected measure or defined filter.

You can find this option in the I want to… menu as well as in the context menu when a measure is selected to color the tree. The screenshot shows the Hyperbrowser with 0 members (left) and without them (right).

(7) Pivot Tables: Exporting Bars, Columns and Water Fall Charts to Excel

Bar, column and water fall elements will now be included when you export a pivot table to Excel.

The export function now accesses a new set of TrueType fonts comprised of these six files:

- Bissantz SparkFonts 5 Bars Narrow Outline.ttf
- Bissantz SparkFonts 5 Bars Narrow.ttf
- Bissantz SparkFonts 5 Bars Outline.ttf
- Bissantz SparkFonts 5 Bars.ttf
- Bissantz SparkFonts 5 BarsHor.ttf
- Bissantz SparkFonts 5 Lines.ttf

DeltaMiner will automatically install these fonts along with the 5.3.7 release. If you need to edit the generated Excel files on a computer that does not run DeltaMiner, you will need to install these fonts manually. Simply copy the six files in your Windows font directory (e.g. C:\Windows\Fonts).

In order to use this feature, you will need to activate the export function for cell charts. If you want to apply this function for all reports, you check the appropriate box under Extras, Options, Export tab, Excel. If you just want to use this for individual reports, however, check the appropriate box under Report properties, Export). The new check box, as shown in the screenshot above, replaces the previous selection which only applied to sparklines.

If you want to export graphical elements from a Web browser to Excel, you will need to install these fonts on the computer that runs the WebService.

(8) Pivot Tables: Tuple Editor for Nested Axes

The new tuple editor, available in Pivotizer and higher levels, offers a very efficient way to combine multiple dimensions that are nested in the row or column axis of a pivot table. You can also use this feature to create individual combinations of measures and dimension members.

If you want to arrange several dimensions on an axis, you would normally nest them so that all members of the inner dimension are listed for each member of the outer dimension and will then be presented as table

columns or rows. In some cases, however, you just want to combine individual members from different dimensions.

One common usage scenario is a report which shows the actuals from the previous year, the actuals for the current year, and the budget for the current year in three columns. In this type of report, you usually will be working with the value type dimension (i.e. ‘Budget’ and ‘Actual’) and presentation / TimeUtility (i.e. 'Current’, ‘Previous year’). When you combine each member with the others, however, you would create one column too many because you really don’t care about the budget values from the previous year any more. You only want to display three combinations: ‘Value type: Actual, Time type: Previous year’, ‘Value type: Actual, Time type: Current’ and ‘Value type: Budget, Time type: Current’. You can also use this same approach to combine individual measures with dimension members. Version 5.3.7 offers a special editor to help you define these ‘tuples’, which are member combinations from different dimensions in which only a single member is selected per dimension.

You can open the tuple editor from the Axis definition of a pivot table. When more than one dimension is placed on an axis, this will appear as the fourth selection option after Member selection, Level selection and User-defined MDX expression. (When only one dimension is located on the axis, DeltaMiner will not offer this option because you cannot create tuples with only one dimension.)

In the middle section of the dialog box, DeltaMiner shows a preview of the pivot table. Here, you can edit the tuple with the following options:

- Inserting columns or rows: To add a new column or row, use the respective option in the context menu or hit the Ins key on your keyboard. DeltaMiner will automatically fill the new cells with either the default member of the respective dimension or the default measure; you can modify this suggestion, however, with a click of a mouse.

- Selecting the desired members or measures for a certain cell: You must select one member or measure in each cell. To do this, click on the currently displayed name and then select a new one in the Dimension browser or the Measure browser.

- Copy: By using the functions in the context menu or pressing Ctrl+C and Ctrl+V, you can copy the selected member into another cell. The source cell, however, must have the same dimension as the target cell and be located in the same row or column in the preview.

- Rearranging columns and rows: If you press and hold the left mouse key while clicking on the small space above the columns or left of the rows you wish to move, you can drag the column or row to the desired location and then let go of your mouse. DeltaMiner will highlight the entry position with a line.

- Removing columns or rows. To delete a column or a row, you can use the functions in the context menu or press the Del key. Please note, however, that DeltaMiner will delete the items immediately without prior asking for your confirmation.

The preview area of the tuple editor can easily be navigated with the keyboard. Simply use the arrow keys to move from cell to cell. In combination with the Ctrl key, the cursor will jump to the first or last cell in the current row or column. By hitting Ins, you can enter additional columns or rows, and Del will delete them. You can use Ctrl+C to copy a member or a measure, and Ctrl+V to enter it into other cells in the same row or column as many times as you would like.

Tip: Do you want the members or measures to appear repeatedly in the same row? The faster alternative would be to 'prepare' them in the axis definition using the Member selection, switch to Tuple selection, and then use the copy/paste shortcuts on your keyboard to arrange them where you want them.

The report on your right shows how a pivot table created with the tuple editor looks in Reader mode using the white style that was introduced in version 5.3.6 (see DeltaMiner deltas! 5.3.6, feature #23). The bars are scaled for each table and the current month was set as a Reference column (March 2007; see DeltaMiner deltas! 5.3.1, feature #29). As a result, the left side clearly shows the variances to the previous year while the right side shows budget-actual variances.

Depending on which members you would like to combine, you may want to deactivate the Merge row (or column) members option under Table properties (context menu, I want to… menu).

In this case, DeltaMiner will display – and not hide – the column and row headlines of identical members in neighboring cells. This can increase the readibility of some reports.

The tuple editor can save you significant time and work. Although you could create pivot tables with individual tuples in the past, you had to either use MDX expressions or create an additional Flexreport. Thanks to this new feature, these workarounds are no longer necessary.

(9) PowerPoint Export: New Template DeltaMaster.pot

'DeltaMaster.pot', the standard draft template for exporting files to PowerPoint, has been revamped in version 5.3.7. The new draft template saves much more space on each slide, requires fewer headlines, and avoids design elements. To export metadata such as the current view or the text contained on report's status line, you only need three variables: 'txtReportView', 'Text1' and 'Text2'. DeltaMiner will place the report name in the text field that lists the report type in large type in the standard template (here: 'Pivot').

The new template does not contain placeholders for action titles (see DeltaMiner deltas! 5.3.1, feature #1). You could add them, however, by adding a rectangle, text field or another AutoShape to the slide, containing the text 'txtActionTitle'. Following these steps, you can easily position a report title and action title on your slides.

Please do not, however, delete the remaining placeholders because you cannot create or modify them from the PowerPoint interface. The placeholders refer to the object's internal IDs – and not their content – during the export process.

When you install the release, the ‘DeltaMaster.pot’ draft template will automatically be copied to the DeltaMiner directory (generally ‘C:\Program files\DeltaMaster 5.3’). You can change the folder in which DeltaMiner searches for the templates under Options (Extras menu) on the Folder tab. If you want to adapt the template to your personal preferences or corporate design requirements, start PowerPoint and open the .pot file by going to the File menu and selecting Open. If you simply double click on the template file by mistake, you will create a new presentation based on the template – and not open the template to modify it.

By using this new template and the related export functions, you will be one step closer to the goal of creating serious, simple and straightforward reports without spending considerable time and manual work on design details.

However, it is certainly still possible to use the existing templates.

(10) Ranking: White Style Design

You can now apply the white style that was introduced in version 5.3.6 (see DeltaMiner deltas! 5.3.6, feature #23) to display the tables in a ranking.

To use this feature, you must first activate the white style display (Extras menu, Options, Presentation tab) for the desired levels (Offline Reader, Reader, Viewer etc. up to Miner).

(11) WebClient: Copying data (Planning Option)

When entering data from a Web browser, you now can copy values and cells as well as entire cell structures. To use this feature, simply apply the following Windows shortcuts for copying, cutting and pasting:

- Ctrl+X (cut) saves the position and value of the highlighted cell internally for later pasting. Afterwards, the cell value will be deleted (as if you hit the Del key).

- Crtl+C (copy) saves the position and value of the highlighted cell internally for later pasting. The cell value, however, remains unchanged.

- Ctrl+V (paste value) enters the previously saved value into the highlighted cell as if the number were entered manually. WebClient checks, however, if you can enter data on that cell.

- Ctrl+W (copy source cell to target cell) takes the previously saved cell based on its position and copies it into the highlighted cell. In this case, you have copied both the numerical value as well as the source cell and all of its children cells – just as you would when you drag one cell and drop it in another in the Windows version of a DeltaMiner data entry application. If you haven’t defined a source cell with Ctrl+C prior to using this function, WebClient will show an error message. If the source and target cells are identical, no change will take place.

Thus, there are two different shortcuts to paste cells that vary with regards to the “depth” of the paste job. While the Ctrl+V shortcut only transfers a number from one cell to another, Ctrl+W also copies the subordinate structures from the OLAP database.

(12) WebClient: Dimension Groups

Dimension groups that were defined in an analysis session can now be displayed in the WebClient, too. You can open and close these groups just as you would in Windows by clicking the the ‘+’ and ‘-‘ signs respectively.

In the I want to… menu, you can show or hide individual groups as well as expand or collapse all groups.

(13) WebClient: ‘session.aspx’

DeltaMiner now only supports calls to the WebClient from the ‘session.aspx’ page and no longer ‘default4.aspx’. This change is only important if you have created direct references to individual applications or reports, such as in a portal, in line with the steps described in DeltaMiner deltas! 5.3.3, feature #23.

(14) WebClient: Portal Integration

Version 5.3.7 supports a better WebClient integration into Intranet or Internet portals. Now you can embed select reports – if desired, even without the Briefing book or the My view window – using an ’<IFRAME>’ HTML tag. Using URL parameters, the portal software can now change the view ‘externally’. For a detailed description, simply contact your Bissantz & Company team.

(15) WebClient: White Style in Pivot Tables

If the White style is activated in an analysis session, (see DeltaMiner deltas! 5.3.6, feature #23) and you save that session into the repository, the pivot tables in your Web browser will also be displayed in the same clean, simple white style.

(16) WebClient: Back from Linked Reports

You can now add a cell with a hyperlink to your Flexreports so that you can quickly switch to a different report. You can use this feature to create the main entry page of a dashboard, which directs the user to different, detailed reports without having to use the briefing book. DeltaMiner WebClient will display these links, regardless of their format, as a hyperlink in the Flexreport.

From this ‘linked’ report, you can quickly go Back to <the previous report> using the new option in the I want to… menu. DeltaMiner, which has supported this feature in its Windows edition since Version 5.3.5 (see DeltaMiner deltas! 5.3.5, feature #9), now offers the same functionality for the Web.

(17) Notes: Compatibility with Previous Versions and Installation

Version 5.3.7 has made no changes to the metadata scheme of ReportServer. As a result, you do not need to execute the ‘reportserver.sql’ script. You should, however, update the ‘ReportServer.exe’ file as well as the respective DLLs so that they match the current DeltaMiner version.

The WebOption components – Repository GUI, WebClient and WebService – are also available in Version 5.3.7 as described in features #11 and #16. An update is highly recommended.

Before you update these files, however, please save a backup copy of the configuration files! These are “web.config” in the WebClient, “DeltaMaster.Service.exe.config“ for the WebService and “DeltaMaster.Repository.exe.config“ for the repository GUI. If you have customized the appearance of the WebClient so that it fits your corporate design or to be integrated in a portal, please also create a backup of “DeltaMaster.css“ (which contains all stylesheet rules) as well as any changed images (in the “Images“ folder, e.g. “Master_Top.png“). Please do not continue using the previous version because it does not contain certain format rules that are important in 5.3.7.

You can update the Repository GUI, WebService and WebClient by copying these files into the respective directories. Once again, please make a backup copy of these files before doing so. A separate setup is not necessary.

Version 5.3.7 has no effects on either the database schema of the repository or the configuration files for the WebService and the WebClient (*.config). As a result, you do not need to transfer your existing configuration into the new files. Nevertheless, you should always create backup copies of the previously used files. This ensures that you can easily restore your settings in the unfortunate case that someone would accidently replace your previous configuration files with the standardized ones that come with the new release.

10 DeltaMiner deltas! 5.3.8

What's new in version 5.3.8 Find out in this overview of the Feb. 13, 2009 release!

(1) Alias Sets: Renaming 'All Members' 3

(2) General: 64-Bit Versions of DeltaMiner, ReportServer and WebOption 3

(3) General: Shorter Window Names – View, Cockpit, Analysis, Folder and Report 4

(4) General: Better Performance Through Additional Multithreading 4

(5) Briefing Book: Sending Reports and Folders by E-mail 5

(6) Briefing Book: Screen Presentation 8

(7) ReportServer: Job Definition Database in Oracle 11

(8) ReportServer: Port Option for SMTP Server 11

(9) Dimension Browser: Search Multiple Members at once with the Advanced Search Option 11

(10) Excel Export: Generating Excel Files in Excel 2007 Format (.xlsx) 13

(11) Flexreport: Entering values from Excel Files into Flexreport Cells 13

(12) Licensing: Viewer Mode now contains Drill-Down Functionality 15

(13) Licensing: Licenses Returned Upon Lowering User Modes 15

(14) Microsoft Analysis Services: ADOMD.NET 10.0 15

(15) Model Browser: Removing Cubes From the Maintenance Dialog 16

(16) Notation: Background and Font Color 16

(17) Notation: Activate/Deactivate using the Shortcut 'Ctrl+N' 16

(18) Oracle OLAP: Parent-Child and Level-Based Hierarchies in Dimensions 16

(19) Oracle OLAP: Pivot Table with Tuple Editor and Sparklines in Nested Axes 16

(20) Oracle OLAP: Support for Oracle OLAP 11g 16

(21) Pivot Table: Number of Members/Values in the Status Bar 17

(22) Pivot Table: Selecting Drill-Down Levels in Viewer Mode 17

(23) Pivot Table: Scales 18

(24) Planning Option: Using Conditions to Lock Cells in a Flexreport 18

(25) Planning Option: Entering Identical Values in Base Cells – Absolute Splashing 19

(26) Portal: Opening Folders in Windows Explorer 19

(27) Portfolio Analysis: Empty Bubbles Replace Filled Ones 19

(28) Small Multiples: Tree Structures in the Menus for Cockpits and Templates 20

(29) Small Multiples: Export Options 20

(30) SQL Drill Through: Using Drag and Drop to Filter Individual Records in the Pivot Table 20

(31) WebClient: Copying to the Windows Clipboard 21

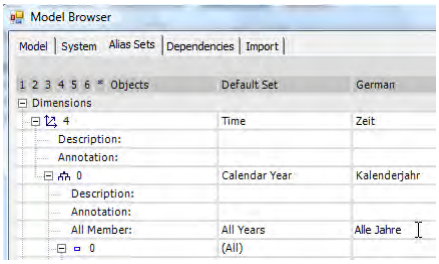
(32) WebClient: Searching in the Dimension Browser 21

(33) White Style in All Analysis Modules 22

(34) Time Series Analysis: Showing Deviations between the Start and End Value 22

(35) Notes: Compatibility with Previous Versions and Installation 23

(1) Alias Sets: Renaming ‘All Members’

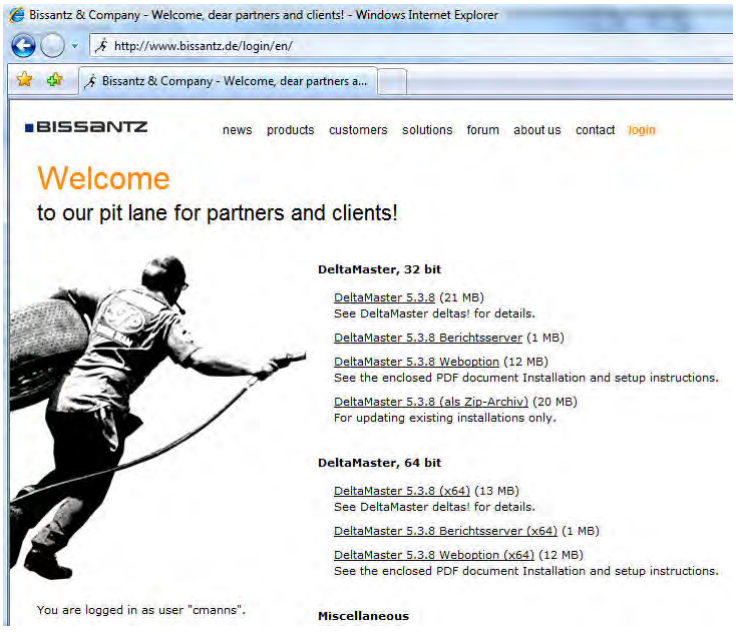


You can now use an Alias set to rename ‘All members’, in other words, the top member of a hierarchy. This makes it easier to create multilanguage applications. Previously, you had to use member properties to translate a root node’s name (e.g. ‘All products’ or ‘All customers’) into different languages. From now on, however, working with alias sets is the better choice.

You can edit the translation tables in the Model browser (Model menu) on the Alias sets tab. ‘All members’ is listed in the third row below the entry for a hierarchy. Here, you can enter the desired name(s) for different Alias sets. If you want to rename the standard set, however, you must change it in your database.

(2) General: 64-Bit Versions of DeltaMiner, ReportServer and WebOption

DeltaMiner, ReportServer and WebOption are now available in a special 64-bit version. As a result, these applications ‘natively’ run on 64-bit systems (i.e. an x64 architecture). The greatest advantage of 64-bit versions is that you can immediately use more than 2 GB of memory.



DeltaMiner, ReportServer and WebOption also ran on 64-bit systems in the past and you can continue operating the 32-bit versions on 64-bit systems. This, however, was based on ‘WOW64’ (‘Windows-32-on-Windows-64’) which emulates a 32-bit environment. As a result, DeltaMiner previously could not fully utilize the strengths of this architecture. This limitation is now history thanks to the new 64-bit compilations.

Two functions – database access via ODBO providers and Geo analysis – are currently only available in 32-bit versions. If you have a 64-bit application, that means you can open analysis files that use the ODBO interface or Geo analysis only in Offline reader mode. Even so, DeltaMiner will not be able to display geo reports – neither individually nor as Small multiples. In Combination cockpits, only the parts that are based on a Geo analysis template will remain empty. In addition, the job definitions from ReportServer can no longer be saved to a Microsoft Access database because Microsoft only offers the JET Engine, which you need to access Access, in a 32-bit version. As a result, the ‘ReportServer.mdb’ Access file is no longer included in the

.zip file which comes with the 64-bit version. Instead, you will have to work with Microsoft SQL Server or Oracle (see feature #7).

If you previously ran 32-bit versions of DeltaMiner or ReportServer on a 64-bit processor and now want to use the x64 versions, you can use the same settings as before:

- DeltaMiner: Transfer all registration settings in 'HKLM\Software\Wow6432Node\Bissantz & Company\DeltaMiner 5.0' to 'HKLM\Software\Bissantz & Company\DeltaMiner 5.0', for example, using the export/import features in the registration editor.

- ReportServer: Create a new ODBC data source for your metadata database in the 64-bit ODBC data source administrator. Your previous ODBC data source can only be used for 32-bit programs. If you previously used Microsoft Access as the database for your ReportServer jobs, you will now need to use Microsoft SQL Server or Oracle.

You can download DeltaMiner 5.3.8 in either 32-bit or the new 64-bit versions, which are marked as '(x64)'. The installation for the 64-bit version is a few megabytes smaller than the 32-version because it does not include the map material for Geo analysis (.ltg files).

(3) General: Shorter Window Names – View, Cockpit, Analysis, Folder and Report

The word 'my' has been removed from all window names. These are now simply called View, Cockpit, Analysis, Folder and Report instead of My view, My Cockpit, My Analysis, My folder and My report respectively.

(4) General: Better Performance Through Additional Multithreading

DeltaMiner is now even faster thanks to the improved and intensified use of multithreading. Software developers use this technique to decompose a task into smaller, parallelized parts so that these 'lighter' processes can be processed simultaneously. Our programmers have made great advancements in parallelization – for instance all the processes below run in their own thread:

- Combination cockpits: each included cockpit and analysis template

- Small multiples: each multiple in this analytical method

- Flexreports: the calculation of all referenced pivot tables (provided there is more than one)

- Hyperbrowser: each dimension that is represented in a branch

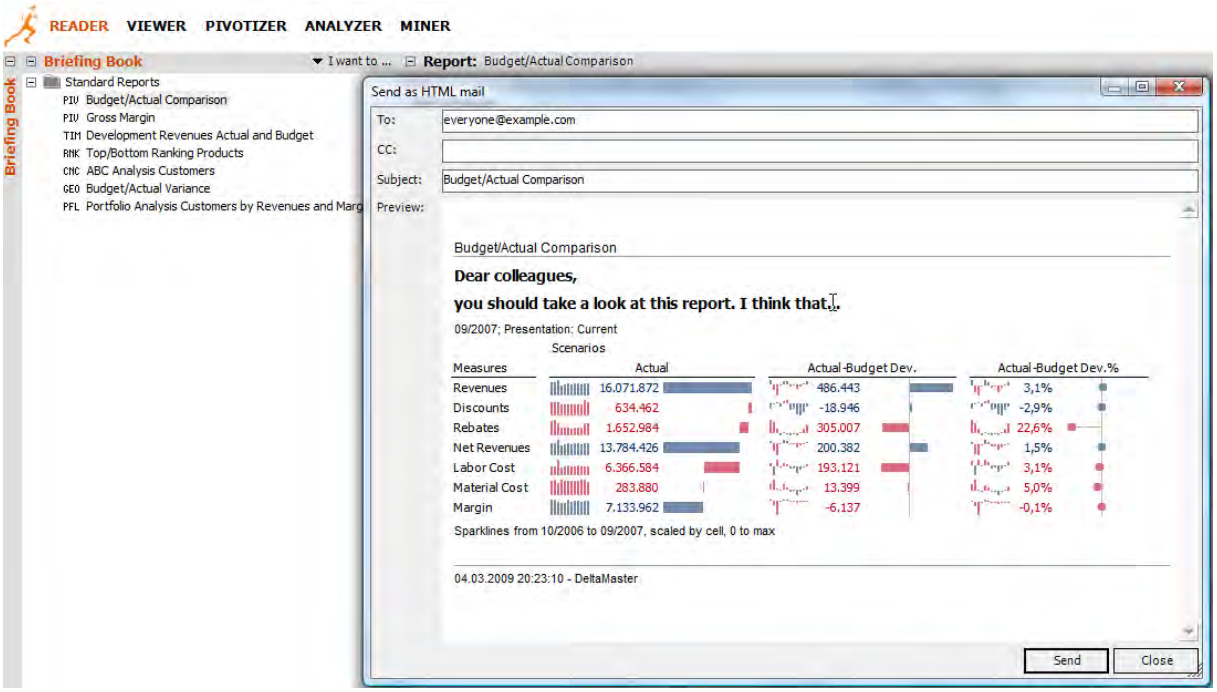
DeltaMiner's new and improved performance power is best seen on computers with either multiple processors or multi-core processors (e.g. Core 2 Duo, Core 2 Quad and Core i7 from Intel, or Athlon 64 X2, Opteron and

Phenom from AMD). These computers allow you to allocate the load into several cores. DeltaMiner is taking account of these new hardware trends. New processors generate their enormous performance through more and more cores that work together – not through higher and higher CPU frequencies. What many companies don't realize is that they can only fully leverage the strengths of these hardware architectures when their software is designed that way and has good scalability. DeltaMiner fits that bill!

Even if you are using a single core CPU, you can still profit from the new performance mechanisms because DeltaMiner can now distribute and process multiple database queries simultaneously during analysis. For example, DeltaMiner now distributes database queries so that it can continue with the calculation of the remaining report components while the database server is running the query.

(5) Briefing Book: Sending Reports and Folders by E-mail

You can now send reports by e-mail from DeltaMiner. As a result, all DeltaMiner users can now directly communicate their latest business analyses and findings in a very quick and easy fashion.



All users – from Offline readers to Miner experts – can now send e-mails either from Microsoft Outlook (2002 and higher – including XP) or a new mail client that is integrated in DeltaMiner. Users can decide whether they want to send a single report, all reports in a given folder or even the entire briefing book (i.e. all folders) – just like they already can with an export to Microsoft Office. Since DeltaMiner directly generates the reports as an HTML mail, there is no need to export the reports to an Office file format before. Every e-mail client that can accept HTML e-mails can display these e-mails – without additional plug-ins or external utilities. This also applies to mobile devices such as modern mobile phones, PDAs or BlackBerry devices.

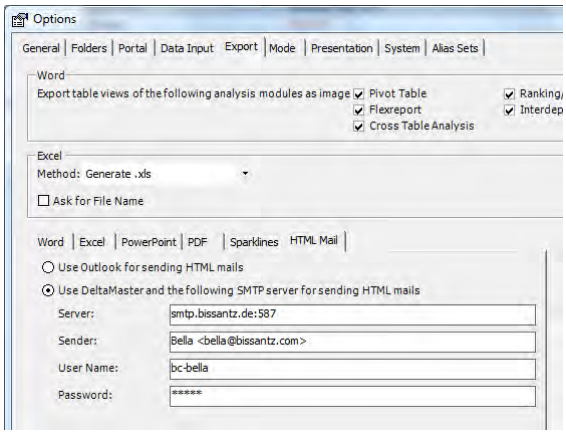
(a) Set up

You can access the most important settings for e-mailing reports in the Extras menu under Options, Export and on the HTML mail tab. Here you can decide first of all if you want to create your message in Microsoft Outlook or in DeltaMiner.

DeltaMiner uses Outlook as the default setting. If you already have Outlook installed on your computer, you can immediately use this new mail function without any further configurations. If you want to use DeltaMiner instead, you will have to make a few additional entries regarding communications with the SMTP server that sends the mail. Since these settings are standard for every other e-mail client, you may already be familiar with them:

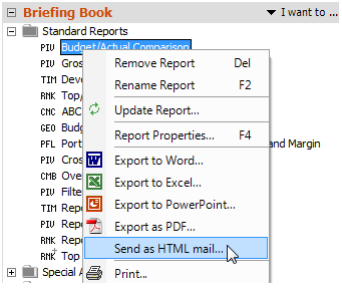
- Under Server, enter the host name or the IP address of the SMTP servers, for example, 'mail.example.com'. You can also enter a specific port by adding a colon followed by the port number: 'mail.example.com:587'. If you don't enter a port number, DeltaMiner will automatically select port 25, which is the standard SMTP port. (You can also modify the port setting in ReportServer as well. See feature #8 for more information.)

- Under Sender, enter your e-mail address. These can – and should – contain the sender's name that the recipients see in their mail clients. Simply enter the name first followed by the e-mail address placed in angle brackets, for example: 'Bella <bella@bissantz.de>'.



- Under User name and Password, enter your login information for the SMTP server. If your SMTP server operates in an Intranet environment with a special security system that uses some other form of authentication, simply leave these fields blank. In most cases, however, SMTP servers require a username/password authentication.

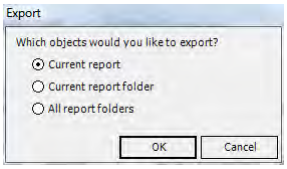
Since DeltaMiner saves the entire settings on this tab for each user in the Windows registry ('HKEY_CURRENT_USER'), they only need to be entered once. These settings apply for all analysis sessions opened on that computer. DeltaMiner encrypts all saved passwords.



Another basic setting is the folder where DeltaMiner should search for the 'DeltaMiner.htm' template which it needs to run the export [see section (c)]. You can define this folder in the Extras menu under Options, Folders. This is the same folder which stores the export templates for Office files.

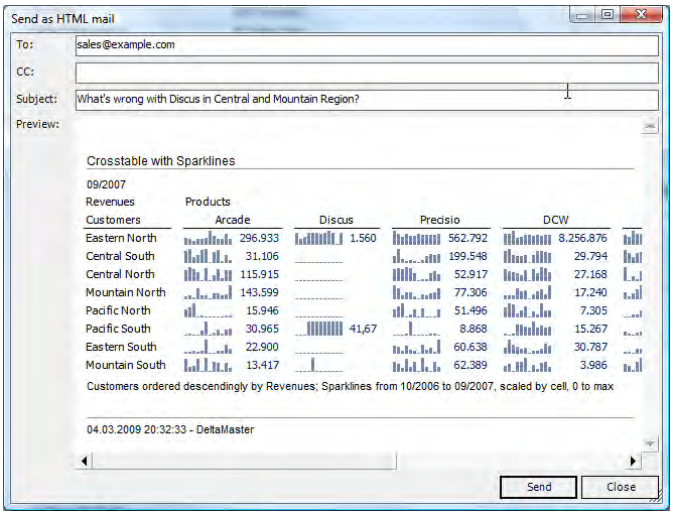
(b) Writing new e-mails in Outlook or DeltaMiner

To send a report or folder as [a] HTML mail from DeltaMiner, simply select the respective command in the context menu or in the I want to… menu in your briefing book.



DeltaMiner will then ask which objects you would like to export as an e-mail. Here you can choose from the Current report, the Current report folder or All report folders. If a folder (and not an individual report) is selected upon selecting the command, the first option will not be available. Alternatively, you could also send the current cockpit, analysis or report as an HTML mail using the respective command in the Save menu. In this case, DeltaMiner knows which objects you would like to export and will not ask this separately.

With a simple click on OK, DeltaMiner will then create a new message. If you decide to send your mail from Outlook, DeltaMiner will create the message there and enter the respective reports as content. Now you can edit the message, select the recipients and send the e-mail just as you normally would in Outlook.



If you select DeltaMiner for your mail client, it will then open a preview of the report that will be sent. At this stage you can enter the e-mail addresses – separated by commas – of the desired recipients. Carbon copies ('CC:') are also possible. You can also edit the default Subject line which is the name of the report, folder or analysis session (.das file) that you are exporting. You cannot, however, edit the mail's content. If you want to add comments your reports, simply create a report comment or action title and save these with the report in your briefing book before you export the mail.

(c) E-mail content and format

When you export an e-mail in DeltaMiner, it will follow the same procedure used in ReportServer since version 5.3.6. DeltaMiner will export the report as a bitmap image in the same format used in Reader (e.g. 'white style' if activated). The names of reports, folders, notes in status lines, comments and action titles are all exported as text.

DeltaMiner uses an export template in (X)HTML format to create the message. The file must be named ‘DeltaMaster.htm’ and is normally located under C:\Program files\DeltaMaster 5.3. The Folder for export templates folder, however, can be modified in the Extras menu under Options. (In comparison, ReportServer can use a different template for each individual job.) DeltaMiner comes with a standardized template which is automatically saved in the program directory with each installation. You can use it as is or edit it as you please, for example, using style sheets (CSS). For more information about creating or modifying templates, please read DeltaMiner deltas! 5.3.6, feature #12.

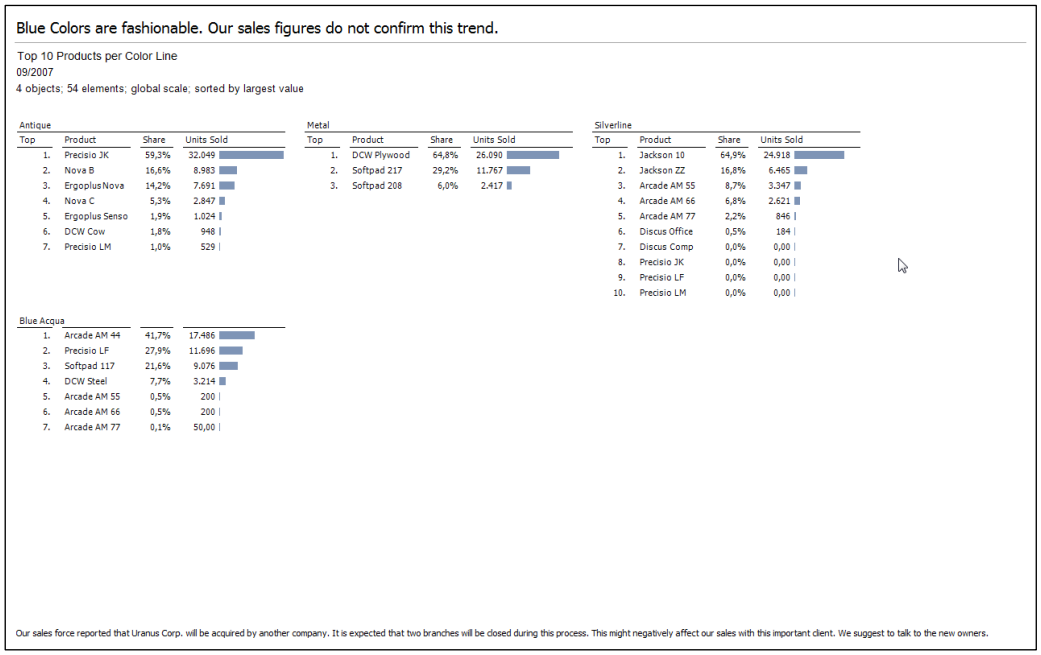
Please note: If you directly send a mail from DeltaMiner, you must embed the images in the HTML mail. Unlike ReportServer, it cannot access the files on a web server. Therefore, you always need to add ‘cid:’, which stands for Content ID in line with RFC 2392, when you enter image tags in the ‘DeltaMaster.htm’ template. For example:

```
<img src="cid:##reportimage[png]##" width="##reportimagewidth##
height="##reportimageheight##" alt="##reporttitle## - ##reportview##">
```

Similar to Microsoft Office exports, reports sent by e-mail are disconnected from the DeltaMiner analysis session and the underlying databases. In other words, they merely render a snapshot and, therefore, cannot account for later changes in the database. If you did not receive an e-mail from DeltaMiner and there was no error upon sending, please check the spam folder in your e-mail client.

(6) Briefing Book: Screen Presentation

DeltaMiner’s new presentation mode makes it easier than ever before to conduct elegant, interactive presentations in your business meetings. As a result, you now rarely need to export your findings to Power-Point. You simply create – and present – them in DeltaMiner!



In all user levels from Offline reader to Miner expert, you can start your screen presentation by using the same F5 function key that you would use in PowerPoint or selecting the respective command from the View menu. DeltaMiner then displays the current report or the title page of the current folder on the entire screen. The briefing book, the title bar of the DeltaMiner application window, the menu and the status bars will all be hidden so that your audience will only see the actual reports over the entire screen. The screen presentation has the same usability as the Reader mode. As a result, you can access the context menus for that particular report, zoom in or out on individual pivot tables (e.g. by holding the Ctrl key and rotating your mouse wheel; see DeltaMiner deltas! 5.3.2, feature #25), etc.

You can use the following PowerPoint shortcuts in presentation mode:

Short cut	Function
F5	Start screen presentation at the beginning (shows the title page of the first folder of the briefing book)
Shift+F5	Start screen presentation with the current report or the title page of the current folder
Esc	End presentation
B	Switch screen to black
W	Switch screen to white

Short cut	Function
PgDn, Space bar, Enter	Forward (switch to next report or next folder title page – further down in the briefing book)
PgUp, Shift+Enter, Backspace	Back (switch to the previous report or previous folder title page – further up in the briefing book)

You can also conduct your presentation using a mouse. The report contains a small, white frame which you can click with your left mouse button.

Click in …	Function
Bottom frame, right-hand side	Forward (same as PgDn, etc.)
Bottom frame, left-hand side	Back (same as PgUp, etc.)
Left frame	End presentation (same as Esc)

DeltaMiner has default settings for the structure and the appearance of the presented folders. In line with today's expectations for modern Business Intelligence, they are serious, simple, and succinct.

- Reports: An action title, which is displayed in the upper corner above a thin grey line, explains the key message of the report in a clear, short sentence. If the report has no action title, DeltaMiner will display the report's name as shown in the briefing book. If an action title exists, the report name will be displayed in the first row below the line. This is followed by the view description, which otherwise is shown in the View or History windows. If you have created user-defined View titles, these will be displayed as well (see DeltaMiner deltas! 5.3.4, feature #16). The following row shows the references from the report's status bar. As a result, your audience can view all of the relevant properties of the report in a very prominent location: the upper-left corner. DeltaMiner displays report comments on the bottom of the screen. Action titles and comments appear in your chosen format. Since the display is almost identical to Reader mode, the tables will be displayed in 'white style' if you haven't deactivated this option (Extras menu, Options, Presentation; see DeltaMiner deltas! 5.3.6, feature #23).

- Folders: DeltaMiner will either present the Title page designated under Folder properties or a standard page showing the name of the folder. These title pages, which were also available in past releases, can

be an image (e.g. .jpg file), a Web page (e.g. Internet, Intranet or local HTML file) or even a Microsoft Office file. In other words, you could also integrate a PowerPoint slideshow in your DeltaMiner presentation. Under URL for the title page, simply enter the path and the name of the desired file.

You can edit the folder properties in Pivotizer, Analyzer and Miner mode. The title page, however, will only be shown in Reader or Viewer mode. When you hit the F5 key to start your presentation, DeltaMiner will display the first folder or, in other words, the title page. Therefore, it does make sense to make the extra effort to design it.

When you hit Esc to end your presentation, DeltaMiner will automatically return to the mode used prior to the presentation.

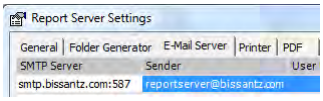
(7) ReportServer: Job Definition Database in Oracle

ReportServer can now save its job definitions to an Oracle database. To set up this feature or update it at a later time, simply run the 'ReportServer (Oracle).sql' script that comes with ReportServer. Prior to running the script, please connect the database against which you are running it. Please note that schemas, users, and access rights will not be generated or changed based on this script.

The respective script for Microsoft SQL Server is 'ReportServer (SQL Server).sql'. This replaces the previous 'reportserver.sql' file. Since the metadata schema was not changed in version 5.3.8, you do not have to run the script again.

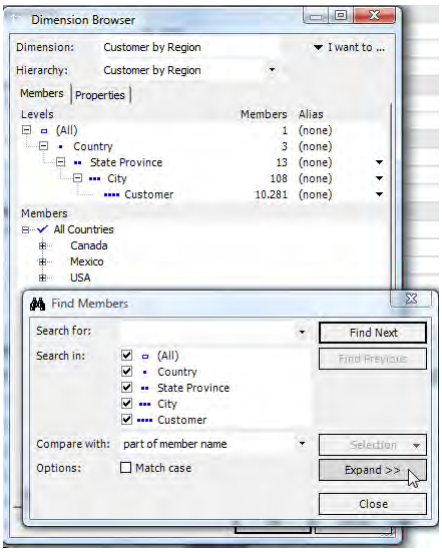
(8) ReportServer: Port Option for SMTP Server

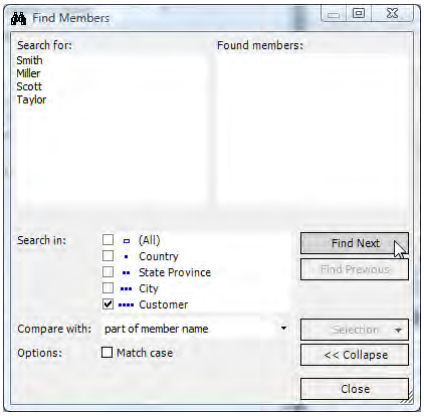
In the Settings of ReportServer, you can set a user-defined port to call up the SMTP server used for sending e-mails (see feature #5). Simply list the server's host name or IP address followed by a colon and the desired port number, for example: 'mail.example.com:587'. If you don't list a port explicitly, ReportServer will use the number '25', the standard SMTP port.



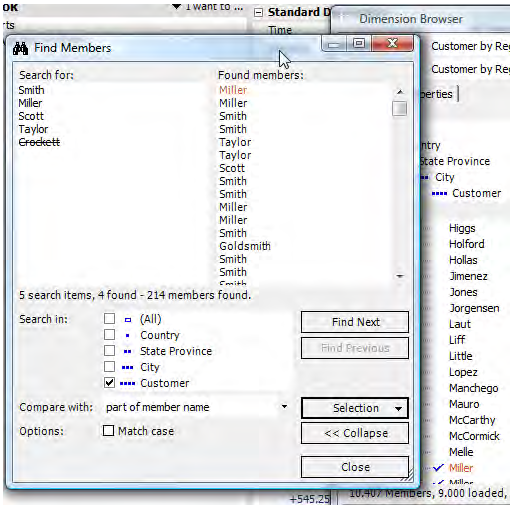
(9) Dimension Browser: Search Multiple Members at once with the Advanced Search Option

Version 5.3.8 now offers an advanced search in the dimension browser so that you can search and select multiple members at the same time. For example, if you are supposed to run a report or analyze a certain list of customer or article numbers, you can simply copy the respective numbers into the expanded search field. DeltaMiner then investigates all of the entries simultaneously and lists the found members for your selection.





Using a new button, you can expand the search dialog located in the Dimension browser (use its context menu, the I want to… menu or Ctrl+F). This will divide the upper half of the dialog box into two parts. On the left-hand side, enter the members you wish to search – one on each row. By using the context menu or hitting Ctrl+V, you can insert the members stored on the clipboard. In other words, it is very simple to copy and paste the desired number of members from an Excel worksheet or a text file. The screenshot on your right, for example, shows the Microsoft reference application “FoodMart”. Here, we searched the customer dimension for several customers’ last names.



If you click Search next, you will start the search process. The bottom half of the window includes familiar options including which levels you want to search (see DeltaMiner deltas! 5.3.7, feature #2), how the search terms should be compared (e.g. whole name, beginning, end or certain part of the name), and if the case is important. If the selected dimension has multiple hierarchies or aliases, DeltaMiner will limit the search to the hierarchy or alias currently selected in the Dimension browser prior to the search.

DeltaMiner then lists the found members in the upper right-hand part of the window. If you click on one of the entries, DeltaMiner will open that member in the Dimension browser, which remains open and active in the background as a non-modal window. This allows you to search and select individual members in your hit list (for a multiple selection, simply press and hold the Ctrl key while clicking your mouse). Alternatively, you could Select the members in the search dialog. The three already known options describe how the search results influence the current selection in the Dimension browser (see DeltaMiner deltas! 5.3.3, feature #4). As a result, you can select all of the found members at once (and, thereby, reset an existing selection), enter the hits of the existing selection (to expand it little by little) or remove all found members from the existing selection.

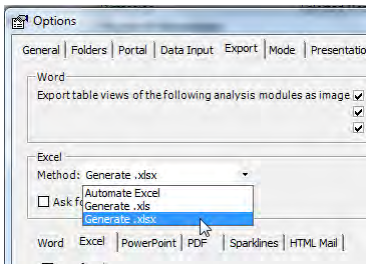
The summary below the lists shows how many terms were searched, how many terms matched, as well as how many members were found. DeltaMiner will strike through all entries that were not found so that you can quickly see where mismatches occurred.

You can treat a selection based on an advanced search just like any other view. For example, you could save and reuse it in a user-defined hierarchy or named set.

When you are using an advanced search, please remember that the search speed depends on the number of entries as well as the number of members in the searched dimension. For example, if you select a large

number of hits in the Dimension browser, the calculation can take a very long time. If you have to access a large portion of the members in a dimension regularly, it could also make sense to address this issue with a separate hierarchy in the database.

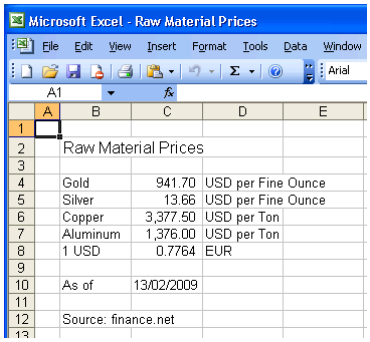
(10) Excel Export: Generating Excel Files in Excel 2007 Format (.xlsx)



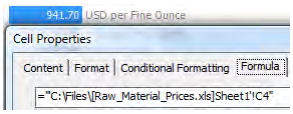
You can now export Excel files from DeltaMiner into Excel 2007 (Microsoft Office Open XML) format. Since a special component within DeltaMiner will generate the files, you don't need a separate local installation of Excel 2007.

(11) Flexreport: Entering values from Excel Files into Flexreport Cells

You can now create external references to Excel files in a Flexreport. This allows you to present values in a Flexreport and use them for further calculations that don't come from the underlying database. In the screenshot below we have created a Flexreport that combines the material costs from our OLAP database with the current raw material prices in an Excel sheet. We can even use these measures to make further calculations.



DeltaMiner uses formulas to enter Excel values into a Flexreport (context menu, Cell properties, Content: Formula tab). The reference is identical to that in Excel:



='[File.xls]Sheet1'!A1

The formula begins with an equal sign. When this sign is followed by a single quotation mark, DeltaMiner automatically knows that it is referencing an Excel spreadsheet. Simply list the file name in brackets immediately followed by the name of the individual sheet within the file. To end the specification of the desired sheet, close it with another single quotation mark. At this point, you enter an exclamation point followed by the desired cell's coordinates. The Formula tab contains a sample reference for support.

If the reference does not contain a path as shown in our example above, DeltaMiner will first search for the file in the same directory where the analysis file (.das or .dam) is stored. If you include a path in your formula, please insert it between the first quotation mark and bracket, for example:

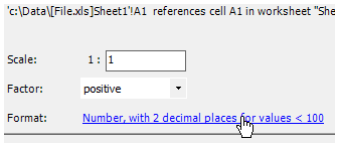
='C:\Files\[Raw_material_prices.xls]Sheet1'!B2

If you want this value to be viewed through WebClient, you must enter the file as an absolute path and ensure that the Web service can access this location.

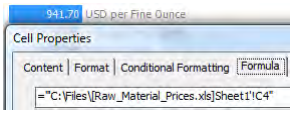
You can use the coordinates of a single cell (e.g. ‘B2’ or ‘B2’) or the name of a cell area (range) as an address within an Excel sheet. In the second case, DeltaMiner will use the sum of all cells carrying that name.

DeltaMiner generally assumes that all values transferred from Excel are numbers. You can use these for additional calculations in the Flexreport or as a variable in a formula – even in the same cell. In other words, DeltaMiner treats the Excel reference as an operand which you can immediately use in other expressions.

You can adjust the Scale and Format in the lower part of the Formula tab, which is located under Cell properties.



If you want to transfer text from an Excel file, you designate this by placing parentheses before and after the formula, for example:



=" '[Raw_material_prices.xls]Sheet1’!C4 "

The example above includes spaces primarily for clarification. These spaces, however, do not obstruct the calculation of the formula; the empty space behind the first parentheses is simply transferred to the Flexreport.

Tip: The syntax defined in Excel can sometimes be tricky. Instead of creating a reference manually, it is easier to do it in Excel, where you receive additional assistance, and do a copy/paste. Here’s how: Select the desired cell in Excel, copy it into the clipboard (Ctrl+C), create a new Excel sheet, and use the respective option in the context menu to Paste [the] contents into the desired cell. In the Paste contents dialog box, click the word Link. Excel will then enter a reference containing the file name, sheet and coordinates of the linked cell. Since this is exactly the information you need in DeltaMiner, you simply copy this expression onto your clipboard and enter it as a formula in the Flexreport cell. Please check that path, file name and sheet are enclosed in single quotation marks.

You don’t need to have Microsoft Excel installed on your computer to access these files, because DeltaMiner can deal with them on its own. It supports all current formats (.xls , .xlsx und .xlsm) and opens the files in write-protected format. This means that you cannot change the files that DeltaMiner references, and that it can also read these files when they are open. In other words, DeltaMiner can still display the last saved copy of the file even if someone else is currently editing it. As a result, you can also include Excel files that are regularly updated automatically, for example, with current financial KPIs.

When you hit F9 to update a Flexreport, DeltaMiner will also update the data from the Excel file so that any changes will be displayed in the report.

(12) Licensing: Viewer Mode now contains Drill-Down Functionality

The Viewer license now offers even more functionality. For the first time, users can now drill down on pivot tables; this functionality was previously reserved for Pivotizer and higher.

Report authors in higher levels can even specify where users can use this open/close functionality (see feature #22).

This drill-down functionality for Viewers also works in the WebOption as seen in the screenshot on your right.

(13) Licensing: Licenses Returned Upon Lowering User Modes

When a user switches to a lower user mode (e.g. from Miner to Viewer), DeltaMiner will now return the higher license to the server after a three-minute period so that someone else can use it. This works as long as a license in a lower level is available at that time. Before switching to a lower level, DeltaMiner will first check the availability for the desired mode and occupy the license. If the desired user level is not available, DeltaMiner will then look for an open license in the next higher level – up to the current user level. If no lower license is available, the user will remain in the current level.

This new approach allows you to use your existing concurrent licenses more effectively because a user can switch to a lower level without ending the current session.

This new feature does not apply to named licenses, which are usually acquired from the local ‘Iservrc’ file.

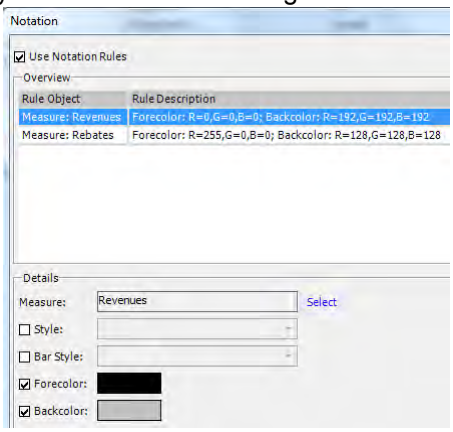
(14) Microsoft Analysis Services: ADOMD.NET 10.0

To access Microsoft Analysis Services 2005 and 2008, DeltaMiner now works with ADOMD.NET (in the current version 10.0), which Microsoft has released in conjunction with Analysis Services 2008. The respective DLLs ‘Microsoft.AnalysisServices.AdomdClient.dll’ and ‘Microsoft.AnalysisServices.dll’ are contained in DeltaMiner 5.3.8.

If you prefer to work with older versions, you can redirect the new assemblies into the older version 9. Simply copy the ADOMD.NET Version 9 DLLs listed above (e.g. from an installation of DeltaMiner 5.3.7) into the program directory of the current DeltaMiner 5.3.8 installation and overwrite the DLLs for Version 10. Afterwards, you will need to edit the application configuration file ‘Client.exe.config’, which is stored in the DeltaMiner 5.3.8 program files. The elements required for the redirect are already stored in the file but are deactivated by angle brackets. If you remove the comment characters (‘<!—‘ and ‘-->’) before and after the block that references the Microsoft DLLs, you will activate the redirect, and DeltaMiner 5.3.8 will run the older versions of the assemblies.

(15) Model Browser: Removing Cubes From the Maintenance Dialog

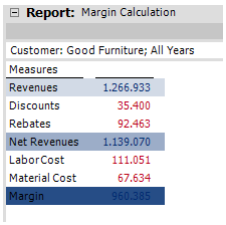
If you want to remove a cube from an analysis model, simply open the respective file in the Maintenance dialog box (e.g. in the portal above the context menu of the analysis file) and remove the name of the respective cube (i.e., leave an empty entry). This really comes in handy when the cubes no longer exist in the database. This feature is supported when the model has more than one cube.



(16) Notation: Background and Font Color

You can now set the background and font color for members and measures in pivot tables in the notation rules (Model menu, Notation). The colors apply to the labels of rows and axes as well as data cells. This font color overrides the automatic Business Intelligence colors.

We generally advise to use colors sparingly. If you wish to use them, however, the notation rules ensure that they are systematically used throughout the analysis application.



(17) Notation: Activate/Deactivate using the Shortcut 'Ctrl+N'

Regardless of which mode you are using, you can easily activate or deactivate the notation to create a common visualization of business relationships in graphical tables. Previous editions only supported this functionality in Miner mode (Model menu, Notation editor, Apply notation rules).

(18) Oracle OLAP: Parent-Child and Level-Based Hierarchies in Dimensions

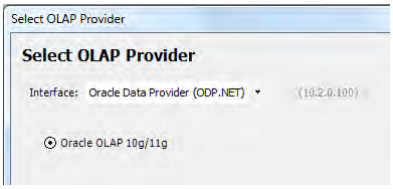
When run on Oracle OLAP 10g and 11g, DeltaMiner supports dimensions containing both parent-child as well as level-based hierarchies.

(19) Oracle OLAP: Pivot Table with Tuple Editor and Sparklines in Nested Axes

Version 5.3.8 offers even better support for Oracle OLAP. You can now work with the tuple editor in Oracle OLAP 10g and 11g (see DeltaMiner deltas! 5.3.7, feature #8). In addition, you can also display sparklines in pivot tables with nested axes.

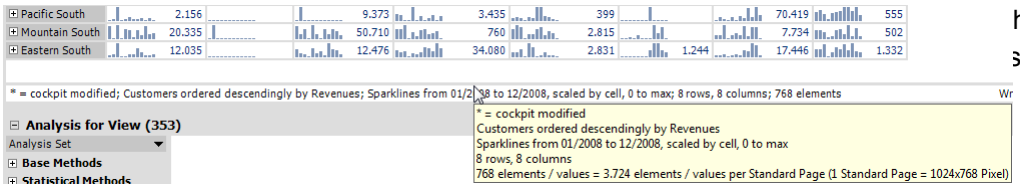
(20) Oracle OLAP: Support for Oracle OLAP 11g

DeltaMiner 5.3.8 supports Oracle OLAP 11g including the compatibility mode for 10g Analytical Workspaces in an 11g database instance (e.g. 10g is hosted in 11g). Due to a limitation in the current version of 11g, however,



you cannot create calculated members or user-defined measures in DeltaMiner; multiple selections are currently not supported for the same reason.

(21) Pivot Table: Number of Members/Values in the Status Bar

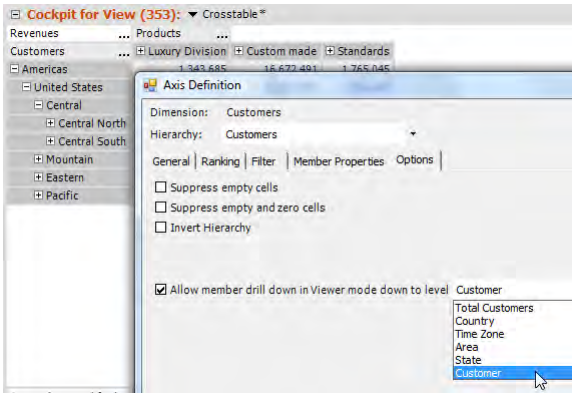


he number of data
ss the quality of reports

A tooltip displays the standard number of values and cells that generally fit on a 1024 x 768 pixel table (i.e. a standard page). This includes trend arrows as well as the values represented as charts in sparklines. If you export this information into the screen presentation mode (see feature #6), this data will be hidden.

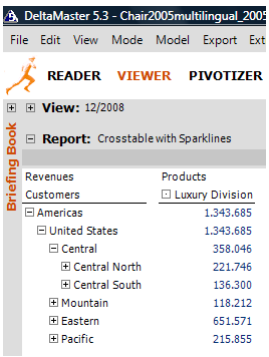
(22) Pivot Table: Selecting Drill-Down Levels in Viewer Mode

Users in Viewer mode can now drill down on and roll up pivot tables (see feature #12). In contrast to Pivotizer, Analyzer and Miner modes, however, Viewer users can only use this drill-down feature on designated areas. As a result, report editors who publish reports to Viewer users can determine where they can access additional, detailed information and where they cannot.



Here, you can define which levels – from top to bottom – that Viewer users can access in every single pivot table (Axis definition, Options tab). As a result, you could provide access to main product groups and product groups but not individual products.

This approach was designed to make the Viewer mode as easy and straightforward as possible for the end users. The ability to drill down to the lowest level of dimensions often means that a large number of members suddenly appears in the pivot table after a single click. This quickly leads to questions about sort and filter functions, which generally involve more in-depth knowledge of OLAP principles – which is exactly what Viewer users shouldn't need in the first place. For this reason, we do not plan to provide access to the Axis definition in Viewer mode. For these types of advanced requirements, you simply use Pivotizer.



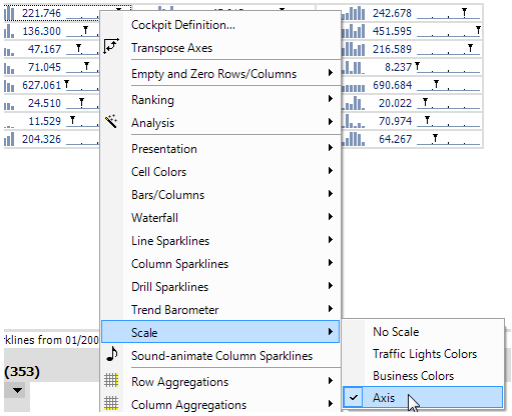
If you place limitations on a certain drill-down level, this will not affect the display of members. As a result, Viewer users can see members from levels that they couldn't otherwise reach in a drill down. In this case, Viewer users can close these branches. To drill down on the branches again, however, they would need to reopen the report.

In the default setting, Viewer users cannot drill down on any levels – just as in previous editions. You can, however, activate the drill-down mode to the desired level wherever you feel that it makes sense to offer this functionality.

This feature works identically in WebClient environments.

(23) Pivot Table: Scales

If have activated sparklines in DeltaMiner, you can determine where the current value should be placed between the sparkline's minimum and maximum values (see DeltaMiner deltas! 5.3.2, feature #19).

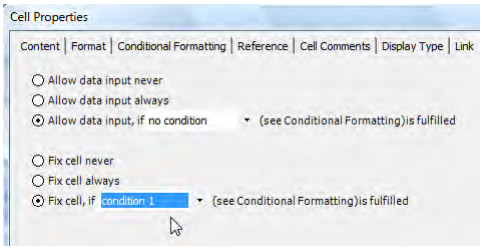


In the context menu this function is now called Scale (previously: 'Traffic Lightsl'). The visualization option previously known as 'Scale' in this menu is now called Axis.

(24) Planning Option: Using Conditions to Lock Cells in a Flexreport

You can use conditional formats to 'fix' or lock cell values. This is very similar to the conditional data entry feature that was introduced in version 5.3.6 (see DeltaMiner deltas! 5.3.6, feature #19)

You simply define the situation that you wish to check as a conditional format under the Cell properties of a Flexreport. A new option on the Data entry tab references this and will fix the value of the cell if the conditions are met. In this case, the cell cannot be changed through data entry. It also remains constant when its parent or child values change. The change in value is then simply allocated to the other cells.



The conditional fixation is an administrative feature that can only be set or canceled from Miner mode (see DeltaMiner deltas! 5.3.5, feature #13). Users in other levels cannot directly change the fixation (i.e. from the context menu or with a short cut). It will only be cancelled when the condition is no longer met, for example, because values were not changed in other cells. If Don't fix cell always was selected in the context menu, Miner users could cancel the fixation by hitting Ctrl + F6. This has the same effect as the Never fix cells option on the Data entry tab under Cell properties.

For example: In a data entry template for sales planning, you want to force all planners to enter information on individual articles and not article groups. To enforce this in a Flexreport, you simply create a column and then insert MDX formulas that determine the level of the displayed member and then make it accessible or not. If the member is an individual article, the condition will not be activated and the user can enter data. If not, DeltaMiner will automatically lock the cell. You can also use conditions to change the appearance of cells, but that has no relevance on evaluating the condition.

(25) Planning Option: Entering Identical Values in Base Cells – Absolute Splashing

If you are using a planning applications based on Microsoft Analysis Services or IBM Cognos (Applix) TM1, you can now enter a value followed by an exclamation point (e.g. '100!') into a cell. This will write that same value onto all underlying base cells. Once you have finished the operation, DeltaMiner will place the aggregate (e.g. sum) of the base cells into the cell where you placed the original entry.

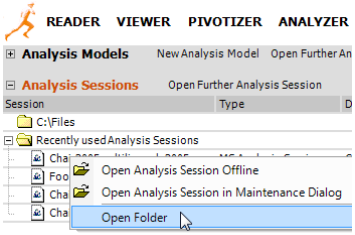
The new data entry option only indirectly affects the cells where you have entered data. First, DeltaMiner allocates the same value to all subordinate base cells. It then calculates the sum (or another aggregate function) and enters this new value into the data entry cell.

If you have deactivated automatic refreshing for the report and need to hit F9 to write back your data, DeltaMiner will recognize the explanation point but not display it in the cell.

You cannot use absolute data allocations in combination with cell fixations. The Analysis Services and TM1 option for stopping an equal distribution cannot be used here either. In other words, DeltaMiner will not prevent the write process regardless of the setting.

(26) Portal: Opening Folders in Windows Explorer

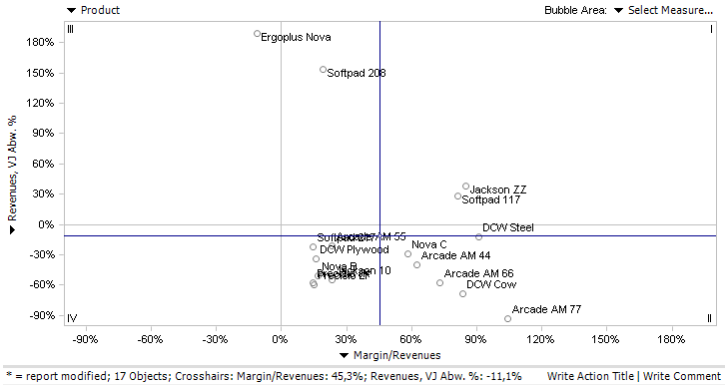
You can now open folders in Windows Explorer from the Portal. To do this, simply use the new entry in the context menus for folders and files displayed in the DeltaMiner Portal. If you select a file, DeltaMiner will open Explorer and display the directory where it is stored. If you select a folder, however, it will open the selected folder.



(27) Portfolio Analysis: Empty Bubbles Replace Filled Ones

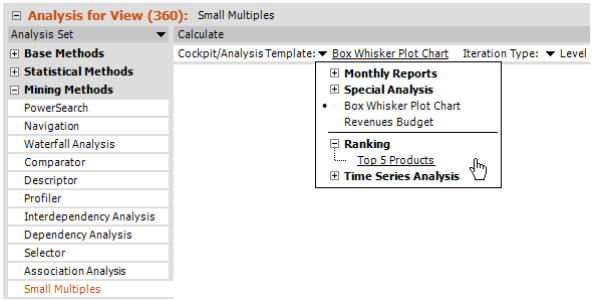
If only two measures are used in a portfolio analysis, DeltaMiner will no longer fill the bubbles.

This improves the readability of close or overlapping objects.



(28) Small Multiples: Tree Structures in the Menus for Cockpits and Templates

The menu for selecting the cockpit or template for creating a Small multiples report boasts a cleaner design. The cockpits in the upper part of the menu now use the same tree structure as in the Cockpit window. This list, however, does not include Combination cockpits and Measure charts/lists because they cannot be iterated with small multiples. To create cockpit folders as well as to sort or rearrange cockpits, please use the Cockpit browser which you can open in the Cockpit window using the Organize cockpits link at the bottom of the list.



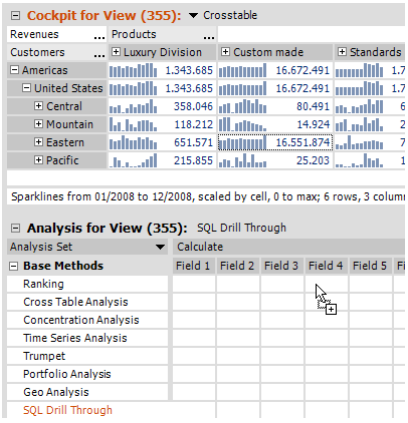
As before, DeltaMiner lists the templates at the bottom part of the menu. It automatically creates a separate group for each analysis module that supports Small multiples and contains analysis templates. DeltaMiner then stores the respective templates in that group.

(29) Small Multiples: Export Options

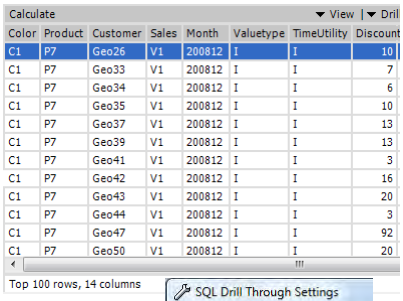
When you export a Small multiples report to Microsoft Word or PowerPoint, DeltaMiner now includes the options for dividing information into different sections. You can define these options for the entire analysis session in the Extras menu under Options, Export. If you want to make exceptions for individual reports, you can make these specifications under Report properties. When you divide information into separate sections, you can determine the maximum number of rows containing Small multiples per page or slide. The number of columns is irrelevant, because DeltaMiner doesn't divide the Small multiples rows during an export. The output will look exactly like it does in the screen display. If you want to export multiple sections, DeltaMiner will ensure that they use a uniform scale.

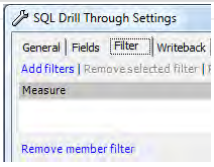
(30) SQL Drill Through: Using Drag and Drop to Filter Individual Records in the Pivot Table

You can now perform a threaded analysis in combination with an SQL drill through. If you drag a data cell from the pivot table in this module, DeltaMiner will add the respective dimension members as an additional criterion in the 'WHERE' clause of the SQL query expression.



As a result, you can start a highly differentiated query using the individual records in a relational database – directly from a measure display. In contrast to other analytical methods, DeltaMiner will not generate a new (filter) measure; this filter, however, will be displayed in the status bar.





If you want to Remove a defined member filter, simply open the Properties for the SQL drill through and click the respective link at the bottom of the Filter tab.

(31) WebClient: Copying to the Windows Clipboard

You can now copy data displayed in the DeltaMiner WebClient (i.e. via a Web browser) into your Windows clipboard for further use. This new feature, which is located in the Save menu (which you also use for Excel exports) of the Report window, is identical to the one in the Windows version of DeltaMiner. In other words, it includes the values of the report as well as the report's name and status information.

You can use this new copy feature provided that your browser's security settings allow you to access the Windows clipboard:

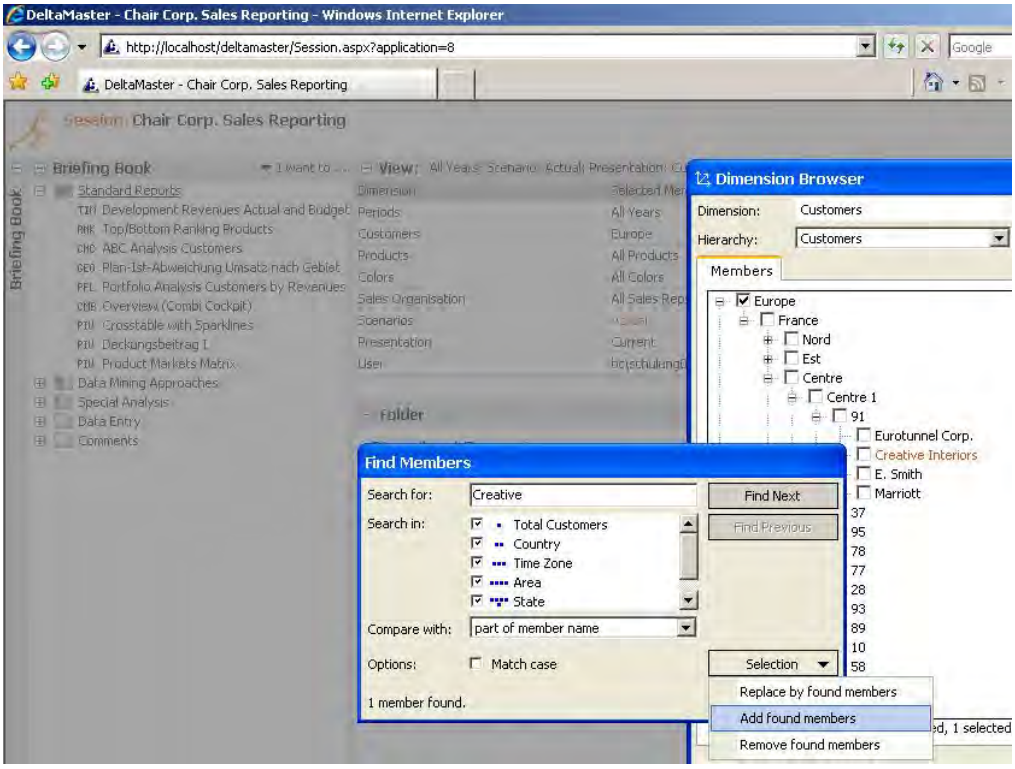
- In Microsoft Internet Explorer this is managed in the Web content zone. Open the Extras menu, Internet options, select the Security tab and pick Custom level. In the Scripting section under Allow paste operations via script, you should either Activate this option entirely or prompt each transaction separately.

- In Mozilla Firefox you can only access the security settings as an enhanced configuration. Enter 'about:config' in the address bar and filter the setting named 'signed.applets.codebase_principal_support'. Now change this setting to 'true'. When you copy something to the clipboard, Firefox will now present a security warning which you simply Accept to continue.

If the copy attempt was unsuccessful, DeltaMiner will display an error message. Please double check the security settings if this should occur.

(32) WebClient: Searching in the Dimension Browser

You can now perform a simply search by members (i.e. without the advanced functionality mentioned in feature #9) in WebClient. As a result, users can use their Web browser to search for members in the View window.



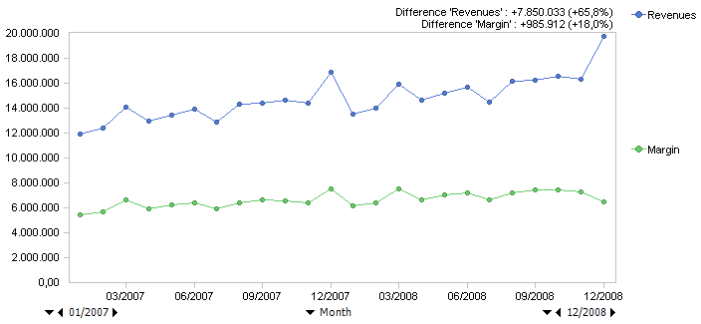
Similar to the rich client under Windows, you can start a search from the context menu, the I want to… menu or by hitting Ctrl+F. You can drag the Dimension browser and the search window separately on your screen. Since the search dialog doesn't block the dimension browser, you can simultaneously navigate and Select members using the same options in the Windows client.

(33) White Style in All Analysis Modules

You can apply DeltaMiner's white style in the table views of all analysis modules. This style, which avoids graphical garbage like grid lines and colored backgrounds, presents your reports in a very clean, straightforward design. You can apply this style in the Extras menu under Options, Presentation. Here you can define up to which user mode DeltaMiner should apply this style. The standard setting is Viewer; in other words, Reader and Viewer reports use this white style. The option applies for the entire analysis file (.das, .dam).

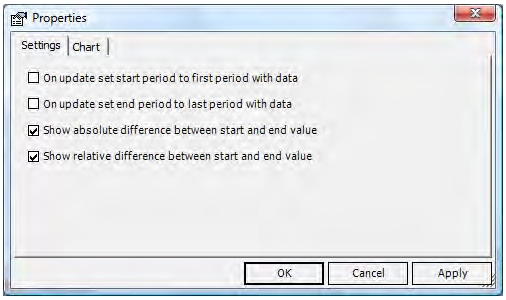
(34) Time Series Analysis: Showing Deviations between the Start and End Value

If desired, DeltaMiner can now calculate the absolute and/or relative (percent) deviation between the start and end value of a time series and display it at the upper right-hand corner of the chart. As a result, you can quickly



see how the examined measures have changed in the course of this period.

If a time series begins or ends with a zero, the division is not defined and will be marked accordingly (‘n. def.’).



You can switch the display on or off in the Properties of the Time series analysis (context menu or I want to… menu). These options apply to all measures used in an analysis or report.

(35) Notes: Compatibility with Previous Versions and Installation

Version 5.3.8 has made no changes to the metadata scheme of ReportServer. As a result, you do not need to execute the ‘reportserver.sql’ script. You should, however, update the ‘ReportServer.exe’ file as well as the respective DLLs so that they match the current DeltaMiner version.

The WebOption components – Repository GUI, WebClient and WebService – are also available in Version 5.3.8 as described in features #31 and #32. An update, therefore, is highly recommended. Since the database schema for the repository has changed in Version 5.3.8, please run the ‘Repository.sql’ script.

Before you update these files, however, please save a backup copy of the configuration files!

- WebClient: ‘web.config’, ‘DeltaMaster.css’ (style sheets) and any changed graphics in the Image folder (e.g. ‘Master_Top.png’)
- WebService: ‘DeltaMaster.Service.exe.config’
- Repository GUI: ‘DeltaMaster.Repository.exe.config’

Please note that you should not use the previous versions of these files in an update because their settings could lack critical information for the current release. As a result, you must transfer their settings into the new version of the file. Since the configuration files of WebService and WebClient did not change from 5.3.7 to 5.3.8, you can reuse the older files.

You can update the Repository GUI, WebService and WebClient by copying these files into the respective directories. Once again, please make a backup copy of these files before doing so. A separate setup is not necessary.

11 DeltaMiner deltas! 5.4.0

What's new in version 5.4 Find out in this overview of the May 15th 2009 release!

(1) General: Opening and Closing the Mode Bar 3

(2) Briefing Book: Zooming Onto Miniature Views with Your Keyboard 3

(3) ReportServer: Enhanced Meta Data Schema 3

(4) ReportServer: New Export Type - 'das offline' 3

(5) ReportServer: New Export Type - 'doc' 4

(6) Dimension Browser: Searching in Virtual and User-Defined Hierarchies 4

(7) Export: Using Notations to Determine Text and Background Colors in Excel 4

(8) Export: Generating Word Files 5

(9) Flexreport: Adjusting Excel Cell References Automatically When Copying 5

(10) Flexreport: Deactivating Automatic Calculations 6

(11) Geo Analysis: Coloring Backgrounds in Grayscale 6

(12) Hyperbrowser: Coloring With Grayscale 7

(13) Hyperbrowser: Using the Context Menu to Roll Up 7

(14) Combination Cockpit: Selecting Cockpits as a Link with the Cockpit Browser 8

(15) Combination Cockpit: Creating Links With Reports 8

(16) Synchronizing Models: Automatic Correction After Moving Hierarchies 8

(17) Pivot Tables: Clearer Names for Scaling Options in the Context Menu 9

(18) Pivot Tables: Setting a Minimum Resolution 9

(19) Pivot Tables: Interpolating Null Values in Sparklines 10

(20) Pivot Table: Applying Logarithmic Scales to Sparklines 11

(21) Pivot Tables: Changed Order for Table Properties 11

(22) Pivot Tables: Scaling Waterfalls Across Multiple Columns 11

(23) Pivot Tables: Applying a Gradual Scale to Cell Colors 12

(24) Pivot Tables: Cell Coloring With Grayscales 12

(25) Planning Option: Undoing the Last Data Entry 12

(26) Planning Option: Defining Allocation Rules for Specific Measures 13

(27) Portfolio Analysis: Synchronizing Selections in Charts and Tables 14

(28) Portfolio Analysis: Replacement of Filled Bubbles With Rings 14

(29) Distribution: Entering Class Borders Numerically 14

(30) WebClient: Exporting to a Word File 15

(31) Time Series Analysis: Showing Start and End Values 16

(32) Time Series Analysis: Logarithmic Scales in the Context Menu 16

(33) Notes: Compatibility With Previous Versions and Installation 19

(1) General: Opening and Closing the Mode Bar

To save space on your computer screen, you can now 'retract' the menu bar that runs horizontally at the top of your screen and allows you to switch among the user modes (*Reader*, *Viewer, etc*). If retracted, the menu bar will still remain active but will run vertically on the left-hand side of your screen. You can still access the *Portal* or plug-ins such as *ReportServer* from the *View* menu of the main toolbar.

This setting will be saved for each user in the Windows registry ('HKEY_CURRENT_ USER'). It also applies for all analysis sessions used on a computer.

To retract the bar, place your mouse on the menu bar and click the minus sign in the upper-left corner. To return to the usual horizontal view, click on the plus sign above the *Miner* level.

(2) Briefing Book: Zooming Onto Miniature Views with Your Keyboard

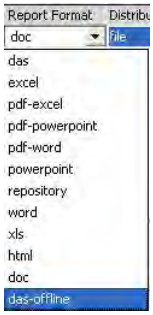
To increase or decrease the size of miniature views in your *Briefing book,* simply press and hold the *Ctrl* key and hit the '+" or '-' keys. Alternatively, you can press and hold the control key and move the wheel of your mouse to zoom in or out. You can use these same options to zoom in or out on pivot tables (see *DeltaMiner deltas!* 5.3.2, feature #25).

For a detailed description of miniature views, please refer to *DeltaMiner deltas!* 5.3.1, feature #9.

(3) ReportServer: Enhanced Meta Data Schema

ReportServer has an enhanced metadata structure in version 5.4.0 (see features #4 and #5). If you use Microsoft SQL Server to administer metadata, please run the 'ReportServer (SQL Server).sql' script to update this change. If you use an Oracle database to store your job definitions, please run 'ReportServer (Oracle).sql'. If you use an Access database (e.g. 'ReportServer.mdb' which is included in the installation), *ReportServer* will automatically update the metadata structure when you start the program.

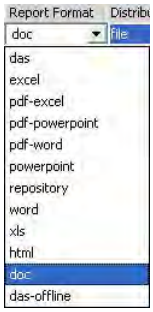
(4) ReportServer: New Export Type - 'das offline'



If you want to use *DeltaMiner* analysis sessions (.das files) only in *Offline Reader* mode, you can save memory by exporting them in our new 'das offline' format. In order to open these files, users will need to run *DeltaMiner* 5.4.0. When a user opens these files, *DeltaMiner* will automatically switch into *Offline Reader* mode. The user, however, will not be able to switch to a higher level.

Since this new report format applies an additional internal compression, these .das files require significantly less memory than normal analysis sessions. As a result, users can work with *DeltaMiner Briefing books* on computers with modest RAM capabilities (e.g. older models, modern netbooks or virtual machines). And since the users cannot switch to other user levels, you can use this format to give third parties or other people access to *DeltaMiner* reports without requiring a database connection.

(5) ReportServer: New Export Type - 'doc'



In addition, *ReportServer* also supports another method for exporting files into Word format. While the previous (and still available) method requires a local, licensed Microsoft Word installation to create reports, the new one does not. Since the new method is also significantly faster than the previous one, you can use it for generating large reports or normal-sized reports in large quantities. This new version, however, does not support all of the functions in Microsoft Word. For more information on these limitations, please read feature #8.

If you want to use the new components to generate a Word file, simply select 'doc' as your *Report format*. If you want to use Microsoft automation, simply set the *Report format* to 'word' or 'pdf word'. All three options require a separate 'ReportServer Office' license.

You can also use this new feature in an ad hoc export as well. Please see feature #8 for more information.

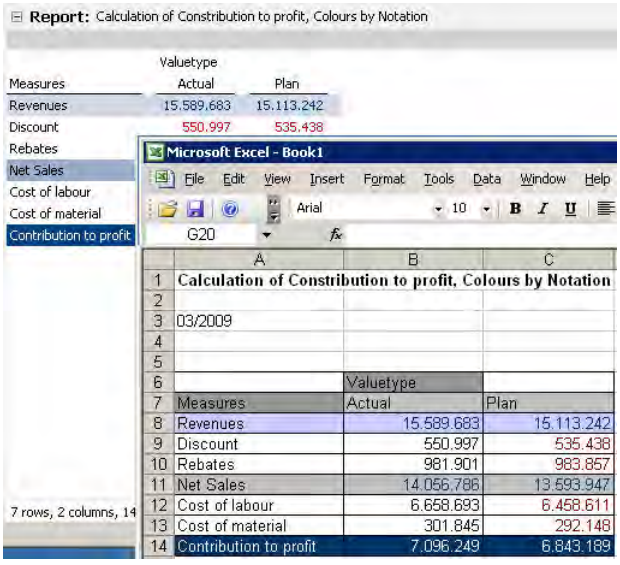
(6) Dimension Browser: Searching in Virtual and User-Defined Hierarchies

You can now use the *Dimension browser* to search virtual and user-defined hierarchies. In previous versions, this search was limited to hierarchies located in the database.

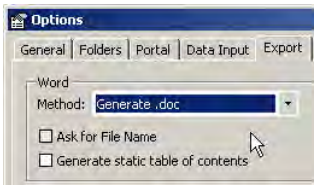
(7) Export: Using Notations to Determine Text and Background Colors in Excel

If you export an analysis session to Excel, *DeltaMiner* will apply the text and background colors stated in the notation. As a result, individual cells will keep their formatting after you export them to Excel.

As of *DeltaMiner* 5.3.8, you can now use a *Notation* (*Model* menu) to assign text and background colors to measures and members in pivot tables (see *DeltaMiner deltas!* 5.3.8, feature #16). Since *DeltaMiner* offers a larger color palette than Excel, there may be color differences between the two applications.



(8) Export: Generating Word Files



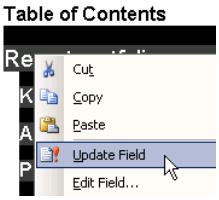
Like *ReportServer* (see feature #5), *DeltaMiner* also supports a new way for exporting analysis sessions into Word format. Under the *Extras* menu, go to *Options* and select the *Export* tab. Here you can choose if you want to export the files using Microsoft Word automation (as in the past) or by generating .doc files directly.

If you wish, *DeltaMiner* will ask if you want to verify the file names before exporting. Using the standard Windows dialog box, you can then specify any name changes as well as the path where you want to save the file. *DeltaMiner* will suggest that you use the name of the respective cockpit, report or report folder and save the folder to the path listed under *Options* (*Extras* menu) on the *Folder* tab for *Export files*. If you leave this option deactivated, *DeltaMiner* will automatically save the .doc file to the *Folder* for *Export files* using the default file name (i.e. the name of the cockpit, report or folder).

In both cases, once the export is complete, the file will automatically open in Word.

Generating .doc files directly is much faster than using Word automation. This option, however, does not support some of Word's convenient functions such as adjusting column widths in pivot tables. If this causes problems with the visualization, simply export the tables in question as images. You can change this global setting in the *Extras* menu under *Options*, *Export;* for specific reports, simply edit the *Report properties* in your *Briefing book*.

If you choose this new export method, you will also not be able to automatically update the table of contents. You can, however, work around this limitation. One option is to *Create a static table of contents* (located on the *Export* tab as shown above). If you activate this option, *DeltaMiner* will list an overview of the reports – without page numbers – on a new page placed after the title page.



If this option is deactivated, *DeltaMiner* will generate a dynamic table of contents with page numbers as a field in the generated file. In this case, you will have to refresh this table manually in Word (in the context menu of the 'Table of Contents' field).

DeltaMiner will apply the setting stored in the Windows registry ('HKEY_ CURRENT_USER') for each individual user. This setting applies for all analysis sessions on your computer and all options for exporting files into Word including the *Briefing book* or when you select *Save* in the *Report, Cockpit* and *Analysis* windows. *ReportServer* uses this same registry key before generating a table of contents.

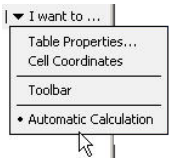
(9) Flexreport: Adjusting Excel Cell References Automatically When Copying

If you copy a cell that contains a reference to an Excel table (see *DeltaMiner deltas!* 5.3.8, feature #11), *DeltaMiner* will automatically adjust the space between the target and source cell when it pastes the cell reference.

For example: The Flexreport cell R3C5 refers to cell B19 in an Excel spreadsheet. Now copy this Flexreport cell (context menu) and paste it one row down and two columns across (i.e. Flexreport cell R4C7). *DeltaMiner* will automatically change the Excel reference and enter the cells that are located one row down and two columns across (i.e. to D20) in Excel sheet 1.

If you don't want *DeltaMiner* to adjust the reference, simply list the cell references with dollar signs (e.g. D20).

(10) Flexreport: Deactivating Automatic Calculations



To make editing a *Flexreport* even faster, you can deactivate the *Automatic calculation* option for your cockpit (context menu, *I want to…* menu). Although *DeltaMiner* has already supported this option in past releases, version 5.4.0 enforces it much more rigorously. For example, *DeltaMiner* will now not even update the cockpit when you change a formula or make other changes that could result in inconsistencies. In fact, *DeltaMiner* will only calculate the cockpit after you change a measure in the table or delete rows or columns so that the cell references still work.

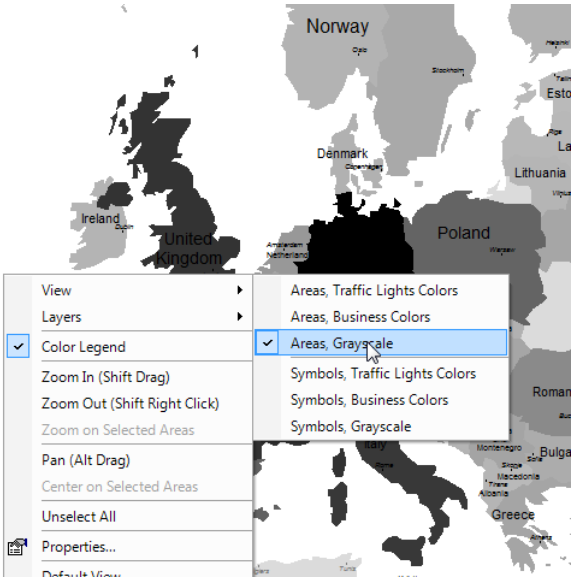
If this option is deactivated and you have made any changes, *DeltaMiner* will note that the Cockpit is *not updated* in the status row of the *Cockpit* window. To manually update the cockpit, you don't need to save your work first; simply hit the *F9* key.

If you have experienced working with large or complex *Flexreports*, you can save significant time by deactivating the automatic update option and simply hitting *F9* to update your work every so often. If you aren't very familiar with *Flexreports* or you are only working with small reports containing simple database queries, it's easier when you can immediately see the results of your work. In this case, leave this option activated as it is in the default setting.

This setting has no effect on how a *Flexreport* is displayed in the user levels *Offline reader* through *Analyzer*.

(11) Geo Analysis: Coloring Backgrounds in Grayscale

You can choose from *Traffic light*, *Business* and, now, *Grayscale* colors in *Geo analysis* maps. This option is located in either the context menu or the *I want to…* menu. In contrast to the other palettes, grayscale supports more finite differentiation because the human eye can identify different shades of brightness more easily than different colors. This output type is also better for many black-white printers.



DeltaMiner can also apply *Contrast* settings (*Extras* menu, *Options*, *General*) to grayscale colors. If you have chosen *dark*, *DeltaMiner* will use darker gray tones.

Grayscale is now also available in the *Hyperbrowser* and the *Cell coloring* options of pivot tables.

When choosing colors, *DeltaMiner* will also account for the BI *Factor*, a *Measure property* that shows the positive (e.g. revenues) or negative (e.g. costs) effects on business development. Thanks to the respective color coding, users can quickly identify the objects that they should investigate more closely. A darker color signalizes a higher importance; the color legend on the right-hand side explains which color stands for which value. The values grow successively larger from the bottom to the top – with one exception. If a measure with a positive factor contains both positive and negative numbers, the scale will be darker on the bottom and lighter on the top.

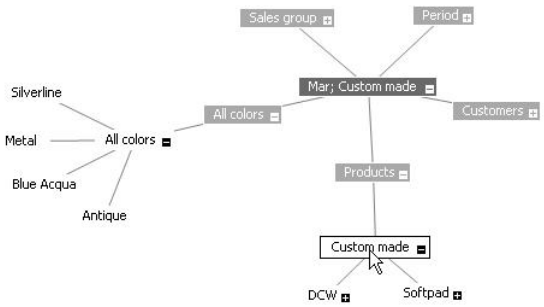
If you are working with variances and other measures that could have positive and negative integers in a single report, we recommend that you continue to use *Business colors*. Through the different shades of red and blue, you can quickly see if a value has a positive or negative BI factor.

(12) Hyperbrowser: Coloring With Grayscale

In addition to *Traffic light colors* and *Business colors, Hyperbrowser* now supports also supports grayscale options. To activate these colors, simply use the context menu or the *I want to…* menu. For more information on interpreting or using grayscale, please read feature #11.

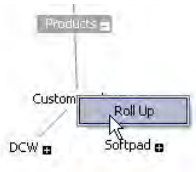
(13) Hyperbrowser: Using the Context Menu to Roll Up

If you are familiar with *Hyperbrowser*, you know that when you double click on a member, you drill down on and, therefore, shorten the branch for this dimension. The respective member (see 'Custom made') in the screenshot on your right) will then move to the root of the tree and *DeltaMiner* will only display the members that lie below the respective member. If you double click on a base member, *DeltaMiner* will hide the entire branch. To *Roll-up* the dimension,, simply use the appropriate command on the upper-right part of the window (not shown in the screenshot above).

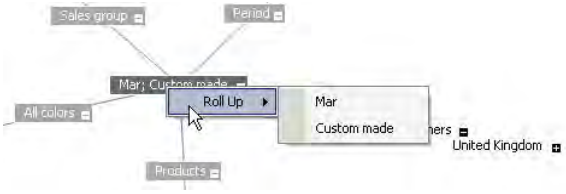


In version 5.4.0, you can roll up dimensions much faster and easier than before.

All nodes (i.e. all members except for base members) now contain a context menu that allows you to roll up to the next higher level.



The root nodes also contain a context menu in which you can roll up all dimensions where the top member is not selected. As a result, you can include branches that were hidden after a base member was selected in the *Hyperbrowser*. With each roll-up step, *DeltaMiner* will display the parent node as well as its children. In other words, by rolling up you will see the siblings of that particular node.

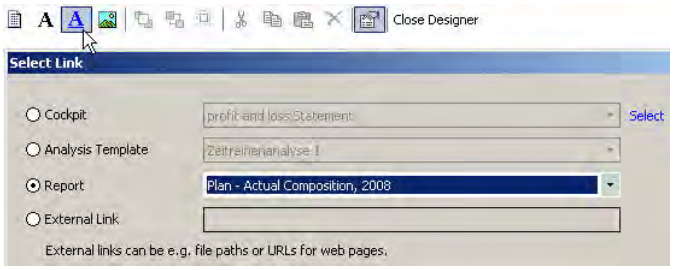


(14) Combination Cockpit: Selecting Cockpits as a Link with the Cockpit Browser

When you create and edit links in the combination cockpit, you can select cockpits using the *Cockpit browser*. As in the past, this dialog box allowed you to select an item from a 'flat' list of all cockpits. When you now click *Select* located to the right of the list (see screenshot in feature#15), *DeltaMiner* will open the *Cockpit browser* which displays your cockpit folders in a structured format.

(15) Combination Cockpit: Creating Links With Reports

You can open reports that are saved in your *Briefing book* from a *Link* in your combination cockpit. These links to reports work in all user levels from *Offline reader* to *Miner*. In the past, you could only create links to external hyperlinks and cockpits and analysis templates that are available in *Miner* level. Since reports are always saved with a view, however, please note that these views may vary when you open a report link.



(16) Synchronizing Models: Automatic Correction After Moving Hierarchies

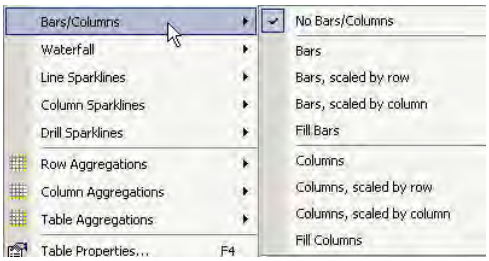
When synchronizing models, *DeltaMiner* checks if any hierarchies were moved using the 'DisplayFolder' property and automatically corrects the cockpits and reports accordingly. As a result, when you change a model in Analysis Services, you no longer need to make any changes in your *DeltaMiner* applications.

When you save analysis sessions in 5.4.0 for Analysis Services 2005/2008, please check the *Treat parallel hierarchy as a separate dimension* setting to see if you have activated the *According to display folder* or *Always* option. If one of these options is activated, you should not use these files with older versions of *DeltaMiner*.

Why? Since version 5.3.0, *DeltaMiner* can visualize parallel hierarchies in Analysis Services as separate dimensions. You can make this dependant on the 'DisplayFolder' property. In other words, *DeltaMiner* will treat all hierarchies that have the same value in this Analysis Services hierarchy property as a dimension with multiple but alternative hierachies. *DeltaMiner* saves which hierarchies from which dimensions will be used in cockpits and reports. Previously, if you assigned a hierarchy in a data model to another dimension, you had to

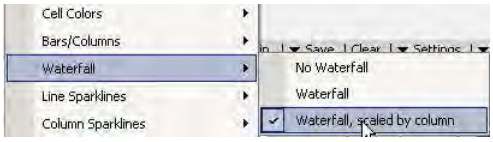
manually make this change in your *DeltaMiner* application as well. As of version 5.4.0, this step is no longer necessary. *DeltaMiner* will automatically identify the move and correct your cockpits and reports accordingly.

(17) Pivot Tables: Clearer Names for Scaling Options in the Context Menu



We have renamed the scaling options in the pivot table so that their functionality is even clearer. If you want to *Scale* bar or column charts by *Rows* or *Columns*, simply choose the appropriate options. If you only choose the words *Bars* or *Columns*, *DeltaMiner* will create a common scale for the entire table. These options were previously called 'Bars (tables)' and 'Columns (tables)'. As in the past, when you use a single scale for an entire table, *DeltaMiner* will treat absolute numbers and percentages separately (see *DeltaMiner deltas!* 5.3.1, feature #26).

Fill bars and *Fill columns* were previously called 'Bars (Tables, 100 %)' and 'Columns (Tables, 100 %). If you choose these options, *DeltaMiner* will draw an outline representing 100% and fill the chart with the respective percentage (see *DeltaMiner deltas!* 5.3.1, feature #25).

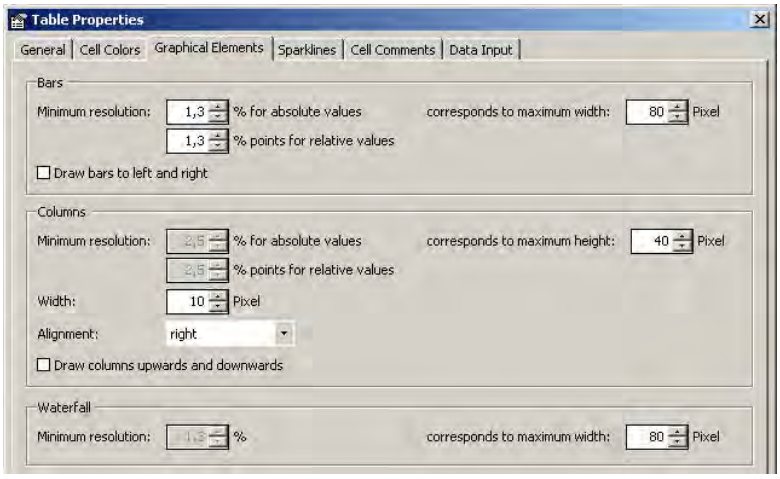


The context menu for the *Waterfall* visualization uses a similar labeling: *Waterfall, scaled per column*, is the new name for the function 'Waterfall (in column)'. *Waterfall*, the second option shown on the screenshot to your right, is new. It draws all waterfall charts in the table based on a common scale so that they are comparable (see feature #22).

These new names also apply for *Line* and *Column sparklines*: *scaled per cell* and *scaled per column*, which were previously called '(Cell)' and '(Column)'. If you choose the *Line* or *Column sparklines* option, all sparklines will be drawn using the same scale.

(18) Pivot Tables: Setting a Minimum Resolution

Resolution is an important criterion for measuring the quality of management information. That's why you can now explicitly state the minimum resolution for *Graphical elements* in the *Table properties* of a pivot table (context menu, *I want to…* menu).



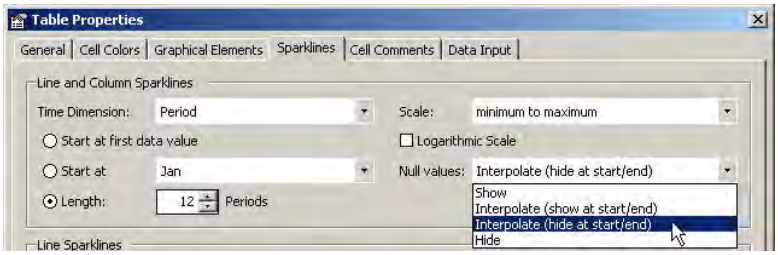
The *Minimum resolution* and the maximum *Width* and *Height* influence each other respectively. A higher resolution (i.e. a smaller percentage) creates wider bars and higher columns, and vice versa. If you choose a resolution of 1.0 percent, the value area that should

be used to draw a bar will be divided by 100 and every pixel on the screen will represent 1 percent of the span. If you increase the resolution to .5 percent, *DeltaMiner* will use 2 pixels to represent 1 percent of the span and the bars will be twice as long. Please note, however, that you can only modify the resolution for *Graphical elements* that exist in the current pivot table.

Although there are strong ties between width/height and resolution, this new feature represents a complete paradigm change. Instead of focusing on pixels, a measurement from the software world, the focus is on resolution, a quality standard in the sphere of applications.

(19) Pivot Tables: Interpolating Null Values in Sparklines

Version 5.4.0 offers a more refined way to deal with missing values (i.e. null) in sparklines. Under the *Table properties* of the pivot table and the *Sparklines* tab, you can now choose from the following four options:



- If you *Show null values*, *DeltaMiner* will treat a missing value like a numerical value of zero. In a column sparkline, the value will be drawn as an abnormal column. In a line sparkline, the value will be drawn as a point on the X axis with the appropriate connecting lines.

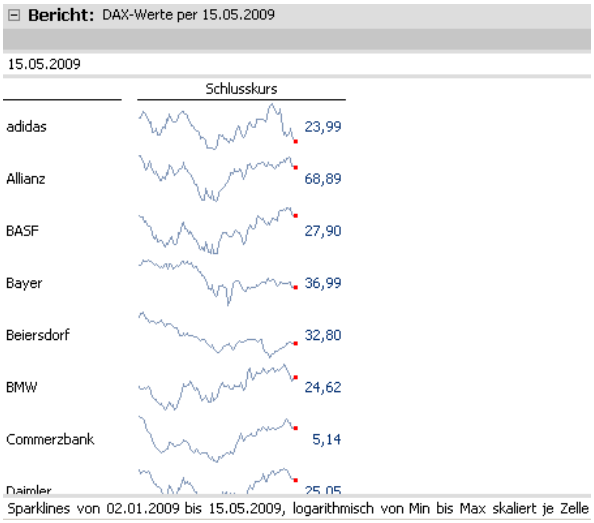
- If you *Interpolate* null values, *DeltaMiner* will smooth out the appearance of the sparkline and calculate the missing values as linear interpolation. In other words, the value change between the data value that precedes the null value or the row of null values and the data value that directly follows it will be allocated to the null values in equal parts. If the values are missing *at the beginning or at the end* of a time series, interpolation is mathematically undefined. In this case, you decide if *DeltaMiner* should *show* the null values (and treat them like zeros) or *hide* them. These sparklines look as if they begin later or end earlier. Generally, however, they remain in the same grid as other sparklines and don't 'slip' within the cell so that the columns or points in the rows of sparklines always refer to the same point in time.

- If you *hide* all zero values, the sparkline will have a hole in it because *DeltaMiner* will not draw columns or connections to the point.

DeltaMiner will always account for a numerical value of zero and will never interpolate or hide it.

(20) Pivot Table: Applying Logarithmic Scales to Sparklines

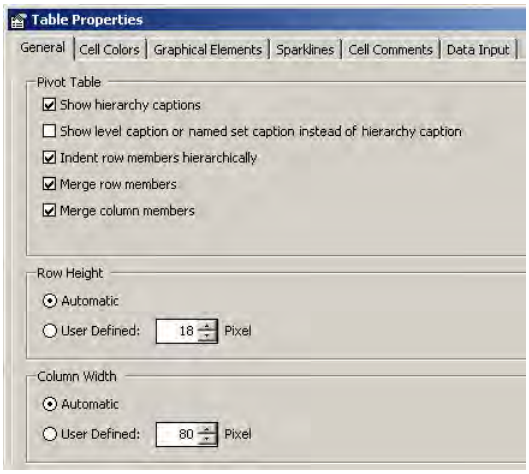
When you apply a logarithmic scale to your sparklines, your report consumers can identify and compare relative changes with their own eyes. That's why *DeltaMiner* now supports these scales in *Time series analyses* (see feature #32) and sparklines, the miniature format thereof. You can activate the *logarithmic scale* under the *Table properties* of the pivot table on the *Sparklines* tab (see screenshot in feature #19). The sparklines shown in the screenshot on your right – German stock exchange "DAX" values as of May 15th, 2009 – have a row height (*Table properties*, *General* tab) of 40 pixels in order to provide more space for better differentiation.



The logarithmic scale is designed for line sparklines. We do not, however, recommend that you use them for column sparklines. When you use logarithmic scales, *DeltaMiner* will post this in the status menu of the report or cockpit.

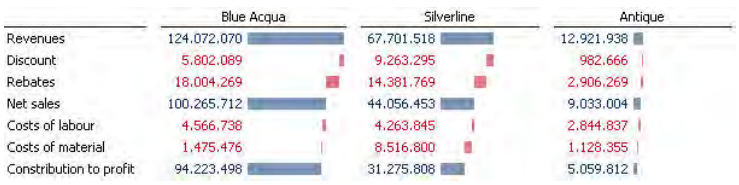
(21) Pivot Tables: Changed Order for Table Properties

The multiple options for defining pivot tables have been reorganized in the *Table properties* dialog box. As before, you can open the dialog box from the context menu, the *I want to…* menu or by hitting the *F4* key. The settings for bars, columns and waterfall charts, for example, are all located on the *Graphical elements* tab, while the *General* settings have been grouped together on a separate tab.



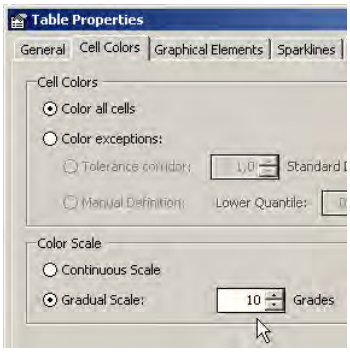
(22) Pivot Tables: Scaling Waterfalls Across Multiple Columns

Using a new scaling option, you can now compare waterfall charts that are located in multiple columns. If you activate the *Waterfall* option in the context menu of the pivot table, *DeltaMiner* will draw all waterfall elements in all columns of the table using the same scale.



As a result, users can compare measures located in different columns of a graphical table and not just from top to bottom.

(23) Pivot Tables: Applying a Gradual Scale to Cell Colors

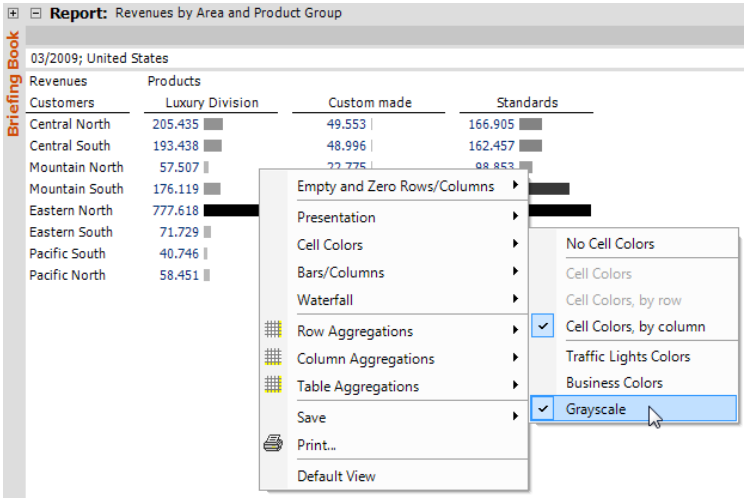


In addition to a continuous scale, *DeltaMiner* can now also apply gradual colors in order to highlight individual cells of a pivot table. Under *Table properties* on the *Cell coloring* tab, you can determine how many *Levels* the scale should contain. The smallest value is ten. This option applies for all three color palettes – *Traffic light, Business* and Grayscale colors (see feature #24).

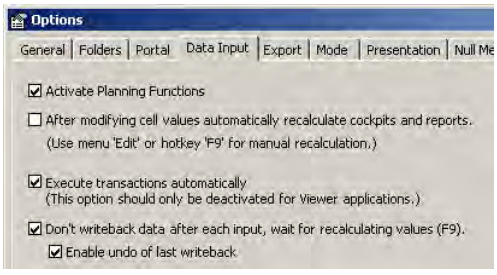
By limiting the number of color grades, you can identify differences more easily – especially when the values are evenly spread. In general, this function improves the differentiation in your visualization. If may, however, also cause problems with thresholds. When a level boundary lies between two values, for example, DeltaMiner may allocate similar values to two different levels.

(24) Pivot Tables: Cell Coloring With Grayscales

Pivot tables now offer *Grayscales*, a third color scheme for *Cell coloring*. For more information on interpreting and using grayscales, please refer to feature #11. The screenshot to your right shows a pivot table in *Reader* mode, the lowest user level that supports these colors.

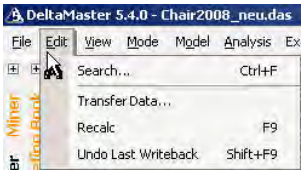


(25) Planning Option: Undoing the Last Data Entry



If you have planning applications that run on Microsoft Analysis Services 2005 und 2008, you can now undo the last data entry.

This *Enable undo* feature, however, only works when *DeltaMiner* does not *write back data after each input* but only after manual recalculation *(F9).* If you want to activate these options, both are located in the *Extras* menu under *Options, Data entry*.



In order to return to the status of the last manual write back (*F9)*, you can either hit *Shift+F9* on your keyboard or select this function from the *Edit* menu. This will

delete the respective data records from the writeback table. This feature, however, will only allow you to retrieve the last saved entry; multiple backward steps are not possible.

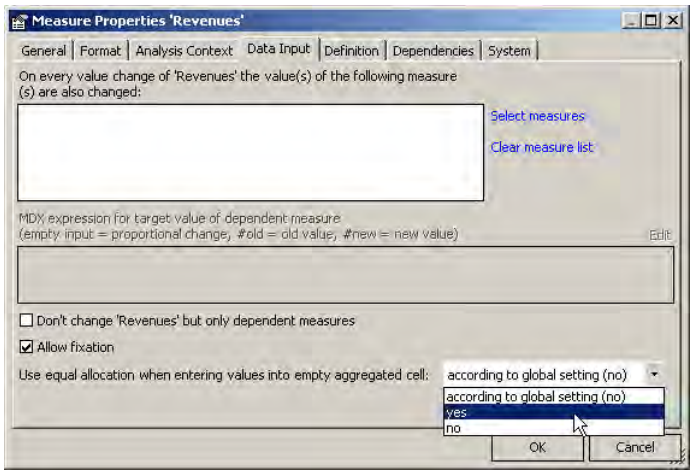
In order to run the respective database operations, you must use a ROLAP write-back table that is stored in Microsoft SQL Server and use Windows authentification. In addition, the user needs SELECT and DELETE rights for the writeback table as well as rights in the OLAP database for editing the respective cube and reading definitions.

(26) Planning Option: Defining Allocation Rules for Specific Measures

In *Planning Option*, you can enter a value into an empty parent cell and allocate this value to the underlying children. Previously, this was a global option that applied for the entire planning application. Now, you can define it for individual measures.

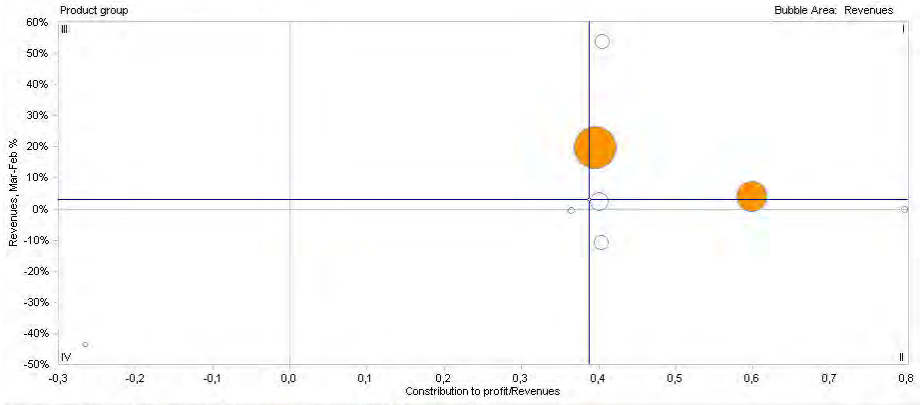
In some planning applications, you may want to prevent users from entering data in an empty aggregated cell and allocating these values to its children. When there are many underling cells, however, this process can take time. To protect users from accidentally starting a time-consuming process, *DeltaMiner* now supports a function for preventing these allocations.

Yet, it also can make sense to leave this option open to users, for example, when only a few parametrization measures are affected. As in the past, you can define the global setting in the *Extras* menu, *Options*, *Data entry*. For specific measures, however, you can change these settings under *Measure properties* on the *Data entry* tab. The default value for all measures is *According to global setting*; this is displayed in parentheses. Apart from that, you can always permit (*yes*) or prohibit (*no*) data allocations to empty underlying cells for individual measures.



(27) Portfolio Analysis: Synchronizing Selections in Charts and Tables

When you choose the mixed view (i.e. tables and charts) of the *Portfolio analysis*, *DeltaMiner* will highlight certain objects in the table and the chart regardless which view you have selected. For example, if you click on (and, therefore, select) a point or bubble in the chart, *DeltaMiner* will highlight the respective rows in the table. Alternatively, if you click on a row in the table, *DeltaMiner* will highlight the respective points or bubbles in the chart.



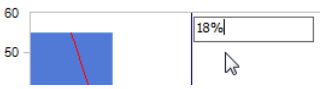
(28) Portfolio Analysis: Replacement of Filled Bubbles With Rings

To help you better identify overlapping objects, *DeltaMiner* now draws the bubbles in a *Portfolio analysis* as empty rings.

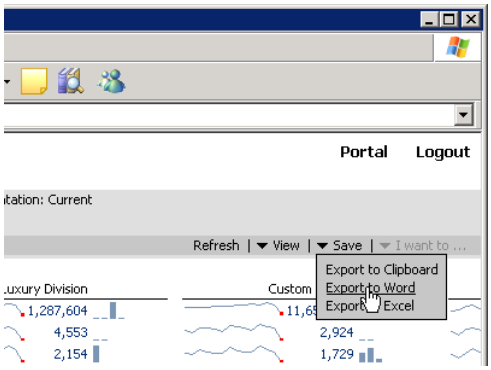
(29) Distribution: Entering Class Borders Numerically

You can now use exact values to define class borders in a *Distribution* analysis. If you mouse over a class border, the pointer will change into a horizontal double arrow. Now, you can drag and drop the border with your mouse or do a right mouse click to open the new context menu and *Set* or *Remove class* borders.

To *Set* the border, you can enter the desired value from your keyboard into a new data entry field that will appear next to the border line. This field will contain the previous settings. To enter percentages, simply add a percentage sign to the number.

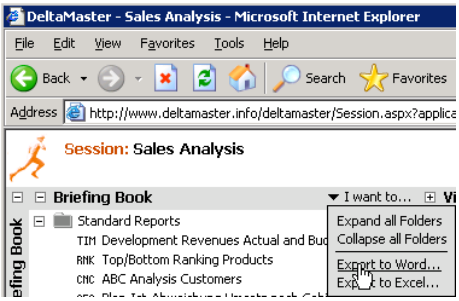


(30) WebClient: Exporting to a Word File



You can now export individual reports or entire folders as Word files from your Web browser. Best of all, since *DeltaMiner* WebClient has the necessary export mechanisms, you don't need to have Microsoft Word installed on your Web server. The steps for exporting these files are identical to those in Windows:

- From the *Report* window: You can export the displayed report by going to the *Save* menu and selecting the respective function from the list.

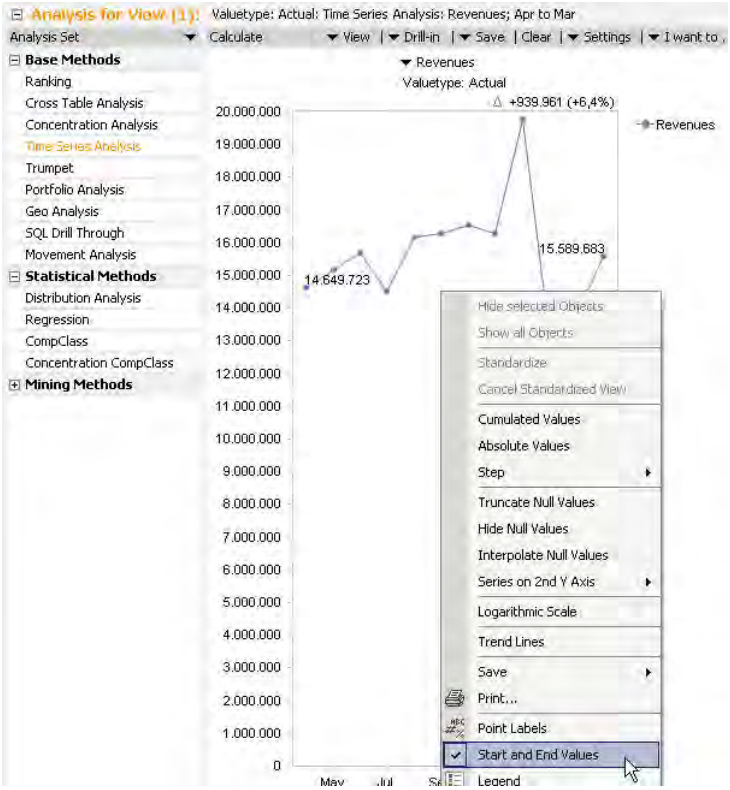


- From the *Briefing book:* You can either export an individual report, all reports in a folder, or all reports in all folders. In all three cases, you start as usual by opening the *I want to…* menu or doing a right click on a report or folder to open the context menu. WebClient will react by presenting its own context menu (i.e. this is not the standard context menu of the browser but specifically for WebClient) where you can find the option to export to Excel or Word. WebClient will then ask if you want to export the current report, the current folder, or all folders.

The Web service will then generate the files and send them to the browser. This functionality uses the same underlying technology that *DeltaMiner* now also offers in the Windows version (i.e. 'generating .doc files'). As a result, the same restrictions that were outlined in feature #8 apply here as well. If you want to export large or complex files, we recommend using *ReportServer* for optimal performance.

WebClient supports the same *DeltaMiner* export options as in the Windows edition. These are stored in a configuration file. For more information, please refer to the WebOption documentation.

(31) Time Series Analysis: Showing Start and End Values



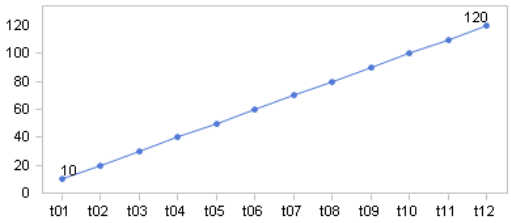
You can now display the *Start* and *End values* (context menu, *I want to…* menu) in a time series analysis. This improves the readability of your reports because start and end values are extremely important for interpreting data correctly. In addition, you can eliminate the values in between to make the visualization clearer.

The screenshot on your right also shows the absolute and relative differences between the start and end values. You can activate this option under *Properties* (context menu, *I want to…* menu; see *DeltaMiner deltas!* 5.3.8, feature #34).

If you want to label all points as in the past and not just the start and end values, simply choose the *Number values* option.

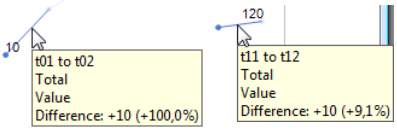
(32) Time Series Analysis: Logarithmic Scales in the Context Menu

In order to compare relative changes in time series analyses, *DeltaMiner* supports logarithmic scales in *Time series analysis*, *Small multiples* and sparklines (see feature # 20).



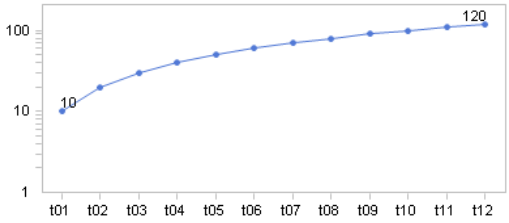
If you worked with time series analyses in the past, you probably (unknowingly) used linear scales. These scales, however, cannot present value changes in percentages correctly so that you can compare them accurately. The screenshot on your right shows a simple example: a measure with a start value of 10 that grows in increments of ten until it reaches the end at 120. In a linear scale, as expected, this creates a straight line where all segments have the same slope.

What interests us in this case, however, is the relative change. This slope ranges from 100% change (from 10 to 20) to 9.1% change (from 110 to 120).



When you are measuring relative changes (and that is usually the case when you are analyzing monetary values), linear scales can be very deceiving. For example, they can visualize an impressive 100% jump and a

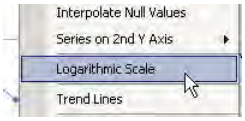
relatively moderate 10% growth using the exact same slope – depending, of course, on how large or small the start value is. Vice versa, a chart can show the same relative change as a very steep or a very flat slope in the exact same chart – depending, again, on the start value.



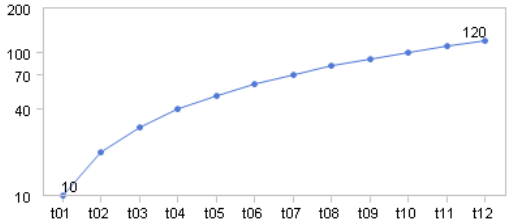
You can solve that problem with a logarithmic scale. The line starts with a sharp slope (100 % from 10 to 20) and becomes flatter because the growth percentage gets smaller and smaller as we progress. You can now see that the smallest increase at the end (9.1 %, from 110 to 120) is indeed the smallest. The decreasing spaces between the divisions on the Y axis are typical for logarithmic scales.

Logarithmic scales make relative changes comparable because the same slopes in a chart represent the same percentage of change between values.

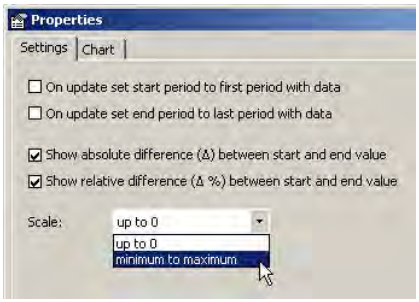
The distortion caused by a linear scale becomes clearer based on how strong they vary within the series. If there are only a few small changes in the entire row (e.g. because they only follow a very weak trend or they only vary slightly around a certain mean), however, the distortions will be so slight that you can almost ignore them.



To use a *logarithmic scale* in place of a linear one, simply choose the respective option in the context menu of the *Time series analysis* or the *I want to…* menu. *DeltaMiner* always calculates the logarithm on the basis of ten (decadal logarithm 'lg'); every other base, however, would also deliver an exact presentation true to scale.



Despite popular belief, you can (and should) chop the Y axis and only show the range between the minimum and maximum values themselves. Why? It's true that the human eye instantly notices the gap between the individual points and the X axis in a column bar chart. In a line chart, however, it primarily notices the slopes of the line segments. And this type of presentation represents these value changes correctly and true to scale – even when you chop the axis (see http://blog.bissantz.com/perceptive-priority).

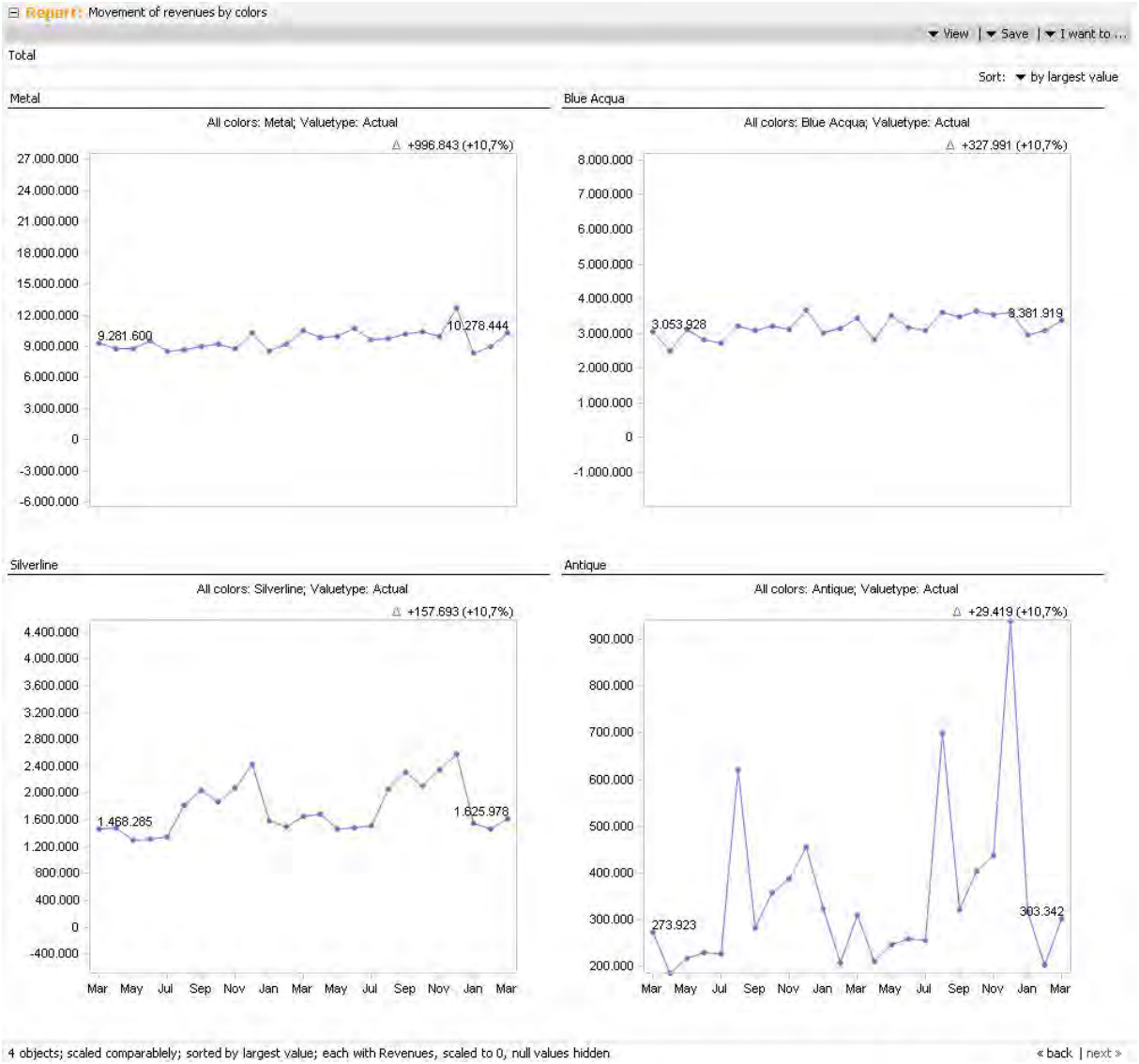


For this reason, you can now set your *Scale* from *Minimum to Maximum* under *Properties* (context menu, *I want to…* menu). Just as with logarithmic axes, this setting will saved in analysis templates and applied in *Small multiples* as explained in detail below.

For negative values and null values, the logarithm is undefined and, therefore, will not be presented in the *Time series analysis*. Again, logarithmic scales are designed for line charts; they are not, however, recommended for column bar charts.

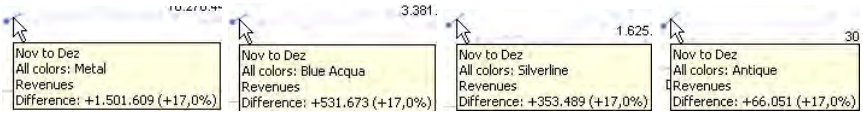
Logarithmic scales are very useful in combination with **Small multiples** (see *DeltaMiner deltas!* 5.3.7, feature #1). If you also use *comparable scaling* (Option located in the *Properties* von *Small multiples*), you can even compare relative changes in value across the different tiles of small multiples.

For the following example, we have selected ‘revenues’ as our measure in a time series analysis, defined a start and end point, set a logarithmic scale to show the minimum and maximum, and saved these settings as a template. If we iterate these with *Small multiples* on the ‘Colors’ level, *DeltaMiner* will generate the following report:



Although we are dealing with completely different sizes (end values of approximately 27 million, 8 million, 4.4 million, and 900,000), we can directly compare the relative changes with each other – both within a single time series as well as among all four. You can see this clearly if you take a look at the change from November to

December 2007, which just so happens to be 17% for all colors. It is no coincidence that the same changes look identical as well. It is simply the result of *DeltaMiner's* automatic formatting.



DeltaMiner has supported logarithmic scales in previous versions. These settings, however, were located in the *Settings* of the Y axis. You can still define or edit these settings, for example, minimum or maximum values here. These parameters, however, will only apply to the report and have no effect on *Small multiples*.

For more information on the benefits of using a logarithmic scale, please refer to 'Me, Myself and BI', Dr. Bissantz' personal blog:

- "Do time series charts really compare time series?"
  http://blog.bissantz.com/shocking-time-series
- "Do managers have to ride rabid tigers?"
  http://blog.bissantz.com/logarithmic-rabid-tiger-1
  http://blog.bissantz.com/rabid-tigers-part-2
- "Sailing under a pirate flag"
  http://blog.bissantz.com/pirate-flag

(33) Notes: Compatibility With Previous Versions and Installation

You do not have to uninstall older versions of *DeltaMiner* before installing the latest version. In fact, you can operate versions 5.0, 5.1, 5.2, 5.3 and 5.4 in parallel. During the installation, *DeltaMiner* 5.4 will transfer the previously defined paths for *Export templates* as well as *Map*, *trace and log files* (*Extras* menu*, Options, Folder*). Please check which folders *DeltaMiner* uses before removing an older installation.

When you install the new version, the installation wizard will suggest that you use a new path (e.g. 'C:\Program Files\DeltaMiner 5.4.0'). You can either use this path or select another one. If you want to overwrite your current installation, choose the same path as before. If you work with a named license, please copy the 'lservrc' file from the directory of your previous installation (usually C:\Program Files\DeltaMiner 5.3.0') into the folder for the 5.4 installation.

The metadata scheme of **ReportServer** has been updated in version 5.4.0 (see feature #3 for more information). As always, please update the 'ReportServer.exe' file as well as the respective DLLs so that they match the current *DeltaMiner* version.

The **WebOption** components – Repository GUI, WebClient and WebService – are also available in Version 5.4.0 as described in feature #30. An update, therefore, is highly recommended. Since the database schema for the repository has not changed in Version 5.4.0, however, you do not need to run the 'Repository.sql' script. Before you update the WebOption, please create a backup copy of the configuration files:

- WebClient: ‘web.config’, ‘DeltaMaster.css’ (style sheets) and any changed graphics in the Image folder (e.g. ‘Master_Top.png’)
- WebService: ‘DeltaMaster.Service.exe.config’
- Repository GUI: ‘DeltaMaster.Repository.exe.config’

Please note that you should not use the previous versions of these files in an update because their settings could lack critical information for the current release. As a result, you must transfer their settings into the new version of the file. Since the configuration files of WebService and WebClient did not change from 5.3.8 to 5.4.0, you can reuse the older files.

You can update the Repository GUI, WebService and WebClient by copying these files into the respective directories. Once again, please make a backup copy of these files before doing so. A separate setup is not necessary.

12 DeltaMiner deltas! 5.4.1

What's new in version 5.4.1 Find out in this overview of the August 14th 2009 release!

(1) General: Running DeltaMiner on Windows 7 3

(2) General: Saving Space in Hierarchy Menus 3

(3) Measure Properties: Formatting Time Spans with the Number of Decimal Spaces 4

(4) Briefing Book: Displaying Action Titles Instead of Report Titles 5

(5) Briefing Book: Placing a Report Title or Action Title on Title Pages (Reader and Viewer) 5

(6) Briefing Book: Displaying in Presentation Mode 8

(7) Export: Sending Reports as a 'Multipart' Mail with Additional Plain Text Section 9

(8) Flexreport: Creating View-Specific Excel Cell References with MDX 9

(9) Licensing: Ending a DeltaMiner Session Automatically 10

(10) Licensing: Deactivating the Return License Function When Working in a Lower Level 10

(11) Microsoft Analysis Services: Using .cub Files as Command Parameters 10

(12) Microsoft Analysis Services: Noting No Read Access in Reports 11

(13) Microsoft Analysis Services: Using SQL Drill Thoughs for Role-playing Dimensions 11

(14) Oracle OLAP: Reporting Exceptions with ReportServer 13

(15) Oracle OLAP: Using OS Authentication for Single Sign-On 14

(16) Pivot Tables: Interpolating Nulls in Logarithmic Scaling 14

(17) Pivot Tables: Sorting by Scale 15

(18) Pivot Tables: Defining Column Widths for Fixed Columns with an Optional Line Break 15

(19) Maintenance Dialog Box: Renaming Relational Fact Tables 17

(20) Maintenance Dialog Box: Editing the Connection String of the Relational Model 17

(21) WebOption: Creating a Logbook 17

(22) WebOption: Supporting Multiple Clients in WebService..... 19

(23) Time Series Analysis: Showing Start and End Values in Multiple Time Series and Displaying Columns 21

(24) Time Series Analysis: Ignoring Nulls in Differences Between Start and End Values..... 21

(25) Time Series Analysis: Showing the Difference Between Minimum and Maximum (Span) 21

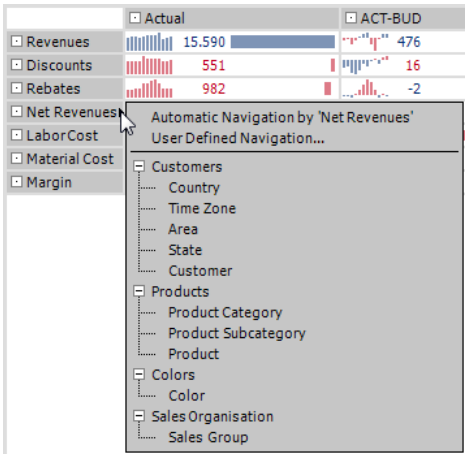
(26) Notes: Compatibility With Previous Versions and Installation 22

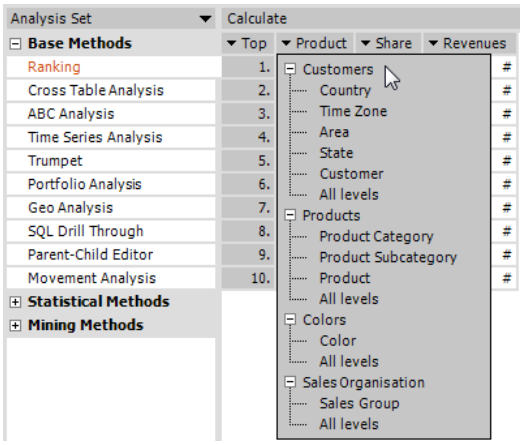
(1) General: Running DeltaMiner on Windows 7

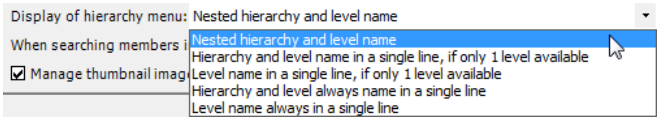
Microsoft has announced that its new Windows 7 operating system will be released on the market in October 2009. We have tested *DeltaMiner* on the pre-release that is currently available and made the necessary changes to ensure full compatibility. The result: *DeltaMiner* runs on Windows 7.

(2) General: Saving Space in Hierarchy Menus

Hierarchy menus are the selection lists offered in *DeltaMiner* hierarchies and levels (e.g. in the pivot navigation or in analysis methods). You can now choose from four new presentation options to display these menus in a space-saving way.

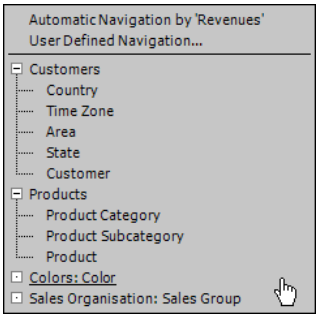






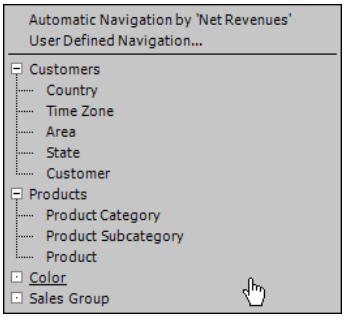
Under *Extras* / *Options* / *General,* you can configure the *Display of hierarchy menus*. The first option is identical to the previous menu configuration: *DeltaMiner* will display the name of each hierarchy followed by the available levels in a tree-like indentation as shown above. Hierarchies that contain no (further) levels will not be shown. This was also the case in previous versions. For example, hierarchies such as value types (budget, actual) or time types (time utility) generally have no top level; their members lie flat next to each other. As the view selection makes these types of hierarchies 'inflexible', it does not make sense to perform further analyses in them. In hierarchies where the selected members are on the lowest level, detailed differentiations aren't possible. As a result, these are not offered in hierarchy menus.

The following four new options summarize the hierarchy and level names more concisely:

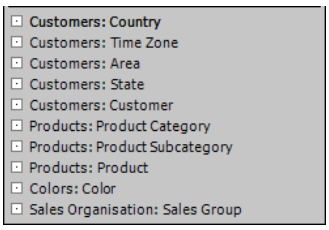


- *Hierarchy and level name in a single line, if only 1 level available*: If a hierarchy only has one level available for analysis, *DeltaMiner* will display the name of the hierarchy and the name of the level next to each other in one

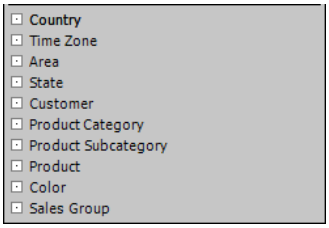
row – instead of on top of each other in two separate rows. This is the case with ‘Colors’ and ‘Sales Organisation’ in the screenshot on your right. In analyses such as *Ranking* and *PowerSearch*, which can work within the individual levels as well as across *all levels* of the data model, this presentation type does not work due to the additional entry.



- *Level name in a single line, if only 1 level available*: Similar to the option above, this option refers to hierarchies that only have a single level. In this case, *DeltaMiner* will display the name of this one level but not the name of the hierarchy in order to save space. The logic is simple. If a hierarchy only has one level available, this level will probably have an identical or similar name to the hierarchy itself. This option eliminates redundancies by shortening ‘Colors: Color’ to ‘Color’ or “Sales Organisation: Sales Group” to ‘Sales Group’.



- *Hierarchy and level name always in a single line*: Unlike the two options listed above, this option applies to all hierarchies including those that have multiple levels for analysis. Here, too, *DeltaMiner* lists the names of the hierarchy and the level on a single line separated by a colon – instead of using two separate lines.

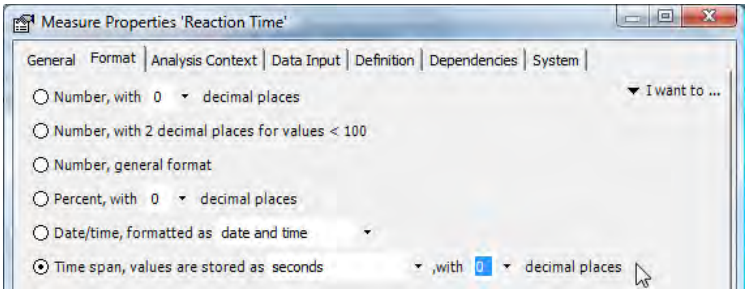


- *Level name always in a single line*: This option is the most compact menu form. In this case, *DeltaMiner* only displays the level names – without hierarchy names.

Especially in cases where level names appear in the menus without hierarchy names, you should be careful that each level has a clear and unique name. If need be, you can rename hierarchies and levels directly in *DeltaMiner*. This comes in handy when you are dealing with parent-child hierarchies that only have symbolic names such as ‘Level 01’ or ‘Level 02’ in the OLAP database. In menus with hidden hierarchies, these types of entries would be confusing. You can give these hierarchies and levels more logical names in the *Dimension browser* (*I want to…* or the context menu of levels).

(3) Measure Properties: Formatting Time Spans with the Number of Decimal Spaces

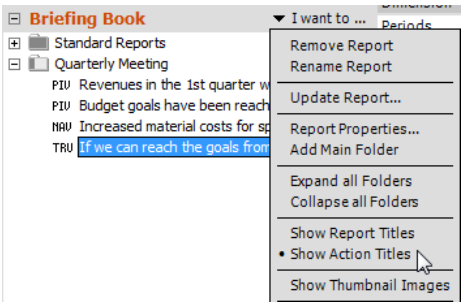
You can now define the number of *Decimal places* for measures that display a period of time. This option is often used to avoid the use of decimals entirely (option = 0). After all, milliseconds are irrelevant for most business transactions. *DeltaMiner*, however, uses the formatting routines in Microsoft’s



.NET framework – and these work with up to 7 decimal spaces for standard time spans. As a result, you can now compensate this pseudo-exactness in the *Measure properties* on the *Formatting* tab.

If you set the number of decimal spaces in time spans, this setting **will not work in previous versions**. Although users can open analysis sessions saved with the current version in older *DeltaMiner* releases, they cannot see any values for these measures or edit their properties.

(4) Briefing Book: Displaying Action Titles Instead of Report Titles



You can now display *Action titles* as an alternative to report titles in all *DeltaMiner* user levels from *Reader* to *Miner*. To switch the display, simply use the respective option in the *I want to…* menu of the briefing book. Just as in the standard report title view, you can also click on the action title to open the desired report directly from the briefing book.

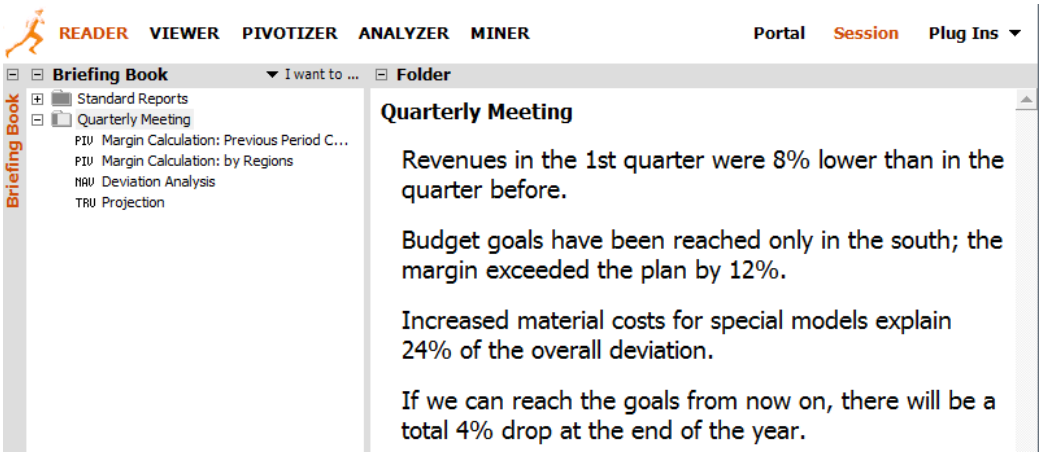
Action titles are designed to summarize the core message of each report (or a presentation slide) in a clear, complete sentence. Together, all action titles should describe the message so clearly so that readers without much time can understand the gist of the reports without having to analyze each one in detail. Switching the view to action titles makes this type of communication easier. And since they are all positioned as separate rows, users can read through the action titles almost like running text.

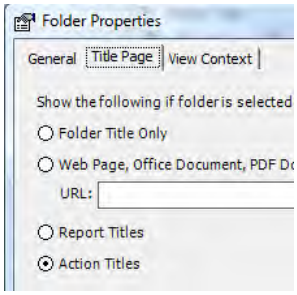
This same logic also applies to another new option in which you can display action titles or report titles on the title pages of folders. This feature, however, is only supported in *Viewer* and *Reader* levels (see feature #5) whereas action titles can be shown in briefing books for all user levels.

(5) Briefing Book: Placing a Report Title or Action Title on Title Pages (Reader and Viewer)

You can now list the title or action title of reports as well as the names of subfolders on the title pages of folders displayed in *Reader* or *Viewer* mode. As a result, report consumers can gain a fast, easy overview of which reports are contained in that folder – and directly open them by clicking on the respective title. This design is optimal for action titles because, if need be, the reader can understand the main message of the presentation merely by reading them (see feature # 4). And when all action titles are grouped together – for example, on the title page of the folder – that's really easy as well.

The screenshot below shows an example where *DeltaMiner* displays report titles in the briefing book and action titles on the folder's title page:





If you select a folder (and not a report) in the *Briefing book* of *Reader* or *Viewer* mode, *DeltaMiner* will display a title page instead of a report. You can customize the appearance of the title page under *Folder properties* (context menu of a folder in the *Briefing book*). Previously, you could choose between a standard layout, which only displays the folder name, or an external view such as a Web site, an image or an Office file. In addition to these options, you can now also choose the *Report title* or *Action title.* All of these options are now located on a *Title page* tab, which can be accessed in *Pivotizer*, *Analyzer* and *Miner* modes.

Title pages with report titles or action titles are based on an HTML template. *DeltaMiner* loads this file, replaces the different wildcards with the respective content of the current folder, generates a template target file in HTML and finally displays them from an internal browser (i.e. an embedded Internet Explorer object). The template file is named 'Folder.htm'. *DeltaMiner* will search for this file in the folder for *Export templates* (*Extras* menu, *Options*, *Folder* tab). If it doesn't find the file here, it will then search for it in the *DeltaMiner* installation directory.

You can use the 'Folder.htm' file, which is automatically installed with version 5.4.1, as it is, or customize the layout using Notepad or another text editor. The main part of the template file contains three sections that determine the page setup:

- *DeltaMiner* will display the name of the current folder between '##headerbegin##' and '##headerend##' in place of the wildcard '##foldertitle##'.

- The section between '##folderbegin##' and '##folderend##' refers to the sub-folders and can be output multiple times on the title page. Two wildcards are supported. *DeltaMiner* will replace '##folderid##' with the folder ID as stated in the *General* tab under *Folder properties* and the '##foldertitle##' with the folder title in the resulting HTML page.
  In the standard template file, the folder titles are given hyperlinks so that readers can directly jump from the title page to another folder. This is defined in the HTML code '…'.
  At a first glance, it may look as if there are too many number signs. This notation, however, is necessary

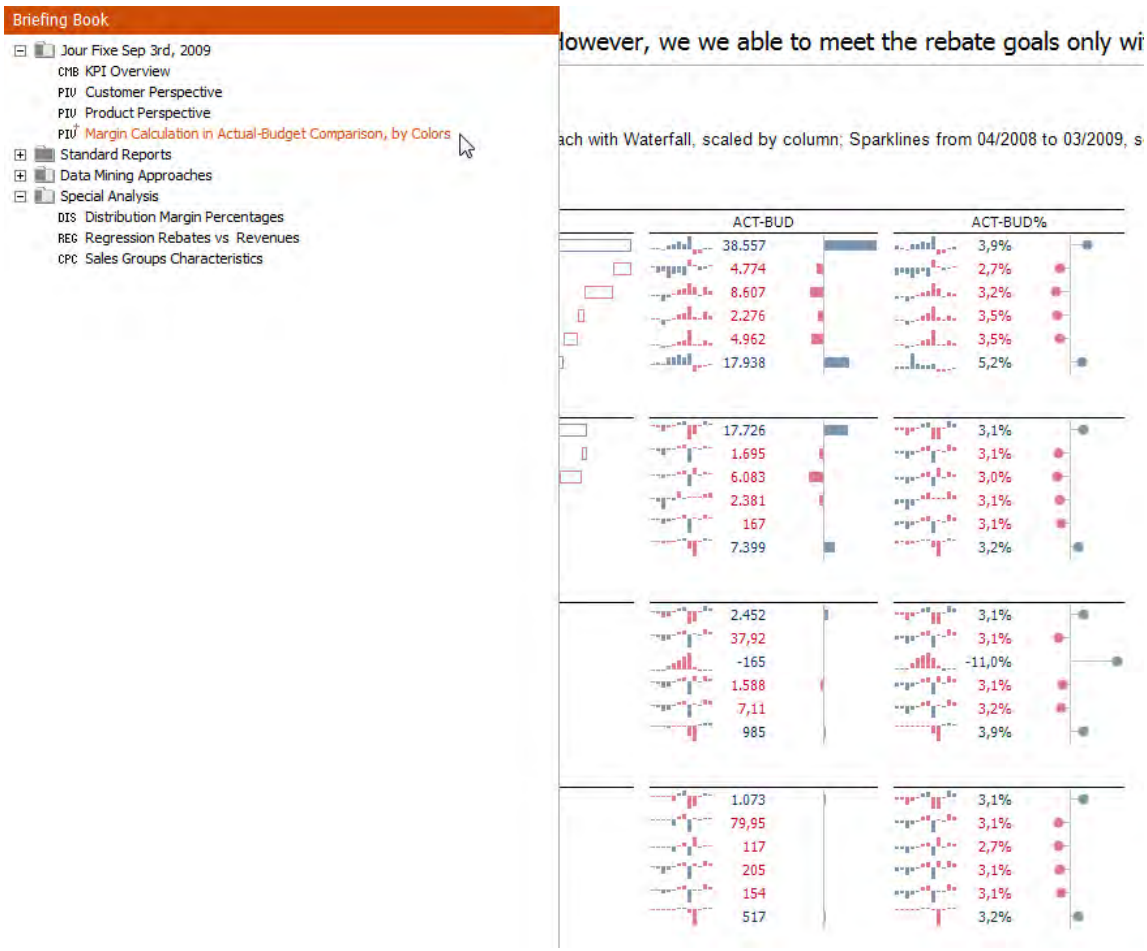
so that the links work. The first part '#folder' is the HTML notation for bookmarks in the same document; the second half is the link to the other folders. *DeltaMiner*, therefore, only replaces the second part '##folderid##'.

- The third section '##reportbegin##' and '##reportend##' prepares the entries for all included reports. These, too, are linked in the template. '##reportid##' and '##reporttitle##' act similarly to the respective wildcards for folders. One thing to note is that the action title comes into play in the '##reportactiontitle##' wildcard. This option is only displayed if the report in question contains an action title and if action titles are activated for title pages in the *Folder properties*. In all other cases, this wildcard remains empty and the report title appears on the title page. As a result, the wildcards '##reporttitle##' and '##reportactiontitle##' can appear directly after each other in the template because only one of them will be replaced.

DeltaMiner does not display title pages for folders in *Pivotizer*, *Analyzer* and *Miner* modes. If you want to view a summary of all action titles in these user levels, simply edit the options in your briefing book (see feature #4).

(6) Briefing Book: Displaying in Presentation Mode

DeltaMiner will display the *Briefing book* during a slide show if you move your mouse to the far-left corner of the screen. This way, you can easily switch to a different report without leaving the presentation mode. Simply nudge your mouse along the left side of the screen and select the desired report.



To hide the briefing book, move your mouse outside of this area and it will disappear automatically. Presentation mode supports the same options that are available in *Reader* in the context menus of reports and folders. As a result, you can update reports or folders during a presentation or even send them as an HTML e-mail.

You can change the width of the briefing book section by dragging the gray border (to the right of the book) with your mouse. Our tip: Move your mouse pointer towards the line from the left to avoid closing the briefing book by accident.

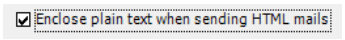
Just as in Microsoft PowerPoint, you can start the screen presentation by hitting the *F5* key, pressing *Shift+F5* or selecting the function from the *View* menu. For more information about the options available in presentation mode, please refer to *DeltaMiner deltas!* 5.3.8, feature #6.

(7) Export: Sending Reports as a 'Multipart' Mail with Additional Plain Text Section

When e-mailing reports directly from *DeltaMiner* (i.e. without Microsoft Outlook), you can now create a text-only version of the mail. This so-called 'multipart' mail contains an HTML version of the message as well as a plain text version. Since the actual report content (e.g. a pivot table or a ranking) is always sent as a bitmap image, *DeltaMiner* cannot display the reports 'in line' in the plain text version.

The advantage of sending reports with a separate plain-text version is that clients that don't support HTML can still process the message. Although the content of the reports is still contained in the attachment, the recipients can still read the titles, comments and other information in the text-only version. In addition, some spam filters aren't as sensitive when a message is available in both HTML and plain-text formats.

To generate multipart mails, simply activate this option in the export properties (*Extras* menu, *Options*, *Export*, *HTML mail* tab).



For more information on sending e-mails with *DeltaMiner*, please refer to *DeltaMiner deltas!* 5.3.8, feature #5.

(8) Flexreport: Creating View-Specific Excel Cell References with MDX

You can use MDX expressions to reference Excel cells. This way, you can output the content of an Excel cell that is dynamically generated depending on the view and display it in a cell of a Flexreport in *DeltaMiner* (see *DeltaMiner deltas!* 5.3.8, feature #11).

Let's assume that you have entered the following report in a Flexreport cell:

='C:\DeltaMaster\[Comments.xls]**{**[Periods].CurrentMember**}**'!A1

The expression in the curly brackets is the MDX part that varies with each view. If you select '2009_Q3' in the view, the expression '{[Periods].CurrentMember}' will deliver this exact character string. Together with the rest of the cell reference, it has the following effect: *DeltaMiner* will transfer the value located in cell A1 of the sheet '2009_Q3' in the Excel file 'C:\DeltaMaster\comments.xls' into the Flexreport cell. If you change the view to '2009_Q2', *DeltaMiner* will automatically change the reference to the '2009_Q2' sheet in the same file. In other words, the references change in sync with the view.

As a short form for the '**{**[Periods].CurrentMember**}**' expression, you could also use '<viewX>,' in which 'X' stands for the ID of the desired dimension (in this case, 'Periods'). You can also use this same syntax in folder or report titles in the briefing book to customize parts of a title depending on the chosen view.

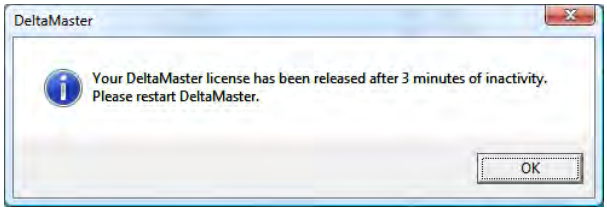
You can use these expressions to make part of an Excel reference dependent on the current view. Options include parts of the path, the file name or the cell coordinates.

(9) Licensing: Ending a DeltaMiner Session Automatically

To make the most of your available licenses, you can now automatically end a *DeltaMiner* session if there is no user interaction within a set time frame. This way, this license can be freed up and used by another authorized user.

Once the time limit has been reached, *DeltaMiner* will display a message and end the running program. If there are any unsaved changes, *DeltaMiner* will prompt you to save these changes before closing. To continue your work, however, you will have to restart the program.

To activate this new function, go to the Windows registry in the key 'HKEY_LOCAL_MACHINE\SOFTWARE\Bissantz & Company\DeltaMiner 5.0' of the respective computer, create a new DWORD value 'SessionTimeout', and enter a value to show how many minutes the session can be idle before it will be closed.



The automatic ending of a session is a purely administrative option that can only be activated and deactivated from the registry. This option is not available through the user interface to prevent users from switching the settings at random.

(10) Licensing: Deactivating the Return License Function When Working in a Lower Level

Since *DeltaMiner* 5.3.8, you can return the higher license to the license server when a user switches to a lower user level (e.g. from *Miner* to *Viewer*) so that another authorized user can access it (see *DeltaMiner deltas!* 5.3.8, feature #13). Now you can deactivate this function by creating an entry in the Windows registry. Once a user has drawn a license, he can access it until he closes *DeltaMiner* – even if he changes into a lower level.

To deactivate this feature, go to the key 'HKEY_CURRENT_USER\Software\Bissantz & Company\DeltaMiner 5.0\License', create a new DWORD value 'ReleaseHigher' and enter '0' as the value.

(11) Microsoft Analysis Services: Using .cub Files as Command Parameters

DeltaMiner can assign a cube file (.cub) at a command prompt. The path could look like this:

"C:\Program files\DeltaMaster 5.4.1\Client.exe" C:\Data\MyCube.cub

In this case, *DeltaMiner* will start and open the local cube stated above – as if you had created a new analysis model and selected that .cub file as the OLAP provider. The preferable interface is ADOMD.NET/XMLA, suited for local cubes from Microsoft Analysis Services 2005 or 2008. If the cubes are from Analysis Services 2000, *DeltaMiner* will automatically access the ODBO interface.

Opening cube files from the command prompt improves the integration with Windows Explorer and makes it easier to create a new analysis file (analysis model/.dam or analysis session/.das) for the respective cube. In particular, you can:

- Transfer a .cub file directly to DeltaMiner in Windows Explorer from the file's context menu (Open with …, Select program from list, DeltaMiner)

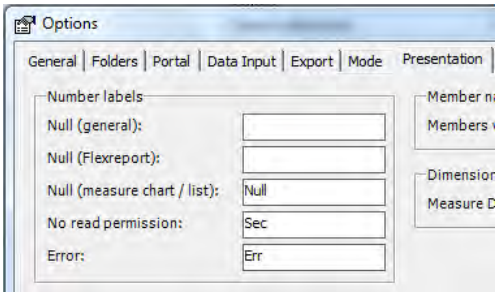
- Create a link in the Send to menu to transfer the .cub file to DeltaMiner.

The basic syntax is now:

Client.exe [<.cub-file>] | [<.das-file> [-Report<ReportId>]]

You cannot combine the name of a cube file with the name of an analysis file or report (see *DeltaMiner deltas!* 5.3.2, feature #29).

(12) Microsoft Analysis Services: Noting No Read Access in Reports



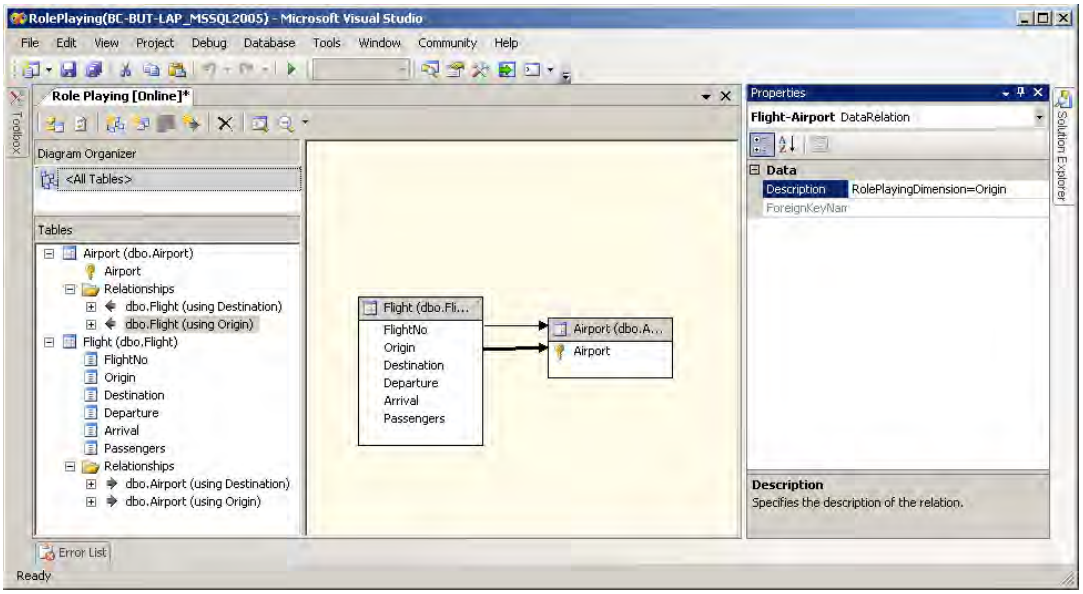
You can now note when *DeltaMiner* cannot read number values from the database because the current user has *no read access* for these cells in the cube. To customize the text that should be displayed, go to *Options* (*Extras* menu) and click on the *Presentation* tab. As with all settings on this tab, these options are valid for the respective analysis file. The default text 'Sec' is an abbreviation for 'Secured cells'.

This option only works in connection with Microsoft Analysis Services 2005 and 2008. In previous *DeltaMiner* versions, there was no differentiation between access and other errors. Both received the same abbreviation in reports. The new option makes it easier to identify access problems as such.

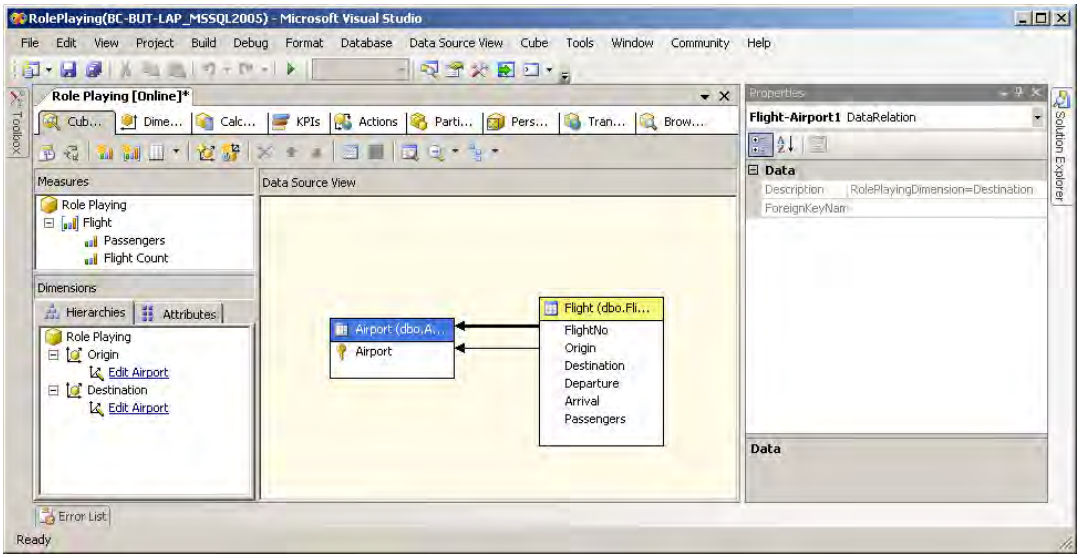
(13) Microsoft Analysis Services: Using SQL Drill Thoughs for Role-playing Dimensions

In Microsoft Analysis Services 2005 and 2008, you can define so-called role-playing dimensions. This type of dimension is based on a relational database table in which the key field (s) are linked to a fact table multiple times. Based on this dimension table, it will generate multiple OLAP dimensions which show the same levels and members but play different roles, or in other words, have different meanings.

For example: A certain airport is the origin city for some flights and the destination city for others. The airport as such, however, always remains the same. The following screenshot shows the ‘flight’ fact table, which contains an origin city, a destination city, and the number of passengers per flight.

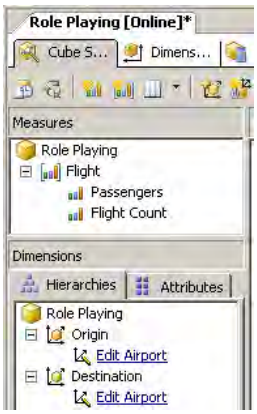


The foreign key fields ‘origin’ and ‘destination’ are each linked with the same dimension table ‘airport’. The dimension table ‘airport’ is the source of two different OLAP dimensions: ‘origin’ and ‘destination’.



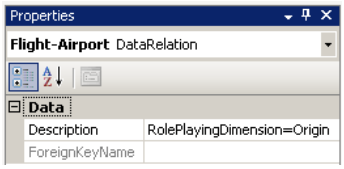
If you use *DeltaMiner* to perform an *SQL drill through* to the relational model for this type of OLAP model, *DeltaMiner* has to first know which OLAP dimension (here: ‘origin’ or ‘destination’) belongs to which of the two links between the dimension table and fact table. Since an Analysis Services database doesn’t provide this

information itself, you can now define the name of the OLAP dimension in *DeltaMiner* as a description text for the links.



First, find the names of the OLAP dimensions in the 'Cube structure' window of Microsoft SQL Server Business Intelligence Development Studio.

Now, open the 'data source view', navigate to the bottom left corner to the 'Role playing' dimension in the *Tables* box, open the *Relationships* folder and select one of the defined relationships.

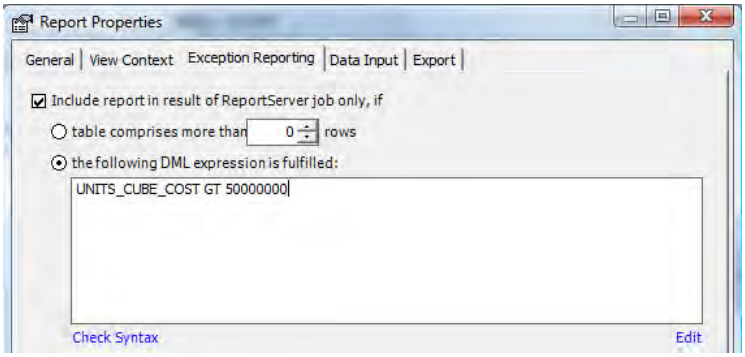


For each relationship, go to the properties window. On the right side in the description field enter the character string 'RolePlayingDimension=' followed by the name of the OLAP dimension.

Without this configuration step, the *SQL drill though* could deliver incorrect results for role-playing dimensions in certain cases.

(14) Oracle OLAP: Reporting Exceptions with ReportServer

You can now use *Report server* in combination with Oracle OLAP for exception reporting. For the test condition in the *Report properties,* you can either choose the length of the report in rows or a user-defined DML expression that returns TRUE or FALSE.



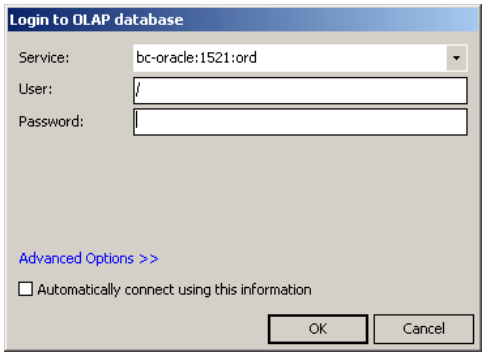
The concept of exception reporting with *ReportServer* is defined in detail in

DeltaMiner deltas! 5.3.6, feature #11.

(15) Oracle OLAP: Using OS Authentication for Single Sign-On

DeltaMiner can now use OS authentication to access Oracle OLAP. Since the log-in information in your client operating system is automatically sent to the database, you don't need to enter your user name and password separately. Most users prefer this practice because they don't have to constantly enter their log-in data. Prior to use, the respective user accounts must be configured as 'OPS$ Accounts' in Oracle.

To use OS authentication, enter a slash (/) under *User* in the login dialog box and leave the *Password* field empty. With this configuration, a registered user in the Windows domain will be automatically logged into the Oracle database and the session will be created using the respective access rights.



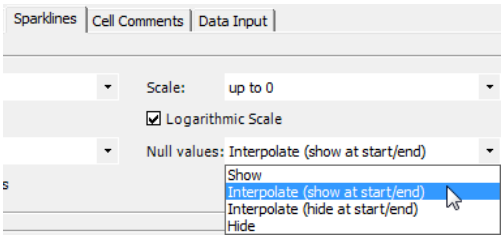
Since you don't need to do anything to log on, you can skip the log-in dialog box entirely. As a result, *DeltaMiner* 5.4.1 contains a new option for Oracle OLAP in which you can *automatically connect using this information*. If you activate this option, *DeltaMiner* will save '/' as the user name in the analysis file and try to automatically sign you into the database the next time you open the application. If the automatic sign on doesn't work for any reason, the log-in dialog box will reappear.

For security reasons, *DeltaMiner* will never save the password in the analysis session. The automatic log in, therefore, only makes sense in connection with an OS authentication because no password is required. In all other cases, the dialog box will appear again (even though the option is activated) because the log in was denied due to the missing password.

You can remove the automatic sign-on function so that the log-in dialog box appears every time you open an analysis file. To do so, simply deactivate this option in the *Model browser* (*Model* menu) or in the maintenance dialog box (context menu of the analysis file in the *Portal*; in the *Model* menu under *Maintenance* if there is no active analysis session).

(16) Pivot Tables: Interpolating Nulls in Logarithmic Scaling

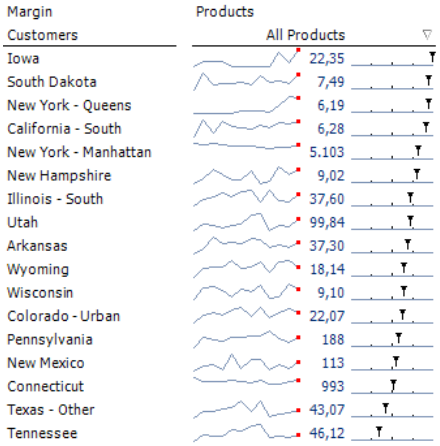
As of *DeltaMiner* 5.4.0, you can interpolate missing values in sparklines to close the 'gaps' for a more polished visualization (see *DeltaMiner deltas!* 5.4.0, feature #19). Now, this same functionality is available for *logarithmic scales* (see *DeltaMiner deltas!* 5.4.0, feature #20). Just as with a normal linear scale, you can select how *DeltaMiner* should treat null values. *DeltaMiner*, of course, will always include a numerical value of '0'; it will never



interpolate or hide it. You can activate logarithmic scales and interpolation options in the *Table properties* of the pivot table.

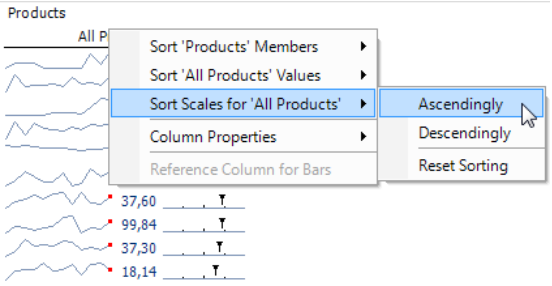
(17) Pivot Tables: Sorting by Scale

If you have activated sparklines, you can also display where the current value is positioned between the minimum and maximum values in that sparkline (see *DeltaMiner deltas!* 5.3.2, feature #19). Now, you can sort the pivot table based on these scales. Simply select *ascending* or *descending* order for *Scales* in the context menu of the desired member.



If you choose ascending order, the members with values close to the minimum will appear on the top or left. In descending order, however, the members on the top or the left will have values close to the maximum in the time series.

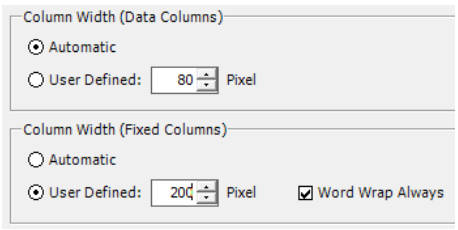
This new type of sort option is available in all user modes from *Reader* to *Miner* as well as in the screen presentation.



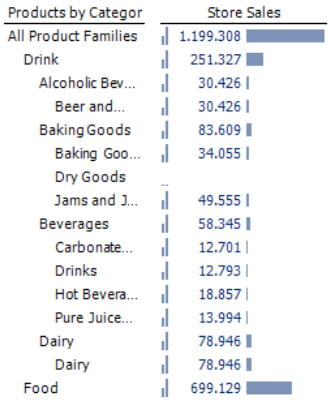
(18) Pivot Tables: Defining Column Widths for Fixed Columns with an Optional Line Break

You can now define the *Column width* for *Fixed columns* in pivot tables. This is useful for all members with very long names, for example, in account dimensions such as ‘Concessions, industrial and similar rights and assets and licenses in such rights and assets’ (a balance sheet item according to § 266 of HGB - German Commercial Code). To make a more compact visualization, you can automatically cut off this text or create a line break after a set point.

You can define the column width in pixels in the *Table properties* of the pivot table (context menu, *I want to…* menu). The default setting is the same functionality as before: *DeltaMiner* automatically adjusts the column setting so that the names of all members and measures fit completely.



If you choose a *user-defined* width, *DeltaMiner* will chop the characters after that point and replace them with an ellipsis ('...').



Alternatively, *DeltaMiner* can *Word wrap always.* In this case, it will display the complete text in multiple rows of the cell, breaking as few words as possible. The number of rows in the cell and the number of pixels that are needed in the row height both depend on the longest name. In this case, please activate the *automatic row height* (not *user-defined*) so that *DeltaMiner* can automatically adjust the height of the rows.

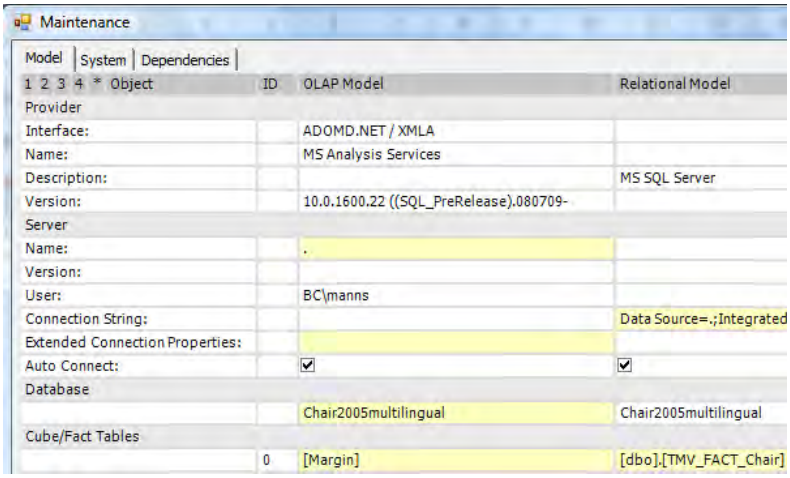
Tip: To view the current setting on the table without closing the dialog box, simply click the *Apply* button in your *Table properties.* That way, you can test multiple widths until you have found the right one.

Members, member properties, hierarchies and measures are all displayed in fixed columns on the left side of the pivot tables. The user-defined column width applies to all fixed columns.

Although you could already set column widths in *DeltaMiner*, this setting only applied for data columns (see *DeltaMiner deltas!* 5.3.5, feature #12). Fixed columns were measured automatically. Now, you can regulate the columns for fixed columns and data columns separately. In the case of data columns, *DeltaMiner* ensures that the number values, sparklines and graphical elements are not cut off. If necessary, it will choose a larger width as stated. In the case of fixed columns, however, *DeltaMiner* will chop or break the cell content at the defined spot.

(19) Maintenance Dialog Box: Renaming Relational Fact Tables

You can change the names of relational fact tables that are used in the maintenance dialog box to reflect a change or a new name in the database of the analysis file. Simply open the analysis file in the maintenance dialog box (context menu of the analysis file in the *Portal*; in the *Model* menu under maintenance if no analysis session is active). Here, you can edit all fields with a yellow background.



(20) Maintenance Dialog Box: Editing the Connection String of the Relational Model

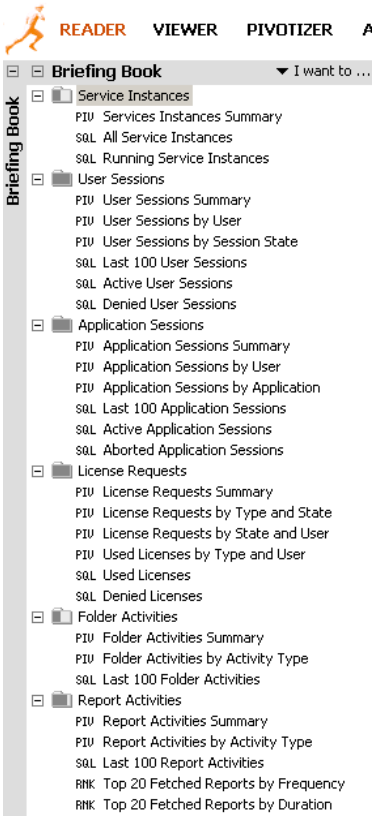
You can now edit the *Connection string*, which contains the necessary information to log into the relational database, in the maintenance dialog box (see screenshot in feature #19). You can also view – but not edit – this expression in the *Model browser* (*Model* menu).

(21) WebOption: Creating a Logbook

All *DeltaMiner* WebOption customers can now access the *Logbook*, a pre-built application for analyzing WebOption usage. For the first time ever, we have provided a complete application called 'Business Content' which you can use as is or tailor to your individual requirements.

What makes this logbook unique is that it directly accesses the relational data in the WebOption repository – without an OLAP cube. The logbook, therefore, is a major step in improving our support for relational databases. Our goal is that companies can use *DeltaMiner* one day directly on top of relational systems without needing a separate multidimensional data model. As for now, we haven't yet implemented all of the functions that you know from working with OLAP models.

The logbook is contained in the installation package for WebOption, which you can download from our Web site. The 'Logbook' folder contains an analysis session (.das) with approximately 30 pre-built reports. You can open this analysis session (just like every other one) in *DeltaMiner*, customize it to your requirements – and save it as a Web application back into the repository.



If you open the .das file for the first time, simply enter the *Connection string* to the repository. In most cases, you only need to copy the connection string, for example, from 'DeltaMiner.Repository.exe.config' or from the *Save analysis session in repository* dialog box. You may, however, have to edit the name of the servers (or the instance) and the database so that the logbook application can 'find' your Web repository.

The logbook accesses the data for different events that are logged in the repository. In the default setting, WebOption doesn't create a protocol (as before). You must explicitly activate this functionality. You can define which events should be logged in five different levels. Using some of these events, you can even analyze the usage behavior of individual users.

To activate the logging function, open the 'DeltaMaster.Service.exe.config' configuration file, go to the section '<appSettings>'and add the following expression:

```
<add key="Logbook" value="X“ />
```

In this expression, you will need to replace the "X" with one of the following levels:

Log level	Meaning
0	Don't log (equivalent to no entry at all; past behavior)
1	Log 'Service instances'
2	The functionality of 1 plus 'User sessions'
3	The functionality of 2 plus 'Application sessions'
4	The functionality of 3 plus 'Folder activities' and 'Report activities'

The main report components of the logbook include:

- *Service instance*: These are 'DeltaMaster Service' instances (i.e. a Windows service) that access the repository. This logs the usage of 'DM-WSV' licenses.

- *User session*: User sessions start when a user logs into the portal and last until the user logs out or a session time out is called. This logs the usage of 'DM-WCL' licenses (ports).

- *Application session*: An application starts when a user selects an application from the portal and ends when a user returns to the portal, logs out, or is inactive for a certain period of time (timeout). This logs the usage of *Viewer*, *Reader* or *Offline reader* licenses ('DM-ORD', 'DM-RDR' and 'DM-VWR').

- *License request*: This logs requests for *Viewer*, *Reader* or *Offline reader* licenses, ports ('DM-WCL'), and *Planning option* licenses ('DM-PLN'). It also logs denied requests and the respective reasons.

- *Folder activity*: This logs view changes and export operations to folders.

- *Report activity*: This reports when reports are opened or exported.

You can view these log levels in the respective briefing book. Since level 3 doesn't log 'Folder activities' and 'Report activities', for example, these folders will be empty. In this case, you can simply delete these folders if you wish.

Due to the logbook function, the database schema for the repository has changed in version 5.4.1. As a result, please run the 'Repository.sql' script located in the current installation package (.zip file) in the Repository folder. This generates a new database role called 'Logbook' – similar to the existing 'Import', 'Repository' and 'WebService'. Only members in this role can read logbook data.

(22) WebOption: Supporting Multiple Clients in WebService

If you want to publish different applications for different user groups in *DeltaMiner* WebOption, you can now completely separate these applications and users from each other without having to install WebOption on multiple computers. You simply have to run a WebService instance combined with multiple repository databases.

The configuration steps are as follows:

1. Create a repository database for each client.

   Create a repository database for each client in SQL Server (see WebOption handbook, Section 4.3). For the 'WebServiceUser' (paragraph 4), simply list the Windows account as the login name under which the Web service runs for all repositories.

2. Define the standard database for 'Import' and 'Repository' users.

   When you define the logins of users that should be able to transfer analysis files from *DeltaMiner* or *Report server* into a repository (database role 'Import') or users that should administer a repository using the repository GUI (database role 'Repository'), you must select the respective repository as the 'standard' database. Each of these users can only work with the stated repository.

3. Edit the Web service configuration file.

   You must make the following changes to the 'DeltaMaster.Service.exe.config' file:

   - In the '<appSettings>' section, add the entry:

     <add key="MultiTenancy" value="true" />

   - In the '<connectionStrings>' setting, you will need to edit the entry

<add name="Repository" connectionString="..."/>

Under ‘connectionString’, remove the part called ‘Initial Catalog=xxx’. Afterwards, restart the Web service. The Web service will now connect with all repositories in which the Windows account of the Web service is a member of the ‘WebService’ database role. The trace file of the Web service (WebOption handbook, section 4.5, paragraph 4e) lists the connected repositories.

4. Edit the repository GUI configuration file.

   Similar to step 3, edit the ‘DeltaMaster.Repository.exe.config’ by removing the ‘Initial Catalog=xxx’ section under ‘connectionString’. The respective repository for the user will be taken from the ‘standard database’ property of the SQL Server login (see step 2).

5. Edit character strings while saving to the repository.

   You also have to edit the connection string in the dialog box which you use to *Save the current analysis session to the repository* (*File* menu) in *DeltaMiner*. Here, too, please remove the ‘Initial Catalog=xxx’ section. This affects every analysis session which should be saved to a repository. The respective repository for each user is determined by the ‘standard database’ property of that person’s SQL Server login (see step 2).

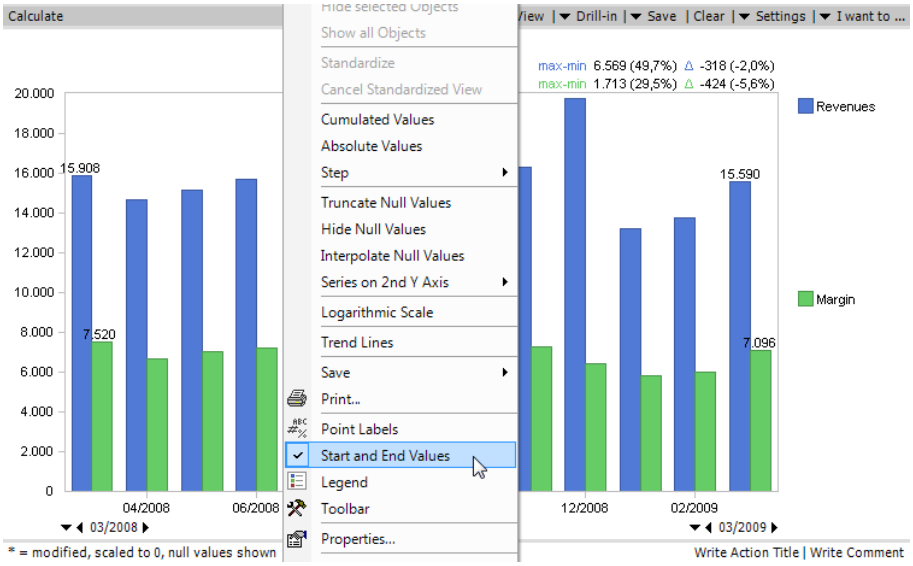
6. Assign the user to one single repository.

   If you want to give users access to applications via WebOption, you can only assign them one role in a single repository. If users have roles in different repositories simultaneously, they will be denied WebOption access.

The multi-client option allows you to build services along the lines of Application Service Providing (ASP) or Software as a Service (SaaS). In addition, it makes it easier to delegate administrative tasks to individual organizational units.

(23) Time Series Analysis: Showing Start and End Values in Multiple Time Series and Displaying Columns

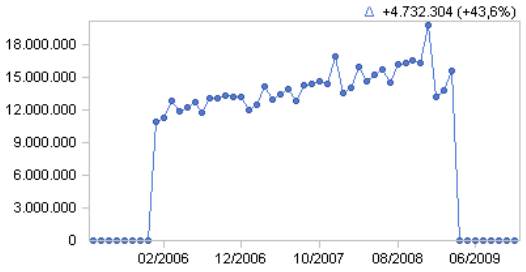
You can now show the start and end values of multiple time series in a single chart (see *DeltaMiner deltas!* 5.4.0, feature # 31 for more information). To display the *Start and end values,* simply activate this option in the context menu or the *I want to…* menu.



You can access the column presentation option in the *Gallery* of the *Tool bar*.

(24) Time Series Analysis: Ignoring Nulls in Differences Between Start and End Values

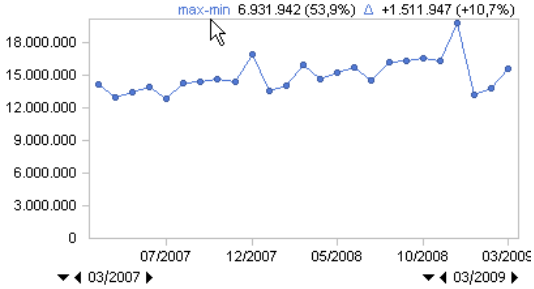
When *DeltaMiner* shows the difference between the start and end values, *DeltaMiner* now only includes the time frame that contains values – and ignores nulls at the beginning and the end. If the analyzed time frame began or ended with nulls in the past, it reported this difference as ‘undefined’ (see *DeltaMiner deltas!* 5.3.8, feature #34).



(25) Time Series Analysis: Showing the Difference Between Minimum and Maximum (Span)

Similar to the difference between the start and end values, (see *DeltaMiner deltas!* 5.3.8, feature #34) *DeltaMiner* can calculate and display the span(s) of time series. The span, which is sometimes referred to as a spread, is the difference between the largest and the smallest value in the series. *DeltaMiner* calculates the span as an absolute value so that it is always positive regardless of its chronological sequence.

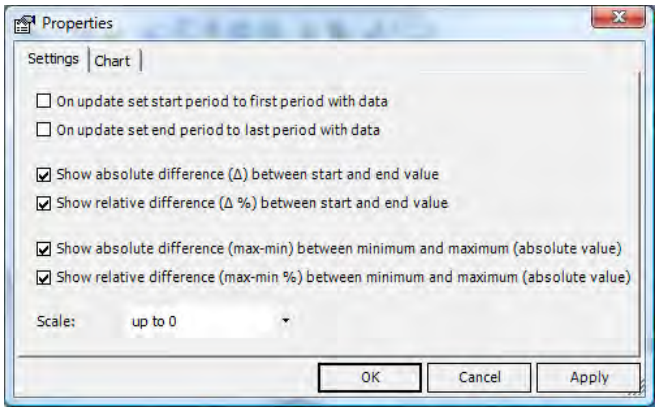
DeltaMiner displays the span on the upper corner of the time series chart with the label ’max-min’. The difference, which was already shown in past versions, is now labeled with the delta symbol ‘△’. The delta shows a change over time and, therefore, a clear direction. As a result, this value always includes a plus or minus sign to designate positive and



negative differences respectively. In the difference between minimum and maximum, however, we don't need an algebraic sign because this gap has no direction and the absolute value is always positive anyway.

To *Show the absolute* or *relative difference between minimum and maximum*, simply activate the respective option in the properties of the time series analysis (context menu, *I want to…* menu). *DeltaMiner* calculates the relative differences based on the minimum.

Spans are especially important in combination with the *comparable scale* option in *Small multiples* (see *DeltaMiner deltas!* 5.3.7, feature #1 for more information).



(26) Notes: Compatibility With Previous Versions and Installation

The option to limit the number of decimal points to format time spans (see feature #3) is only supported in *DeltaMiner* 5.4.1 and higher.

Version 5.4.0 contains no changes to the metadata scheme of **ReportServer**. As a result, you do not have to run the 'ReportServer (SQL Server).sql' or 'ReportServer (Oracle).sql' scripts. You should, however, update the 'ReportServer.exe' file as well as the respective DLLs so that they match the current *DeltaMiner* version.

The **WebOption** components – Repository GUI, WebClient and WebService – are also available in Version 5.4.1. An update, therefore, is highly recommended. Since the database schema for the repository has changed in Version 5.4.1, please run the 'Repository.sql' script.

Before you update WebOption, please create a backup copy of the configuration files:

- WebClient: 'web.config', 'DeltaMaster.css' (style sheets) and any changed graphics in the Image folder (e.g. 'Master_Top.png')
- WebService: 'DeltaMaster.Service.exe.config'
- Repository GUI: 'DeltaMaster.Repository.exe.config'

In general, you should not use the previous versions of these files in an update because their settings could lack critical information for the current release. Please transfer their settings into the new version of the file.

Since the configuration files of WebService and WebClient did not change from 5.4.0 to 5.4.1, you can reuse the older files. If you want to use the new ‘logbook’ and ‘multi-client’ functions, however, you will need to modify the configuration files (see features #21 and #22).

You can update the Repository GUI, WebService and WebClient by copying these files into the respective directories. Once again, please make a backup copy of these files before doing so. A separate setup is not necessary.

13 DeltaMiner deltas! 5.4.2

What's new in version 5.4.2 Find out in this overview of the Nov. 13th 2009 release!

(1) Alias Sets: Exporting and Importing Translation Tables 3

(2) General: Restoring Expand/Collapse Status of Windows 4

(3) General: Recalculating Reports at All Times 4

(4) General: Installing DeltaMiner from a ZIP File 5

(5) General: Enhanced Dialog for Login to Relational Databases 5

(6) General: No View Numbers in Window Title Bars 6

(7) General: Displaying User Interface in Dutch 6

(8) General: Inserting Special Characters Using the Context Menu 6

(9) General: Warning Before Leaving Cockpits, Analyses and Reports with Unsaved Changes 7

(10) Measure Browser: Filtering by Error Icon 7

(11) Briefing Book: Deleting Comments and Action Titles After Updates 8

(12) Briefing Book: Enabling or Disabling Multi-Select in 'View Context' Option of Viewer Mode 8

(13) Report Server: Pasting E-mail Text in an HTML Export 9

(14) Dimension Browser: Defining Calculated and Virtual Elements Without Formatting 9

(15) Flexreport: Retaining Line Height and Column Width When Converting from a Pivot Table 9

(16) Geo Analysis: Using Updated Maps 10

(17) HTML Export: Displaying Detailed Information as a Tool Tip 10

(18) Hyperion Essbase: Supported by ADOMD.NET 10.0 11

(19) Modelling: Using Default Measures of the Cube 11

(20) Oracle OLAP: Using Various Enhancements and Improvements 12

(21) Pivot Table: Simplifying View Synchronization in the Axis Definition 12

(22) Pivot Table: Filtering Members with Queries 13

(23) Pivot Table: Creating Rankings by Member Name, Member Key, and Member Property 14

(24) Pivot Table: Calculating Row, Column and Table Aggregations for Selected Levels Only 14

(25) Pivot Table: Disabling Line Break for Double Space Characters in Column Header 15

(26) Pivot Table: Accessing Member Properties on all Levels 15

(27) ReportService: Executing Report Server Jobs on a Remote Machine 16

(28) SAP BW: Renewed Certification of the DeltaMiner SAP Interface 19

(29) SparkTicker: Formatting Numbers as in Reports 19

(30) SQL Drill-Through: Supporting Analysis Services Partitions with Query Binding 19

(31) WebClient: Inputting Data in SQL Drill Through 19

(32) WebClient: Displaying Detailed Information in a Tooltip 20

(33) WebClient: Editing Cell Comments 20

(34) WebService: Supporting Parallel Installations of Multiple Instances 20

(35) What's New: Including Changes from Past "deltas!" 22

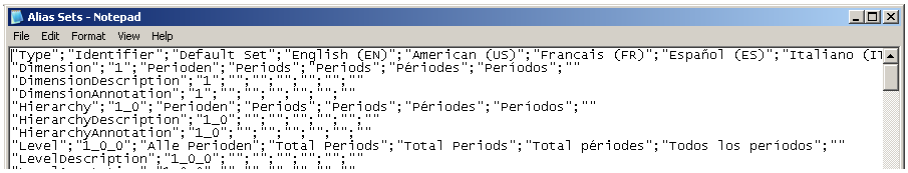
(36) Time Series: Viewing All Options for Nulls in the Context Menu 22

(37) Notes: Compatibility With Previous Versions and Installation 22

(1) Alias Sets: Exporting and Importing Translation Tables

You can now import or export alias sets, which are used to administer alternative names for the objects in your application, as a .CSV file. This makes it easier to create and maintain multilanguage applications because you now can provide your translator with a list of words in an easy-to-use format and simply import the finalized translation back into the application.

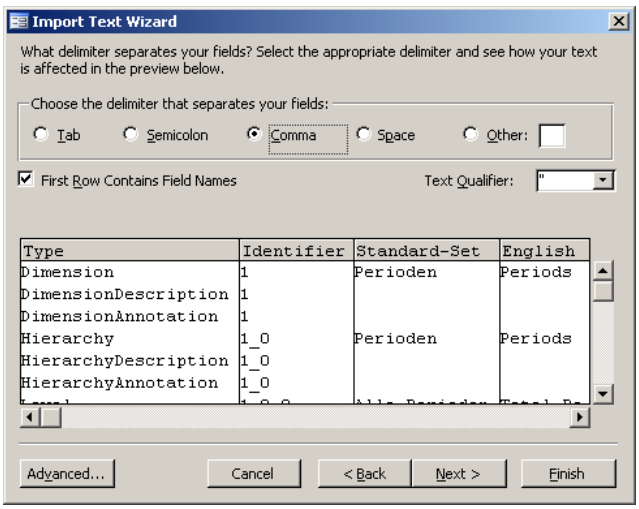
To *Import* and *Export* these tables, start by using the respective commands located in the *Model browser* (*Model* menu) on the *Alias sets* tab. Now, select the file that you want to import or export and the respective function will begin as soon as you have selected the file.



DeltaMiner will export the terms in a CSV format so that each row contains the terms for exactly one object. Each term will be enclosed in double quotation marks (“”) and separated by a delimiter (comma or semicolon). As a result, you can use a comma, blank spaces, semicolons, or other special characters as part of your description. You may also use quotation marks as part of a term’s name. In this case, however, you need to use two sets of them so that *DeltaMiner* can distinguish the desired name from the normal field delimiters during the import process.

“Type” and “Identifier”, the first two columns of the file that you want to export, serve as the primary keys. Based on this combination of the object type (i.e. dimension, hierarchy, level, measure, cockpit, report, comment, etc.) and an internal ID, *DeltaMiner* can classify which entry belongs to which object during the import process. The further columns contain the names of the respective alias sets. The first row, which contains the field names, should not be modified.

You do not have to use a complete CSV file in an import because *DeltaMiner* will only replace the terms of those objects listed in the file; all others will remain unchanged in the alias sets. If certain fields are missing within the row of a .CSV file, however, these will be treated as empty fields. Let’s say, for example, that you have created five alias sets in your application and have exported them for further editing. Here, you have deleted three columns so that you now only have a total of two. If you now save and import this file, *DeltaMiner* will delete the entries for the three missing columns in the respective alias sets.



Since CSV is a commonly used format, you can easily import the files, for example, into Microsoft Access for further processing. We do not recommend, however, that you open or edit CSV files in Microsoft Excel because it doesn't always identify the data types correctly or support exports with variable delimiters and text qualifiers.

If you use Access, we recommend that you go to the *File* menu and select *External data*, *Import.* Usually, the program automatically detects the import options including *with delimiters*, *delimiter - comma*, *first row contains field names*, and *text qualifiers*. All fields should have *Text* as their data type. When you *Export* (*File* menu) from Access back into CSV format, however, just remember to check the delimiter character and the quotation mark (") as the text qualifier.

The texts for report comments ("ReportComment") and *Action titles* ("ReportActionTitle") are saved in the alias set in Rich Text Format (RTF). As a result, these texts will include various 'tags' for formatting as well as other information. You should not change these tags while editing the content.

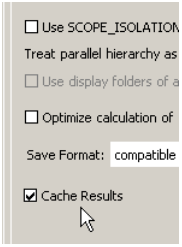
Which 'Identifiers' are shown depends on the analysis file. For this reason, you should only import or export using the same analysis file – and not exchange the terms between different ones.

(2) General: Restoring Expand/Collapse Status of Windows

At the beginning of a session, *DeltaMiner* can automatically restore your workspace depending on the window states at the end of the last session. This affects the *View*, *Cockpit*, *Analysis*, *Report*, *Briefing book,* and *History* windows. The *Restoring the expand/collapse status of windows* option is located in the *Extras* menu under *Options* on the *General* tab.

DeltaMiner users have been able to resume the expand/collapse status within a briefing book as well as within the list of cockpits for quite some time now. These two options both apply to the respective analysis file. The expand/collapse status of the window, however, is saved for each user in the Windows registry ('HKEY_CURRENT_USER'). As a result, it applies to all sessions of a given user on that particular computer.

(3) General: Recalculating Reports at All Times



To ensure that all users are working with the most current data possible, you can now modify the cache properties in *DeltaMiner.* You can determine if you want to *Cache results* or not in the *Extras* menu under *Options* on the *System* tab. This setting applies for the current analysis file (.das or .dam). The default setting is 'activated' which means that reports and analyses will be cached as they were in the past.

The option to deactivate cache especially makes sense in planning applications where several users are writing back to the same database at the same time. Other applications such as the *DeltaMiner* logbook (see *DeltaMiner deltas!* 5.4.1, feature #21), which give real-time information regarding WebService usage, also profit from this feature.

Bypassing cache, however, is more of a hindrance than a help in all other applications that center around reporting or analysis. If you don't use cache here, *DeltaMiner* will recalculate the respective queries each time you change the report, cockpit, analysis or view – and that takes time. Therefore, you should *Cache results* in most cases and only deactivate this option in the few times where the data in the database is likely to change more quickly than a user can switch from one report to another.

(4) General: Installing DeltaMiner from a ZIP File

The *DeltaMiner* setup is available in two different formats: an MSI package for Windows Installer as well as a ZIP archive. As of version 5.4.2, you can now use the ZIP archive to run *DeltaMiner* without an installation or update an existing installation (as in the past).

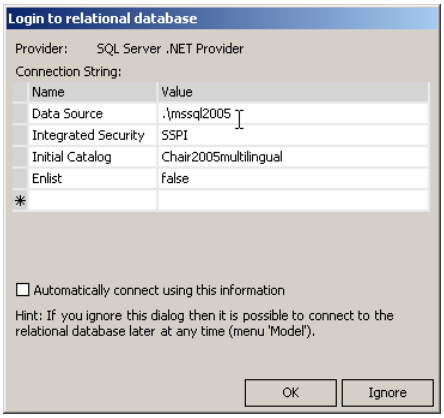
This type of installation is also known as an XCOPY deployment which refers to an MS DOS command for copying files. The XCOPY deployment is useful in many situations. If you have users that don't have write rights into the 'Program Files' directory, for example, you could place this data in another directory which they could access such as 'My Documents' . In this case, you could directly start *DeltaMiner* from this directory by running the 'Client.exe' file. When you unzip the ZIP file, you must keep the existing folder structure; please make sure that this option is activated in your file compression/decompression software.

If you choose not to use Windows Installer:

- *DeltaMiner* will not be listed under the programs in your 'Start' menu
- '.das' and '.dam' files will not be automatically linked to *DeltaMiner*
- The TrueType fonts (i.e. 'SparkFonts'), which you need to export sparklines to Excel, will not be installed automatically

You can quickly fix these limitations in Windows if you create the link yourself with 'client.exe', register the file types in Windows Explorer, and copy the fonts into the Windows font directory. If you need these fonts seperately, you can download them from www.bissantz.com/pub/DeltaMaster-SparkFonts.zip.

(5) General: Enhanced Dialog for Login to Relational Databases

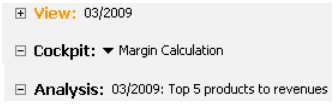


Version 5.4.2 makes it much easier to change the parameters for the *Login to relational database* dialog box. *DeltaMiner* now breaks down the connection string into its components instead of displaying them as a continuous string with semicolons separating the name-value pairs.

To edit a *Name* or a *Value*, simply double click on the respective files or press the *F2* key. In the last row which is marked by an asterisk ('*'), you can also add a new parameter. To delete a parameter, simply delete the respective row or its name.

The *Model browser* (*Model* menu) will display the complete connection string as before - with a semicolon separating the parameters.

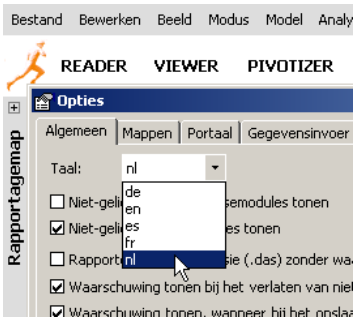
(6) General: No View Numbers in Window Title Bars



The title bars in the *View*, *Cockpit*, *Analysis* and *Report* windows will no longer display the number of the currently valid view. This leaves more room for the view description and the name of the cockpit or report. The previous naming convention 'Cockpit for view (X)' is now simply called 'Cockpit'. *DeltaMiner* will now only display the number of the view in the *History* window.

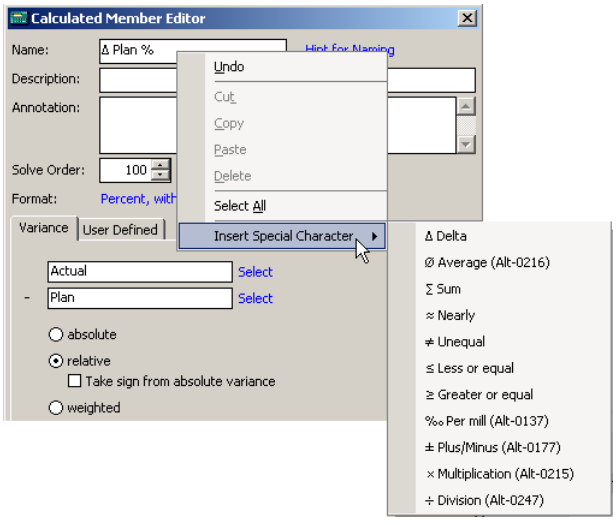
(7) General: Displaying User Interface in Dutch

Spreekt u Nederlands? If so, *DeltaMiner's* user interface now supports a Dutch language version. You can change the current language under *Options* (*Extras* menu) on the *General* tab. This change will immediately take effect without a separate restart.



(8) General: Inserting Special Characters Using the Context Menu

You can now enter special characters such as 'Δ' (delta, for variances) or 'Ø' (for averages) directly from the context menu in multiple text fields. You can access the context menu for special characters in the following dialog boxes and data entry fields:

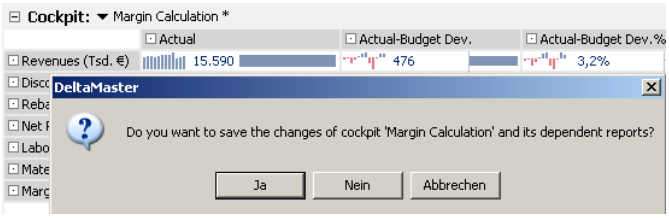


- Measure properties: Name, Description, Annotation, Units
- Editor for calculated members: Name, Description, Annotation
- Editor for time analysis members: Name, Description, Annotation
- Editor for virtual members: Name, Description, Annotation
- Editor for named sets: Name, Description
- Report properties: Report title

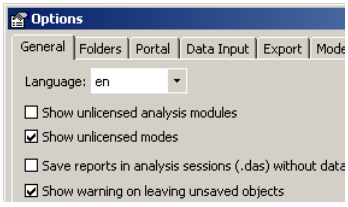
- Folder properties: Folder title
- Create cockpit, Rename cockpit: Name, Description
- View properties: User-defined view title

For some signs, you will have to add the Unicode code in parentheses. You can also enter the symbol directly from your keyboard by holding the *Alt* key and entering the four-digit character code using your 10-key pad.

(9) General: Warning Before Leaving Cockpits, Analyses and Reports with Unsaved Changes



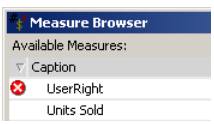
When you are working on cockpits, analyses and reports, *DeltaMiner* now offers better protection against losing the changes since you have last saved your work. Let's say, for example, that you have saved an analysis file and opened another cockpit or created a new one. If your current cockpit contains unsaved changes, *DeltaMiner* will now prompt you to save the current cockpit before closing it. This works for analyses and reports as well. Here, you can choose if you want to save the current status (*Yes*) or discard the changes (*No*). The event of leaving an object occurs e.g. when you open another report, create a new cockpit, report or analysis, or start a screen presentation by hitting *F5*.



You can tell if an object has unsaved changes because *DeltaMiner* will display an asterisk following the name of the cockpit, analysis or report in the title bar of the respective window. If you answer the question with 'Yes', *DeltaMiner* will save the object under its current name. This security prompt is activated in the default settings. If you want *DeltaMiner* to leave an unsaved object without a warning (like in the past), go to *Options* (*Extras* menu*, General* tab) and deactivate the check box *Display warning before leaving an unsaved object*.

This option, which applies to all levels in which users can save reports (i.e. *Pivotizer*, *Analyzer,* and *Miner*), will be stored for each user in the Windows Registry ('HKEY_CURRENT_USER'). It is valid for all analysis files that a user can access on that computer.

(10) Measure Browser: Filtering by Error Icon



In the *Measure browser*, *DeltaMiner* highlights invalid or invisible measures with a symbol that will be displayed in a separate column before the measure's name. You can now sort them by clicking your mouse in the column header. If you sort them in descending order, *DeltaMiner* will display the invalid measures at the top of the list so that you can quickly check, edit or delete them without having to waste time searching for them.

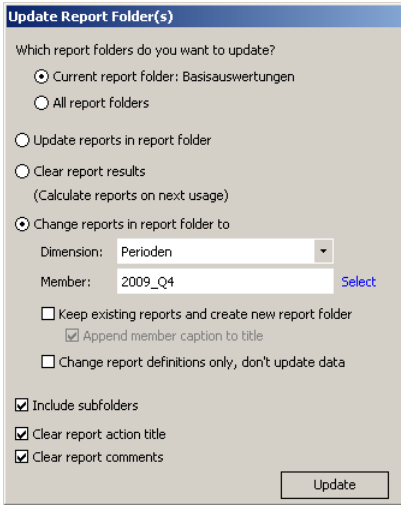
If you click on the column header repeatedly, *DeltaMiner* will switch from ascending order to descending order to no order at all. If you want to work with measure groups, you should *hide* them temporarily (*I want to…* menu, context menu), so that the respective measures either appear at the very top or bottom of the list. Otherwise, *DeltaMiner* will sort the invalid measures correctly within their groups from the top or the bottom but you will still have to check through the individual groups.

If your model does not contain any invalid or invisible measures, *DeltaMiner* will not display the separate column which contains the error image.

You can access the *Measure browser* in many different ways, for example from the *Model* menu. Invalid measures occur, e.g. if measures that were deleted in an OLAP cube are still noted in a *DeltaMiner* analysis file.

(11) Briefing Book: Deleting Comments and Action Titles After Updates

The report comments and action titles in *DeltaMiner* are designed for your comments, messages, warnings, explanations and other important background information – in other words, for texts that cannot be generated automatically because they require skillful editing. That's why you can now automatically *Delete action titles* and *comments* when you update a report because this information would probably no longer be valid once the view has changed.

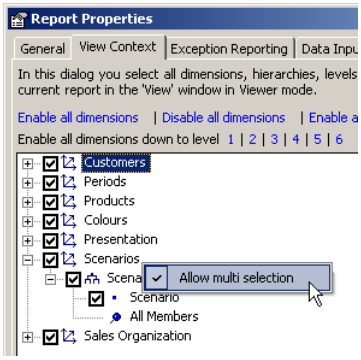


If you update a report from the context menu or the *I want to…* menu, you can use both options for individual reports, the current folder, or even all folders.

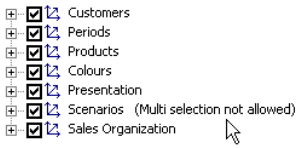
(12) Briefing Book: Enabling or Disabling Multi-Select in 'View Context' Option of Viewer Mode

You can now determine if users in *Viewer* mode can select one or more members. This new option is located in the *View context* of reports and folders.

You can define the *View context* on the respective tab either under *Report properties* or *Folder properties* (context menu of reports or folders in the *Briefing book*); see *DeltaMiner deltas!* 5.3.6, feature #8.



In the context menu of dimensions, you can either allow or prohibit a multiple selection. Since multiple selections are allowed in the default setting, the reports will work as they did before.



A dimension in which a *Multiple selection is not permitted* will be marked accordingly.

In these dimensions, users in *Viewer* mode will only be able to select a single member; a multiple selection using the *Ctrl* and *Shift* keys is no longer possible. Reports that have already been saved with several selected members will continue to show this selection. If a *Viewer* user wants to change the view, however, he will only be able to select a single member.

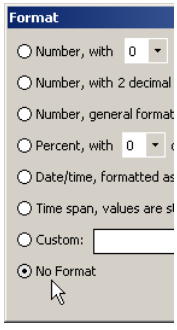
This new option is really helpful in dimensions with members that can't be aggregated, for example, the value types 'Budget' and 'Actual'. To ensure that a user cannot combine them by accident, you can simply prohibit a multiple selection. Please note, however, that multiple selections lead to an aggregation of the selected members in most cases. One exception, however, is a pivot table with a level selection that is dynamically synchronized with the view (see feature #21). In this case, you don't give *View* users the chance to decide how many rows or columns a pivot table should contain.

(13) Report Server: Pasting E-mail Text in an HTML Export

ReportServer now supports an additional variable in the template for HTML exports. Instead of the '##reportservermailbody##' variable, it will enter the generated HTML file of the respective value of the *E-mail text field* in the *Job definition*. Using this feature, you could paste a personalized greeting into the exported HTML file. In this case, the *Report generator* variable such as '@IMN' would be replaced with the respective text of the current iteration.

This new variable is not used in the standard 'DeltaMaster.htm' template that comes with *DeltaMiner.* Other variables in the template file are listed in *DeltaMiner deltas!* 5.3.6, feature #12.

(14) Dimension Browser: Defining Calculated and Virtual Elements Without Formatting



You now no longer need to enter a number format in calculated members (e.g. variances) or virtual members (e.g. a virtual hierarchy created in an ABC analysis).

If you choose *no formatting*, *DeltaMiner* will apply the same format that is set for the respective measure value to the numbers. Its formatting, in turn, will not change based on the combination with calculated or virtual members.

(15) Flexreport: Retaining Line Height and Column Width When Converting from a Pivot Table

If you have chosen a *user-defined row height* or *column width* under the *Table properties* of the pivot table (context menu, *I want to…* menu), *DeltaMiner* will use these same settings when you *Convert [it] to a Flexreport* (*Change* menu in the *Cockpit* window). It will also transfer the option *Always break rows* in the

Flexreport (*Row break* option in the *Cell properties*, *Format* tab). *DeltaMiner* will first set the measurements for all rows and columns and the row break in all relevant cells. Afterwards, you can fine tune the properties of individual cells, rows and columns according to your preferences (*Cell properties* or the context menu of row or column headers, *Row properties* or *Column properties*).

(16) Geo Analysis: Using Updated Maps

Certain maps for the *Geo analysis* module are now available in an updated version (i.e. December 2008). These include the maps of the world, Europe as well as Germany broken down by postal regions (five-digit zip codes) and counties. The new German maps are part of the standard *DeltaMiner* release.

DeltaMiner will search for the map files in the directory listed in the options (*Extras* menu) on the *Folder* tab. In the default installation, the folder is 'C:\Program files\ DeltaMaster 5.4.2\Maps'.

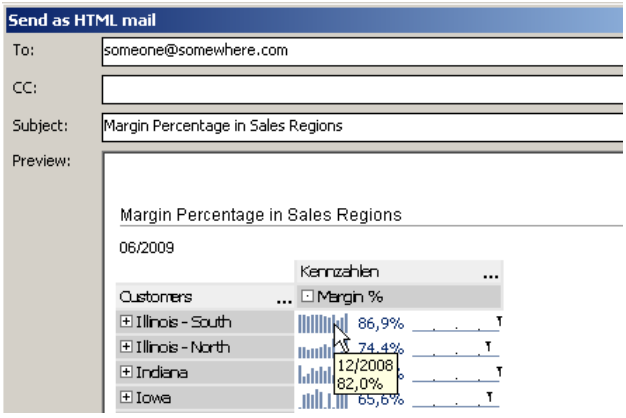
If you open an analysis session that already contains *Geo analyses* in *DeltaMiner* 5.4.2 and *DeltaMiner* finds a newer map in the respective folder, it will not automatically update the reports to the newer version. Therefore, you should use the newer maps for the entire installation including *ReportServer* and *WebOption* and not just on individual workstations. The easiest way to do that is by defining the map folder on a server directory and storing the maps there as well. If you prefer to work with the existing maps instead of the newer ones, simply delete the updated files from the map folder.

(17) HTML Export: Displaying Detailed Information as a Tool Tip

The HTML export includes additional detailed information which is displayed as a tooltip when you mouse over certain graphical elements. This applies to cockpits, analyses and reports that you send via e-mail directly from *DeltaMiner* as well as from automated HTML exports with *ReportServer*.

This detailed information is available for:

- Individual columns of column sparklines in pivot tables, Flexreports and combination cockpits (shows: time frame and the respective value)
- Data points and the connection lines in *Time series analysis,* line charts and *Trumpet curves* (shows: time frame, view description, measure and its value)
- Points or bubbles in *Portfolio* or *Regression analysis* (shows: object description plus the two or three measures and their values)



You can also access this detailed information using the WebClient as described in feature #32.

In order to enter the necessary data for the tooltip in the HTML file, you will need to edit the 'DeltaMaster.htm' template file. The template that comes with *DeltaMiner* 5.4.2 already contains these changes. Please ensure that the updated file is stored in the folder for *Export templates* (*Extras* menu, *Options*, *Folder* tab). If you want to display these tooltips in *Report Server* jobs as well, please ensure that they are based on the *Export template* that contains the additional specifications.

You cannot, however, generate tooltips if you send an e-mail through Microsoft Outlook (in *DeltaMiner*: *Extras* menu, *Options*, *Export*, *HTML mail*) and your Outlook settings state that it should *Edit e-mails with Microsoft Office Word* (in Outlook: *Extras* menu, *Options*, *E-mail format*). If you send an e-mail through Outlook, you might see remnants such as contour lines surrounding the graphical elements in question. These only appear, however, when you edit the e-mail – not in the actual display. Your recipients, therefore, will see the report correctly without these remnants.

(18) Hyperion Essbase: Supported by ADOMD.NET 10.0

You can now access Oracle Hyperion Essbase using Version 10.0 of the ADOMD.NET interface. If you used Essbase with previous *DeltaMiner* versions, you needed to use ADOMD.NET 8.0 and, therefore, replace two DLLs. This is no longer necessary in version 5.2.4. As a result, you can now access Essbase and Microsoft Analysis Services using the standard 'Server.dll' and 'Microsoft.AnalysisServices.AdomdClient.dll' files that come with *DeltaMiner*.

DeltaMiner can easily access Essbase versions 9.3 or higher since version 5.3.2.

(19) Modelling: Using Default Measures of the Cube

If there are 'default measures' defined in OLAP databases such as Microsoft Analysis Services, *DeltaMiner* will automatically select this measure as a suggestion if one of the following conditions apply:

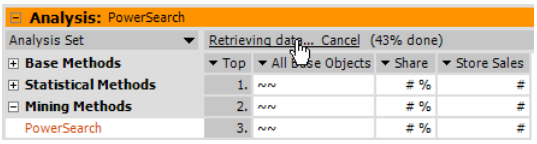
- You are creating a new report based on a *Pivotizer* analysis in either the *Pivotizer* or *Analyzer* user mode.
- You are in *Analyzer* mode and you have opened an analysis method for the first time in your current session.
- You have dragged and dropped the measure dimension on an axis in the cockpit or report definition.
- You have entered an additional column or row in the *Tuple editor.*

If there is a dominating or a frequently used measure in your data model, it makes sense to mark it as a default measure. In this case, the chances are very high that you won't even need to select your desired measure because it is already preselected. Of course, you can change the measure in all of the cases listed above whenever you wish.

(20) Oracle OLAP: Using Various Enhancements and Improvements

Version 5.4.2 has now implemented the following functions that were previously not supported in connection with Oracle OLAP.

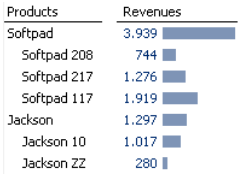
- General: You can stop database queries. Simply click the respective link that appears in the title bar of the *Cockpit*, *Analysis* and *Report* windows during a database query.



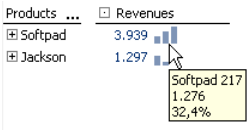
- Briefing book: You can now also use variables in the form '<viewX>' in Oracle. This way, you can enter the member of the dimension with the ID 'X' in the names of reports, folders, measures, calculated members and other objects.

- Flexreport: You can access *Time-related sparklines* as well as *User-defined sparklines* in the *Cell properties*. In comparison to a pivot table, here you have greater control over which values should be used in the sparkline.

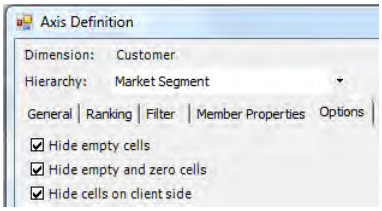
- Pivot table: You can access *Hierarchical rankings* in the *Axis definition* and the context menu of measures. This option makes sense when the axis includes multiple hierarchal levels. It keeps track of the level relationship of the members. If products and product groups are displayed on the axis, the hierarchical ranking first arranges the product groups and then the products within each group.



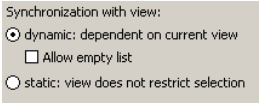
- Pivot tables: You can now also use *Drill sparklines* (context menu) in addition to time-related sparklines. These are displayed to the right of the number and show how the respective figure is spread across the members of the next lower hierarchy level.



- Pivot table: You can now *hide* null and 0 cells on the *client side* instead of on the server side. In some cases, the performance is better when you hide these cells on the client side. This option, which is located in the *Axis definition* on the *Options* tab, only works in combination with Oracle OLAP – not in applications based on other databases.



(21) Pivot Table: Simplifying View Synchronization in the Axis Definition



DeltaMiner has given the *Level selection* options in the *Axis definition* clearer names and has changed the default settings slightly so that creating pivot tables is much more intuitive than ever before. The current option *Dynamic: dependent on current view* is the equivalent to the 'Synchronize with current view ' option that was previously activated. The current option *Static: view does not restrict selection* works the same as if you had previously deactivated the 'Synchronize with current view' option. The currently deactivated *Allow empty list* option is equivalent to the previously activated 'Synchronize level with current view level' option.

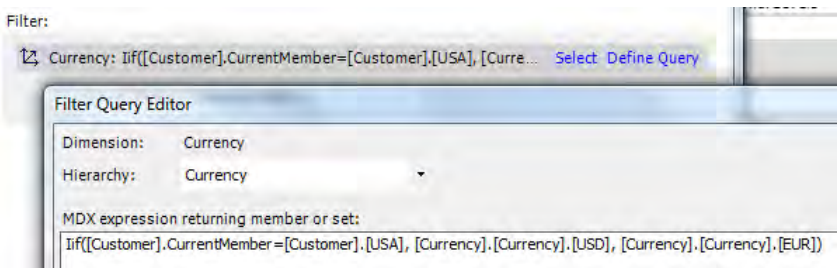
Background: In the *Axis definition* you can determine which members should be added to the pivot table. If you choose them by level (*Level selection*), the default setting will first include all members of the selected levels. You can then delegate the decision regarding which members should be displayed individually to the *View* window. This is what we call a *dynamic synchronization with the view* – the *Axis definition* then states from which levels the members should originate and the actual selection takes place in the *View*. A *static* synchronization, in contrast, takes place when it makes no difference for the pivot table which members have been selected in the respective dimension in the *View* window. (In both cases, of course, you can further limit the resulting number of members by filtering, sorting or other options.)

In a *Dynamic view synchronization* you can also determine if you want to *Allow [an] empty list* or not. Although the option itself is new in this form, you could already generate the same effect in earlier *DeltaMiner* versions as well. This option is deactivated in the default setting so that there are no empty displays. Empty displays can occur if the member that is selected in the *View* is located on a lower level than the lowest one in the *Axis definition*. (Example: A month is selected for the time dimension in the *View* but 'All periods', the highest level, is selected in the *Axis definition.)* If you want *DeltaMiner* to automatically adapt the view in the *Axis definition* to the selection in the *View*, simply leave the *Allow empty display* option deactivated (default setting).

Although the options' names and the default functions have changed since this issue of *clicks!*, the steps that describe the synchronization of levels are still valid.

(22) Pivot Table: Filtering Members with Queries

You can now use MDX to define the *Report definition* (*Analyzer* or *Pivotizer* level) as well as the *Cockpit definition* of pivot tables (*Miner* level). This function is very practical when the filter should dynamically change to correspond with the current view.

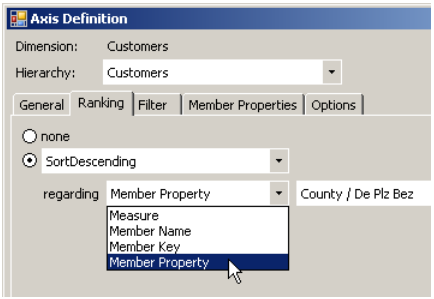


The screenshot on your right shows a filter for the 'Currency' dimension that checks which member is selected in the 'Customers' dimension. If the 'USA' is selected in the view, the currency dimension will automatically switch to 'USD'. Otherwise, it will use 'EUR'. By using these types of variables, you can instantly account for relationships between different objects and minimize the chance that a user would select a combination that returns no values.

The MDX expression must return a result that has a 'member' or 'set' type. If you want to edit these expressions, you can use the same MDX editor that you already know from creating user-defined measures or calculated members.

You can only use reports and cockpits that contain these types of filters in *DeltaMiner* 5.4.2 and later releases. They will not be displayed in previous releases.

(23) Pivot Table: Creating Rankings by Member Name, Member Key, and Member Property



You can now use the names of members, their keys and their properties (i.e. attributes) to sort the objects in a pivot table. To support this new feature, we have extended the *Ranking* tab in the *Axis definition*. This tab now contains a drop-down list in which you can choose if you want to rank the objects by *measure* or use the new options *member name, member keys* or *member properties*.

If you select *Measure* or *Member property*, *DeltaMiner* will display a second drop-down menu where you can select the measure or member property that you would like to use.

- Nothing has changed with the measure option in version 5.4.2. At first, the drop-down list will only show the measures that are used in the pivot table. You could, however, add any other measure to your ranking if you simply *select* the link displayed next to the list. In general, though, it's easier for your report consumers if the measures that are used to sort the table are also contained in the report.

- The selection list of the member properties displays all attributes that are available in this hierarchy. If there are level-dependent attributes, *DeltaMiner* will also display the level in question (before the slash). When you are sorting your pivot table, it doesn't matter if the attribute is displayed in the table or not – just as it doesn't with measures either. The ranking functions *TopSum*, *TopPercent*, *BottomSum,* and *BottomPercent* only work with numeric member properties.

In previous *DeltaMiner* versions, you could also sort pivot tables based on member properties – but only through the context menu and, therefore, 'superficially' on the interface. These ranking options are now located in the *Axis definition*, where you can use them, for example, in named sets, for exception reporting or in references from Flexreports.

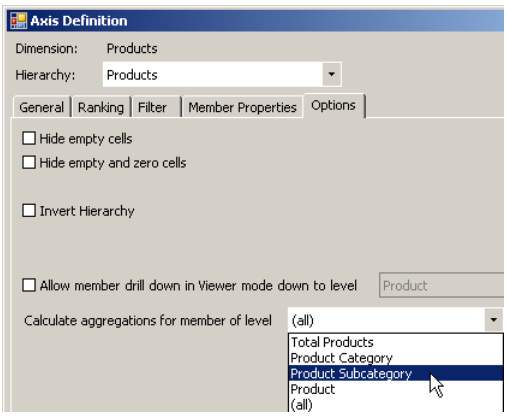
You can only use reports and cockpits that use this ranking in *DeltaMiner* 5.4.2 and subsequent releases. They cannot be displayed in previous versions.

(24) Pivot Table: Calculating Row, Column and Table Aggregations for Selected Levels Only

	Measures ...
Products by Category ...	Store Sales
All Product Families	326.385
Drink	68.523
Alcoholic Beverages	8.537
Baking Goods	22.701
Beverages	15.583
Dairy	21.703
Food	189.655
Non-Consumable	68.207
Sum	721.292

Some users have reported that when they use the context menu to display the *Row*, *Column,* and *Table aggregations* in a pivot table, the results that they see differ from the ones that they expected. These aggregations are specified and implemented to process the displayed values, e.g. to create aggregations on the interface which do not necessarily exist in the data model. As a result, you may receive unexpected results if the table contains aggregated members and their subordinate members, as shown in the screenshot on your left. The sum, which is shown in the cell with a yellow background, is twice larger than you would expect because the grand total includes the subtotals Drink, Food, and Non-Consumable as well as their subordinate members.

In order to prevent future misunderstandings, we have added a new option that affects how aggregations work.



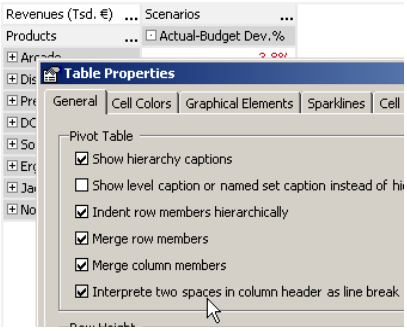
In the *Axis definition* (*Options* tab), you can determine which hierarchy level(s) you want to use in *Row*, *Column* and *Table aggregations*. The default setting is *(all)*. This is the equivalent to the how this function previously worked. The aggregation will include every single displayed value – regardless of the member's level.

If you select a certain level, however, *DeltaMiner* will only aggregate the values for the displayed members that belong to this level.

Products by Category	Measures ... Store Sales
All Product Families	326.385
Drink	68.523
Alcoholic Beverages	8.537
Baking Goods	22.701
Beverages	15.583
Dairy	21.703
Food	189.655
Non-Consumable	68.207
Sum	326.385

(25) Pivot Table: Disabling Line Break for Double Space Characters in Column Header

If you use two empty spaces in the names of members and analyses, *DeltaMiner's* standard setting will add a row break in the column heading at this position. As of version 5.4.2, you can deactivate this functionality in the *Table properties* (*General* tab). If you have deactivated the control box, *DeltaMiner* will display two empty spaces as two empty spaces.



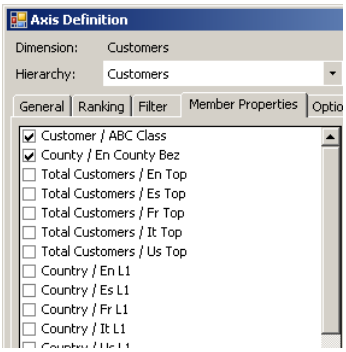
Many users like the feature which replaces two empty spaces to break down a long column headline into multiple rows so that the column is thinner. You can manually control the column width in the *Table properties* as well (see *DeltaMiner deltas!* 5.4.1, feature #18, and *DeltaMiner deltas!* 5.3.5, feature #12).

(26) Pivot Table: Accessing Member Properties on all Levels

You can display member properties (attributes) from multiple hierarchy levels in the pivot table. For each property you select, *DeltaMiner* will create an individual column in the pivot table.

Customers ...	ABC Class	En County Bez	Measures ... Revenues
United Kingdom			15.842.514
North			1.022.972
East			868.477
South			13.360.468
South 1			13.209.356
826112		Truro	10.167.875
Eurotunnel Corp.	C		10.167.875
Creative Interiors	C		
E. Smith	C		
Marriott	C		
826100		Southampton	353.365

To select all member properties that are defined in the respective hierarchy, simply select either the *Axis definition* (*Member properties* tab) or the context menu for fixed columns (not data columns). *DeltaMiner* will display the properties as 'level / member property'. To arrange the columns, you can drag and drop the member properties in the *Axis definition*.



(27) ReportService: Executing Report Server Jobs on a Remote Machine

You can administer and execute *ReportServer* jobs on different remote machines. You can define the jobs from a workstation as usual, but they will be executed from a server that has more powerful hardware (e.g. more memory, 64-bit system, more processors, or processor cores). This dramatically accelerates the process of generating and distributing reports, and the workstation won't be slowed down during the job execution.

We call this type of 'remote-controlled' *ReportServer* a **ReportService**. It is implemented as a Windows service called 'DeltaMiner ReportService'.

Similar to *ReportServer, ReportService* comes as a ZIP file in the standard *DeltaMiner* installation. If you unzip the archive in a separate folder, the installation will create two subfolders called 'local' and 'remote' as well as the known SQL scripts to create the job definition database for Microsoft SQL Server and Oracle. (Since there were no changes to the structures in Version 5.4.2, you do not need to execute the scripts if your job definition database is up to date). The 'local' folder contains the client components of the *ReportService*. These files are designated for the computer where you want to administer the jobs (workstation, client system).

- The 'remote' folder contains the *ReportService* server components. These files are for the computer where the jobs will be executed (server, remote system).

Both components access the same job definition. You should create this definition in Microsoft SQL Server or Oracle and configure them on both machines as an ODBC database. You should not use the Access database 'ReportServer.mdb' for the *ReportService*.

How to configure and install the **client components**:

1. Copy the files from the 'local' folder into *DeltaMiner's* installation directory (e.g. 'C:\Program files\DeltaMaster 5.4.2') on the workstation.

2. Edit the 'ReportServer.exe.config' with a text editor (e.g. Notepad). The three settings that you have to change are:

- The data source name of the job definition database (‘<add key="Database" value="DSN=ReportServer" />’),

- The address of the server system (‘<endpoint address="net.tcp://localhost:8000/ReportService" … />)

- The name of the user under which the server is running on the remote system (‘<userPrincipalName value="domain\user" />) – see step 5 below

  In case the service is running under ‘network server’, the default suggested account, the user name will be ‘NT AUTHORITY\NetworkService’.

How to configure and install the **server components**:

1. Copy the files from the ‘remote’ folder into the *DeltaMiner* installation directory on the remote system.

2. Edit the ‘ReportServer.exe.config’ file with a text editor. Here, you only need to make one change – namely, edit the data source name of the job definition database (‘<add key="Database" value="DSN=ReportServer" />’).

3. Edit the ‘ReportService.exe.config’ file with a text editor. Here, you need to edit two settings:

   - The data source name of the job definition database (‘<add key="Database" value="DSN=ReportServer" />’)

   - The end point (i.e. port) that the service should use (‘<endpoint address="net.tcp://localhost:8000/ReportService" … />’).

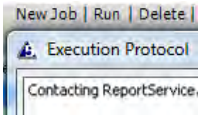
     The end point must correspond with the properties on the client system.

4. Run the ‘_install.bat’ file with administrator rights to install *ReportService* as a Windows Service.

5. Enter the login information (*Control panel*, *Administration*, *Service*) in the ‘DeltaMiner ReportService' *Properties*. Although the network service is the standard setting, we recommend that you change this default and let the service run under a different account, preferably that of the user who would like to run the jobs remotely. The account that you enter here must have access to the job definition database, the OLAP database, and eventually the relational databases that the *DeltaMiner* applications use.

   You can also set the *Start type* in the *Properties* as well. In most cases, you will probably want to start the *ReportService* automatically.

You can start or stop this service using the service administration in the Windows control panel or by running the '_start.bat' and '_stop.bat' files. To install this service, simply run 'uninstall.bat'. Administrator rights are required in each of these cases.



If you *execute* a job with this configuration on the client, it will create a connection with the *ReportService* on the remote system and transfer it for processing.

When you are administering jobs, please pay attention to the **file path**. The administration and the execution take place on different computers that have their own local drives and folder structures. As a result, the server cannot access a *Report source (Analysis session)* that is saved on the client under 'C:\DeltaMaster' because it would try to load this file from its own 'C:' drive. For that reason, you should try to only work with server drives – optimally, in UNC notation (e.g. '\\Server name\Share name\Path') in all fields where you use file and path names. This applies to the *Report source*, the *Address*, the *Export template* and the *E-mail attachment*. You can also use *Report Server* variables (e.g. '@IMN') for path components. These need to be accessible both from the client and server.

In the *OLAP server* and *SqlCnnStr* (connection string for relational connections) fields, you must enter the server names so that both systems can find them. The name 'localhost', for example, should not appear anywhere because this name will be interpreted differently.

Technical requirements:

- Client and server workstations require Microsoft .NET Framework 3.0 or higher.
- Client and server workstations must be able to access the same job definition database.
- The user who runs the service must have access to all OLAP and relational databases that the application uses.
- The server computer (i.e. the user account under which the service is running) must be able to obtain a *Report Server* or *Report Server Office* license. (You don't need a special license to administer the jobs on client workstations.)
- The client/server communication takes place using a TCP/IP connection that is defined in the 'ReportServer.exe.config' file. You may also need to configure an existing firewall between the systems.

The *ReportService* does not require a separate license. You can use each *Report Server* or *Report Server Office* license in the distributed manner described above. For testing purposes, you could run the client and server components on the same system.

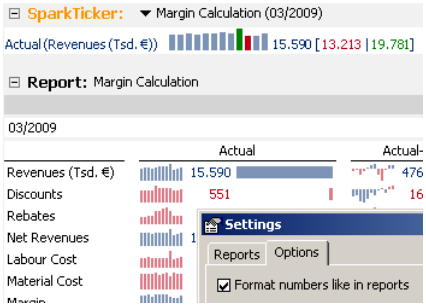
(28) SAP BW: Renewed Certification of the DeltaMiner SAP Interface

SAP has recertified *DeltaMiner*'s certification for SAP BW/Netweaver BI. This certification, which is line with the SAP scenario 'BW-ODB 2.0' for SAP BI 7.0, covers all mandatory requirements and includes all listed optional functions. As a result, we can continue to use the official 'SAP Certified – Integration with SAP NetWeaver' logo.

This certification has been published in SAP's Partner Information Center in the Internet under the URL: http://tinyurl.com/deltamaster-sap-certification. Our interface first received certification back in 2006 and has fulfilled the ongoing recertification requirements ever since.

(29) SparkTicker: Formatting Numbers as in Reports

The numbers that are displayed in *DeltaMiner's* integrated *SparkTicker* (*View* menu) are generally rounded up and use a space-saving notation in which an apostrophe is used to symbolize a thousand, and two apostrophes symbolizing a million. Using a new option in the *SparkTicker properties*, you can display the numbers in the ticker exactly as they are shown in the respective report.



(30) SQL Drill-Through: Supporting Analysis Services Partitions with Query Binding

When you connected to the relational model of a Microsoft Analysis Services 2005/2008 database in the past, *DeltaMiner* only considered partitions with the connection type 'Table connection'. *DeltaMiner* 5.4.2, however, now also supports partitions with 'query connections'. To determine the names of the underlying table or view, *DeltaMiner* will analyze the SELECT query (in the *Partition source*) and extract the identifier behind the keyword 'FROM'. You can then access the resulting table or view in *DeltaMiner*, for example, in the *SQL Drill Through* module.

(31) WebClient: Inputting Data in SQL Drill Through

In pure relational applications, you can now enter data into reports from the Web browser using the *SQL Drill Through*.

At the present time, the functions to build purely relational applications are available only with a special registry key. The *Logbook*, which was introduced in *DeltaMiner* 5.4.1 (see *DeltaMiner deltas!* 5.4.1, feature #21), is one example of a relational application. It wasn't, however, designed for data entry. The new data entry functions in the *SQL Drill Through* are another successful example of our efforts to strengthen the support for relational databases so that in the future you can access relational systems without an OLAP database.

(32) WebClient: Displaying Detailed Information in a Tooltip

When you mouse over certain graphical elements in the WebClient, *DeltaMiner* will display a tooltip which provides additional detailed information. This feature, which is very similar to the HTML export (see feature #17), applies to sparklines in combination cockpits, for *Portfolio*, *Regression* and *Time series analyses,* as well as *Trumpet curves*.

If you have existing applications that are already calculated and stored in the repository, you must update them once to activate the tooltip function.

(33) WebClient: Editing Cell Comments

You can now enter and edit cell comments in planning applications directly from the Web browser by opening the context menu of the respective cell.

(34) WebService: Supporting Parallel Installations of Multiple Instances

You can operate a WebService in multiple interdependent instances on the same machine. This way, you can build a separate development, testing and productive environments without needing additional virtual or physical machines. In addition, you can operate different versions of the WebService on the same server.

To install an additional **WebService Instance,** simply follow the same general instructions for installing and configuring an instance with these few exceptions:

1. Copy the files that belong to the WebService (see 'WebService' folder in the ZIP file that comes with the installation) into a separate directory, for example: 'C:\Program files\DeltaMaster WebService TEST' (see the *DeltaMiner WebOption* installation and configuration whitepaper, section 4.5, point 1).

2. Open the 'DeltaMaster.Service.exe.config' file in this directory and add the following three entries in the section called '<appSettings>':

   ```
   <add key="ServiceName" value="DeltaMaster Service TEST" />
   <add key="DisplayName" value="DeltaMiner WebService Test Environment" />
   <add key="Description" value="This is a DeltaMiner WebService instance for testing." />
   ```

   These three entries are the equivalent to the *Service name*, *Display name* and the *Description* as they will be displayed in the service's properties (control panel, administration). The 'ServiceName' must have a unique reference to the respective system.

3. The instance should write its protocol information in its own trace file. Please ensure that a suitable path/file name is listed in the 'DeltaMaster.Service.exe.config' in the section '<system.diagnostics><trace><listeners>' under 'initializeData' (see the *DeltaMiner WebOption* installation and configuration whitepaper, section 4.5, point 4e).

4. In order to communicate with the WebClient, the new instance will need its own port. You can also enter this information in the 'DeltaMaster.Service.exe.config' in the section '<system.serviceModel><services><service>'. The number of the port is located in the 'address' attribute behind the colon (see the *DeltaMiner WebOption* installation and configuration whitepaper, section 4.5, point 4f). Please note that this port may not be used by other services such as WebService instances.

A suitable **WebClient Instance** takes over the communication with this type of parallel **WebClient Instance**. To set up a further WebClient instance, simply proceed as described in the *DeltaMiner WebOption* installation and configuration whitepaper with the following exceptions:

1. Copy the files that belong to the WebClient (see 'WebClient' in the ZIP file that comes in the standard *DeltaMiner* installation) into its own directory, for example, 'C:\Program files\DeltaMaster WebClient TEST' (see also *DeltaMiner WebOption* installation and configuration whitepaper, section 4.6, point 1). You could also select a directory in 'C:\Inetpub\wwwroot' ; this is not, however, mandatory.

2. For the instance, you need to create a separate virtual directory with its own alias (see *DeltaMiner WebOption* installation and configuration whitepaper, section 4.6, point 2).

3. To communicate with the WebService, the new instance of the WebClient must use the same port as the WebService. This is configured in the 'web.config' in the section called '<system.serviceModel><client><endpoint>'. Compare the addresses of the endpoints with those of the WebService (see *DeltaMiner WebOption* installation and configuration whitepaper, section 4.6, point 3d).

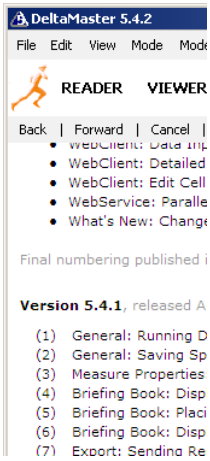
By following these directions, you can generate multiple WebServices and WebClients that you can configure independently from each other as described in the *DeltaMiner WebOption* installation and configuration whitepaper.

The logbook (see *DeltaMiner deltas!* 5.4.1, feature #21) is already designed for use in systems with multiple WebService instances. Since it takes its data in relational form from the WebOption repository, it can analyze the behavior and usage of all instances that access this repository.

You could, however, also operate each WebService Instance with its own repository and logbook (see *DeltaMiner WebOption* installation and configuration whitepaper, section 4.5, point 4d).

By enabling the WebService to support multiple instances, we have made another major step to enable users to build large Web applications such as an Application Service Providing (ASP) or Software as a Service (SaaS) framework with *DeltaMiner*. The foundations for this were already laid in version 5.4.1 when WebService was able to support multiple clients and operate multiple repositories from one and the same WebService instance (see *DeltaMiner deltas! 5.4.1*, Point #22). Now in version 5.4.2, you can even operate multiple WebService instances (either one or more repositories) on one and the same machine.

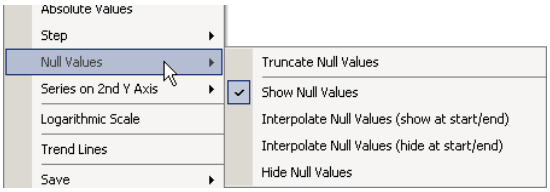
(35) What's New: Including Changes from Past "deltas!"



Starting in release 5.4.2, you can view a complete list of all of the changes (as documented in *DeltaMiner deltas!*) in the *Help* menu under *What's New!*. The features in the most current release are not numbered, because creating descriptions for the features is a time-consuming process which is not always finished by the release date. When *DeltaMiner deltas!* is published shortly after the release, certain features may change in comparison to the 'What's new!' list. In the subsequent release, however, we will adjust these changes so that the numbered entries always are equivalent to the published *deltas!*.

This way, you can get a quick overview – directly in *DeltaMiner* – of which functions have been added from release to release.

(36) Time Series: Viewing All Options for Nulls in the Context Menu



All *Time series analysis* options which refer to nulls are now summarized in their own section of the context menu.

(37) Notes: Compatibility With Previous Versions and Installation

Version 5.4.2 contains no changes to the metadata scheme of **ReportServer**. As a result, you do not have to run the 'ReportServer (SQL Server).sql' or 'ReportServer (Oracle).sql' script. You should, however, update the 'ReportServer.exe' file as well as the respective DLLs so that they match the current *DeltaMiner* version.

The **WebOption** components – Repository GUI, WebClient and WebService – are also available in Version 5.4.2. An update, therefore, is highly recommended. Since the database schema for the repository has not changed in Version 5.4.2, you do not need to run the 'Repository.sql' script.

There are two new pivot table functions – the query-defined filter (feature #22) and rankings by member names, keys or properties – which you can only use in Version 5.4.2 and subsequent releases. People using a previous *DeltaMiner* version will be able to open and use analysis sessions that have reports and cockpits containing these functions. The respective objects, however, will not be displayed.

Before you update WebOption, please create a backup copy of the configuration files:

- WebClient: 'web.config', any changed graphics in the Image folder (e.g. 'Master_Top.png'), and 'DeltaMaster.css' (style sheets)
- WebService: 'DeltaMaster.Service.exe.config'
- Repository GUI: 'DeltaMaster.Repository.exe.config'

In general, you should not use the previous versions of these files in an update because their settings could lack critical information for the current release. Please transfer their settings into the new file versions. Since the configuration files of WebService and WebClient did not change from 5.4.1 to 5.4.2, you can reuse the older files without needing to make any changes.

You can update the repository GUI, WebService and WebClient by copying the new files into the respective directories. Once again, please make a backup copy of these files before doing so. A separate setup is not necessary.

14 DeltaMiner deltas! 5.4.3

What's new in version 5.4.3 Find out in this overview of the Feb. 12th 2010 release!

(1) Analysis Services: Taking over Descriptions from the Cube into DeltaMiner 3

(2) Briefing Books: Using Relative Paths in the Title Page Settings 3

(3) Slide Show: Showing Menus by "Touching" the Right Border of the Screen 4

(4) Dimension Browser: Rearranging Members in User-Defined Hierarchies Through Drag & Drop4

(5) Dimension Browser: Moving Multi-Selections of Members within User-Defined Hierarchies 5

(6) Export: Support for Microsoft Office 2010 (Beta) 5

(7) Flexreport: Supporting Relative Paths for Excel References, Links and Images 5

(8) Flexreport: Using Scales from Referenced Pivot Tables 5

(9) Flexreport: Inserting Cell Content into Links Using a Placeholder 6

(10) Integrating ImportWizard 5.4.3 into DeltaMiner 6

(11) Combination Cockpit: Supporting Relative Paths in Links 7

(12) General: Using a Configurable Minus Symbol in Reports, Dialog Boxes and Proposed Names7

(13) Pivot Table: Axis Definition with Options for the Measure Axis 8

(14) Pivot Table: Inverting Measure Hierarchies 8

(15) Pivot Table: Using Difference Bars and Columns 8

(16) Pivot Table: Drilling Down on Measures Hierarchies in Viewer Mode 10

(17) Pivot Table: Applying Options for Outliers in Bars and Columns 10

(18) Pivot Table: Ordering Rows by a Specific Column 11

(19) Creating Analysis Models for Relational Databases 12

(20) WebClient: Selecting Members by Direct Input Without the Dimension Browser 14

(21) WebClient: Using Sparklines as Inline Graphics 15

(22) WebService: Using Impersonation to Issue Reserved Licenses 15

(23) Accessing IBM InfoSphere 16

(24) Accessing Oracle OLAP via MDX Using the Simba MDX Provider 16

(25) Notes: Compatibility With Previous Versions and Installation 16

(1) Analysis Services: Taking over Descriptions from the Cube into DeltaMiner

In the sense of a continuous documentation within a BI project, *DeltaMiner* now automatically takes over description texts from Microsoft Analysis Services, i.e. Business Intelligence Development Studio. The following objects contain a 'Description' property, which will be read into your *DeltaMiner* application when you create a new analysis model:

- Dimension
- Hierarchy
- Level
- Member property
- Cube
- Measure

In addition to this automatic initial behaviour, *DeltaMiner* will also update any later changes in the database provided that the description of the respective object hasn't been modified in *DeltaMiner*.

DeltaMiner doesn't just transmit these descriptions. In many cases, it even displays them as additional information in a tooltip. If you are working with measures or calculated members in reports or with dimensions in the *View* window and you point your mouse on one of these objects, *DeltaMiner* will then show the *Description* as a tooltip. Contrary to this, the *Annotations* which can be made in the property dialog boxes of many different object types will not be displayed as a tooltip because they are designed to support your internal documentation.

(2) Briefing Books: Using Relative Paths in the Title Page Settings

As you already know, you can display external documents on the *Title page* of folders in *Reader* and *Viewer* modes (context menu of folders, *Folder properties*). This way, you can integrate images, an entire PowerPoint presentation or other Office files, as well as Web, Intranet or local HTML files into the *DeltaMiner* analysis session.

Starting in Version 5.4.3, you can now use relative paths – relative to the storage location of the current analysis session – for the *URL* of the file that you wish to integrate. For example, if you enter 'New_product_features.ppt' or '.\New_product_features.ppt' for the URL, *DeltaMiner* will search for a PowerPoint presentation with this name in the folder where the .das file is located and display it as the title page of the folder in *Reader* and *Viewer* modes.

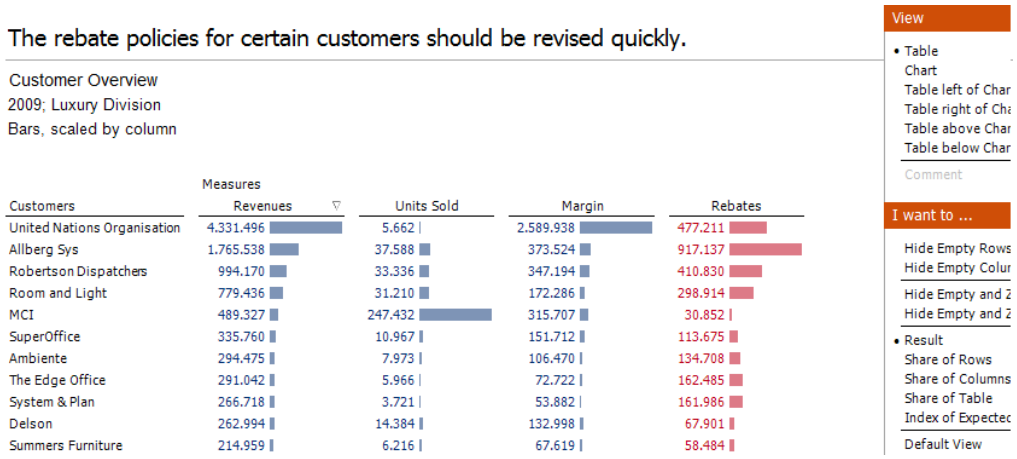
These relative paths make it much easier to move an analysis session in the file system or to copy it to another computer for a presentation. Now you can save all of the referenced files in the same folder as (or a subfolder of) the .das file and simply keep the same relative path.

DeltaMiner now also supports relative paths for Excel references, images and shortcuts in a Flexreport as well as shortcuts in combination cockpits. Please see features #7 and #11 for more information.

Please note that you should not use relative paths in applications which are published in the Internet or an Intranet with *DeltaMiner* WebOption.

(3) Slide Show: Showing Menus by "Touching" the Right Border of the Screen

You can now access additional functions in the presentation mode (*F5* key or *Shift+F5*, *Slide show* in the *View* menu) when you move your mouse pointer to the right corner of your screen. *DeltaMiner* will then display the *View* and *I want to…* menus in a vertical menu bar just as they are shown in *Reader* mode. This way, you can access additional functions during a presentation without having to leave your current screen.



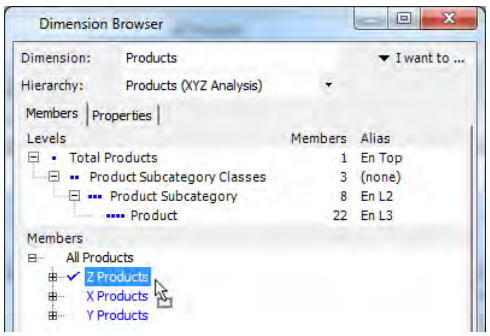
The list of available functions depends on the report type that is currently displayed. If you are viewing a pivot table, for example, you can switch between graphical or table views, hide (or show) empty rows and columns, or change your view from absolute values to percentages.

The *View* and *I want to…* menus are not supported for folders in *Reader* and *Viewer* modes. Accordingly, if you are in a folder during a slide show, nothing will happen if you move your mouse to the right corner of your screen.

The left corner of your screen serves as a control panel, which you can use to display your briefing book; this feature has been supported since the *DeltaMiner* 5.4.1 release.

(4) Dimension Browser: Rearranging Members in User-Defined Hierarchies Through Drag & Drop

You can now change the order of classes in a user-defined hierarchy by holding the *Alt* key and dragging and dropping the desired class. This is the same handling as for organizing dimensions in the *View* window.



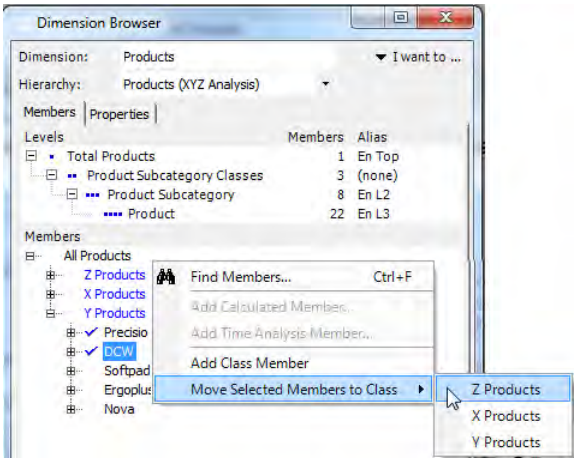
This new function makes creating a user-defined hierarchy much easier. If you previously wanted to create classes for neighboring ranges without 'breaks' in the *Dimension browser*, you had to add the additional class elements in the proper order. Now you can change this order however you like. Please note, however, that you

can only rearrange the order of elements *within* the classes by editing the MDX definition.

(5) Dimension Browser: Moving Multi-Selections of Members within User-Defined Hierarchies

You can now move multiple elements into a different class all at once. In previous editions, you had to move each one at a time.

To move the *selected elements,* simply open the context menu from the empty space in the *Dimensions browser*. If you open the context menu of a dimension element instead, you will only move the element which you have clicked and not all of the ones selected. Therefore, if you want to move several elements at once, please ensure that your mouse is positioned on an empty area before you hit the right mouse button.



(6) Export: Support for Microsoft Office 2010 (Beta)

Microsoft has announced to release a new version of Office this July. We have already tested *DeltaMiner* with the beta 2 version that is currently available (i.e. Office 2010 Version 14.0.4536.1000) and have made all of the necessary changes to ensure compatibility. In addition to Microsoft Office 2010, *DeltaMiner* offers continued support for its 2007, 2003, XP und 2000 versions.

(7) Flexreport: Supporting Relative Paths for Excel References, Links and Images

Similar to the title pages of folders (see feature #2), you now can also use relative paths in Flexreports for:

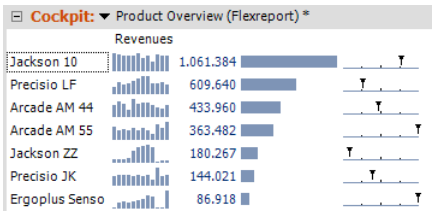
- External links (Link tab under Cell properties)
- Referenced Excel spreadsheets (Formula tab; see DeltaMiner deltas! 5.3.8, feature #11)
- Linked images (Image tab or text if you have chosen an image as the display type).

These relative paths make it much easier to move an analysis session in the file system or to copy it to another computer for a presentation. Now you can save all of the referenced files in the same folder as (or a subfolder of) the .das file and simply keep the same relative path.

Please note that you should not use relative paths in applications which are published in the Internet or an Intranet with *DeltaMiner* WebOption.

(8) Flexreport: Using Scales from Referenced Pivot Tables

In *DeltaMiner clicks!* 2/2010, we explained how you can display pivot tables in a scale showing the respective value between its historical minimum and maximum. Now you can use this same scale in a Flexreport if you have created it from a pivot table using the



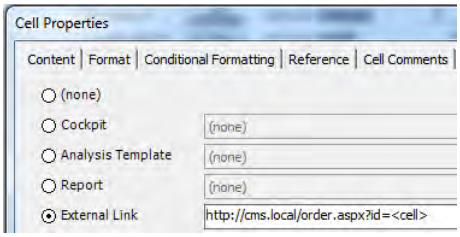
Convert with cell references option (*Change* menu for pivot tables in the *Cockpit* window).

The scale's display is based on the settings and data in the pivot table. To hide the scale from a cell, simply deactivate the option in the *Cell properties* (context menu of a Flexreport cell) on the *Sparkline format* tab.

You can only display this scale in cells that have the *Type* '*Reference'* and where the scale presentation was already activated in the pivot table before you converted it. You cannot, therefore, insert a scale to a reference that was added at a later time.

(9) Flexreport: Inserting Cell Content into Links Using a Placeholder

When working with links of Flexreport cells, you can now use the content of the respective cells as parameters for the link target. *DeltaMiner* will then replace the new '<cell>' wildcard with the content of the cell in the link.



This function makes it much easier to integrate other systems – especially if they are Web-based. For example, if you now display an order number in a Flexreport, you could enter this number in a link which would then automatically open and display the respective order in a content management system.

(10) Integrating ImportWizard 5.4.3 into DeltaMiner

You can now spontaneously transfer data into an OLAP cube with *DeltaMiner*. We have completely redeveloped *ImportWizard*, which previously was offered as a separate tool, and integrated it into *DeltaMiner*. The most important changes compared to the previous version are:

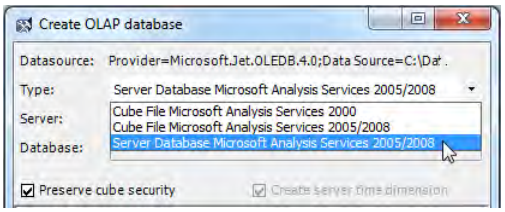
- The full integration into the *DeltaMiner* user interface and installation package
- The creation of cube files and server databases for Microsoft Analysis Services 2005/2008

As in the past, you can still use this tool to create cube files for Microsoft Analysis Services 2000. However, you can no longer create server databases for Analysis Services 2000 or Infor PM OLAP (MIS Alea).

We will soon provide separate, detailed documentations for relational analysis models and *ImportWizard*. For now, here is a brief overview:

You can use *ImportWizard* with relational analysis models that were created with *DeltaMiner* 5.4.3. Feature #19 describes how you can access almost any relational database or other systems using *DeltaMiner*. Using *ImportWizard*, you now can transfer these models to an OLAP database. This is very helpful if you want to use an OLAP system to improve performance or provide more flexible analytical capabilities.

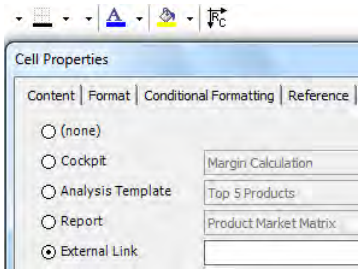
You can create an OLAP database using this dialog box located in the *Model* menu.



You will need a separate license to use the new *ImportWizard*. If you have a valid maintenance contract for the previous version of *ImportWizard*, you will receive this license free of charge. If

you would like to test this functionality, we will gladly send you a free evaluation license.

(11) Combination Cockpit: Supporting Relative Paths in Links

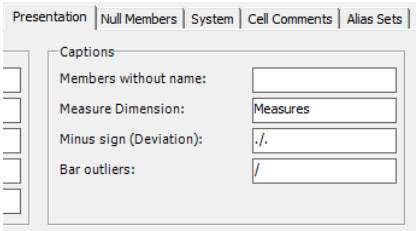


Similar to the title pages of folders (see feature #2), you can now use relative paths as an *External link* in combination cockpits.

These relative paths make it much easier to move an analysis session in the file system or to copy it to another computer for a presentation. Now you can save all of the referenced files in the same folder as (or a subfolder of) the .das file and simply keep the same relative path.

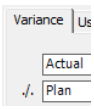
Please note that you should not use relative paths in applications which are published in the Internet or an Intranet with *DeltaMiner* WebOption.

(12) General: Using a Configurable Minus Symbol in Reports, Dialog Boxes and Proposed Names



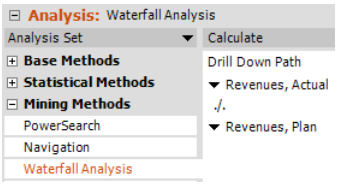
You can now specify which symbol *DeltaMiner* should use as a minus sign in reports and dialog boxes and as its suggestion for system-generated names. You can modify this setting in the *Extras* menu under *Options*.

This option helps unify your reporting. In Germany, for example, many businesses use the sign './.' to designate a subtraction. This avoids any potential confusion with a dash which stands for 'until' (e.g. '2008 - 2009'). If you enter this or any other notation under *Minus sign*, *DeltaMiner* will automatically follow this rule and apply the designated sign in:



- The Editor for calculated members

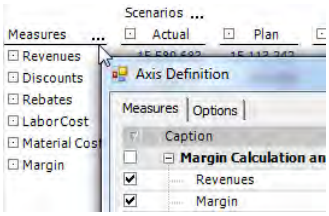
- The Editor for time analysis members (if you let DeltaMiner suggest a name)



- Trumpet curves
- Waterfall analyses
- The wizard for gross margin flow analysis

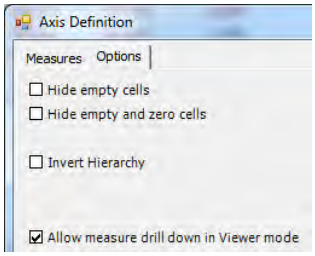
If you use a different notation for a minus sign, *DeltaMiner* will only use it in suggested names for new members. Existing ones, however, will remain unchanged.

(13) Pivot Table: Axis Definition with Options for the Measure Axis



DeltaMiner now offers an *Axis definition* dialog box for the axis on which the measures are arranged. This contains two tabs: the first shows the available measures and the second displays the *Options*.

The first tab looks and acts exactly like an embedded *Measure browser*. The name of the tab depends on the notation of the *Measure dimension*, which is defined in the *Extras* menu under *Options* on the *Presentation* tab.

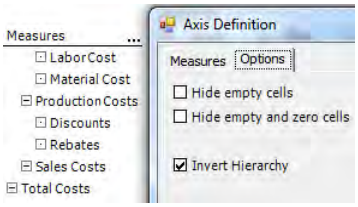


Using the Options on the second tab, you can now Hide empty cells, Hide empty and zero cells, Invert [the] hierarchy and Allow measure drill down in Viewer mode (see feature #16). These options, which are identical to those in the Axis definition for dimensions, are new for measures.

The *Axis definition* dialog box opens as usual when you either click on the three points behind the headline of the measure list in a pivot table or *Select* in the *Report* or *Cockpit definition* (*Change* menu in the *Cockpit* window).

This change also makes operating the system much easier. If you now want to edit the axes of a pivot table, you simply go to the *Axis definition* – regardless if the axis contains measures or dimension members.

(14) Pivot Table: Inverting Measure Hierarchies

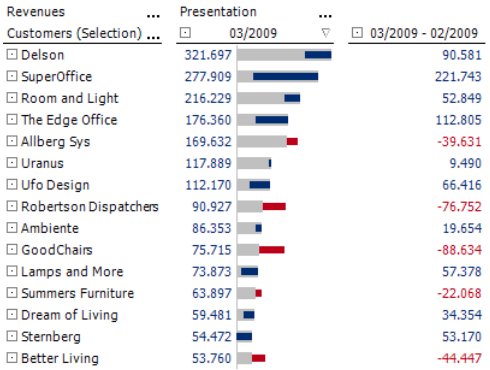


You can now display hierarchies of any measures created in *DeltaMiner* in reverse so that the rows containing the sums appear below those with the summands. You can activate this *Invert hierarchy* feature on the *Options* tab in the *Axis definition* of the measure axis (see feature #13).

This option has been available for dimension members since *DeltaMiner* 5.1.5.

(15) Pivot Table: Using Difference Bars and Columns

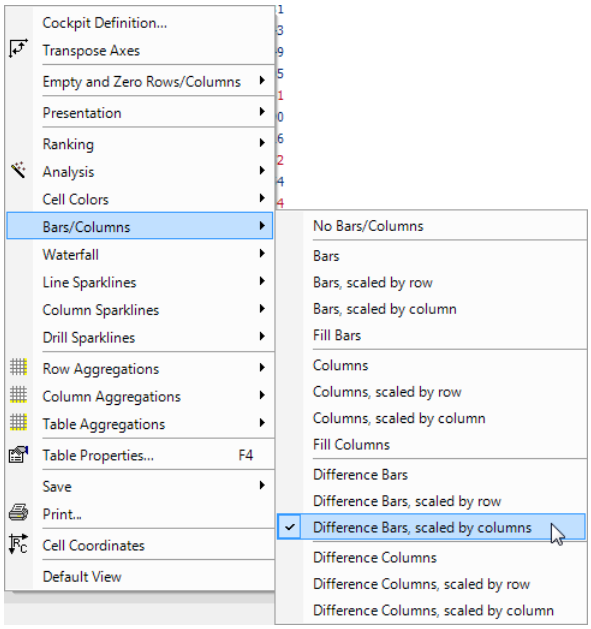
The graphical tables in *DeltaMiner* now support a new option which allows you to display difference bars or columns in the cells of pivot tables. Dr. Rolf Hichert, one of the leading data visualization experts in Central Europe, recommends using this type of visualization in his seminars. We listened – and integrated it into the pivot tables of *DeltaMiner*.



The screenshot on your right shows an example of difference bars which make comparisons to the previous month. The first data column, which lists the revenues for the current month, is depicted by the gray bars. The second column shows the variance to the previous month and is displayed in the first column as difference bars in blue (increase since the previous month) or red (drop since the previous month).

To explain this visualization in more detail, let's look at the enlarged section of the screenshot on your right. The gray bar from 'The Edge Office' represents the revenues for this customer in the current month. The blue offset piece shows the change. The value of the previous month is displayed graphically as the (small) piece from the beginning of the gray bar to the beginning of the blue one. The blue difference bar, therefore, shows how much the 'initial' bar has grown until it reached the length of the current bar. Revenues for 'Allberg Sys', however, have dropped. The value of the previous month equals the distance from the start of the gray bar to the end of the red one. The red offset piece shows the drop in revenues and the gray bar displays the value of the current month.

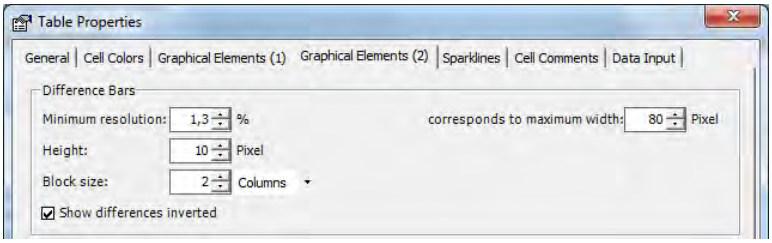
You can display difference bars and columns in pivot tables starting in *Pivotizer* mode using the respective options in the context menu. As with other graphical elements, you can decide which scale you would like to use: one that uses the same scale throughout the entire table (displayed in the option without additional text) or one in which the scale varies *by row* or *by column*.



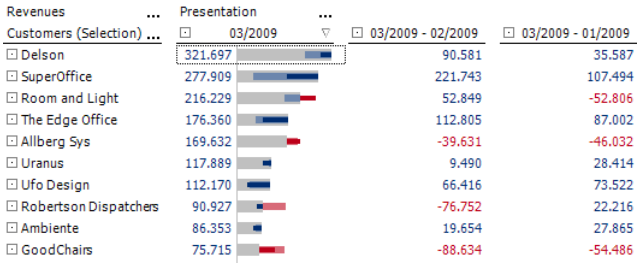
In the following section we will describe how you can use difference bars in detail. These same instructions apply to difference columns.

When you activate difference bars for the first time, you will probably only see a gray bar without any red or blue offset pieces showing the differences. In contrast to all other graphical elements, difference bars require a separate parameterization.

To set the parameters, go to the *Table properties* of the pivot table (context menu, *I want to…* menu or *F4* key) under the *Graphical elements (2)* tab.

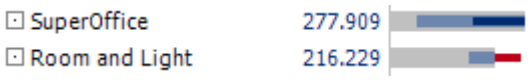


The most important setting here is the *Block size*. This determines how many columns or rows *DeltaMiner* should take into account to draw as difference bars. This block interprets the first data column or row as the starting value and draws it as a gray bar. The difference bars only appear in the first column/row of the block. The following columns and rows deliver the data for the visualization in the first column/row. *DeltaMiner* interprets these as absolute differences (not percentages) in comparison to the value in the first column/row and displays them as red or blue offset pieces. That is why you cannot see any red or blue bars if the *Block size* is set to 1. Each column or row is its own block and has a starting value but not a difference value. As a result, you can only see differences if you set the *Block size* to 2 or higher.

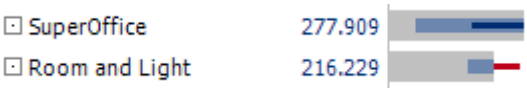


Revenues ...	Presentation ...		
Customers (Selection) ...	03/2009	03/2009 - 02/2009	03/2009 - 01/2009
Delson	321.697	90.581	35.587
SuperOffice	277.909	221.743	107.494
Room and Light	216.229	52.849	-52.806
The Edge Office	176.360	112.805	87.002
Allberg Sys	169.632	-39.631	-46.032
Uranus	117.889	9.490	28.414
Ufo Design	112.170	66.416	73.522
Robertson Dispatchers	90.927	-76.752	22.216
Ambiente	86.353	19.654	27.865
GoodChairs	75.715	-88.634	-54.486

If you now want to include a column for the difference to the values two months ago, you have to set the *Block size* to 3. *DeltaMiner* will then deliver the results on your right:



In this enlarged section of the screenshot you can now see that there are two difference bars on top of the gray starting value. The inner bars represent the columns that are further away. This visualization shows that SuperOffice's growth between the previous and current month was extreme – this is shown as the light blue outer bar. The darker inner bar represents the change in comparison to the value two months ago. This was significantly lower. This visualization also shows that Room and Light's revenues have grown in comparison to those of the previous month (represented by the wider blue piece) but have fallen compared to the revenues from two months ago (represented by the narrower red piece).



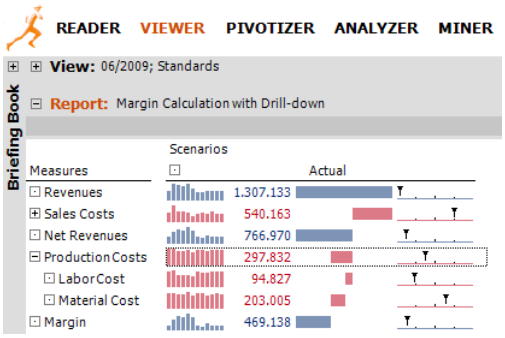
You can spot this trend even more easily if you change the *Height* of the difference bar. In your *Table properties* on the *General* tab, you can also adjust the *Row height* so that larger difference bars fit in the rows.

In this example, we have activated the *Show differences inverted* option. As a result, *DeltaMiner* drew the 'blue' growth to the left of the right end of the 'gray' starting value and the 'red' drop in growth to the right of it.

The parameters for *Minimum resolution* and *Maximum width* are equivalent to those in bars and columns.

(16) Pivot Table: Drilling Down on Measures Hierarchies in Viewer Mode

If you have connected measures in *DeltaMiner* to a hierarchy, users in *Viewer* can drill down on this hierarchy regardless if they are using a Windows or Web client.

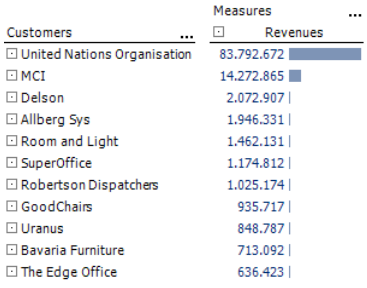


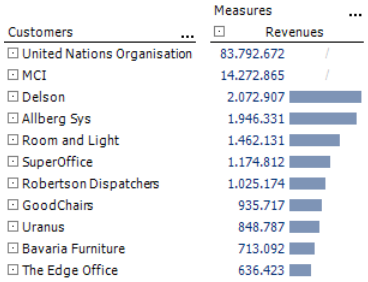
Similar to the drill down in dimension members (see *DeltaMiner deltas!* 5.3.8, feature #22), this option is deactivated for *Viewer* mode in the default setting. As a result, all of your reports have the same behavior as before and *Viewer* users cannot drill down on a measure axis. You can, however, allow a drill down by opening the *Axis definition* on the axis where the measures are displayed and activating this feature on the *Options* tab. This tab is new. When you previously opened the measure axis, *DeltaMiner* displayed the *Measure browser*. This is now integrated into the *Measure* tab.

DeltaMiner has supported the creation of measure hierarchies since version 5.3.6.

(17) Pivot Table: Applying Options for Outliers in Bars and Columns

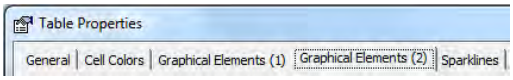
Graphical tables often suffer when a report contains extreme values. In its default setting, *DeltaMiner* draws bars and columns so that the largest value is set as the maximum bar length or column height. And since it scales the other elements proportionally, these other values often become so small that it is almost impossible to visualize the difference as you can see in the screenshot on your right.



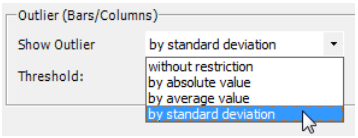


As of *DeltaMiner* 5.4.3, however, you can intercept those outliers. In this case, *DeltaMiner* will simply not display a graphical element and will ignore the outlier when creating a scale for the remaining bars and columns.

This special option for outliers neither cuts off the bars or columns nor suppresses the values. It simply replaces the bars or columns in the respective cells with an alternative short text. In the default setting this is a slash ('/'). If you wish to create a different text for *Bar outliers*, you can edit this setting in the *Extras* menu under *Options* on the *Presentation* tab (see screenshot in feature #12).



You will have to define, however, when you want a value to be treated as an outlier. You can set this parameter using a new option in the *Table properties* of pivot tables (context menu, *I want to…* menu, *F4* key) on the equally new *Graphical elements (2)* tab. The standard setting for outliers is equivalent to the previous behavior. *DeltaMiner* will display them *without restriction* and use them to set the scale for the remaining bars and columns. Alternatively, you can use one of the following options to determine outliers:

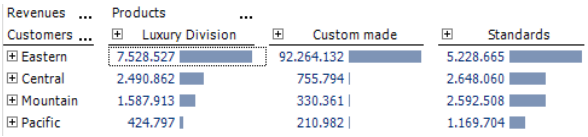


- An *absolute value*. *DeltaMiner* will display the alternative short text in place of the outlier in cells where the data value is higher than the defined threshold.
- A multiple of the *average value*.
- A multiple of the *standard deviation*.

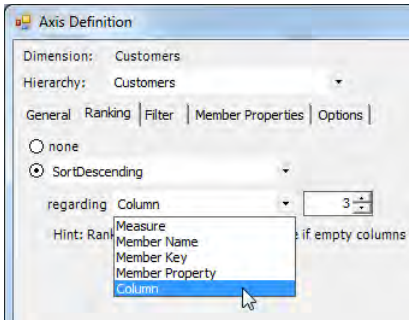
If you mouse over the alternative short text, a tooltip will explain why *DeltaMiner* didn't display a bar or column in that cell.

(18) Pivot Table: Ordering Rows by a Specific Column

If your applications are based on Microsoft Analysis Services, you can also select a certain column as an additional benchmark for a *Ranking* in pivot tables. This especially comes in handy when you want to sort a table based on a certain criterion that is not (yet) available as a measure.



For example, the screenshot on your right shows an overview of revenues broken down by time zones in the rows and product groups in the columns. If you previously wanted to sort the tables based on 'Standards', you had to create a filter measure for 'Revenues, Standards'. As of version 5.4.3, however, this is no longer necessary.



Now you can configure the *Axis definition* of the row axis on the *Ranking* tab so that the ranking is *regarding* the respective *Column*.

The pivot navigation also complies with this setting. On the row axis, *DeltaMiner* sorts the members by the first column. Previously, this ranking only depended on the view. This, however, could be misleading, for example, if the table shows a budget-actual variance but this scenario

wasn't selected in the view.

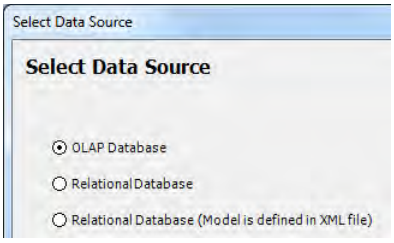
You cannot create a ranking by row if you have selected the *Hide empty columns* option in the table. In this case, the result would not definitely be based on the respective data. As a result, *DeltaMiner* will not calculate the table if you have selected both properties.

(19) Creating Analysis Models for Relational Databases

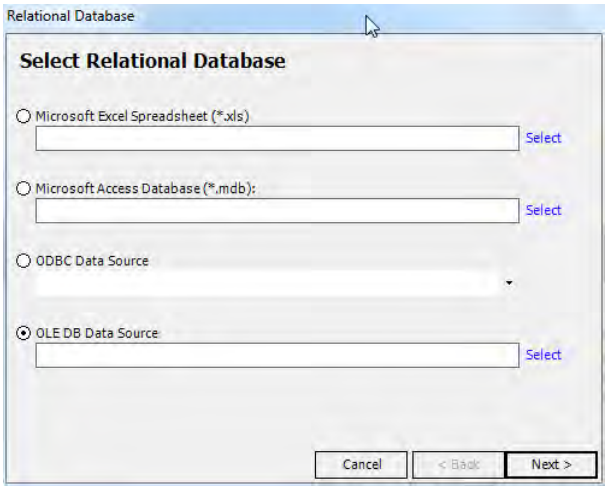
DeltaMiner can also access relational databases *without* needing OLAP cubes. This way, you can directly work with data which are stored in Microsoft Excel spreadsheets, Access databases as well as ODBC or OLE DB data sources. Almost all databases on the market – including DB2, Informix, FileMaker, FoxPro, MaxDB, MySQL, Oracle, PostgreSQL, Teradata, as well as Lotus Notes or other application programs – offer an ODBC interface. And now you can immediately access these and many other systems without first needing to create an OLAP model.

We will soon provide separate documentations for relational analysis models and *ImportWizard*. For now, here is a brief overview:

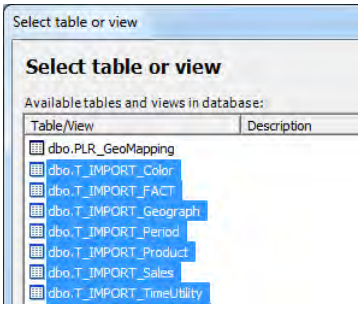
When you create a *New analysis model* in the *Portal* or in the *File* menu, *DeltaMiner* will ask which data source you would like to select. Here, you can either choose an OLAP or relational database. You can also select a relational database in which the data model is defined in an XML file. We will describe this option in detail, however, in a separate documentation.



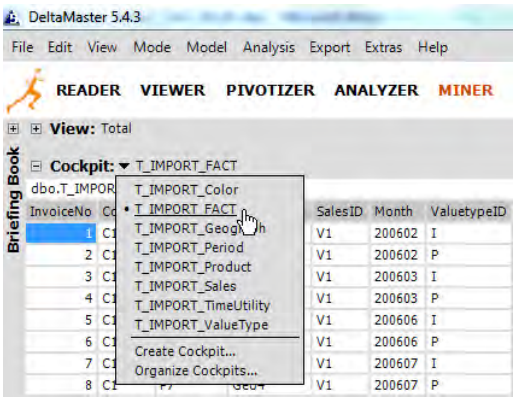
If you select a *Relational database*, *DeltaMiner* will ask which database you would like to use in the next step. Here, you can choose from Excel and Access files (i.e. .xls or .mdb) as well as ODBC and OLE DB data sources.



Once you have selected a data source, you can now highlight ône or more tables and views which you want to add to the new analysis model. If you want to insert or remove tables and views at a later time, you can do so in the *Model* menu.

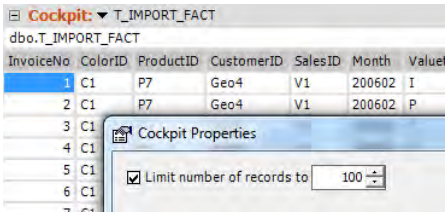


And that's it! You can now access the tables and views of the analysis model as new cockpits in *DeltaMiner*.

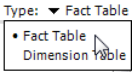


Please, however, do not mistake these tables for pivot tables. You can use these tables to create and maintain the analysis model in *Miner* mode. You can then report and analyze this data using your regular tools (e.g. pivot tables, sparklines, hyperbrowser, analytical methods) on the structures that you have created from the cockpits based on the relational tables and views.

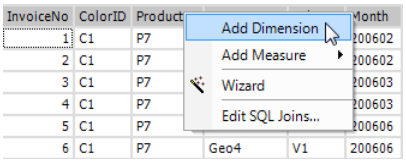
You can clearly see the difference to a pivot table in the *Cockpit definition* where you can limit the number of data records; the default setting is 100.



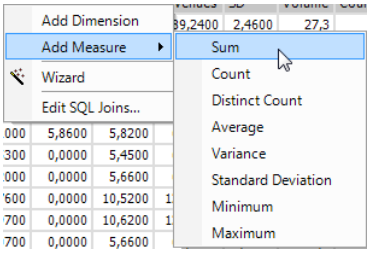
You can also determine if the table is a *Fact table* or a *Dimension table*. This setting is located in the Cockpit window on the upper right-hand side.



To give the tables and views access to the analytical functions in *DeltaMiner*, you will need to turn the table columns into *Dimensions* or *Measures* (see context menu of the column header). When you create a new dimension, *DeltaMiner* will immediately display this in the *View* window and you can already use it, for example, in one of the built-in analyses.

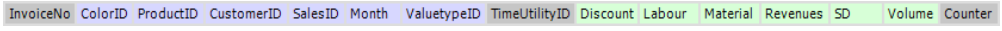


If you create a *Measure*, you will need to define its aggregation function. The most common one is a *Sum*. You will also immediately see any new measures in the *Measure browser* (*Model* menu) and be able use them for any number of analyses. Unlike OLAP-based models, you can even delete 'simple' measures. Your relational database, of course, will not be affected.



The *Wizard* uses a fact table based on an internal set of rules to automatically create dimensions and measures.

As in the previous *ImportWizard*, *DeltaMiner* highlights all columns with dimension members in green and those with measures in blue as you can see in the screenshot below. Yellow, which is not shown in this example, stands for member properties.



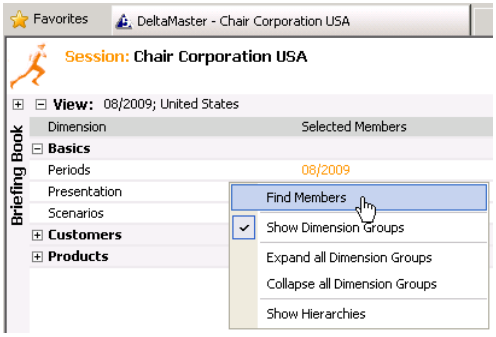
To create levels in the dimensions, you can alternatively switch to the respective dimension table, mark them as such (*Type*), and select the dimension where it should be placed. Rearranging levels later is possible, too, albeit in a slightly unusual way: via drag and drop in the context menu.

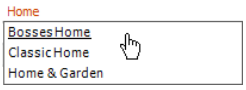
If you wish, you can also *create* an *OLAP database* based on your relational analysis model via the *Model* menu: This will start the *ImportWizard* (see feature #10). You can, however, also use the model as a purely relational application by simply saving it as a regular analysis model (.dam file) or analysis session (.das file).

If you want to work with purely relational analysis models, you will need a separate license for *ImportWizard* (see feature #10) or *DeltaMiner Modeler*. If you would like to test this functionality, we will be pleased to send you a free evaluation license.

(20) WebClient: Selecting Members by Direct Input Without the Dimension Browser

If you are using *DeltaMiner's* WebClient, you can select members by entering their names or parts of it directly – without having to open the *Dimension browser*. This can save you considerable time when you are working with large dimension because the list of dimension members doesn't have to be sent through and rendered by the browser.





To start a direct input, simply select the *Find members* option in the context menu of the desired dimension. (If you are working in the Windows client, you could also click on the desired members while pressing and holding the *Shift* key. Since a Web browser cannot replicate this control reliably, WebClient users need to use the context menu.) Now, you can type in the desired member on your keyboard. In most cases, you only need to enter part of the member name. If several members match your entered text, *DeltaMiner* will display all of them in a list, and you can select the appropriate one with a simple mouse click.

In the Windows client, you can influence the method of comparison in the *Extras* menu under *Options* on the *General* tab. In the WebClient, however, you must change this setting in the 'web.config' configuration file by adding the following entry to the '<appSettings>' section:

```
<add key="MemberSearchMode" value="1" />
```

The value means:

- 0 – Compare with the entire member name
- 1 – Compare with part of the member name (i.e. the standard setting if there is no separate entry in the 'web.config' file)
- 2 – Compare with the beginning of the member name
- 3 – Compare with the end of the member name

(21) WebClient: Using Sparklines as Inline Graphics

To display reports with many sparklines or other graphical elements more quickly, you can now transfer them as an ‘inline graphic’.

In this case, the browser no longer opens an image as an independent object from the Web server. Instead, it transfers the image in a special code directly into the HTML source text of the Web site. Although the code (Base64) increases the data volume that needs to be transferred slightly, it ultimately reduces the total number of queries to the Web server. As a result, you can drastically increase the speed of reports containing multiple sparkline images if your transfer them ‘inline’.

Inline graphics are specified under the name ‘Data URI’ in the RFC 2397 Internet standard. Here, you must list the reference data as the image source in the IMG tag, for example:

```
<img src=" abcdef.." />
```

Please note, however, that not all browsers currently support data URIs. Microsoft Internet Explorer can only display inline graphics in versions 8 and higher and will not display them in Internet Explorer 6 and 7. Mozilla Firefox, in contrast, has supported inline graphics since version 2.

To transfer sparklines as inline graphics, please add the following entry to the WebClient’s ‘web.config’ file under the ‘<appSettings>’ section:

```
<add key="Base64EncodeImages" value="true" />
```

In the default setting, *DeltaMiner* will not display sparklines inline. In addition, if you activate the inline transfer option, WebClient will check if the respective browser supports this function and only send inline graphics to browsers that support them.

This code only applies to sparklines, bars, columns, scales, and other elements that occur in graphical tables. Other images, such as pivot charts or bitmaps embedded in Flexreports, will be rendered as usual.

(22) WebService: Using Impersonation to Issue Reserved Licenses

In the past, if you wanted to reserve licenses for certain users, you had to be using a Windows client version of *DeltaMiner*. Thanks to impersonation, a security measure in Windows, you can now use this option in *DeltaMiner* WebOption as well.

The *DeltaMiner* WebService can use impersonation to access the license server as if it were running under the account of a certain user – namely the one who logged into the WebClient. This way, the license server is able to identify which user is requesting a license – and give that particular user a reserved license instead of any available one at random.

Before you can use the impersonation mechanism for issuing licenses, you must first edit ‘DeltaMaster.Service.exe.config’ configuration file. Please enter the following row in the ‘<appSettings>’ section.

```
<add key="ImpersonateLicenseRequest" value="true " />
```

You may also require Kerberos, for example regarding the so-called ‘double-hop’ issue.

If you don’t work with reserve licenses, you do not need to activate this option.

(23) Accessing IBM InfoSphere

DeltaMiner now supports IBM InfoSphere Warehouse Cubing Service using ODBO (OLE DB for OLAP) and MDX query language. As a result, IBM InfoSphere users can now access almost all of the functions that are available in Microsoft Analysis Services.

(24) Accessing Oracle OLAP via MDX Using the Simba MDX Provider

As an alternative to the ODP.NET interface, *DeltaMiner* can also access Oracle OLAP 11g using the MDX Provider for Oracle OLAP interface from the Canadian manufacturer Simba Technologies.

Since this interface is based on MDX query language, you can now use virtually all of the functions that *DeltaMiner* offers for MDX-compliant databases – including those that have not yet been implemented using ODP.NET and DML query language. In some cases, however, the performance is better when you access Oracle OLAP using ODP.NET/DML instead of through the Simba provider. In addition, Simba does not offer support for Oracle OLAP 10g.

How to use the Simba interface: When you are creating a new analysis model in the *OLAP provider* dialog box, select ‘OLE DB for OLAP (ODBO)’ and ‘Oracle OLAP 11g’ under *Interface*.

If you are interested in using a Simba MDX provider, simply contact your account manager or partner.

(25) Notes: Compatibility With Previous Versions and Installation

The metadata scheme of **ReportServer** has changed in version 5.4.3; the address field for report recipients is now much longer. To update your job definition database, please run the ‘ReportServer (SQL Server).sql’ or ‘ReportServer (Oracle).sql’ script. If you are using the Access database ‘ReportServer.mdb’, *DeltaMiner* will update the file automatically. As always, you should update the ‘ReportServer.exe’ file as well as the respective DLLs so that they match the current *DeltaMiner* version.

The **WebOption** components – Repository GUI, WebClient and WebService – are also available in Version 5.4.3. An update, therefore, is highly recommended. Since the database schema for the repository has not changed in version 5.4.3, you do not need to run the ‘Repository.sql’ script.

Before you update WebOption, please create a backup copy of the configuration files:

- WebClient: ‘web.config’, any changed graphics in the Image folder (e.g. ‘Master_Top.png’), and ‘DeltaMaster.css’ (style sheets)
- WebService: ‘DeltaMaster.Service.exe.config’
- Repository GUI: ‘DeltaMaster.Repository.exe.config’

In general, you should not use the previous versions of these files in an update because they might lack critical information for the current release. Please transfer previously modified settings into the new file versions. Since the configuration files of WebService and WebClient did not change from 5.4.2 to 5.4.3, you can reuse the older files without needing to make any changes.

You can update the repository GUI, WebService, and WebClient by copying the new files into the respective directories. Once again, please make a backup copy of these files before doing so. A separate setup is not necessary.

15 DeltaMiner deltas! 5.4.4

What's new in version 5.4.4 Find out in this overview of the May 14 2010 release!

(1) General: Business Intelligence Coloring Optionally in Green/Red 3

(2) General: Displaying User Interface in Portuguese 4

(3) General: Displaying User Interface in Russian 4

(4) Briefing Book: Activating a Start Report for the Beginning of a Session 4

(5) Flexreport: Scale for User-defined Sparklines 4

(6) ImportWizard: Generating Local Cube Files from Oracle Databases 5

(7) Modeling: Using Virtual Hierarchies for Oracle (Hyperion) Essbase 5

(8) Pivot Table: Positioning Difference Bars and Columns on the Corners (Instead of Centering Them) 5

(9) Pivot Table: Completely Opening or Closing a Hierarchy Level with the Shift Key 6

(10) Relational Modeling: MySQL Support 6

(11) Waterfall Analysis: New Calculation Logic and Visualization in the Table View 6

(12) WebClient: Displaying the Title Page of Folders 7

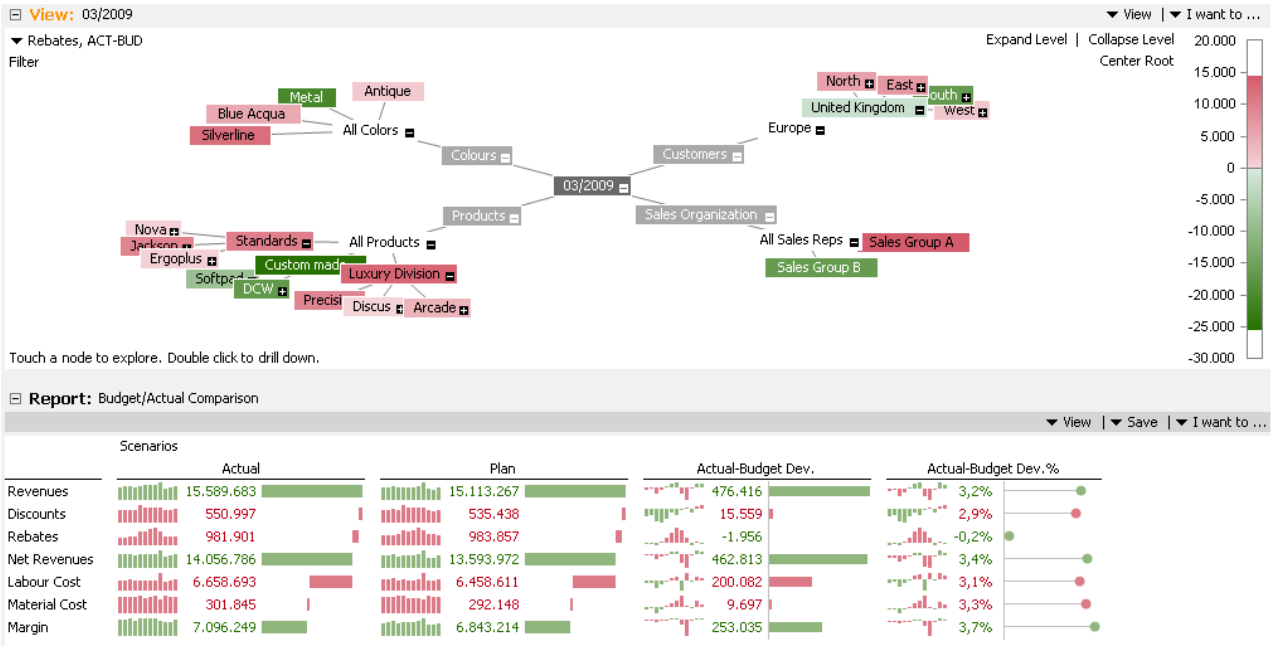
(13) Cell Comments: Deactivating the Cockpit Recalculation Cockpit After Entries 8

(14) Cell Comments: Option for Non-empty Cells Only 9

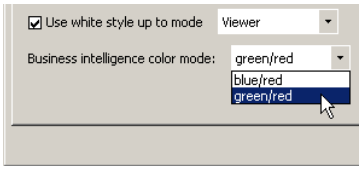
(15) Notes: Compatibility With Previous Versions and Installation 9

(1) General: Business Intelligence Coloring Optionally in Green/Red

Business Intelligence logic is deeply rooted in *DeltaMiner*. Through color coding, you can quickly see if a given value has a good effect (e.g. revenue increase or cost savings) or a bad effect (e.g. revenue drop or additional costs) on your business. In the past, *DeltaMiner* always used the color blue for 'good' and red for 'bad'. Now, you can switch these colors to a green-red schema.



In this case, *DeltaMiner* uses green to represent the 'good' values instead of blue. This option comes in handy when other commonly used analyses use these colors as well.



You can change the color mode in the *Extras* menu under *Options* on the *Presentation* tab. It applies to all automatically formatted values and visualizations in tables in the current analysis session (.das file), for example:

- All values, sparklines, bars, columns, waterfall elements, *Trend arrows*, *Cell coloring,* and the *Scale* (both in the *Business colors* setting) in pivot tables
- Hyperbrowser (with Business colors)
- Table views of certain analyses such as Ranking, Trumpet, Portfolio analysis, Geo analysis (with Business colors), PowerSearch, Navigation, Waterfall analysis
- Flexreport cells that follow Business intelligence colors (Cell properties)

You can change the color mode as often as you wish. *DeltaMiner* will automatically update all saved reports.

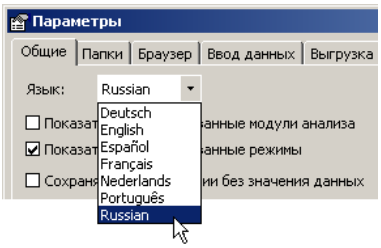
The option to use green instead of blue can be beneficial when standardizing your reporting. However, you should consider that people with certain types of color blindness cannot differentiate between green and red as well as they can between blue and red. In addition, most people perceive the color green to have a stronger signal than blue – which might not always be appropriate or desired.

(2) General: Displaying User Interface in Portuguese

Fala português? The *DeltaMiner* user interface is now available in Portuguese. Now, there is nothing that can stand in the way for a rollout in Brazil.

You can change the language in the *Extras* menu under *Options* on the *General* tab. *DeltaMiner* will then activate this setting without needing a separate restart.

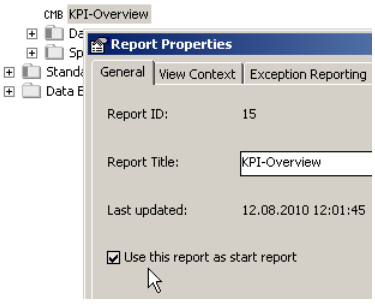
(3) General: Displaying User Interface in Russian



Вы говорите по-русски? *DeltaMiner's* user interface is now also available in Russian. Thanks to the software's full Unicode support, which makes it possible to use non-Latin alphabets, you can also write Russian names, descriptions and other texts in *DeltaMiner* analysis sessions.

You can change the language in the *Extras* menu under *Options* on the *General* tab. *DeltaMiner* will then activate this setting without needing a separate restart.

(4) Briefing Book: Activating a Start Report for the Beginning of a Session



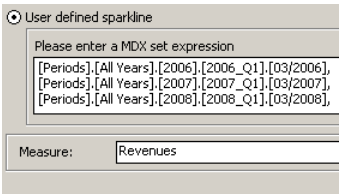
You can now select which report you would like to display at the beginning of an analysis session. To activate this new option, simply tick *Use this report as a start report* in the *Report properties* (context menu of the *Briefing book*) for the respective report. *DeltaMiner* will then automatically display the selected report after the user has opened an analysis session from a .das file or an application from the WebOption portal.

If you previously used another report as a start report, *DeltaMiner* will automatically remove the former selection. If no start report is selected, *DeltaMiner* will act as it previously did.

If you are working in *Miner* mode, the start report will either affect the *Cockpit* or the *Analysis* window. In the first case, the start report will appear in the *Cockpit* window and the *Analysis* window will remain empty. In the second case, *DeltaMiner* will display the report in the *Analysis* window and the first cockpit of the selection list in the *Cockpit* window.

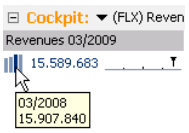
(5) Flexreport: Scale for User-defined Sparklines

DeltaMiner can now display a scale for user-defined sparklines in Flexreports.



The scale assigns the current value within the range of those displayed in the sparkline. As a result, you can see how close the current value lies on the minimum or maximum of the entire time series.

In a Flexreport, you can create *User-defined sparklines* under the *Cell properties* on the *Sparklines* tab. In a 'user-defined' sparkline, *DeltaMiner* shows the elements that were returned by an MDX expression instead of automatically 'reading' the values from the time dimension.



The example on your right shows a sparkline that visualizes revenues for the month of March over four different years.

To arrange the March value for the current year between the smallest and the largest of all March values as shown in this example, simply go to the C*ell properties.* On the *Sparkline format* tab, you can select if you wish to visualize the scale using an *Axis*, *Business colors*, *Traffic light colors,* or *Gray scale*.

In previous *DeltaMiner* versions, you could only use the scale in a Flexreport when the Flexreport was generated by transforming a pivot table with cell references and the scale was already activated in the pivot table.

(6) ImportWizard: Generating Local Cube Files from Oracle Databases

You can now use *DeltaMiner ImportWizard* to save relational models based on Oracle databases as local cubes (.cub files). Using this format, you can generate multidimensional analyses and reports without needing access to a database server.

You can use local cube files to provide access to all or part of a database on laptops for outside sales or services teams as well as other decentralized computers which have no server services installed on them and are not constantly connected to the central data warehouse. Since *DeltaMiner* can work with .cub files on all user levels from *Reader* to *Miner*, you can use these local databases for sophisticated analytical tasks.

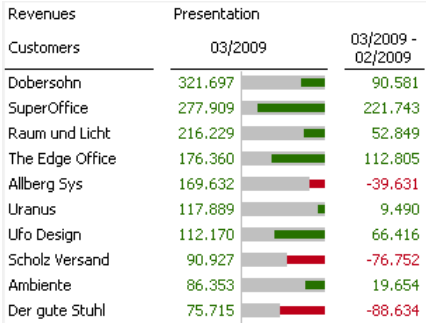
From a technical standpoint, local cubes are a data storage option in Microsoft Analysis Services. However, most companies who use *DeltaMiner* to directly access an Oracle database do not use Microsoft SQL Server/ Analysis Services as well. In cases like these, all you need is *DeltaMiner ImportWizard* to create local cube files from Oracle databases.

(7) Modeling: Using Virtual Hierarchies for Oracle (Hyperion) Essbase

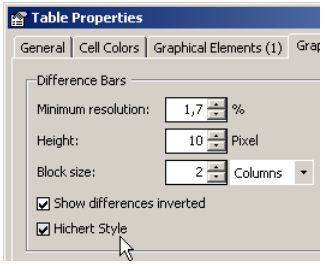
DeltaMiner now supports virtual hierarchies in analysis models based on Essbase. This wasn't possible in the past with this database.

You can use virtual hierarchies to combine dimension members into new groups, for example, customers that were assigned to the classes A, B and C as part of a *Concentration analysis*. You can also create virtual hierarchies from a *Ranking*, *Portfolio analysis*, *Distribution analysis,* or *PowerSearch*. User-defined hierarchies and hierarchies created from member properties now work in conjunction with Essbase.

(8) Pivot Table: Positioning Difference Bars and Columns on the Corners (Instead of Centering Them)

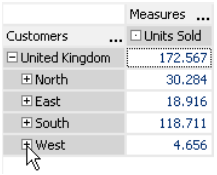


You can now visualize *Difference bars* and *columns* in a slightly different form. When this feature was introduced in the 5.4.3 release, you could only vertically center the internal bars and columns representing changes. As of version 5.4.4, however, you can now position them on the corners of the surrounding bars or columns as well. This visualization is very similar to the suggestions made by Dr. Rolf Hichert, for example, during our 'Industrial reporting – Bella Reporting Standards' seminar series. You can make an even stronger impact by switching the business intelligence colors to green/red as explained in feature #1.



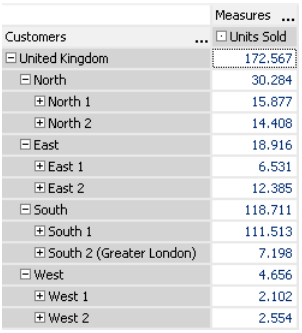
To position the *Difference bars* and *columns* in the corners instead of the center, activate the '*Hichert style'* option on the *Graphical elements (2)* tab of the *Table properties* of a pivot table.

(9) Pivot Table: Completely Opening or Closing a Hierarchy Level with the Shift Key



Thanks to a new keyboard shortcut, you can show or hide the members of a hierarchy level more quickly in a pivot table. When you now press and hold the *Shift* key while clicking a '+' or '-' in the pivot table, *DeltaMiner* will either drill down or roll up each member on that same level. This function also works in *DeltaMiner* WebClient.

For example: The screenshot on your right shows a simple pivot table of a customer dimension with a member from the country level (UK) and four subordinate members from the region level (North, East, South, West).



If you now hold the *Shift* key while clicking on the '+' sign before 'West', *DeltaMiner* will open all of the nodes on the region level – and not just this node – to display the subordinate members. In other words, you can open the table in four different places with a single mouse click. If you now want to hide the region level (e.g. North 1, North 2), simply hold the *Shift* key and click on the '-' before one of the region members (i.e. North, East, South, West). *DeltaMiner* will now roll up this node and hide the subordinate members – the starting position in the first screenshot.

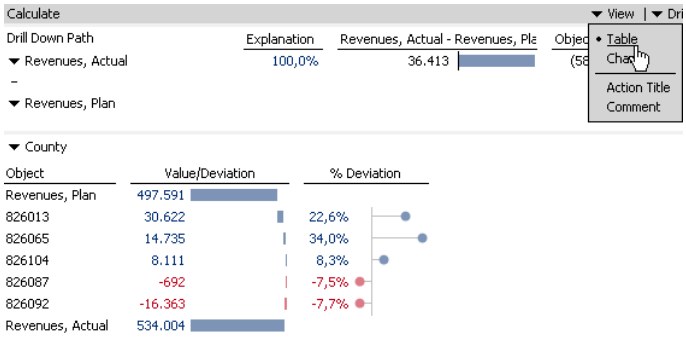
If you want to extend a pivot table in this manner, please note that there could be a large number of members depending on the data model. This, in turn, could affect the response time. If you are familiar with the data model, however, you generally know which levels contain a large number of members and would take that into consideration during a drill down. To help the readers who don't have as much insight into the model, however, you might want to limit how far they can drill down on a hierarchy level in *Viewer* mode. In this case, use the respective *Option* in the *Axis definition* as described in *DeltaMiner deltas!* 5.3.8, feature #22.

This function – clicking while holding the *Shift* key – has a similar effect in other areas of *DeltaMiner.* For example, you can open/close all folders at once in the *Briefing book* as well as all dimension groups in the *View* window, all measure groups in the *Measure browser*, all cockpits in the *Cockpit browser*, all objects in the *Model browser*, and all folders on the respective level in the *Portal*.

(10) Relational Modeling: MySQL Support

DeltaMiner can directly access relational databases – for example, using ODBC – since version 5.4.3. This now also works when the ODBC data source connects to a MySQL database. Up until now, *DeltaMiner* could not correctly read the metadata due to a specific SQL dialect used in MySQL. In the current 5.4.4 version, *DeltaMiner* automatically adapts the generated query expression to the specific characteristics of MySQL as soon as it recognizes the latter. You must, however, use a MySQL ODBC driver in version 5.x or higher.

(11) Waterfall Analysis: New Calculation Logic and Visualization in the Table View



The *Waterfall analysis* has a new and improved table view with a stronger focus on budget-actual variances and deviations from the previous period – the most common way to use this analytical method. These improvements apply to the optical appearance of the analytical results as well as the underlying business logic for this type of analysis.

If you now switch the *View* to *Table* in a *Waterfall analysis*, you will immediately see that *DeltaMiner*

presents the results of the analysis as a graphical table in the bottom part of the window.

In the first data column 'Value/Variance', the bars visualize the size relationships as well as the variance between the start and end values. This visualization is very similar to the waterfall in a *DeltaMiner* pivot table; the measure in the first table row increases or decreases successively, from the top to the bottom, to produce the measure in the final table row. In the screenshot above, you can see the aggregated budget revenues (497,591) as the starting value for a sales region. In the following rows, *DeltaMiner* lists the budget-actual variances for the related zip code areas. If you add these to the start value (i.e. the budget revenues), you get the actual revenues for the region. This end value (534.004) is listed in the last row of the table.

DeltaMiner used this same method of calculating in previous versions as well. Visualizing with waterfall elements and displaying the absolute variances in the same column as the start and end values (and not in a separate column), however, are both new in version 5.4.4.

In the second data column '*% variance', DeltaMiner* displays the relative variance as a percentage for each deviation from the budget, previous period or other comparative value and visualizes it using 'push pins' of different lengths. This graphical visualization is the same as the standard *Notation* for relative variances in *DeltaMiner*.

Let's use the screenshot on your right to explain how *DeltaMiner* determines the '*% variance'*. To calculate the waterfall analysis, we created the same budget-actual comparison in a pivot table. The selected sales region and the respective zip code areas are listed in the rows while actual revenues, budget revenues as well as the absolute and relative budget-actual variances are listed in the columns.

Revenues ...	Scenarios ...			
Customers ...	Actual	Plan	Actual-Budget Dev.	Actual-Budget Dev.%
⊞ West	534.004	497.591	36.413	7,3%
⊞ 826013	166.007	135.385	30.622	22,6%
⊞ 826065	58.011	43.276	14.735	34,0%
⊞ 826104	105.546	97.435	8.111	8,3%
⊞ 826087	8.545	9.237	-692	-7,5%
⊞ 826092	195.895	212.258	-16.363	-7,7%

If you compare the values from the pivot table with those in the waterfall analysis, you can recognize the absolute and relative variances. *DeltaMiner*, however, automatically determines these results in the waterfall analysis. This means that you do not need to create calculated members or something similar to compute the variances. *DeltaMiner* determines the start measure and the end measure for each changing member (i.e. the values in the rows between both measures in the waterfall analysis), and calculates the difference to arrive at the absolute variances. To generate the percentage results, it divides the absolute differences by the start value of the respective member.

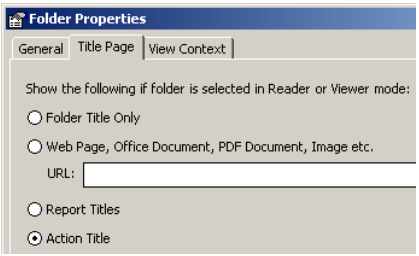
The above description for budget-actual variances also applies to deviations from the previous period and other comparisons.

This additional automation for variance analysis is new in *DeltaMiner* 5.4.4. In previous versions, *DeltaMiner* only displayed the percentage of the individual members in comparison to the total variance. Now, *DeltaMiner* calculates the absolute and relative variance for each member (in each row) of a budget-actual variance or deviation to the previous period.

The resulting visualization is very similar to the waterfall charts advocated by Dr. Rolf Hichert. His samples show the absolute and relative variances visualized with bars or 'push pins' for each member.

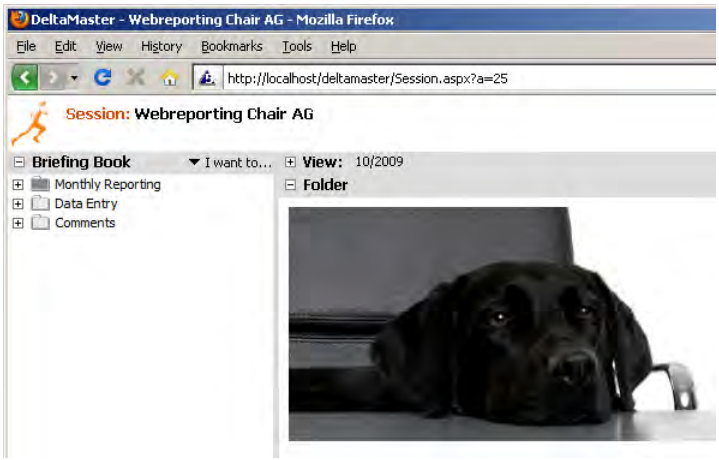
(12) WebClient: Displaying the Title Page of Folders

DeltaMiner now displays the title pages of *Briefing book* folders through a Web browser. When you now publish a *DeltaMiner* briefing book through the Web, you can now embed your choice of Web sites and documents as well as create a list of report or action tiles for the reports contained in the folder.



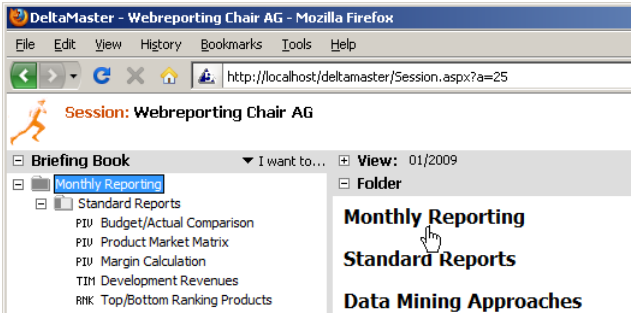
You can create a *Title page* for a folder in *Pivotizer*, *Analyzer* or *Miner* modes by editing the *Folder properties* (context menu) in the *Briefing book*. This dialog box offers four options that now work identically in Windows and the Web (see *DeltaMiner deltas!* 5.4.1, feature #5).

- *Only folder titles*: *DeltaMiner* displays a standard page that shows the names of the folders. This is equivalent to the previous functionality.



- *Web sites, Office files, PDF files, Images, etc.* can be reloaded from a URL in the browser window. In theory, you could enter a file from the file system as a URL but only the Windows client would provide reliable access. If users should be able to see the title page from *DeltaMiner* WebClient through a Web browser, you should only create links to files, images, etc. that are accessible through HTTP.

  In most cases, you would use a Web site or an image as a title page. In certain cases, however, you may wish to use Microsoft Office or PDF files for the title page – provided that the report consumers have the respective programs (e.g. Microsoft PowerPoint or Adobe Reader) installed on their computers. If you want the documents to appear directly in the browser window and not to open in a new window, you usually need to change the settings of the browser. This, however, is not generally recommended without further restrictions. For these reasons, HTML files and images are the main ways to display title pages in the browser because the browser can display them on its own.



- You can list the *Report titles* for all reports contained in the folder on the folder title page. This title page is interactive because each title is linked with the respective report. As a result, you can directly jump from the overview to the respective report with a single mouse click.

- *DeltaMiner* can also display *Action titles* in place of report titles. These, too, serve as hyperlinks to the respective reports.

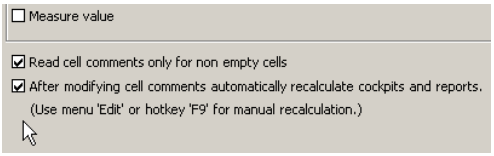
To display the title page, *DeltaMiner* accesses a Web template: 'Folder.htm'. The setup of this page is described in *DeltaMiner deltas!* 5.4.1, feature #5. If *DeltaMiner* is installed as a Windows program on the computer where the WebService runs, it will search for the file in the *DeltaMiner* installation directory. If it is not saved there or *DeltaMiner* is not installed on the computer, it will then search for the 'Folder.htm' file in the WebService directory. Since the WebService directory of the standard *DeltaMiner* installation does not contain this file, please copy your 'Folder.htm' file to this location.

(13) Cell Comments: Deactivating the Cockpit Recalculation Cockpit After Entries

When you administer cell comments in planning applications, you generally need additional calculation time because the comment texts need to be reloaded from the relational database each time you refresh a report.

In large models this can lead to noticeable delays especially when you are working with aggregated cell comments. That's why we implemented two options to improve response times in *DeltaMiner* 5.4.4.

You can now determine if *DeltaMiner* should not automatically calculate cockpits or reports when the user is editing cell comments. In this case, it would only update them when you press the *F9* key. Cell comments are designed to explain or describe data values. They don't, however, change the data value. When you recalculate the entire report or cockpit, therefore, you usually don't need to reload all cell comments just because a comment has changed.



You can change this setting under *Options* (*Extras* menu) on the *Cell comments* tab. This applies for the current analysis session (.das file). This option is activated (i.e. everything will automatically be recalculated) in the default setting, which is equivalent to how it previously worked.

If you choose a manual recalculation (i.e. deactivated option), you can only see the aggregated cell comments when the user updates the report or cockpit by hitting the *F9* key.

The second option for improving performance is explained below under feature #14.

(14) Cell Comments: Option for Non-empty Cells Only

In addition to feature #13, version 5.4.4 offers another option for improving query response times in planning applications: reading cell comments *For non-empty cells only*. This option has proven to reduce the number of data records that need to be processed since multidimensional applications contain a great deal of empty cells. With this setting, *DeltaMiner* will omit the comments that a user created for empty cells to explain why the values are missing.

You can change this setting under *Options* (*Extras* menu) on the *Cell comments* tab. This applies to the current analysis session (.das file).

(15) Notes: Compatibility With Previous Versions and Installation

The metadata scheme of **ReportServer** has not changed in version 5.4.4. As a result, you do not need to run the 'ReportServer (SQL Server).sql' or 'ReportServer (Oracle).sql' script. You should, however, update the 'ReportServer.exe' file as well as the respective DLLs so that they match the current *DeltaMiner* version.

The **WebOption** components – Repository GUI, WebClient, and WebService – are also available in Version 5.4.4. An update, therefore, is highly recommended. Since the database schema for the repository has changed in version 5.4.4, please run the 'Repository.sql' script against the existing repository database to update the structures.

Before you update WebOption, please create a backup copy of the configuration files:

- WebClient: 'web.config', any changed graphics in the Image folder (e.g. 'Master_Top.png'), and 'DeltaMaster.css' (style sheets)
- WebService: 'DeltaMaster.Service.exe.config'
- Repository GUI: 'DeltaMaster.Repository.exe.config'

In general, you should not use the previous versions of these files in an update because their settings could lack critical information for the current release. Please transfer their settings into the new file versions. Since

the configuration files of WebService and WebClient did not change from 5.4.3 to 5.4.4, you can reuse the older files without needing to make any changes.

You can update the repository GUI, WebService and WebClient by copying the new files into the respective directories. Once again, please make a backup copy of these files before doing so. A separate setup is not necessary.

16 DeltaMiner deltas! 5.4.5

What's new in version 5.4.5 Find out in this overview of the Aug. 13 2010 release!

(1) General: Personal Views in Viewer, Pivotizer, and Analyzer Mode 3

(2) Association Analysis: Calculating the Probability of Error (ChiTest) 4

(3) ReportServer: Sending E-Mails Without Attachments 4

(4) Geo Analysis: District Grouping for Relational Models 4

(5) Hyperbrowser: Coloring in Viewer Mode Only with Shift or Ctrl Keys 4

(6) ImportWizard: Preview Data Before Opening Tables or Views 5

(7) ImportWizard: Display Dimension Usage in the Model Browser 5

(8) ImportWizard: Creating the Period View Dimension Separately from the Provider 5

(9) ImportWizard: Adding and Editing SQL Queries 6

(10) ImportWizard: Starting a Model Synchronization Manually 7

(11) ImportWizard: Using the Table Browser to Add, Delete, and Edit Tables, Views, and SQL Queries 7

(12) ImportWizard: Displaying Column Headers IDs as ToolTips While Pressing the Alt Key 7

(13) Show and Page Through Reports Automatically in Kiosk Mode 8

(14) Licensing: Prohibiting Users from Switching to Higher User Levels Than Assigned in Start Mode Through a Password 9

(15) Pivot Tables: Using the Ctrl Key to Drill Down on Individual Rows in Nested Axes 9

(16) Pivot Table: Column Sparklines with Additional Spacing for Each Parent Member 10

(17) Planning: Moving the Cursor Automatically After Pressing Enter 10

(18) Planning: Copying and Pasting Cell Areas 11

(19) Planning: Deleting Cell Values in Data Entry Reports 12

(20) Changing the View in Multiple Dimensions Without Recalculating Cockpits, Analyses, or Reports 12

(21) Small Multiples: Iterating Pivot Tables With Measures 13

(22) Small Multiples: Iterating Pivot Tables with Dimensions 14

(23) Small Multiples: Iterating Members from Named Sets 14

(24) SQL Drill Through: Setting the Maximum Row Height 16

(25) WebClient: Using Hyperlinks in SQL Drill Through from the WebClient 16

(26) Notes: Compatibility With Previous Versions and Installation 16

(1) General: Personal Views in Viewer, Pivotizer, and Analyzer Mode

Users in *Viewer*, *Pivotizer,* and *Analyzer* modes can now save a selection in the *View* window as a *Favorite* or *Start view* and apply it to other reports in the briefing book.

This feature, which was previously only available for *Miner* users, is very useful. Let's say, for example, you open a report (e.g. budget-actual comparison) and then change the view to show another month, product group or customer region. Now, you would like to take that *same* view and analyze the information further. So, you open a different report in your *Briefing book* and compare this information to that from a previous period. When you open a new report, however, *DeltaMiner* will automatically switch the selection in the *View* window to the one that is saved in that comparison. In previous *DeltaMiner* versions, you would now have to reselect the members. As of 5.4.5, however, this is no longer necessary. You simply save your view as a *Favorite*, switch to the desired report, and open the saved view under your *Favorites*.

In order to activate this function, you will need to save the analysis session (.das file) in the 5.4.5 (or higher) versions of *DeltaMiner* or *ReportServer*. After this time, all users on *Viewer*, *Pivotizer* and *Analyzer* levels can automatically access the *Start view* option in the *View* window. The upper part of the menu contains two options:

- You can *Add* the current view *to your personal favorites*. If this option is deactivated, *DeltaMiner* has already saved the current view to your *Favorites*.

- You can *Administer* your favorites to sort, rename, or remove them.

DeltaMiner will list all saved start views below these two options. If you select one of these favorites, *DeltaMiner* will place the selection of members into the *View* and apply it to the displayed report. If you are working in a user level in which you can edit reports (e.g. a pivot table in *Pivotizer* mode), *DeltaMiner* will place an asterisk '*' behind its name in the *Report* window to show that this report has changed.

DeltaMiner will save these changes permanently – and not just for the current program session – in a separate XML file. [This differs from the start views in *Miner* mode, which are saved to the analysis session (.das) file]. This way, users can create and use their individual start views without changing the commonly used analysis session.

DeltaMiner will save and (search for) the XML files with the personal start views in the user-specific directory for application data (i.e. '%appdata%\Bissantz & Company\DeltaMiner\PersonalStartViews'). Here, it will generate a separate XML file for each analysis session. These XML files will be allocated to the analysis session based on the file names of the .das file. *DeltaMiner* will access an internally generated ID (GUID) and try to load the respective file from the user's application directory (see above). Since you can only generate a GUID in *DeltaMiner* 5.4.5, users can only access the options for personal views if the analysis session has been saved with this version or a higher one. If you open a file that was saved in a version prior to *DeltaMiner* 5.4.5, you will not see this change or be able to access the *Start view* function. Once you have saved the file with version 5.4.5, however, you can access the start views in the menu bar of the *View* window.

Please note that these XML files are not designed to be processed in external tools. They contain coded binary data that cannot be edited with a text editor or similar program.

(2) Association Analysis: Calculating the Probability of Error (ChiTest)

When you now use an *Association analysis* (e.g. to create a shopping cart analysis), *DeltaMiner* will calculate the measure *ChiTest* and display this in a separate column. The *ChiTest* applies a four-filed independency test to determine if the prerequisite and consequence are statistically related – similar to *ChiSquared*, a measure which has been offered in past editions as well.

The background: If the two products A and B have nothing to do with each other, the probability that both products land in a shopping cart will equal the product of both individual possibilities. In other words: p(A, B) = p(A) * p(B). ChiSquared is the test measure to assume the independency. The larger ChiSquared is, the stronger the dependency is between the products. ChiTest displays the so-called 'p' value that states with which probability a test measure value (like the one displayed in the *ChiSquared* column – or even larger) can appear based on the hypothesis that the products in the shopping cart have nothing to do with each other. The ChiTest generates values between 0 and 1, respectively 0 % and 100 %. Small values or small percentages are 'better' for the ChiTest because it means that the rule does not occur by coincidence. In order to calculate the ChiTest, *DeltaMiner* accesses a table to ensure that the additional processing time is kept to a minimum. The table determines that the ChiTest will be displayed in 5% intervals. This 'exactness' is limited but adequate for most business scenarios.

(3) ReportServer: Sending E-Mails Without Attachments

ReportServer can now send e-mails without attachments – in other words, without sending the actual reports. This feature is very useful if you want to automatically inform your report consumers by e-mail that updated reports are now available – without having to send them as attachments.

To support this feature, *DeltaMiner* has now enlarged the *E-mail attachment* field in the *Job definition*. Since version 5.2.0 you can use this setting to determine if you want to delete the attachment after you have sent the e-mail or archive it by placing the appropriate path before the file name and an asterisk ('*') after it (see *DeltaMiner deltas!* 5.2.0, feature #8).

For this new scenario, enter the desired path before the file name and two asterisks ('**') behind it. *ReportServer* will now save the attachment in the listed directory (e.g. as a Word file or a *DeltaMiner* analysis session), archive the file and send the e-mail without an attachment. In the *E-mail text* field, you should inform your readers where they can access the updated reports (e.g. where you have saved them).

You can also use *ReportServer's* known variables (e.g. '@IMN') for this function.

If you enter '\\Server\Share\Monthly Reports @IMN.doc**' as the e-mail attachment and iterate a *Report generator* in the job for your two sales regions 'North' and 'South', *ReportServer* will generate the two Word documents 'Monthly Report North.doc' and 'Monthly Report South.doc' and archive them on the '\\Server' server in the 'Share' folder. Afterwards, *ReportServer* will send two e-mails informing the recipients that new or updated reports are available and where they can find them – without sending the actual files themselves.

(4) Geo Analysis: District Grouping for Relational Models

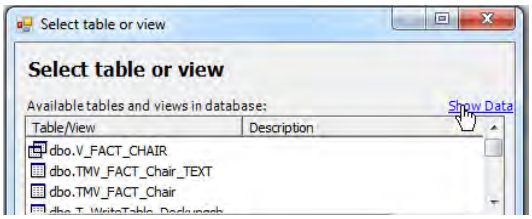
In the *Settings* of a *Geo analysis*, you can now apply the *Reference type* 'district grouping' to relational models. As a result, you can now visualize hierarchal structures (e.g. from a sales organization) on the map. In previous versions of *DeltaMiner*, you could only use district grouping in combination with OLAP models.

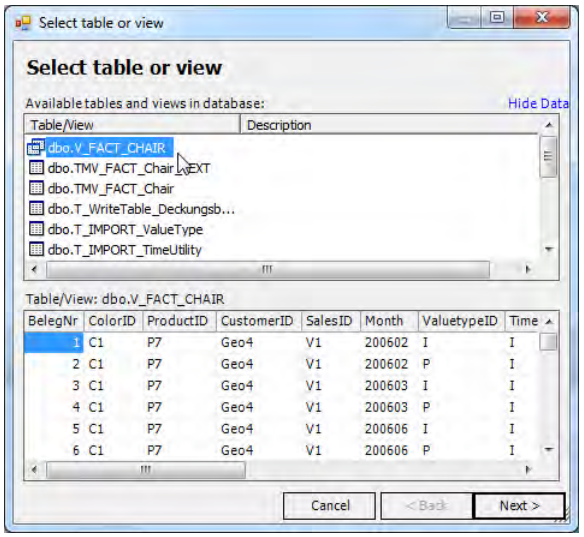
(5) Hyperbrowser: Coloring in Viewer Mode Only with Shift or Ctrl Keys

When you are working with planning applications (*Extras* menu, *Options*, *Data input* tab: *Planning functions activated*) in *Viewer* mode, the function to select cell areas (see feature #18) leads to a slightly different

handling in the *Hyperbrowser.* If you want to drag and drop a measure from a report into the *Hyperbrowser* to color the tree, you will need to hold the *Shift* or *Ctrl* key – again, only in planning applications and only in *Viewer* mode. You need to hold one of the keys so that *DeltaMiner* can differentiate if it should transfer a value into the *Hyperbrowser* or enclose a cell area in the pivot table or Flexreport. In all other situations, you can drag values into the *Hyperbrowser* either with or, as in the past, without pressing the *Shift* or *Ctrl* key.

(6) ImportWizard: Preview Data Before Opening Tables or Views





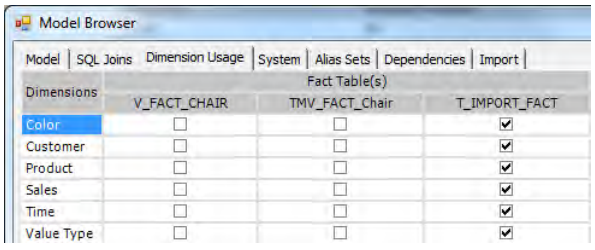
When you are creating a relational analysis model, *DeltaMiner* can now display a preview of the data in the tables and views which are available in the selected database. As a result, you can preview the data in the relational source before including it into the analysis model. This preview is very useful when you are debating which tables and views you would like to use. It helps to look at the data – especially when the objects in question do not have self-explanatory names (e.g. 'Table 1' or 'Table 2').

This *Show data* link is located in the dialog box where you can select the desired tables and views. It displays the first 100 data records from the selected table or view in the bottom part of the dialog box.

While this preview is active, you can select another table or view in the upper part of the dialog box. The preview automatically adjusts to your selection.

To *Hide* the data, simply click on the respective link.

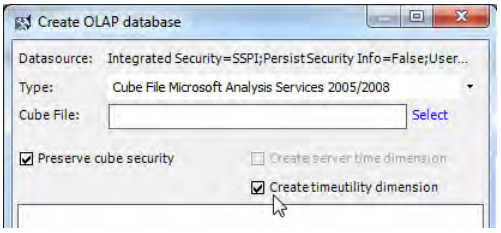
(7) ImportWizard: Display Dimension Usage in the Model Browser



If you are working with relational analysis models, the *Model browser* (*Model* menu) now contains a new table where you can see the current *Dimension usage*. The table lists the *Fact tables* in the columns and the model's *Dimensions* in the rows. A check box, which is positioned where the rows and columns meet, shows if the respective dimension is referenced in that fact table. If you uncheck the box, you will remove the link between the fact table and dimension; if you check the box, you will link the two.

Fact tables are all tables, views, and SQL queries that are categorized as such in the *Cockpit* window under *Type*.

(8) ImportWizard: Creating the Period View Dimension Separately from the Provider



When you *Create an OLAP database* (*Model* menu), the *DeltaMiner ImportWizard* can generate a dimension for the period view ('Time utility' – designed for time analysis members such as 'current', 'previous period', etc.) without having to create a separate field in the fact table. This depends on the database

provider and is also possible for snowflake and multi-cube models. In previous versions of *DeltaMiner*, you could only generate the period view for ODBC data sources and simple models.

(9) ImportWizard: Adding and Editing SQL Queries

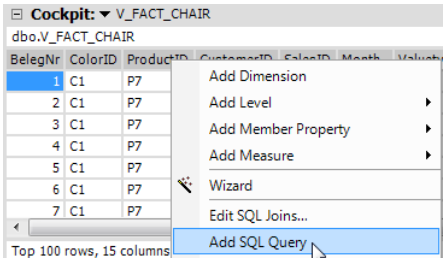
In addition to the tables and views from relational sources that *DeltaMiner* displays by default, you can also directly create other views, for example, to filter the data or add additional fields for calculations classifying attributes, etc.

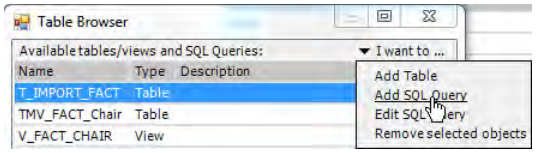
You can use these views for many different scenarios:

- You only want the analysis model to include part of the original data. In this case, you create the SQL query so that it only contains the desired data. This scenario occurs when you only want to transfer a certain time period in the analysis model for testing purposes or want to sort out incomplete data records during the modeling process.

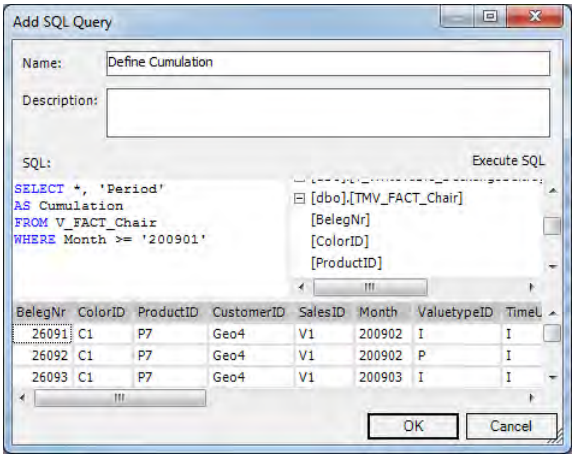
- You want to add fields that aren't located in the original data to the analysis model. For example, you could add fields with additional calculations, classify records based on a range of conditions, or generate 'dummy' members which you can later define as dimensions and use to create calculated members after the conversion into an OLAP model. As a result, many models often require a help dimension which you can use to display the values either 'cumulated' or 'non-cumulated'. You can quickly create a cumulation in *DeltaMiner* as a calculated member. In order for *DeltaMiner* to classify the personal dimension 'cumulation', this dimension must be contained in the analysis model. Using a query such as "SELECT *, 'not cum.' AS cumulation FROM T_fact table", you can add the necessary field to the original fact table and then use it the same way you would use a dimension.

To add an SQL query to the analysis model, select the respective command from the context menu or the *I want to…* menu in the new *Table browser* (*Model* menu, see feature #11) or in the context menu of column headers in the fact table or dimension table (*Cockpit* window).



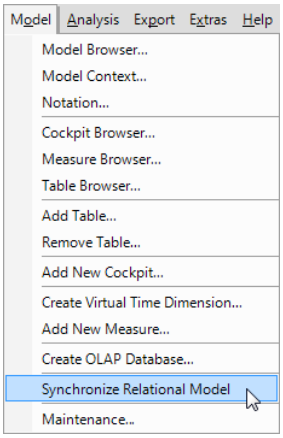


DeltaMiner will now display an SQL editor to edit the query. You can enter the query in the *SQL* field. *DeltaMiner* will color the keywords (e.g. SELECT, FROM) to make the code more legible. In addition, you can enter a line break by pressing *Ctrl* + *Enter* on your keyboard. On the right side of the data entry field, you can see the tables and views that are available in the model. This helps you maintain an overview of which tables, views, and queries are already available in the model as well as which fields they contain. When you click on the link *Execute SQL*, *DeltaMiner* will calculate the query and display the results in the bottom section of the window. This way, you can check the syntax during processing and control which data the query returns.



You can use these queries just like you would use imported tables and views as fact tables (e.g. to define dimensions or measures).

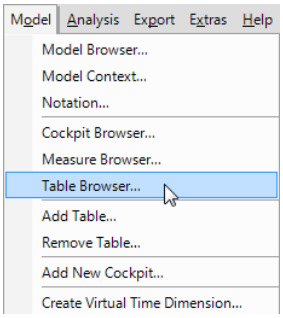
(10) ImportWizard: Starting a Model Synchronization Manually



During a running program session, you can *Synchronize* the relational model with the database – with just a click of a mouse. In previous versions, you could only do this at the beginning of the session [i.e. when you opened an analysis file (.das or .dam)].

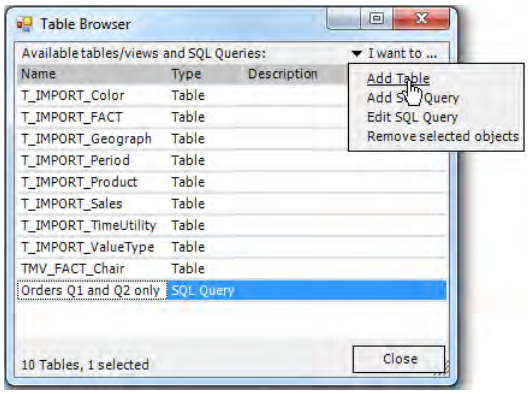
You might want to start the synchronization process manually when the database, table or view has changed while you are working with it in *DeltaMiner*. To reflect these changes in the analysis model of *DeltaMiner*, you do not need to restart the session. The respective command in the *Model* menu takes care of that for you.

(11) ImportWizard: Using the Table Browser to Add, Delete, and Edit Tables, Views, and SQL Queries

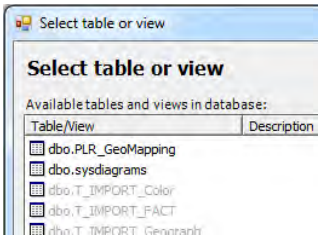


You can easily edit the basic components of relational analysis models with the new *Table browser.* This shows an overview of all tables and views from the relational database that are in use in the analysis model as well as all SQL queries created in *DeltaMiner* (see feature #9). You can open the *Table browser* from the *Model* menu.

As usual, you can use the *Ctrl* key to select multiple objects from the list or the *Shift* key to select an entire area. You can remove any selected objects from the analysis model using the context menu or the *I want to…* menu. *DeltaMiner* will prompt you to confirm this action before it deletes these objects. This function will not delete the respective tables and views from the database. It simply removes them from the analysis model – and you can add them back into the model at any time. When you delete SQL queries that were generated in *DeltaMiner*, however, this function will remove them permanently. If you need a query at a later time, you will have to reenter the SQL statement.



Using the *Table browser*, you can also add other tables or views from the database and additional queries to the current analysis model (context menu, *I want to…* menu). In the case of tables or views, you would work with the same dialog box that you would use to create the model – in other words, the first time you would connect to the data source. Objects that are set off in gray and cannot be selected are already contained in the current analysis model. To create and edit SQL queries, *DeltaMiner* will open the editor described in feature #9.



(12) ImportWizard: Displaying Column Headers IDs as ToolTips While Pressing the Alt Key

If you are working in *Miner* mode and are using *DeltaMiner ImportWizard* for relational modeling, you can now view technical information as a tooltip when you mouse over a column header that is used as a measure, dimension, or member property. If you mouse over a measure, for example, *DeltaMiner* will display the aggregation type. This tooltip functionality was also available in older versions. In version 5.4.5, *DeltaMiner* will also display the internal IDS when you hold the *Alt* key while mousing over the column header.

(13) Show and Page Through Reports Automatically in Kiosk Mode

In its new *Kiosk mode, DeltaMiner* will display an analysis session in presentation mode and automatically switch from report to report in an infinite loop. This mode is designed so you can create big-screen presentations of KPIs and other reports for production halls, the office cafeteria, reception areas, break areas, open offices, meeting rooms, etc. – without needing (or wanting) any user interaction.

In *Kiosk mode*, *DeltaMiner* will recalculate the reports with the latest information from the database with each cycle – regardless of the usual update behavior. The only exception is when *DeltaMiner* runs on an *Offline reader* license or the *Start mode* of the analysis session is set to *Offline reader* (*Extras* menu, *Options*, *Modus* tab). In this case, *DeltaMiner* will not update the results. The reports that are to be displayed must already be calculated in the analysis session (.das file).

After the last report or the last folder title page, the presentation will automatically restart from the beginning (i.e. infinite loop). To end the presentation and return to the regular analysis session, simply press the *Esc* key or click your mouse on the left side of the screen.

You can activate the *Kiosk mode* using a command line switch. The program command:

Client.exe **-kiosk** my_analysis_session.das

will open the specified analysis session (.das file), switch into presentation mode (as you normally would by hitting the *F5* key), and display all folders and reports in the briefing book one after another.

After thirty seconds, *DeltaMiner* will automatically switch to the next folder or report. You can change this time frame in the command line:

Client.exe -kiosk **-interval:**x analysis session.das

In this case, ‘x’ is the display duration in seconds. If this option is not listed, the standard length is 30 seconds.

You can also use an additional switch to define which reports or folders you would like to display from the analysis session:

Client.exe **-kiosk:r**1**f**2**f**3***** analysis session.das

- To display a report, use the abbreviation ‘r’ followed by the report’s ID number (above: 1).
- To show a folder, use the abbreviation ‘f’ followed by the folder’s ID number (above: 2). *DeltaMiner* will then display the title page of the folder (if a *URL* was defined in the *Folder properties* on the *Title page* tab) followed by the reports contained in the folder excluding any subfolders.
- To show a folder structure (i.e. a folder including its subfolders), use the abbreviation ‘f’ followed by the folder ID (above: 3) and an asterisk (‘*’). *DeltaMiner* will then display the title page of the folder, all of the reports contained in that folder and, recursively, all of its subfolders and all of the reports contained in those folders in the same order that they are saved in the *Briefing book*. Here, too, *DeltaMiner* will only display the title page of the folder if a *URL* (e.g. an address of an HTML file, a JPG image or a PDF file) was defined in the *Folder properties*.

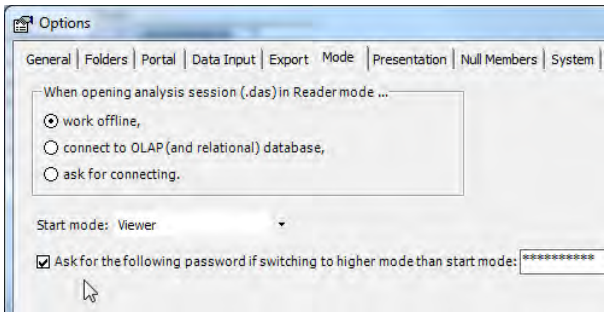
You can obtain the report and folder numbers from the tooltip that appears when you press the *Alt* key while mousing over the respective report or folder. This ID is also listed in the *Report* or *Folder properties*.

You can string these entries together any way you want – without needing to separate them, for example, with empty spaces – so that you can design the entire kiosk presentation in the form you wish without having to

make any changes to your briefing book. For example, the switch '-kiosk:r1r3f12r4f5*r5' starts a presentation with the following screen sequence: Report 1 ('r1'), Report 3 ('r3'), the title page of folder 12 ('f12'), all reports contained in folder 12 but not including any subfolders, Report 4 ('r4'), the title page of folder 5 ('f5*'), and then all of the reports including the subfolders contained in folder 5 in the same order as they are saved in the *Briefing book*, Report 5 ('r5'). After this cycle, the presentation will start again with Report 1.

Windows offers many different ways to start programs from the command line and assign parameters such as 'kiosk'. For example, you can create a shortcut to *DeltaMiner* with Windows Explorer to your desktop, specify the executable (e.g. 'C:\Program Files\DeltaMiner 5.4.5\Client.exe') as the target and add this switch for the kiosk mode into the shortcut's properties. You can now start the presentation by double clicking on the shortcut. If you copy this shortcut into the Windows 'Autostart' folder, Windows will automatically open the kiosk mode in *DeltaMiner*. To ensure that the presentation can start without any additional questions, you should define the settings in the analysis session (.das file) so that *DeltaMiner* automatically signs into the OLAP database and, if applicable, any relational databases.

(14) Licensing: Prohibiting Users from Switching to Higher User Levels Than Assigned in Start Mode Through a Password



In *Miner* mode, you can now set a password for the current analysis session (.das file) that prohibits users from switching to a higher user level than set in *Start mode*. This way, users can only change the mode if they have entered the correct password.

This option was designed for planning applications. To enter budget data, for example, most users prefer to work in *Viewer* mode. With this option, you can ensure that users stay in this mode – even if they usually work in *Pivotizer* or *Analyzer* and have the licenses to work in these user levels – by setting a password for these applications so that they cannot switch to their regular licenses. You can only set, change or delete a password in *Miner* mode – and only when you have defined a *Start mode* for the application.

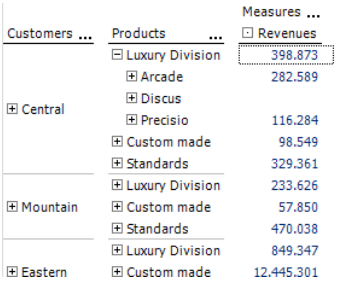
This password merely fine tunes the licensing concept and is not intended for security measures. This password simply controls who can switch to a higher level than the one defined in *Start mode* – and not who accesses what in the analysis session. In addition, you can annul the password by saving the analysis session with a previous version of *DeltaMiner*.

(15) Pivot Tables: Using the Ctrl Key to Drill Down on Individual Rows in Nested Axes

When you drilled down on a pivot table with nested axes in previous versions, *DeltaMiner* would display the subordinate levels in all of the rows in which the selected parent member appears. As you can see in the screenshot on your right, if you drilled down on the main product group 'Luxury division', you would then see the subgroups 'Arcade', 'Discus', and 'Precisio' in all sales regions.

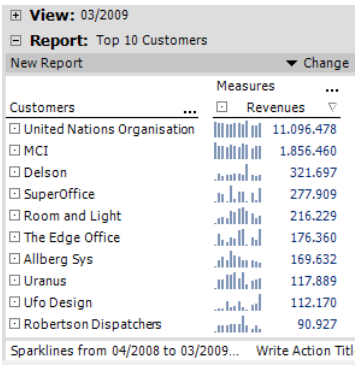
Customers ...	Products ...	Measures ... Revenues
	Luxury Division	398.873
	Arcade	282.589
Central	Discus	
	Precisio	116.284
	Custom made	98.549
	Standards	329.361
	Luxury Division	233.626
	Arcade	86.045
Mountain	Discus	
	Precisio	147.581
	Custom made	57.850
	Standards	470.038
	Luxury Division	849.347
	Arcade	401.886
Eastern	Discus	1.534
	Precisio	445.926
	Custom made	12.445.301

If you now press the *Ctrl* key while drilling down, this will only affect the current row. In this second screenshot, these three subgroups will only be differentiated in the 'Central' region.



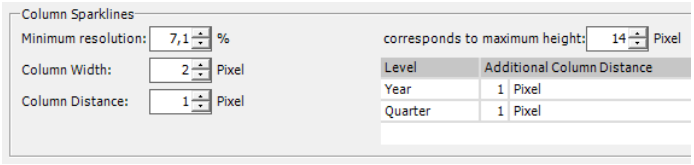
(16) Pivot Table: Column Sparklines with Additional Spacing for Each Parent Member

To group the values within a column sparkline optically, *DeltaMiner* can automatically add additional spacing in the sparkline as soon as the time hierarchy of the respective parent member changes. This, for example, makes it easier to visually combine months into quarters and years.

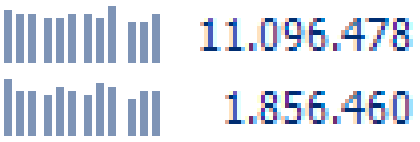


The screenshot on your right shows column sparklines with monthly values from April 2008 to March 2009. The small gaps group the months into quarters while the larger gap signifies the year's end.

You can set the *Additional column distance* on the *Sparklines* tab in the *Table properties* of pivot tables (context menu, *I want to…* menu). Here, you can define the desired distance in pixels for each *Level* of the time dimension that lies between the current and top levels in the sparklines.

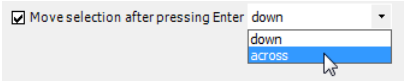


If several parent members change from one member to the next, *DeltaMiner* will add up the respective distance. In our example, therefore, the gap between the December and January columns (i.e. the third and fourth column from the right) is larger than the one between the quarters (e.g. the third and fourth column from the left) although the same distance is listed in the settings.



In general, we recommend that you keep the distance to a minimum (e.g. 1 or 2 pixels) so that the sparkline as a whole remains legible and you can recognize the time series as a connected pattern.

(17) Planning: Moving the Cursor Automatically After Pressing Enter



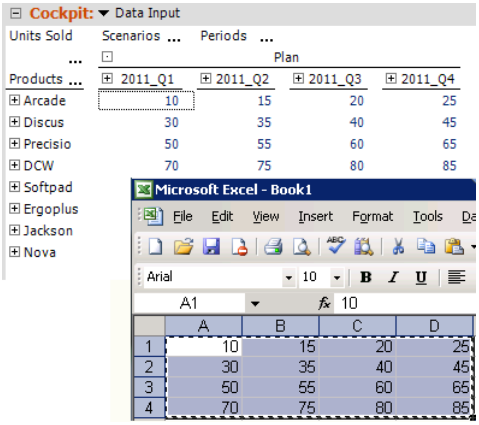
With this new option, *DeltaMiner* will automatically move the cursor down or across after the user has finished entering data into a cell and has pressed *Enter*. This makes it easier to enter multiple values in succession. In data entry reports, which are typically created in columns that are filled from the top down, you would want the cursor to automatically move *down*. If the report is set up in rows and you are working from left to right, you can set the cursor to move to the right.

These options, which are defined in the *Table properties* (context menu, *I want to…* menu) on the *Data input* tab, apply to each individual report (i.e. pivot table or Flexreport). In addition, the user must be working in *Pivotizer*, *Analyzer,* or *Miner* modes. Although this option works in *Viewer* mode, *Viewer* users cannot change these settings. *DeltaMiner* will only automatically move the cursor when the cell values and cockpits are not automatically recalculated (*Extras* menu, *Options*, *Data input* tab) after the cell values have been changed. (Recalculating would reset the position of the cursor.)

As in the past, the user can also end the data entry by hitting one of the arrow keys (*Left*, *Right*, *Up*, *Down*) instead of *Enter*. In this case, the cursor will move in the desired position even if the report would automatically move in a different direction.

(18) Planning: Copying and Pasting Cell Areas

You can now copy and paste entire cell areas – and not just individual cells – in planning applications. This function works in both directions. You can copy and paste cell areas in *DeltaMiner* planning templates or other applications. In addition, you can also transfer multiple values as a cell area, for example, from Microsoft Excel or another external application and paste them into the planning template all at once.



1. Highlighting and copying cell areas in DeltaMiner

   First, you need to highlight the cell area that you wish to copy using your keyboard; in *Viewer* mode you can also use your mouse. In both cases, you first highlight a cell that represents a corner of the desired report so that the field is marked with a dashed border. From this corner, you can now select the area in one of two ways:

   - With the *Shift* key pressed, you can expand the area by moving the arrow keys up, down, left or right.
   - Also with the *Shift* key pressed, you can click on the cell that lies diagonally to the cell that you marked first.

   By pressing the *Ctrl+C* keys, you can copy these values onto the clipboard, from where you can then paste them into other applications such as Excel, a text editor, or another data entry report in *DeltaMiner*.

2. Pasting cell areas into DeltaMiner

   To transfer the values of the cell area from the clipboard into a data entry report in *DeltaMiner*, you simply have to mark the upper left corner of the area where you want to paste the values. (This is adequate – you do not have to select the area where you would like to paste the data.) If you now press the *Ctrl+V* keys, you will paste the values into the report. If the target cells already contain data, *DeltaMiner* will simply write over them without prompting you to confirm this action. When you paste the data, *DeltaMiner* will treat the data as if you had entered each value individually; a copying of structures as during a drag and drop action does not take place.

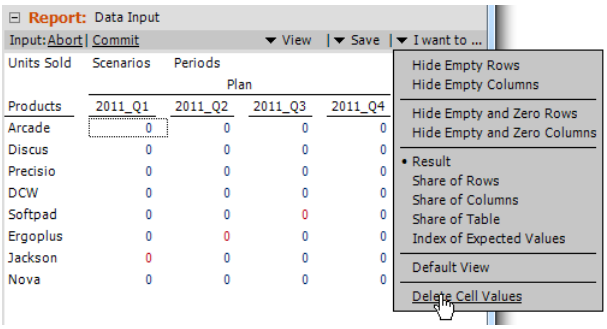
   You can use the functions described above in pivot tables and Flexreports. In order for this option to work, you must first *Activate the planning functions* (*Extras* menu, *Options*, *Data input* tab) for the respective analysis session (.das file) and activate the *Allow data entry* option (*Report properties*, *Data input* tab) for the report in question.

   You can only mark a cell area with a mouse in *Viewer* mode; the keyboard functions, however, work in all levels. This is due to the slight change in the *Hyperbrowser's usability* in *Viewer* mode (see feature #5).

   The functionality described above is also available in *WebClient*.

(19) Planning: Deleting Cell Values in Data Entry Reports

During data input, you sometimes may want to delete all of the values of a certain report and reset the pivot table or Flexreport to its initial settings. Using a new function in the *I want to…* menu in *Viewer* mode, you can now *Delete all cell values* to reset them to zero. This deletion only applies to the values in the current report and takes the dimension settings in the *View* window into account. *DeltaMiner* will only completely delete the cell values when a user selects the *Commit* input link in the upper left side of the *Report* window). If you decide to *Abort* the input, *DeltaMiner* will undo the deletion.

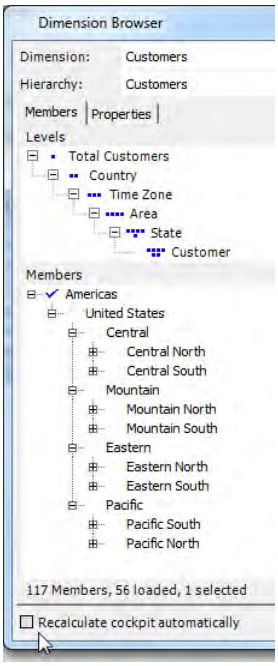


This option is only available in *Viewer* mode if the *Enable transaction control* option is activated in the *Extras* menu under *Options* on the *Data Input* tab.

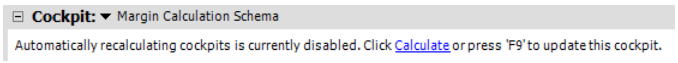
(20) Changing the View in Multiple Dimensions Without Recalculating Cockpits, Analyses, or Reports

Using a new option in the *Dimension browser*, you can now change the view in multiple dimensions at once. As a result, you can switch the view of cockpits and reports faster than before.

If you deactivate the *Automatically recalculate cockpit/report* option, *DeltaMiner* will not recalculate the cockpit or report – and will not do so again until you have reactivated this option. As a result, you can change the view in multiple dimensions without waiting for *DeltaMiner* to recalculate the results after every change.



When the automatic recalculation option is deactivated, *DeltaMiner* will display this message (see screenshot) in the *Cockpit* or *Report* window. To calculate the current cockpit or report, you simply need to press the *F9* key or click on *Calculate*. This will automatically reactivate the recalculation – and the check box in the *Dimension browser*.



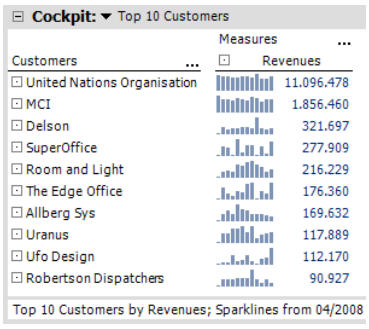
This option is also available in *WebClient* applications.

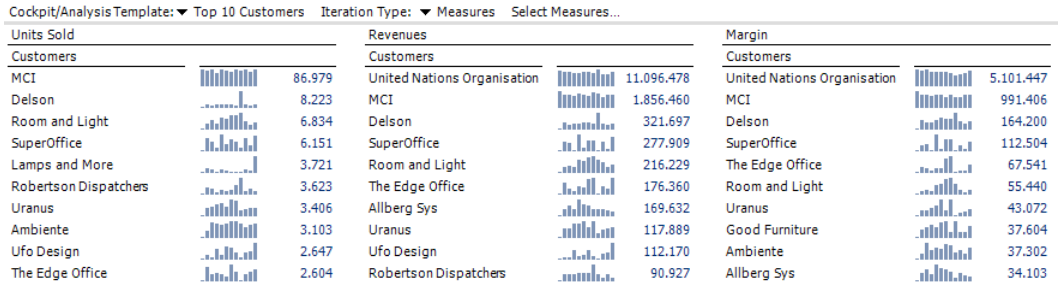
(21) Small Multiples: Iterating Pivot Tables With Measures

In certain circumstances, you can now iterate pivot tables with measures to create *Small multiples*. In previous *DeltaMiner* versions, you could iterate pivot tables with *Levels* and *Members* but not *Dimensions* (see feature #22) and *Measures*.

You can iterate with *Measures* if the pivot table that serves as a template contains a single measure. Using *Small multiples, DeltaMiner* successively replaces this measure through the one that is defined in the small multiples report. The measure that you want to iterate, therefore, should be connected with the dimensions that are used in the pivot table, i.e. especially stem from the same measure group.

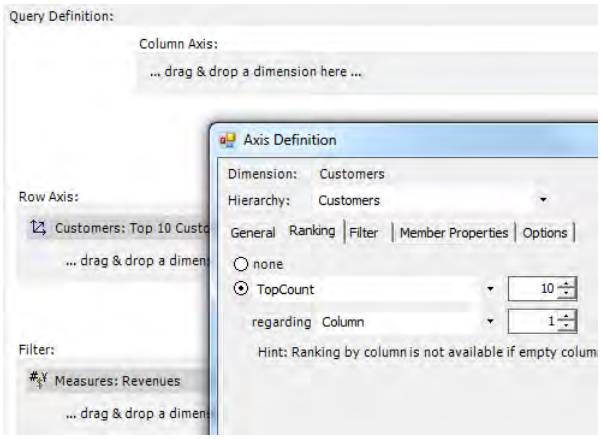
The screenshot on your right shows a pivot table of the top ten customers with regards to revenues. If you would use this as a template for *Small multiples* and iterate it with the *Measures* units sold, revenues, and margin, you would obtain the following report:





DeltaMiner has calculated a ranking for each of the three measures and combined them in a report. You could not create this type of visualization with a normal pivot table because it cannot apply different sort criteria at the same time and display the results next to each other.

If you want to create a report similar to the one above, you need to note two small details, which you can see by taking a closer look at the *Cockpit definition* on your right.



The measure (revenues) is set in the *Filter* and not on the column or row axis. This ensures that you don't get double labeling. The *Small multiples* method generally labels the tiles that it generates with the names of the iterated objects. In this case, *DeltaMiner* would list 'Revenues', 'Units sold', etc. above the generated tables. If the column was given a headline within the table, the name of the measure would then appear twice. For this reason, you should create the measure in the *Filter* of the pivot table.

In the *Axis definition* of the row axis where the customers are listed, the *Ranking* is based on (i.e. *regarding*) column 1 and not the 'Revenues' measure. As a result, the dimension members in each tile are sorted by the measure that the *Small multiples* method placed and calculated in that tile. If you created a ranking based on the measure, *DeltaMiner* would use the selected measure in the template to rank the other measures. In other

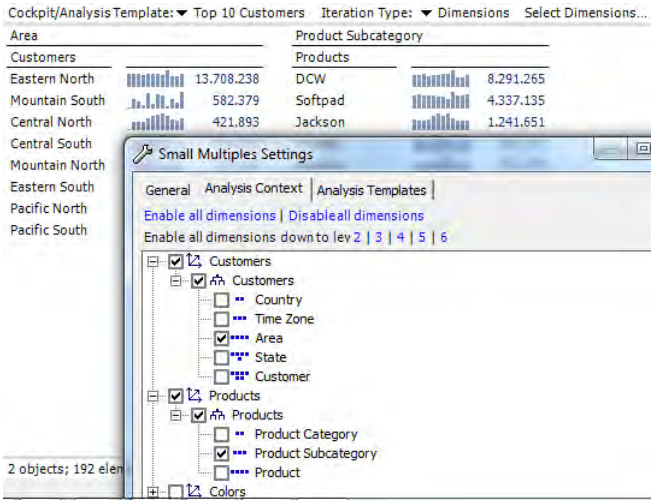
words, the iteration would only affect the selected members or measures – and not the ranking or filter options within the pivot table.

Although these types of evaluations can be very interesting, they require additional information (e.g. in the report comments) so that the reader can identify the ranking. You can rank a pivot table based on a given column in the table since *DeltaMiner* 5.4.3 (see *DeltaMiner deltas!* 5.4.3, feature #18 for more information).

(22) Small Multiples: Iterating Pivot Tables with Dimensions

In certain circumstances, you can now iterate pivot tables with measures to create *Small multiples*. In previous *DeltaMiner* versions, you could iterate pivot tables with *Levels* and *Members* but not *Measures* and *Dimensions* (see feature #21).

You can iterate pivot tables with dimensions provided that the pivot table contains dimensions but no measures on the row axis. If multiple dimensions are available on the row axis, *DeltaMiner* will iterate the outer one. The dimensions you want to iterate should be connected with the measures located in the pivot table; in particular, they should come from the same measure group.

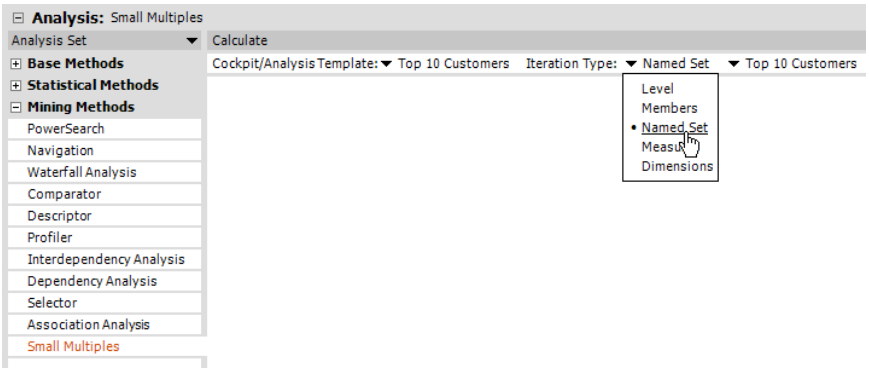


The example on your right uses the pivot table 'Top 10 customers' from feature #21 with sparklines as a template. This pivot table meets the requirement that only dimension members (in this case, the individual customers) can lie on the row axis. The iteration replaces the customer lists with the 'Area' (left multiple) and then the 'Product subcategory' (right multiple) as defined in the *Settings* (*Select dimensions*…). The ranking (Top 10) and other options work as they did in the template (i.e. the pivot table).

(23) Small Multiples: Iterating Members from Named Sets

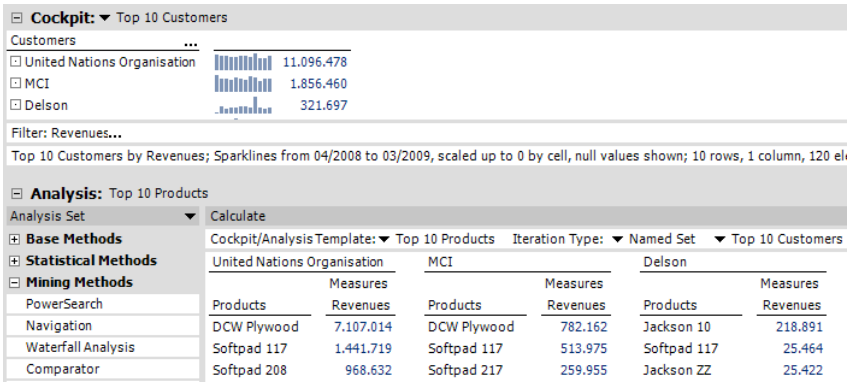
You can now also calculate *Small multiples* for the members of a named set and combine them into a report. This new iteration type is very similar to iterating with members. Here, too, you can iterate all of the supported types of templates (e.g. pivot tables, Flexreports, rankings, cross table, time series, portfolio analysis, geo analysis, and PowerSearch) from the members of named sets.

Unlike the iteration type *Members*, however, you can dynamically select the dimension members for named sets. If you used the *Ranking* option to define a named set for the 'Top 10 customers by sales', this set would show different customers for different months, sales channels, etc. (see setting in the *View* window). If you use this named set as the iteration within *Small multiples, DeltaMiner* will calculate the ten most important customers for the selected template (i.e.



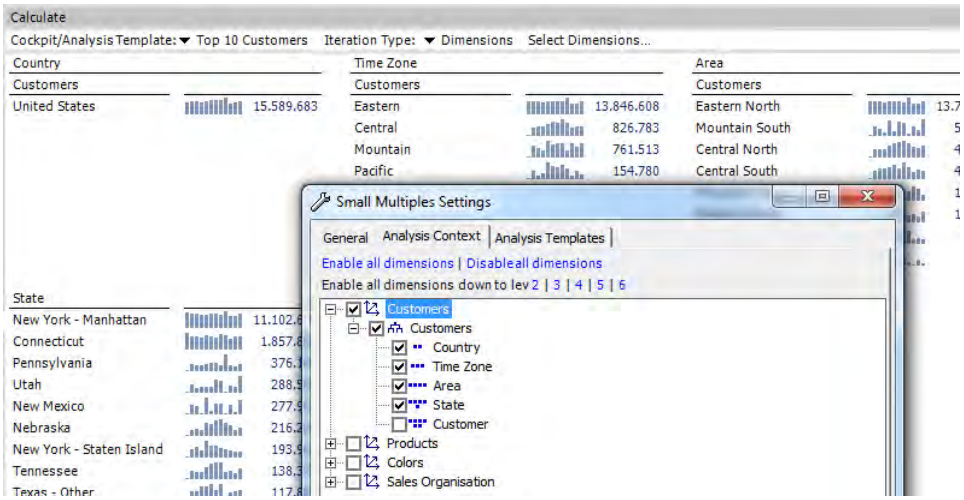
cockpit or analysis template) and place them as multiples in the *Small multiples* report. The ten customers with the largest revenues next month can be different than those this month. Since the *Small multiples* report is not based on an explicit customer list but a dynamic 'top ten' group, you would receive a combined assessment showing the ten most important customers for each group in the new month.

In the screenshot on your right, you can see how these two rankings were nested. The cockpit shows the 10 most important customers in a pivot table. This axis definition was saved as a named set 'Top ten customers' and used in *Small multiples* for the iteration. As a result, the *Small multiples* report starts with 'United Nations Organization' and 'MCI' which also lead the list in the cockpit.



DeltaMiner, in turn, will use the analytical method 'Ranking' to calculate the 'Top 10 products' for each customer. This generates a dynamic, data-dense report on the most important customers and their most important products.

For more information on *Small multiples*, please refer to *DeltaMiner deltas!* 5.3.7, feature #1.



The iteration by dimensions now runs across all available dimension levels by default – not just the first one. You can adjust the selection of the levels under *Analysis context* in the *Select dimension…* dialog box.

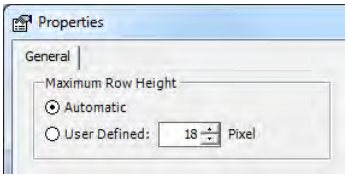
The following table shows which combinations of *Small multiples* templates and iteration types are possible with *DeltaMiner* 5.4.5. This includes named sets (as described here) as well as the iteration of pivot tables from measures (feature #21) and dimensions (feature #22).

		Level	Members	Named set	Measures	Dimensions
PIV	Pivot table	+	+	+	(+)[1]	(+)[2]
FLR	Flexreport	+	+	+		
RNK	Ranking	+	+	+	+	+
XTB	Cross table analysis	+	+	+	(+)[1]	+
TIM	Time series analysis	+	+	+	+	
PFL	Portfolio analysis	+	+	+		+
GEO	Geo analysis	+	+	+	+	
PWR	PowerSearch	+	+	+	+	+

[1] Requirements: Pivot table or cross table contains just one measure

[2] Requirements: Only dimension(s) on the row axis and measures on the column axis

(24) SQL Drill Through: Setting the Maximum Row Height



You can enter a *User-defined maximum row height* for the result rows in the *Properties* of the *SQL drill through* (context menu). This option is important in combination with a *user-defined column width* that is defined in the *Settings.* If the column width is limited, *DeltaMiner* will automatically break the text that should be displayed in case it does not completely fit in a table cell. As a result, the row of this data record will be higher. With this new *User-defined maximum row height* you can limit the space that you would need for longer texts. Please note that this option only works in data rows and not for column headers.

(25) WebClient: Using Hyperlinks in SQL Drill Through from the WebClient

As of *DeltaMiner* 5.3.2, you can add hyperlinks to fields in the result tables of an *SQL drill through* (see *DeltaMiner deltas!* 5.3.2, feature #30). The hyperlink target can remain constant (e.g. a URL that does not change) or contain the content of one or more fields from the same SQL record. As of *DeltaMiner* 5.4.5, you can now use the hyperlinks of the *SQL drill through* in *DeltaMiner WebClient* as well. This means that you can jump from a report that is displayed in *DeltaMiner WebOption* through a standard Web browser into a Web-based CRM system and pass on e.g. the order or customer number listed in the report as a URL parameter.

(26) Notes: Compatibility With Previous Versions and Installation

The following table shows if the new release contains any changes to the metadata schema of the Re*port server* and *WebOption* as well as the *WebOption* configuration files. This table will be included in future editions of *deltas!* so you can quickly identify if you need to update the configuration files or database structures.

Component	Files	Changes since Version 5.4.4
Report Server	„ReportServer.mdb“, „ReportServer (SQL Server).sql“, „ReportServer (Oracle).sql“	No
WebRepository	„Repository.sql“	Yes
WebService	„DeltaMaster.Service.exe.config“	No
WebClient	„web.config“	No
GUI repository	„DeltaMaster.Repository.exe.config“	No

The metadata scheme of **ReportServer** has not changed. As a result, you do not need to run the ‘ReportServer (SQL Server).sql’ or ‘ReportServer (Oracle).sql’ script. You should, however, update the ‘ReportServer.exe’ file as well as the respective DLLs so that they match the current *DeltaMiner* version.

The **WebOption** components – Repository GUI, WebClient and WebService – are available in Version 5.4.5. An update, therefore, is highly recommended. Since the database schema for the repository has changed in version 5.4.5, please run the ‘Repository.sql’ script against the existing repository database to update the structures.

Before you update WebOption, please create a backup copy of the configuration files:

- WebClient: ‘web.config’, any changed graphics in the Image folder (e.g. ‘Master_Top.png’), and ‘DeltaMaster.css’ (style sheets)
- WebService: ‘DeltaMaster.Service.exe.config’
- Repository GUI: ‘DeltaMaster.Repository.exe.config’

Since the configuration files of WebService and WebClient did not change from 5.4.4 to 5.4.5, you can reuse the older files without needing to make any changes.

You can update the repository GUI, WebService, and WebClient by copying the new files into the respective directories. Once again, please make a backup copy of these files before doing so. A separate setup is not necessary.

DeltaMiner deltas! 5.4.7

Version 5.4.7, released February 18th, 2011

- General: Sorting Entries in Selection Dialogs for Databases, Cubes, and Relational Tables/Views
- ReportServer: New Variables for Names and Values from Pivot Tables
- CubeWizard: Creating OLAP Databases from Slices of the Data Model
- Flexreport: Inserting Multiple Rows/Columns at once
- Flexreport: Accessing Excel Files with Regard to the Current View
- Flexreport: Editing Cell Properties for Multiple Cells at once
- Flexreport: Scaling Sparklines According to Scaling Option in Referenced Pivot Table
- Hyperbrowser Available in the 64-Bit Edition of DeltaMiner
- Combination Cockpit: New Component for Rich Text
- Microsoft Analysis Services: Assigning the Data Source for the Relational Model
- Modeling: Attaching Relational Model to Analysis Services 2005/2008 Local Cube Files
- Pivot Chart: Converting Chart to a Graphical Table
- Pivot Chart: Choosing "Minimum/Maximum" or "0/Maximum" Scaling in the Chart Properties
- Pivot Table: Completely Opening or Closing a Level of a Measure Hierarchy with the Shift Key
- Pivot Table: Changing the Factor of Measures Using Alt+Right Click
- Pivot Table: Customizing or Hiding the Hint for "no Trend"
- Pivot Table: Inverting a Hierarchy Disables Ranking and Vice Versa
- Planning Option: Process Definitions for Copying, Moving, and Setting Values
- Presentation Mode on the Viewer Level – Changing the View in Full-Screen Presentations
- Repository for the Windows Client on the Reader and Viewer Level as an Alternative to Analysis Files
- TableWizard: Support for Files in the Microsoft Office 2007/2010 Format
- Viewer: Interlinking Reports with other Reports or External Documents
- WebClient: Undoing Data Entries
- WebClient: Copying and Pasting Cell Ranges
- Time Series Analysis: Persistent Line and Point Styles

DeltaMiner deltas! 5.4.8

Version 5.4.8, released May 20th, 2011

- General: Surpressing the Reminder to Save the Analysis Session in Reader and Viewer mode
- General: New File Format "DM2GO" as a Container for .das and Corresponding .cub File
- ReportServer: Creating .dm2go Files Automatically
- ReportServer: Creating PDF Documents Directly (Without Using Microsoft Office)
- Export: Creating PDF Documents Directly (Without Using Microsoft Office)
- Flexreport: Displaying Cells of the Data Type Text
- Combination Cockpit: Maintaining Multilingual Labels, Formatted Texts, and Link Labels in Alias Sets
- Microsoft Analysis Services: Specifying Local Cube Files with Relative Paths
- Pivot Table: Starting Pivot Navigation from Any Cell
- Pivot Table: Displaying Cells of the Data Type Text
- Pivot Table: Zooming also Scales Sparklines and Other Visual Elements
- Pivot Table: Double-Click Toggles Sort Order between Decreasing, Increasing, and Unordered
- Waterfall Analysis: Optionally Cut Start and End Value
- Viewer: Defining Conditions for Links
- Viewer: Filtering Rows and Columns in Links
- Viewer: Linking to Reports

19 DeltaMiner deltas! 5.4.9

What‘s new in version 5.4.9 Find out in this overview of the Aug. 19 2011 release!

(1) ADOMD.NET Provider: Automatic Login with User Name and Password 2

(2) General: Displaying the User Interface in Italian 2

(3) ReportServer: New Export Format "mobile" for DeltaMiner ReaderApp on the iPad/iPhone 3

(4) ReportServer: Exporting Files in the Microsoft Office 2007/2010 Format 9

(5) ReportServer: DeltaMiner Notifications for the iPad/iPhone 11

(6) ReportServer: Sending Mails to CC and BCC Addresses 15

(7) ReportServer: Configurable Log Folder 15

(8) ReportServer: Adding Only Reports with Changes to the Job Result 15

(9) ReportServer: New Export Format "csv" for Pivot Table Reports 17

(10) IBM Cognos TM1: Integrated Windows Authentication 20

(11) Infor10 BI: Access via the ADOMD.NET/XMLA Interface 20

(12) Pivot Table: Executing Automatic Pivot Navigation Steps via Ctrl+Double Click 21

(13) Pivot Table: Comparable Scaling for Line Sparklines and Dot Line Sparklines 21

(14) Pivot Table: Calculating Displayed Sparklines Only 22

(15) Pivot Table: Predefining Pivot Navigation Steps and Executing via Double-Click 22

(16) Pivot Table: Dot Line Sparklines 23

(17) Pivot Table: Semantic Zoom for Sparklines 24

(18) Pivot Table: Defining the Start Member of Sparklines via MDX 26

(19) Repository: Permission Management for Report Folders and Reports 27

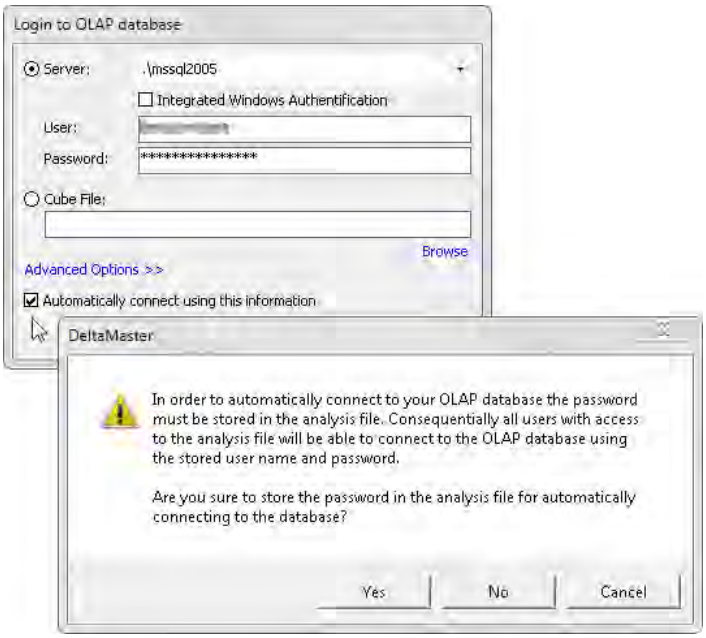
(20) Small Multiples: Scaling Time Series Comparably and with Shared Reference Lines, Similar to the Wall Street Journal (WSJ) 33

(21) TableWizard: Accessing the Microsoft SQL Server Compact Edition and SAND Analytic Server 36

(22) WebOption: „Impersonation” after Login with User Name and Password 36

(23) Notes: Compatibility with Previous Versions and Installation 37

(1) ADOMD.NET Provider: Automatic Login with User Name and Password



If your analysis models are based on an ADOMD.NET data source, you can now *Automatically connect* to the database using a predefined *User* name and *Password*. This feature is especially useful for the —tedious" among our users.

Previously, you could only automatically connect to the database using the *Integrated Windows authentication.*

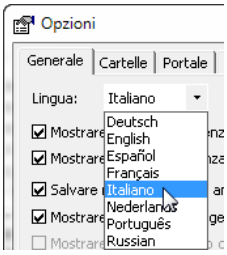
If you select automatic login without integrated Windows authentication, *DeltaMiner* saves the password to the analysis file (.das/.dam). This, however, constitutes a **security risk.** Anyone who gets hold of such an analysis file can automatically connect to the database as the user whose login data is saved to it and access the database with all of that user's rights. *DeltaMiner* warns you of this risk if you enable automatic login without integrated Windows authentication. The integrated Windows authentication, in contrast, does not save the user name and password to the analysis file.

DeltaMiner WebService also accesses this account if you save the file to *Repository*.

Microsoft Analysis Services 2005, 2008 and 2008 R2, Oracle Essbase, and Infor PM 10 databases all support the ADOMD.NET interface (see feature #11).

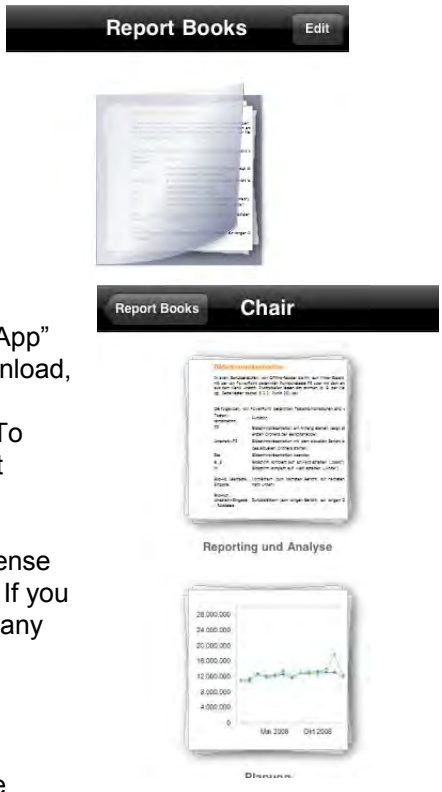
(2) General: Displaying the User Interface in Italian

Parla italiano? If so, you can now access the *DeltaMiner* user interface in Italian. You can change the language in the *Extras* menu under *Options* on the *General* tab. A separate restart is not necessary.



(3) ReportServer: New Export Format "mobile" for DeltaMiner ReaderApp on the iPad/iPhone

You can now use *ReportServer* to create *DeltaMiner* reports to be displayed on iPad, iPhone, and other iOS devices.

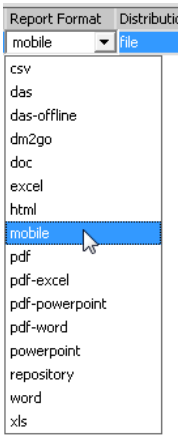


To use this feature, you must first download the free „DeltaMiner ReaderApp" from the Apple App Store to your iOS device. This app allows you to download, update, and display specially designed report books. You can display the reports even if you aren't connected to the Internet (i.e. in offline mode). To publish these reports, *DeltaMiner ReportServer* uses a new export format called „mobile".

In order to generate these types of report books, you need a separate license for *ReportServer* („DM-RPSR" = „DeltaMiner ReportServer ReaderApp"). If you would like to request a test license, simply contact your Bissantz & Company team.

(a) Generating mobile report books with ReportServer

As usual, start by selecting the *Report source* in *ReportServer*. This is the analysis session containing the briefing book that you would like to publish for *ReaderApp*.



Select „mobile" as the *Report format*.

Now choose from the following *Distribution types*:

- "ftp": to load the generated report books to a Web server
- "file": to use the Web server in an Intranet environment or to use an online storage service (e.g. Dropbox)
- „mail" to send the report books directly to individual recipients

In the default setting, *ReportServer* gives the mobile report book the same name as the analysis session (.das file). You can, however, enter a different name for the mobile report book in the *Address*.

When you *Run* the job, *ReportServer* generates the report book in „mobile" format. This format consists of two files. The one that contains the report ends in „.dmmobile", while the other file – which checks for updates – has the ending „.hash". You can download mobile report books generated in this way provided that *DeltaMiner ReaderApp* is installed on your iOS device.

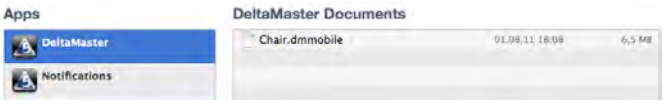
(b) Accessing mobile report books on iOS devices

You can transfer mobile report books to iOS devices in many different ways including:

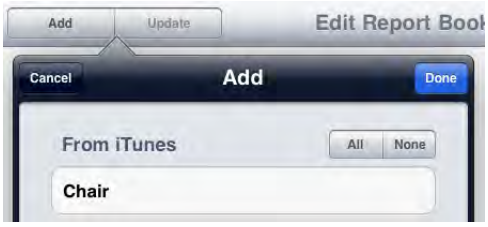
- Transfer via iTunes
- Download of individual report books (*From location* option) or a list of report books (*From server* option) from a Web server
- E-mail

Transfer report books via iTunes

1. Connect the iOS device to your computer. Open iTunes and select the iOS device.
2. Click on *Apps* in the center at the top.
3. Select *DeltaMiner* from the *Apps* list. You can now see which mobile report books are available for *DeltaMiner* in the *Documents of "DeltaMiner"* window.



4. Click on the *Add* option on your computer.
5. Select the desired report book file (with the ending .dmmobile).
6. Start *DeltaMiner ReaderApp* on your iOS device.
7. Tap on *Edit* in the upper-right corner of *DeltaMiner ReaderApp*.
8. Tap on *Add* in the upper-left corner.
9. You can now see the name of the file that you want to transfer in the *From iTunes* selection field. Tap on the name.
10. Tap on *Done* to automatically transfer the file to *ReaderApp*.
11. Tap on *Done* to exit the editing mode.



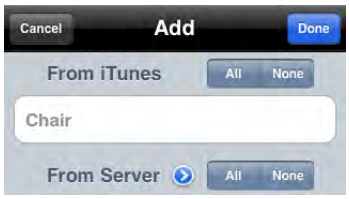
Transfer a list of report books from a Web server (—From server")

You can choose from two separate options for retrieving report books from a Web server: as a list of report books (*From server*) or as individual report books (*From location*, see below). Using the *From server* option, you can place one or more report books on a Web server and enter their names in an XML file. This way, the users can select from a list containing several report books without having to explicitly enter their respective names.

The following example shows the structure of the XML file. You must create this file with a text editor and save it to the Web server, normally under the name ‑index.xml". You should write the links to the individual report books as relative paths to the XML file. For the sake of simplicity, therefore, you may wish to save the books and the XML file to the same folder.

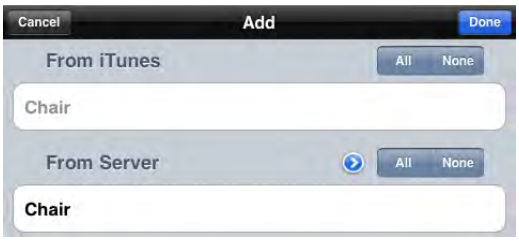
```
<?xml version="1.0" standalone="yes"?>
<applications xmlns="http://www.bissantz.de/2011/DeltaMiner/mobile">
<application ref="Chair_AG.dmmobile"/>
<application ref="Chair_AG_2.dmmobile"/>
<application ref="Chair.dmmobile"/>
</applications>
```

Now you can configure the report book list on your iOS device:



1. Start *DeltaMiner ReaderApp* on your iOS device.
2. Tap on *Edit* in the upper-right corner.
3. Tap on *Add* in the upper-left corner.
4. Tap on the blue arrow to the right of *From server*.

5. Enter the server information and tap on *Done*.
   When you enter the data source, you can omit the ‑http://" prefix. If you access the report books via FTP instead of HTTP, simply enter the URI schema as well (e.g. ‑ftp://" where you would otherwise put —http://"). If you have saved your XML file under the name ‑index.xml", you can now simply state the path. Otherwise, please enter the name of your XML file as well.
6. Please enter your valid user name and password for the **Web server** (not for an OLAP database, etc.).



7. Tap on the name of the mobile report book in the selection field below *From server*.
8. Tap on *Done* to automatically download and install the file.

Tap on *Done* to exit the editing mode.

You can now see the mobile report books that were referenced in the XML file as a selection list on your iOS device.

Download individual report books from the Web server (From location)

With the *From location* option, you can access a single, explicitly named report book.

1. Tap on *Edit* in the upper-right corner of the iOS device.
2. Tap on *Add* in the upper-left corner.
3. Tap on the input field below *From location*.

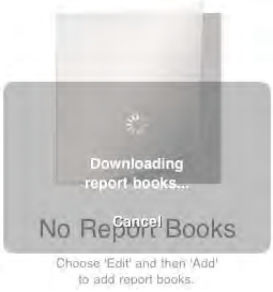
4. Enter the *Data source, User name,* and *Password*. Under *Data source,* you must include the name of the .dmmobile file. Please note that there is not a default name like in the report book list.
5. Tap on *Done* to automatically download and transfer the file.

6. Tap on *Done* to exit the editing mode.

Receive report books via e-mail

1. In *ReportServer*, select —mail" as the *Distribution type* and enter the desired *Address* so that it can send the .dmmobile file to the recipient. If desired, you can alternatively save .dmmobile files to a file system and send them to the desired address from your e-mail client (e.g. Microsoft Outlook).
2. Tap on *Mail* on your iOS device.
3. Tap on the attachment (.dmmobile file) in the respective e-mail.

4. The iOS device will automatically associate the .dmmobile file with *ReaderApp*, which will then start with the new .dmmobile file.



(c) Updating mobile report books on an iOS device

Data source = Web server or URL address

If you set up a Web server (report book list/From server or individual report book/From location) as the data source on your iOS device, ReaderApp

automatically downloaded the associated .hash file from the data source during the installation and saved it to the iOS device. If you now start an update, ReaderApp compares the .hash file on the iOS device with the one at the data source. If these .hash files differ, ReaderApp assumes that the data source contains a newer version of the report book that is ready for download.

To check if the data source contains newer versions of the report books and to install any updates, please proceed as follows:

5. Tap on *Edit* in the upper-right corner of the iOS device.
6. In edit mode, *ReaderApp* automatically checks if the data source contains updated versions of the report books. If it does, an eraser appears on the respective report book on the iOS device.
7. Tap on *Update* in the upper-left corner.
8. Tap on the report books that you would like to update. A blue check mark appears on these books.

   Alternatively, you can tap on *All* in the lower-right corner to select all currently updateable report books at once. A blue check mark appears on these report books.
9. Tap on *Update* in the lower-left corner to download the updated reports.
10. Once the report books have been updated, the eraser disappears.
11. Tap on *Done* to exit the editing mode.

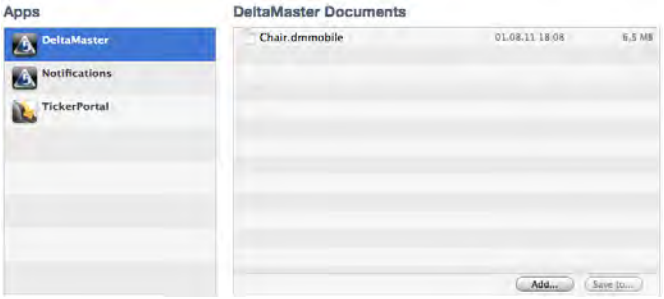
Data source: iTunes

If you have selected iTunes as the data source for mobile report books on the iOS device, iTunes saves the content of the .hash file as well as the time of the last modification to the mobile report book. When you initiate an update, iTunes searches for the .hash file on the iOS device and compares it to the .hash file in iTunes. If the .hash files are not identical, iTunes assumes that the mobile report book on the iOS device can be updated.

If iTunes cannot find a .hash file on the iOS device, it compares the date of the last modification to the respective mobile report book on the iOS device with the date of the last modification to the report book of the same name in iTunes. If iTunes detects a difference, it assumes that the mobile report book on the iOS device can be updated.

You can update your mobile report book through the data source „iTunes" as follows:

1. Connect the iOS device to your computer and select the iOS device in iTunes.
2. Click on *Apps* in the center at the top.
3. Select *DeltaMiner* from the *Apps* list.



4. Click on *Add* on your computer.
5. Select the file (with the ending .dmmobile) that you want to install.
6. You are asked if you want to replace the existing object. Click on *Replace*.
7. Tap on *Edit* in the upper-right corner of the iOS device.
8. *ReaderApp* checks if the data source contains updated versions of your report books. If yes, an eraser appears on the respective report book on your iOS device.
9. Tap on *Update* in the upper-left corner.

10. Tap on the report books that you want to update. A blue check mark appears on these report books.

    Alternatively, you can tap on *All* in the lower-right corner to select all currently updateable report books at once. A blue check mark appears on these report books.

11. Tap on *Update* in the lower-left corner to download the updated reports.
12. Once the report books have been updated, the eraser disappears.
13. Tap on *Done* to exit the editing mode.

Data source: E-mail

You cannot update mobile report books that you have received by e-mail. By looking at the e-mail's date and time, however, you can see if updated versions of mobile report books are available. You can use these updated report books as described above.

(d) Requirements for publishing data to a Web server

A Web server is required to publish report books via HTTP. The server must be configured so that users can access files in the .xml, .dmmobile, and .hash formats.

For this purpose, the corresponding MIME types must be entered in the IIS:

- .xml = application/xml
- .dmmobile = application/x-deltamaster-mobile-reportbook
- .hash = application/x-deltamaster-hash

To protect the data on the server from unauthorized access, the Web server should require separate authentication and the connection should be encrypted with SSL. BasicAuth, Digest, or NTLM can be used as the HTTP authentication method.

(e) Demo data

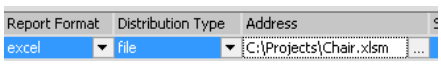
If you would like to install demo data, you can download it from our Web server: „readerapp. deltamaster.info/demo" using the *From server* method. Afterwards, you can select our *Chair* reference application.

You will find more information on the „mobile" export format for *DeltaMiner ReaderApp* on the iPad/iPhone in a separate document, which we will gladly send upon request.

(4) ReportServer: Exporting Files in the Microsoft Office 2007/2010 Format

DeltaMiner ReportServer can export files to Microsoft Office 2007/2010 formats. As a result, you can now choose from the following formats:

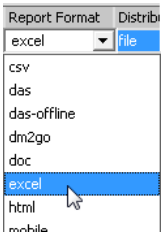
- .doc – Word file
- .docx – Word file in Office Open XML format (Microsoft Office 2007 and higher)
- .docm – Word file with macros (Microsoft Office 2007 and higher)
- .ppt – PowerPoint presentation
- .pptx – PowerPoint presentation in Office Open XML format (Microsoft Office 2007 and higher)
- .pptm – PowerPoint presentation with macros (Microsoft Office 2007 and higher)
- .xls – Excel workbook
- .xlsx – Excel workbook in Office Open XML format (Microsoft Office 2007 and higher)
- .xlsm – Excel workbook with macros (Microsoft Office 2007 and higher)
- .xlsb – Space-saving Excel workbook in Office Open XML format (Microsoft Office 2007 and higher)



As usual, you select the desired *Report format* in the job definition of *ReportServer*. To define the format option, simply enter a file name

with the desired ending under *Address* or *E-mail attachment*. Based on this ending, *ReportServer* knows if it should use the Office 2007/2010 format or that of Office 2000/XP/2003.

In Excel files with an .xlsx ending, tables can contain a maximum of 16,384 columns and approximately 1 million rows. In contrast, .xls files only allow tables with a maximum of 256 columns and 65,536 rows.



Under *Report format*, you can specify whether *ReportServer* should generate the files by automating the installed Microsoft applications (i.e. ~~e~~xcel", ~~w~~ord", and ~~p~~owerpoint" formats) or whether it should generate the files itself without the respective Microsoft applications (i.e. ~~x~~ls" and ~~d~~oc" formats, with "ppt" to follow in *DeltaMiner* 5.5.0). For more information on the difference between automating Office applications and generating the files, please also see *DeltaMiner deltas!* 5.3.2, feature #7, for Excel files, and *DeltaMiner deltas!* 5.4.0, feature #8, for Word files).

In general, we recommend that you use the same format version for both the export template and the report format (i.e. target format = template format). You can, however, use different combinations of versions as documented in the following table:

Export type	Target format	Possible templates
Word 2000/XP/2003, automation	doc	dot
Word 2007/2010, automation	doc	dot, dotx, dotm
	docx	dot, dotx, dotm
	docm	dot, dotx, dotm
Word, generation	doc	dot
Excel 2000/XP/2003, automation	xls	xlt
Excel 2007/2010, automation	xls	xlt, xltx, xltm
	xlsx	xlt, xltx, xltm
	xlsm	xlt, xltx, xltm
	xlsb	xlt, xltx, xltm
Excel, generation	xls	xlt, xltx, xltm
	xlsx	xlt, xltx
	xlsm	xltm
PowerPoint 2000/XP/2003, automation	ppt	pot

PowerPoint 2007/2010, automation	ppt	pot, potx, potm
	pptx	pot, potx, potm
	pptm	pot, potx, potm
PowerPoint, generation (available as of *DeltaMiner* 5.5.0)	ppt	pot
	pptx	potx, potm
	pptm	potx, potm

Licensing If you want to use *ReportServer* to export reports to Excel, PowerPoint, and Word as well as to PDF format, you need a license key for *ReportServer Office* (~~„~~DM-RPSO~~“~~). This license is valid for automating and generating reports alike.

Multiple versions of Microsoft Office on a computer If you are running multiple versions of Microsoft Office on a single computer, *DeltaMiner* and *ReportServer* will export the file to the version that was used last. If the exported reports do not appear in the desired version of Microsoft Office, simply start the preferred version and run the export again.

(5) ReportServer: DeltaMiner Notifications for the iPad/iPhone

Thanks to a new feature in *ReportServer,* you can now send push notifications to iPad, iPhone, and other iOS devices. As a result, you can immediately and actively inform report recipients as soon as new reports are available or a particular event has occurred. One special feature is that you can select the audio signal – which plays when the iOS device has received a new notification – based on the data concerned. As a result, the signal already transfers information to the recipients through the sense of hearing, a sensory channel that has been hardly used in the past. This helps increase the recipient‘s ability to absorb that information. You can read more about a detailed user scenario in the blog entry ~~„~~You can close your eyes but not your ears” (http://blog.bissantz.com/information-absorption-capacity).

This functionality utilizes a combination of several components. First, you have to download and install the free ~~„~~DeltaMiner Notifications” app from the Apple App Store to the iOS device. *DeltaMiner Notification Service* can address this app through the Apple Push Notification Service (APNS). *DeltaMiner ReportServer*, in turn, controls *DeltaMiner Notification Service*.

Users register with *Notification Service* through the app. During the registration process, the service also makes a note of the iOS device based on its Unique Device ID (UDID). Although a user can register multiple iOS devices, only one user can register with *Notification Service* per iOS device. *Notification Service* sends the messages to all registered iOS devices of the respective user. If a user has registered with *Notification Service* but has not registered an iOS device with *Notification Service*, *Notification Service* ignores that user.

Notification Service sends the message as well as information about the sound that the iOS device should play when a new message arrives. Both static and variable sounds are stored in the app (see below for more information on configuring the sounds).

Installing and deinstalling the notification service We would be happy to provide you with a .zip file containing the program files for *Notification Service*. Please note that Microsoft .NET Framework 3.5 is necessary to run *Notification Service*. Unzip the file in the desired folder and install *Notification Service* by running „install.bat" (administrator rights are necessary). Afterwards, you can see this service under the name „DeltaMiner Notification Service" in the Windows Service Manager. Start this service in the Windows Service Manager or by running „start.bat". You can end *Notification Service* either by using the Windows Service Manager or by running „stop.bat". To deinstall the service, simply start „uninstall.bat".

In the „NotificationService.exe.config" configuration file, you can make changes to the service:

Parameter	Default value	Meaning
webServicePort	8080	Port where the Web service is available
logThreshold	Info	Threshold for log messages Possible values: Error, Warn, Info, Debug
logFile	NotificationService.trace	Path to the log file – either absolute or relative to the installation folder

Once it starts, *DeltaMiner Notification Service* creates SSL connections to the following targets:

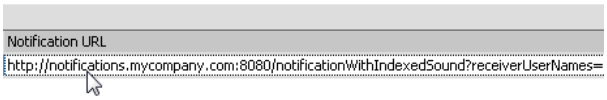
- gateway.push.apple.com, port 2195
- feedback.push.apple.com, port 2196

Please ensure that these connections are not blocked by a firewall.

App settings Once you have downloaded the *DeltaMiner Notifications* app, you can define the following parameters:

- Server: Enter the URL where Notification Service can be reached (e.g. notifications.mycompany.com).
- User name: Enter the name under which the user should be reached in Notification Service. You could, for example, make it a standard procedure to use either the person's Windows login name or their e-mail address.

Sending the notification *ReportServer* dispatches notifications based on the information in the *Notification*



URL. In this new field in the job definition, you can enter the URL for *Notification Service* and use URL parameters to specify the notification type, sound, and recipients.

Notification Service supports the following parameters:

Parameter	Meaning
receiverUserNames	List of the user names who should receive the message. In order to receive notifications, users must register their iOS devices under that same name with *Notification Service*. The service ignores any user names that are not registered. Please list the user names using URL encoding and separate multiple users with a ┼.
messageText	The notification text that appears in the dialog box. If this parameter is empty, the service does not display a dialog box. A newline character (ASCII code 10) creates a line feed. Please keep the message text concise (e.g. 100 characters), since the notification size is limited to 256 bytes and the dialog box on an iOS device has a limited size as well. The message text must be URL-encoded.
soundName	Name of the sound that should be played. A: Xylophone-like sound B: Metallophone-like sound C: Gong-like sound
soundType	Type of the sound that should be played. Amount: for numerical values Amount2: alternative for numerical values Units Percentage
soundIndex	Index of the sound that should be played. Amount: from 1 to 5 Two sounds are played. The higher the soundIndex, the greater the interval between the sounds.

Amount2: from 0 to 4
An initial sound is played. The encoded number is the number of subsequent sounds.

Units: from 1 to 19
Either double or single sounds are played. A double sound counts as 5, a single sound counts as 1. The sum of them equals the encoded number.

Percentage: from 0 to 8
A total of 8 sounds are played. The number of high-pitched sounds equals the encoded number.

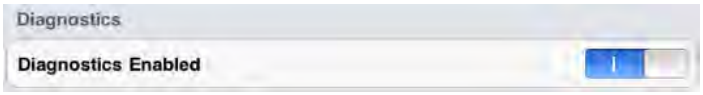
Sample URL with a static sound:
http://notifications.mycompany.com:8080/notificationWithNamedSound?receiverUserNames=Bella&messageText=*messageText*&soundName=A

Sample URL with a variable sound:
http://notifications.mycompany.com:8080/notificationWithIndexedSound?receiverUserNames=Bella&messageText=*messageText*&soundType=Amount&soundIndex=2

Instead of using static numbers, you will probably want to indicate the changes to the reports or the numbers dynamically using the sound. To do this, you can use *ReportServer* variables (e.g. "@ReportX#+R", see feature #8).

Logging For diagnostic purposes, you can enable logging for the *Notifications* app:

1. Go to the SpringBoard and open the *Settings* app.
2. Select Notifications.
3. Under *Diagnostics*, change the *Diagnostics Enabled* switch from "0" to "1".



4. Start or switch to the *Notifications* app (the running app will also detect that the setting has changed).

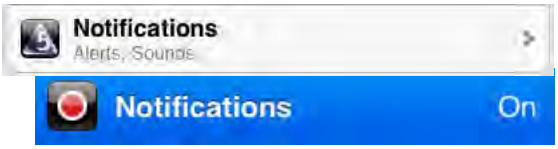
You can access the log by following the procedure below:

1. Connect your iOS device to your computer/Mac and start iTunes.
2. Select the iOS device.
3. Select the *Apps* tab.
4. Select the *Notifications* entry in the *Apps* menu.

5. Click on ‑log.txt" and select *Save as*.

Receiving notifications with an inactive app iOS devices can receive messages from the *Notifications* app even when it is not running (e.g. because another app is open).

Disabling notifications To stop receiving messages from the *DeltaMiner Notifications* app, you can disable this service on your iOS device in the *Settings* menu under *Notifications*.



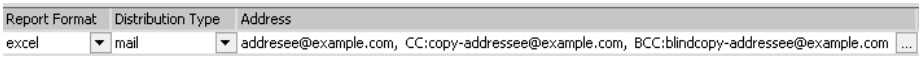
Tap on Notifications.

Change the Alerts switch to "On".

More information about push notifications For more detailed information about receiving push notifications on iOS devices, please read http://support.apple.com/kb/HT3576?viewlocale=en_US.

Licensing In order to send notifications, you need an additional *ReportServer* license (‑DM-RPSR‑). To request a test license, please contact your Bissantz and Company team.

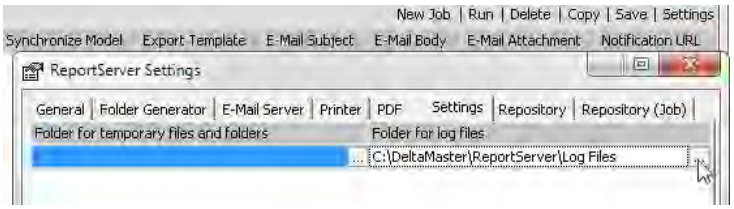
(6) ReportServer: Sending Mails to CC and BCC Addresses



When you send e-mails from *ReportServer*, you can now use carbon copy (CC:) or blind carbon copy (BCC:) options as well. To use this function, simply enter the address list as usual and place either CC: or BCC: without any spaces directly in front of the desired addresses. For example: ‑Adressee@example.com, **CC:**copy-addressee@example.com, **CC:**copy-addressee2@example. com, **BCC:**blindcopy-adressee@example.com—.

Here, you can write ‑CC:" and ‑BCC:" in either uppercase or lowercase letters. If you don't want your addressees to see the other recipients on your e-mail distribution list, you can enter all addressees as blind carbon copies.

(7) ReportServer: Configurable Log Folder

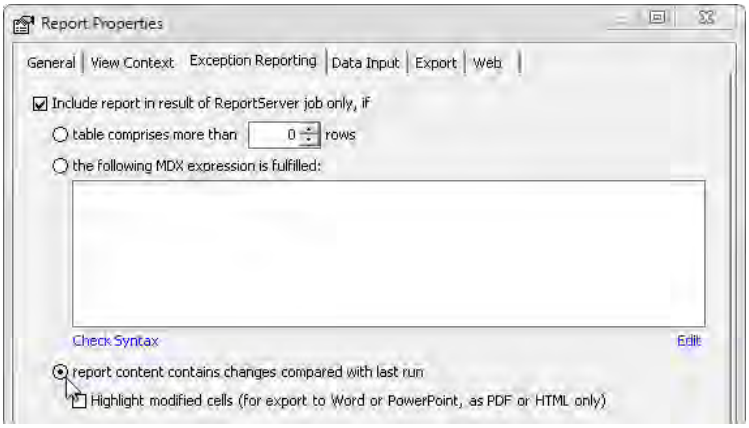


In *DeltaMiner ReportServer,* you can now specify in which folder it should save the job log files (‑Job <x> (<Date> <Time>).log—) under *Settings* on the *Settings* tab under *Folder for log files*.

Previously, *ReportServer* always stored these log files in the —Log"subfolder of the installation folder.

(8) ReportServer: Adding Only Reports with Changes to the Job Result

When you work with reports that are published on a regular basis, you often want to know what has changed since the last report. After all, you usually need to pay more attention to what has changed than to what has stayed the same. To help your report recipients concentrate on the changes in these reports, you can now state in the *Report properties* of *DeltaMiner* that a *ReportServer* job should only include reports in which something has changed since they were last generated.



You can enable the necessary options starting in *Pivotizer* mode under the *Report properties* (context menu of the reports in the *Briefing book*) on the *Exception reporting* tab. Here, you can enable the *Include report in result of ReportServer job only, if* option and the *report content contains changes compared with last run* condition.

When *ReportServer* processes these reports, it compares the result saved in the analysis session (.das file) with that of the current calculation. If both results are identical, *ReportServer* ignores the report when outputting the job. If all reports are omitted based on the conditions defined on the *Exception reporting* tab, *ReportServer* does not create any output and, accordingly, does not distribute any reports.

If the change detection is enabled for at least one report, *ReportServer* recalculates the analysis session (.das file) that serves as the report source each time it runs the job and saves it to the same .das file. Therefore, please ensure that this file is not write-protected. On the same tab, you can also opt to have the changed cells in these reports highlighted. This option is only available for reports that are based on pivot tables or *SQL Drill Through* and are exported to Word or PowerPoint, or as a PDF file or sent as an HTML mail.

In the pivot table on your right, for example, there was a change in revenues for product „Discus". As a result, all affected cells are highlighted in yellow.

All products	19,800,093
Luxury Division	1,362,422
Arcade	565,573
Precisio	777,004
Discus	19,845

the

You can now use three new ***ReportServer* variables** for pivot tables and *SQL Drill Through* reports. These variables provide a summary of the changes, specifically the number of rows that a report contains as well as the number that have been added or removed. You can place these variables in the *E-mail subject line*, *E-mail text*, *E-mail attachment*, and *Notification URL* to prominently notify your readers about which changes have taken place.

The new *ReportServer* variables are:

@ReportX#R	Number of rows in the report („R" stands for row)
@ReportX#+R	Number of rows that have been added since the previous job run
@ReportX#-R	Number of rows that have been removed since the previous job run

In the variables above, „X" stands for the report ID. You can obtain this ID from the *Report properties* or from the tooltip that appears when you press the *Alt* key while mousing over a report in the *Briefing book*.

Using these variables, you could create a subject line in an event registration system that shows the current status for new and canceled registrations: —98registrations (3 new, 1 canceled)".

(9) ReportServer: New Export Format "csv" for Pivot Table Reports

You can now use *ReportServer* to export pivot tables to CSV (Comma Separated Values) format, in other words, as pure text files that you can load and process in many other systems.

To export a briefing book as a .csv file, please select ‑csv" as the *Report format* in the job definition in *ReportServer*.

(f) Export template

Similar to most other report formats, *ReportServer* uses an *Export template* during the export. Unlike the templates of the other formats, which are partly incorporated in the exported file, this *Export template* is a configuration file that contains parameters indicating how to format and fill the .csv file. The standard installation of *DeltaMiner* contains a sample export template called ‑DeltaMaster.csv.txt", which you can customize using a text editor (e.g. Windows Notepad).

The export template contains the following settings:

Name, default setting	Description, options
Encoding=Unicode	Character encoding of the exported data Options: Unicode, ASCII, UTF7, UTF8, UTF32
ByteOrderMark=True	Option to set a Byte Order Mark (BOM) for Unicode, UTF8, and UTF32 Options: True, False
NumberFormat=Auto	Number format Options: Auto (as in *DeltaMiner*), Raw (as defined in NumberDecimalSeparator, and NumberGroupSeparator)
NumberDecimalSeparator=Auto	Decimal separator Options: Auto (system delimiter), user-defined delimiter
NumberGroupSeparator=Auto	Symbol for number group Options: Auto (system delimiter), user-defined delimiter
FieldDelimiter=,	List delimiter Options: User-defined delimiter; a tab is designated by ‑TAB"

FieldQualifier=	Character to demarcate a data field that contains a delimiter that is not intended to be used as one in this case Options: User-defined delimiter
RecordDelimiter=CRLF	Character to signify the end of a data record Options: CRLF, CR, LF, user-specific delimiter(s)
RowLimit=	Maximum number of rows to be exported; no entry (i.e. default setting) = unlimited
ColLimit=	Maximum number of columns to be exported; no entry (i.e. default setting) = unlimited
ColHeaders=	The number of rows to be exported (with column headers, separated by a comma). The first row containing column headers has an index of 0. No entry (i.e. default setting) means that all column headers should be exported. See below for more information.
RowHeaders=	The number of columns to be exported (with row headers, separated by a comma). The first column containing row headers has an index of 0. No entry (i.e. default setting) means that all row headers should be exported. See below for more information.

To comment parameters out, simply use double dashes (e.g. — RowLimit=100”).

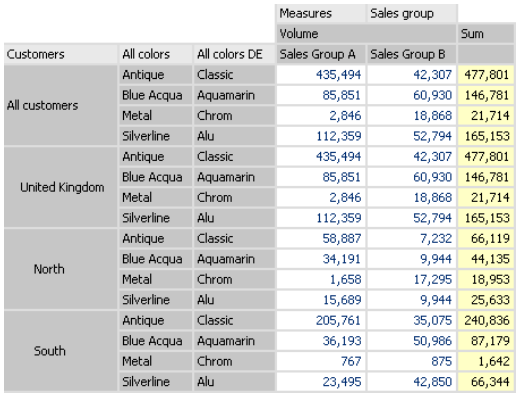
If you do not specify the export template or *ReportServer* cannot find it, *ReportServer* applies the default settings as well as the same number of decimal spaces used in the original *DeltaMiner* reports. You can learn more about numeric format strings from Microsoft Developer Network: http://msdn.microsoft.com/en-us/library/427bttx3%28VS.80%29.aspx

(g) Exported components of the pivot table

ReportServer exports any member property values, displayed hierarchy captions as well as row, column, and table aggregations from the pivot table. If you do not want to include the hierarchy captions, simply hide them in the pivot table first (*Table properties*, *General* tab). Information such as comments, action titles, status information, references to filters, etc. is not included in the export. When values are formatted as a percentage, *ReportServer* exports the percent signs as well, which means that the values are treated as text (e.g. default setting: in quotation marks).

The generated .csv files show an identical number of fields in each row. As a result, the export splits up any merged row and column elements. In addition, any cells that were not used in the screen view (e.g. column headers) are treated as empty fields.

The following screenshots clearly illustrate the difference between a pivot table in *DeltaMiner* and its equivalent as a CSV file:



			Measures	Sales group	
			Volume		Sum
Customers	All colors	All colors DE	Sales Group A	Sales Group B	
All customers	Antique	Classic	435,494	42,307	477,801
	Blue Acqua	Aquamarin	85,851	60,930	146,781
	Metal	Chrom	2,846	18,868	21,714
	Silverline	Alu	112,359	52,794	165,153
United Kingdom	Antique	Classic	435,494	42,307	477,801
	Blue Acqua	Aquamarin	85,851	60,930	146,781
	Metal	Chrom	2,846	18,868	21,714
	Silverline	Alu	112,359	52,794	165,153
North	Antique	Classic	58,887	7,232	66,119
	Blue Acqua	Aquamarin	34,191	9,944	44,135
	Metal	Chrom	1,658	17,295	18,953
	Silverline	Alu	15,689	9,944	25,633
South	Antique	Classic	205,761	35,075	240,836
	Blue Acqua	Aquamarin	36,193	50,986	87,179
	Metal	Chrom	767	875	1,642
	Silverline	Alu	23,495	42,850	66,344

```
,,,Measures,Sales group,
,,,Volume,Volume,Sum
Customers,All colors,All colors DE,Sales Group A,Sales Group B,
All customers,Antique,Classic,"435,494","42,307","477,801"
All customers,Blue Acqua,Aquamarin,"85,851","60,930","146,781"
All customers,Metal,Chrom,"2,846","18,868","21,714"
All customers,Silverline,Alu,"112,359","52,794","165,153"
United Kingdom,Antique,Classic,"435,494","42,307","477,801"
United Kingdom,Blue Acqua,Aquamarin,"85,851","60,930","146,781"
United Kingdom,Metal,Chrom,"2,846","18,868","21,714"
United Kingdom,Silverline,Alu,"112,359","52,794","165,153"
North,Antique,Classic,"58,887","7,232","66,119"
North,Blue Acqua,Aquamarin,"34,191","9,944","44,135"
North,Metal,Chrom,"1,658","17,295","18,953"
North,Silverline,Alu,"15,689","9,944","25,633"
South,Antique,Classic,"205,761","35,075","240,836"
South,Blue Acqua,Aquamarin,"36,193","50,986","87,179"
South,Metal,Chrom,767,875,"1,642"
```

On the column axis of the pivot table, the „Customers" and "All colors" dimensions are nested and one member property, „All colors DE", is listed as well. On the row axis, the measures and the „Sales group" dimension are nested. The sums in the right-hand column are *Row aggregations*. All of this information is contained in the export.

The first row of the exported CSV file („,,,Measures, Sales group,") shows multiple commas in succession. These commas indicate empty fields, which arose due to the unused parts of the table – in this case, the space above the column headers „Customers", "All colors", and „All colors DE" as well as the space above the column header "Sum". The CSV export splits up the merged cells in the „Customers" column and for the „Volume" measure and repeats the respective member in each row/column. Where commas are used within a number to separate groups of digits (e.g. „435,494"), these numbers are enclosed within double quotation marks ("") acting as field qualifiers to indicate that the comma in this case is not being used as a field delimiter.

This example shows the effects of the "ColHeaders" and "RowHeaders" export template parameters. The table above contains three rows with column headers: row 1 with "Measures/Sales group", row 2 with „Volume/Sum", and row 3 with "Customers/All colors/All colors DE/Sales group A/Sales group B". The optional "ColHeaders" parameter specifies which of these rows you want to export along with the other data. The row numbering starts at zero. If you only want to export row 2 („Customers/All colors/…/Sales group B"), you would enter "ColHeaders=2" in the export template. If you want to show the other two rows, you would write "ColHeaders=0,1". If you want to suppress all of these rows, you would write "ColHeaders=" without any number at the end. To export all of the column headers, you should comment the row out („ ColHeaders="). The same applies to the columns containing row headers and the „RowHeaders" parameter.

(h) Variables for the report ID (@RID) and report name (@RN)

In a CSV export, *ReportServer* writes each table to a separate .csv file. In the other formats, it writes all of the reports to one file. Using two new *ReportServer* variables, *ReportServer* can assign dynamic, report-specific names to the files.

- "@RID" stands for "Report ID". You can find this ID in the *Report properties* or as a tooltip when you hold the *Alt* key while mousing over a report in the *Briefing book*.
- "@RN" stands for the "Report Name" as it is shown in the *Briefing book*.

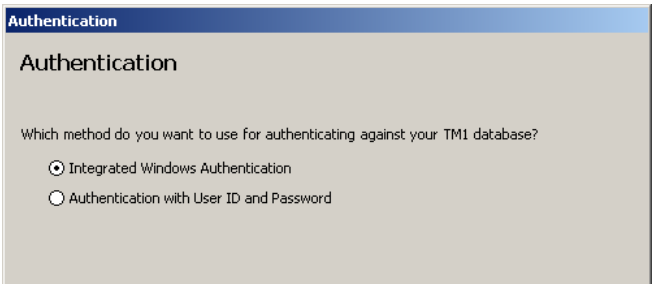
If you choose not to use variables in the file name or path (*Address* field in the job definition), *DeltaMiner* uses the defined file name and simply adds a serial number for all additional reports (e.g. „Report.csv", „Report (1).csv", „Report (2).csv", etc. This ensures that the exported reports do not overwrite each other. Since this creates rather enigmatic file names, we suggest that you use the „@RID" and „@RN" variables to automatically differentiate the reports from each other. The report ID („@RID") is well suited for automated further processing, especially when other systems always access a certain file under the same name.

(i) Licensing

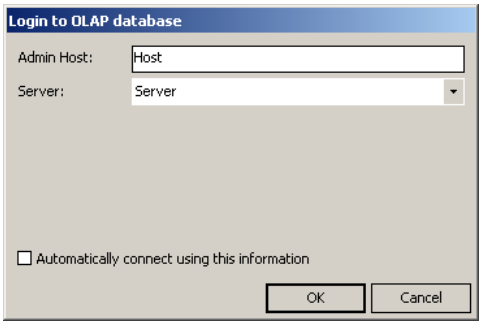
A special license is required for CSV exports. To request a test license, simply contact your Bissantz and Company team.

(10) IBM Cognos TM1: Integrated Windows Authentication

Starting in version 5.4.9, *DeltaMiner* supports integrated Windows authentication for the OLAP database, IBM Cognos TM1 (formerly Applix TM1). If you use this method, you no longer need to enter your user name and password, as the Windows login information is automatically transferred to the database (i.e. single sign-on). Many users like this feature because they don't have to reenter their login data. In order to use Windows authentication, the respective user accounts must be configured in the Windows domain and this login option must be configured on the TM1 server.



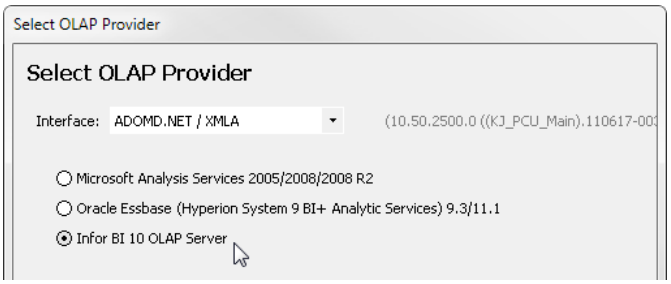
When you create a new analysis model, you are asked which method you want to use to *Authenticate against your TM1 database*. Here you can choose between *Integrated Windows authentication* and *Authentication with user ID and password*.



If you select integrated Windows authentication, you must then enter the *Admin host* and select the *Server*. With this information, the logged-in Windows domain user is logged onto the TM1 database and *DeltaMiner* establishes the session based on that individual's access rights.

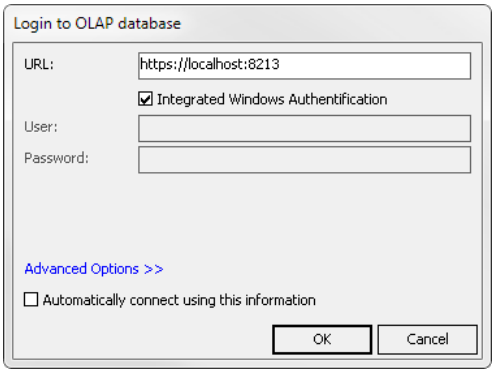
(11) Infor10 BI: Access via the ADOMD.NET/XMLA Interface

Starting in *DeltaMiner* 5.4.9, you can access Infor10 BI via the ADOMD.NET/XMLA interface. In previous Infor PM versions, you could access the Infor server using an OLE DB driver, which is automatically installed as part of the Infor Office Plus (Excel add-in) installation. Starting in Infor10 BI, however, this OLE DB driver is no longer available. Access is only possible via XMLA and uses the same driver as the interfaces to Microsoft Analysis Services 2005/2008/2008 R2 and Oracle Essbase 9.3/11.1. A separate driver installation for Infor XMLA is not necessary.



Selecting the interface

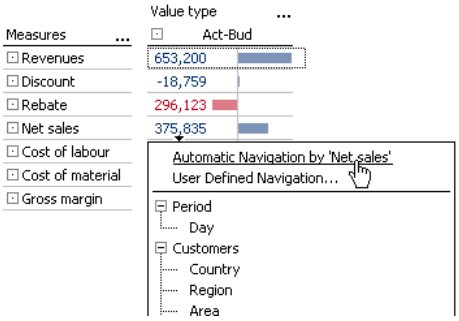
When you create a new analysis model, *DeltaMiner* initially asks you to select the data source (*OLAP database*) and then the desired interface (i.e. the OLAP provider). In this case, select „ADOMD.NET/XMLA" as the interface and „Infor BI 10 OLAP Server" as the OLAP server.



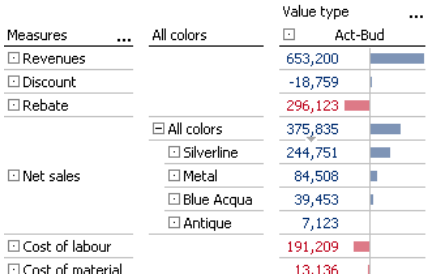
Then you log onto the OLAP database. Here, you can choose between integrated Windows authentication (i.e. single sign-on) and the separate authentication of the database server.

(12) Pivot Table: Executing Automatic Pivot Navigation Steps via Ctrl+Double Click

The automatic pivot navigation is now easier to use. If you double click while holding the *Ctrl* key, *DeltaMiner* performs an additional navigation step as if you had opened the *Automatic navigation* feature from the menu.



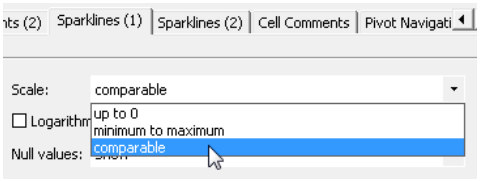
With this feature, *DeltaMiner* always navigates to the next-lower level, as you can see in the case of „Net sales" in the screenshot.



With the automatic navigation feature, *DeltaMiner* searches for dimensions that haven't been used yet in the table but would help explain the value in question and automatically inserts the most „interesting" one into the pivot table. This is especially helpful in models containing a large number of dimensions where you aren't always sure which dimension you should choose next to help explain the reasons for variances, for example. This feature uses data mining algorithms that are also used in the *Navigation* analysis module.

(13) Pivot Table: Comparable Scaling for Line Sparklines and Dot Line Sparklines

You can now use *Comparable* scaling as a third option to scale line and dot line sparklines. In the past, you could already choose a scale *up to 0* or between *Minimum and maximum* for these types of sparklines. You can set this scale in the *Table properties* on the *Sparklines (1)* tab.



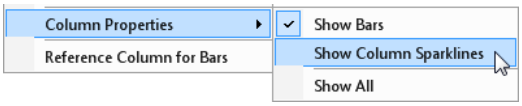
Comparable means that *DeltaMiner* draws the sparklines so that the height of all cells in the table – i.e. of the respective row or column – represents the same percentage range, in other words, the same percentage difference between the minimum and maximum. It makes sense to use a comparable scale when you want to draw all sparklines in the entire table with a common scale for each column or row (see the scaling options under *Dot line sparklines* in the context menu of the pivot table). If you choose to scale by cell, in contrast, you won‘t necessarily be able to compare the data in the individual cells.

In addition to using a *Comparable* scale, you may want to enable the *Logarithmic scale* option, which is also located in the *Table properties* on the *Sparklines (1)* tab. This scale ensures that the same slopes on a line or dot line stand for the same percentage differences.

This scale option is not available for column sparklines because it may lead to the Y axis being cropped. Although the cropping of lines and the similar dot lines is acceptable according to the principle of the perceptive priority, it would distort the data in the case of columns and reduce the integrity of the visualization.

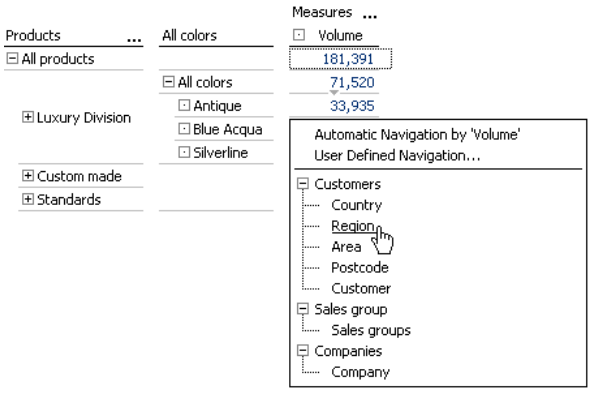
(14) Pivot Table: Calculating Displayed Sparklines Only

To accelerate the processing speed, *DeltaMiner* now only calculates visible sparklines in pivot tables.



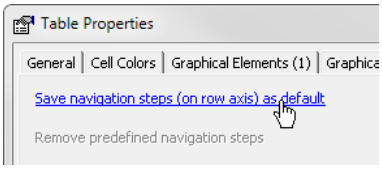
In earlier versions, *DeltaMiner* always calculated sparklines for all columns of the current table including those where the *Show sparklines* option was disabled in the *Column properties*. This way, *DeltaMiner* was able to quickly show sparklines that were temporarily hidden – including in *Offline Reader* mode because the data were already known but they just weren‘t displayed. On the downside, this feature increased the calculation time of objects that users may have never wanted to display. After careful consideration, we decided to accelerate the initial calculation time of the pivot table in *DeltaMiner* 5.4.9 instead of trying to anticipate major changes to the view. If you are using *Offline Reader* to view an analysis session (.das file) that was saved without sparklines, you will no longer be able to show sparklines in columns at a later date.

(15) Pivot Table: Predefining Pivot Navigation Steps and Executing via Double-Click



Some users of the *Pivot Navigation* (see *DeltaMiner clicks!* 10/2007) reported that they sometimes (or even always) analyze certain scenarios using the same dimensions in the exact same order. In our „Chair" reference model, for example, a product manager might always analyze his sales volume first by product groups, second by colors, and third by sales regions.

Now, you can save this type of predefined sequence together with a report or cockpit and access it later by double clicking on the desired measure. This makes detailed data analysis faster than before. Instead of selecting the dimension for the next step each time in the hierarchy menu, you can now simply double click on it.



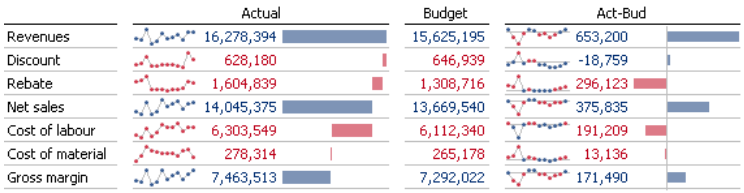
To define the analysis steps, you simply go through the desired sequence in the pivot navigation. Now, open the *Table properties* of the pivot table to the new *Pivot navigation* tab and click on *Save navigation steps (on row axis) as default.* After you have saved these navigation steps, they remain saved even if you now undo them. Please note, however, that you cannot save a sequence that was generated using the *Automatic navigation* because that is data-driven. (Starting in *DeltaMiner* 5.4.9, you can start the *Automatic navigation* with ~~*Ctrl*~~ + double click". See feature #12 for more information).

As explained above, you can rerun the predefined navigation steps when you double click on a value that you want to examine in further detail.

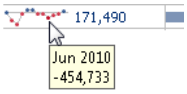
If any defined navigation steps are available, *DeltaMiner* displays these in the *Table properties* where you can *Remove* them, if desired, as well. Please note that you can only define one sequence per report or cockpit.

You can save and access pre-defined navigation steps – not to mention, use the entire *Pivot Navigation* feature – in *Analyzer* und *Miner* user modes.

(16) Pivot Table: Dot Line Sparklines

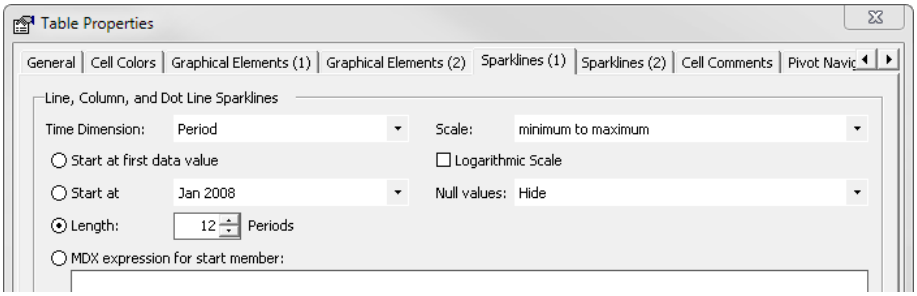


You can now use a new display option for sparklines in pivot tables: dot line sparklines. These sparklines visualize the time series as a line that shows each value as a dot. If the series contains positive and negative numbers, *DeltaMiner* draws a zero line. This visualization combines the advantages of the familiar column and line visualizations (see feature #16):



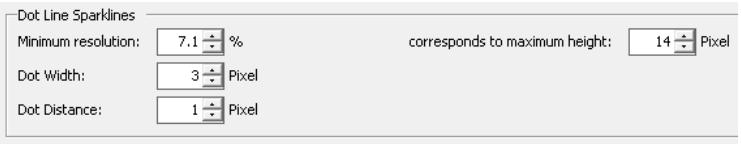
- As with columns, you can clearly see that the dot line sparklines are referring to separate, discrete points in time. In addition, you can view the exact value of a point on the line as a tool tip when you point at it with your mouse – just as is the case with column sparklines.

- As with lines, you can choose a *Minimum to maximum* scale as well as a *Logarithmic scale*, which allows you to compare relative changes.

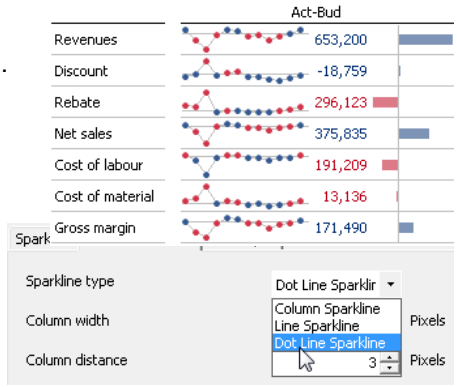


In the *Table properties* of the pivot table (context menu, *I want to* menu) on the *Sparklines (1)* tab, you can determine which time frame the sparklines should cover, how you want to scale them, and how you want to deal with null values. These properties apply to all sparklines, irrespective of whether they are line sparklines, column sparklines, or dot line sparklines.

On the *Sparklines (2)* tab, you can specify the size of the sparklines, for example, their *Maximum height*, the *Minimum resolution,* the *Dot width*, and the *Dot distance.* This breakdown of the sparkline options on two separate tabs is new as well.



The example on your right shows dot line sparklines with a maximum height of 20 pixels, a dot width of 5 pixels, and a dot distance of 3 pixels.



You can also use dot line sparklines in Flexreports (*Cell properties*, *Sparkline format* tab).

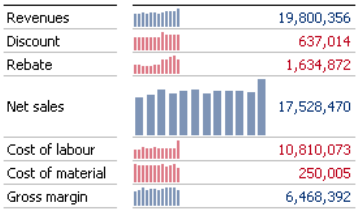
You can export sparklines to Microsoft Office applications provided that you export them as an image (i.e. bitmap or metafile). Microsoft Excel displays the dot line sparklines if you have selected *Export bar/column/waterfall/sparklines as SparkFonts* in the *DeltaMiner* export options (*Extras* menu, *Options*, *Export* tab, *Excel,* or on a report-specific basis in the *Report properties*).

(17) Pivot Table: Semantic Zoom for Sparklines

The ~~-~~semantic zoom" is a new way to enlarge sparklines so that you can immediately obtain more information from them. What's so special about this zoom method is that *DeltaMiner* doesn't simply scale the existing sparkline columns or sparkline lines to a larger size. Instead, it shows additional information as soon as the zoom provides additional space on the screen. You can use a semantic zoom in all user levels from *Offline Reader* to *Miner Expert* as well as in presentation mode (*F5* key or *Shift+F5*).

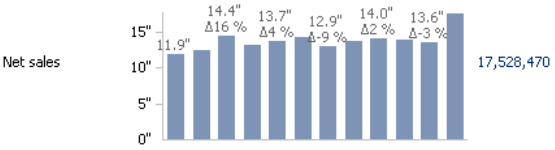
To increase or reduce the size of a sparkline, simply point your mouse at the desired sparkline, hold the *Ctrl* key, and rotate the wheel of your mouse forward or back. If you hold the *Ctrl* and *Shift* keys together, *DeltaMiner* performs a semantic zoom for all sparklines in the table. In a pivot table, you can only use a semantic zoom on either one sparkline or all of them simultaneously – not one first and then another.

The examples below show a semantic zoom on a net sales sparkline of a gross margin calculation.



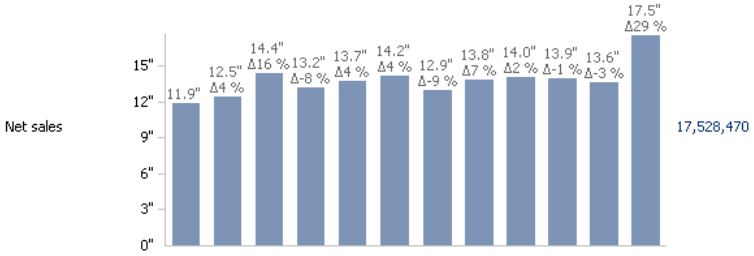
First, *DeltaMiner* draws the columns larger and larger.

As soon as enough space is available, it also shows the Y axis.

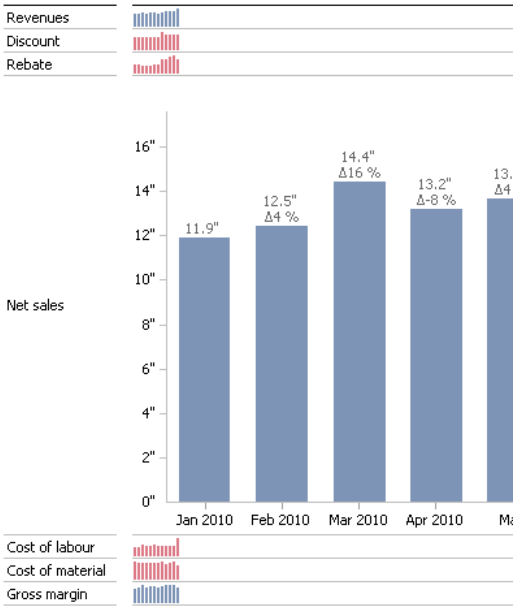


A few levels later, it has enough space to label every second column with the absolute value and percentage change vs. the value of the previous period.

As soon as even more space is available, *DeltaMiner* labels each column.



Finally, it displays the labeling for the X axis in the visualization.



You can compare the semantic zoom to an ROI plan. In this case, the more valuable screen space you „invest", the higher the „return" you will receive in the form of additional information.

Thanks to the simple handling with the wheel of the mouse, you can smoothly switch from a cell graphic to the chart and back. As a result, you can spontaneously take a closer look at a certain time series without having to change the report or start a parallel *Time Series Analysis*. The semantic zoom is designed to support these types of interactive scenarios. If you run an ad hoc export, *DeltaMiner* includes the semantic zoom view. However, it does not save it with the cockpit or report.

As soon as you use the „*Ctrl* + mouse wheel" action to start a semantic zoom on another cell, *DeltaMiner* reverts the previously zoomed sparkline back to its default size. Alternatively, you can simply hit the *Esc* key.

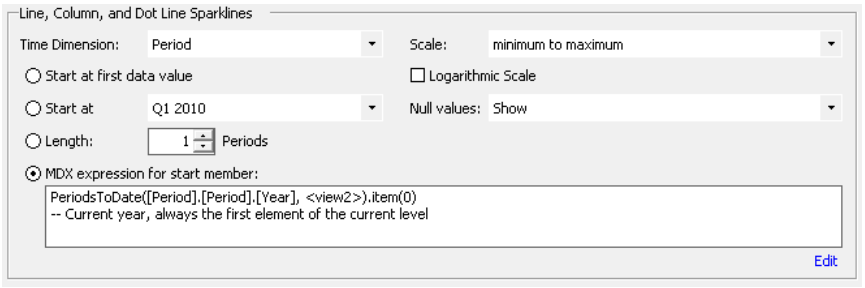
If you use the „*Ctrl* + mouse wheel" action to mouse over other parts of the table instead of just a sparkline, *DeltaMiner* enlarges the entire table as in the past. This action also zooms the sparklines in size but without the semantic information.

(18) Pivot Table: Defining the Start Member of Sparklines via MDX

You can now use an MDX expression to determine the period in which *DeltaMiner* should start the sparklines in a pivot table. This way, it can dynamically and flexibly adjust the sparklines to the current view.

You can define the *MDX expression for the start member* in the *Table properties* on the *Sparklines (1)* tab. The expression must return a dimension member. Using the *Edit* link in the bottom-right corner below the data entry field, you can open the familiar MDX editor, which shows the components of the model (e.g. dimensions and measures) to help create an MDX expression.

In the MDX expression, you can use „<viewX>" as a variable to refer to the members that are selected in the view. The „X"



stands for the dimension ID, which you can find by holding the *Alt* key while mousing over the desired dimension in the MDX editor. In the screenshot above and the examples below, the time dimension has the ID 2. As a result, „<view2>" signifies the current period of time. As is common practice in MDX, two minus signs („--") designate that the rest of the row is a comment.

Example 1: The following expression always returns the first member of the level and year from which a member was selected in the *View* window – for example, the first day, the first month, and the first quarter of the current year.

```
PeriodsToDate([Period].[Period].[Year], <view2>).item(0)
-- Current year, always the first member of the current level
```

Example 2: The following expression moves the start period back one year based on the selected level.

```
<view2>.Lag(Descendants(Ancestor(<view2>, [Period].[Period].[Year]), <view2>.Level).Count)
-- One year back, on the same level
```

The sparkline extends from the member defined in the MDX expression to the period in time that was selected in the *View* window.

Please note that this MDX expression does not work in previous versions of *DeltaMiner*. Instead, they show the sparklines starting with the *first data value*.

(19) Repository: Permission Management for Report Folders and Reports

Starting in *DeltaMiner* 5.4.7, the *DeltaMiner* Windows client („Client.exe") has been able to access *Repository*. *WebClient* from *DeltaMiner WebOption* could already access it in previous versions. As a result, you can centrally administer applications (i.e. the analysis sessions stored in *Repository*) and use them with *DeltaMiner*. In version 5.4.9, we have refined the rights concept so that you can now assign and administer role-based rights for the following objects:

- Sessions (as root objects or for specific rights; equivalent to entire analysis sessions or applications)
- Folders in the *Briefing book*
- Reports

With this new rights concept, you can now grant or ban access to specific folders and reports for specific users (i.e. for the roles of which they are a member).

The administration of rights takes place in two separate places: *Repository GUI* and *DeltaMiner* itself. You can specify which roles (i.e. which users) may access which applications in *Repository GUI* and which roles may access which folders and reports within an application directly in *DeltaMiner*. This concept supports work sharing between IT and specialist departments.

(j) Requirements

The following software components are required to implement folder- and report-specific rights in the *DeltaMiner* Windows client:

- *DeltaMiner Repository* as in *DeltaMiner WebOption*, version 5.4.9 or higher (to save roles, applications, rights, etc.)

- *DeltaMiner WebService* as in *DeltaMiner WebOption*, version 5.4.9 or higher (to enable communication among *DeltaMiner*, the *Repository* database, and the multidimensional and relational application databases)

- *Repository GUI* as in *DeltaMiner WebOption*, version 5.4.9 or higher (to administer applications and roles, especially *Admin roles*)

If you currently use *DeltaMiner WebOption* in version 5.4.9 or higher, you already have all of the components you need. If access should only take place in *DeltaMiner,* you can do without *WebClient*.

You will also need Microsoft .NET Framework 3.0 or higher on any clients running *DeltaMiner* so that they can communicate with *DeltaMiner WebService*. If a client only runs .NET Framework 2.0, it will not display the part of the *DeltaMiner Portal* that is used for accessing *Repository.* On these clients, you can use *DeltaMiner* as usual for file-based work but you will not be able to access *Repository*.

You also need to note the following rights in *Repository*:

- Users who publish applications to *Repository* or need to administer rights must be members of the database role „Import".

- Users who should only have read access to the applications in *Repository* (i.e. are not allowed to publish or change the applications) must be members of the database role „WinClientReader".

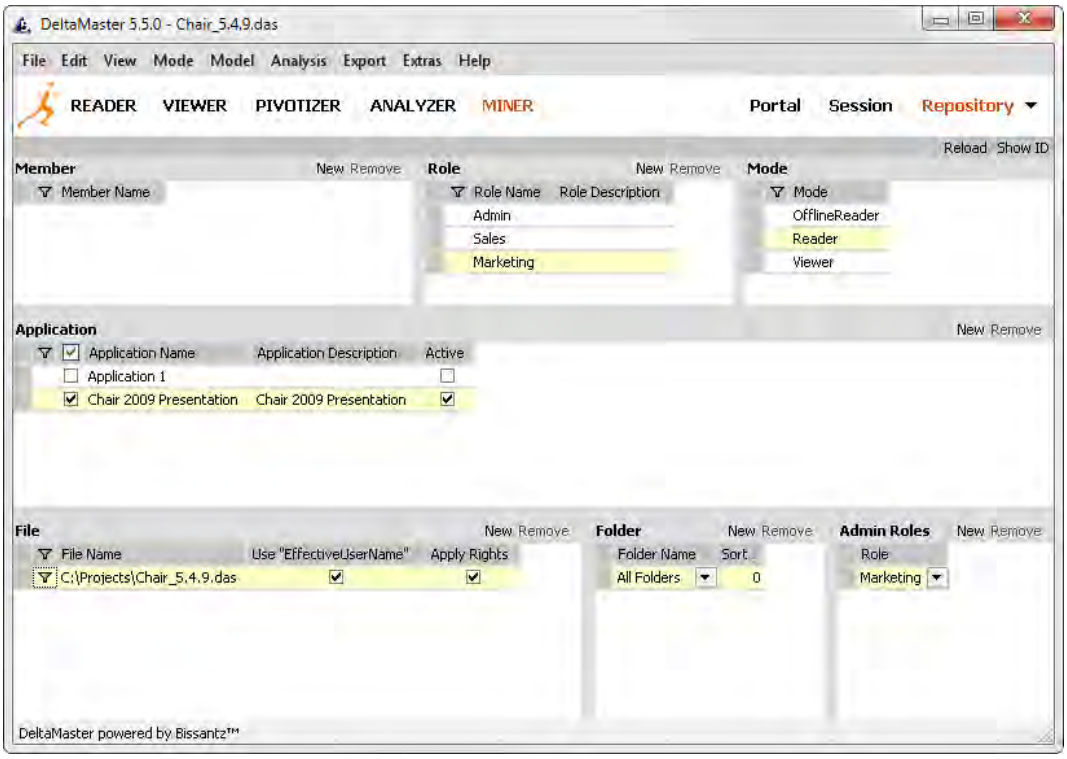
Please note that the role for write access (i.e. „Import") does not automatically include read access (i.e. „WinClientReader"). As a result, you must assign both roles to a user needing both types of access.

Finally, you should configure the *DeltaMiner* installation so that it can access *Repository*. You can make the necessary changes in the „Client.exe.config" file, an XML file located in the *DeltaMiner* installation folder (e.g. „C:\Program Files\DeltaMaster 5.4.9"). This file already contains sample parameters for communicating with *WebService*. To use these settings, you will first need to remove the XML comment tags by deleting the rows with the comments „<!—" and „—>" around the block „<system.serviceModel> … </system.serviceModel>". Now, you can adapt the settings in this block to your *WebService* configuration. Please pay close attention to the user name under which *WebService* runs in the entry „<userPrincipalName value="Domain\User" />".

For more information on installing and configuring *Repository*, *Repository GUI,* or *WebService,* please read the documentation on *DeltaMiner WebOption*.

(k) Administering roles and Admin roles in Repository GUI

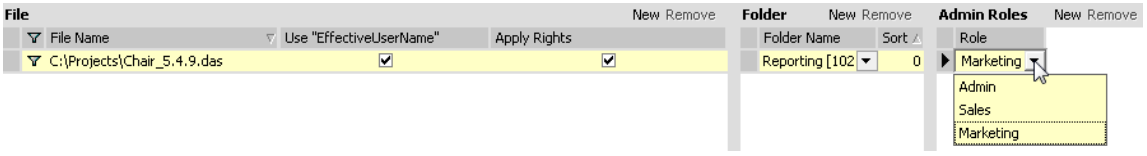
In *Repository GUI*, you can determine which user roles may access which applications as well as which roles may administer the session, folder, and report rights within an application (i.e. *Admin roles*).



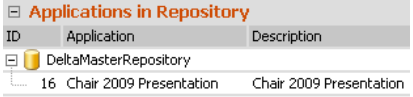
Note: The screenshot above shows the English *Repository GUI* of *DeltaMiner* 5.5.0.

If you want to enable the option for administering rights with applications, you must first enable the new *Apply rights* options for the respective *File*. This *File* must be linked to an *Application* which, in turn, must be linked to one or more *Roles* in a certain *Mode*. If the check box in the *Apply rights* column is not enabled, *DeltaMiner* applies the previous, more simplified rights administration (i.e. you can grant certain roles access to the application but you cannot set specific rights within it).

Once you have enabled the *Apply rights* option, you should define the maximum administrator rights for at least one *Admin role* by clicking in the „funnel" column of the *Application* or *File* table so that the funnel appears. If you *Apply rights*, *DeltaMiner* displays a new table called *Admin roles* next to the *Folder* table. After clicking on *New*, you can create a new entry in the *Admin roles* table by simply selecting the desired role. You can only choose from the roles that are linked to the file through at least one application.

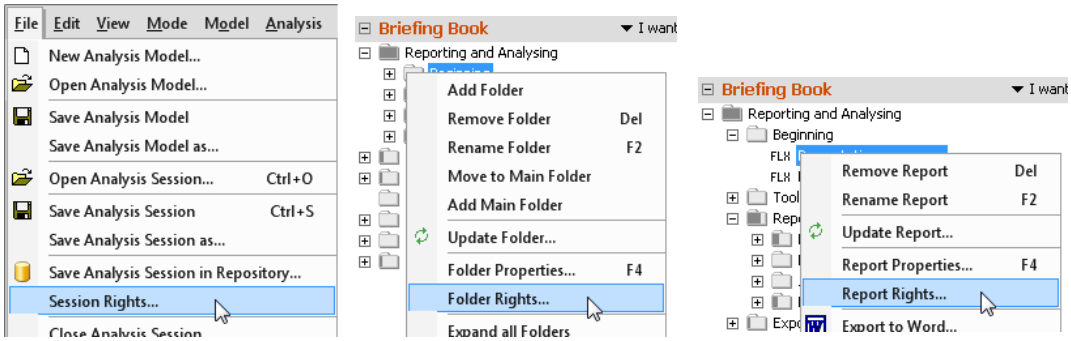


(I) Administering session, folder, and report rights in DeltaMiner



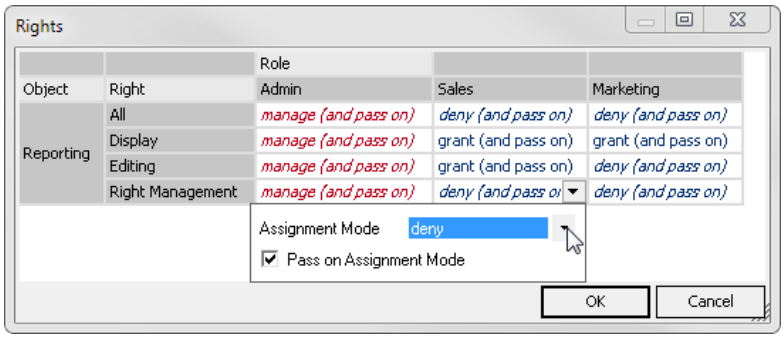
To assign and administer rights to further associated roles, simply start *DeltaMiner* as a user who is a member of an admin role and select the desired application in the *Portal* in the *Applications in repository* section.

Please ensure that you are running *DeltaMiner* on *Miner* level. To edit the *Session rights*, go to the *File* menu and select the respective option. You can change the *Folder* and *Report rights* using the respective options located in the context menu of folders and reports respectively.



In the columns of the *Rights* window, you can view the associated *Roles* as they are defined in *Repository GUI*. The *Objects* that can be administered are located in the rows. Here, you can edit the following *Rights*.

- *All*: Combination of all other rights (maximum rights)
- *Display*: Minimum rights
- *Editing*: Rights to change the object and subordinate objects
- *Right management*: Assignment of access rights to others



Legend

Red: Non-editable

Blue: Editable

Italics: Implicit setting passed on by inheritance

Non-italics: Explicit setting directly configured

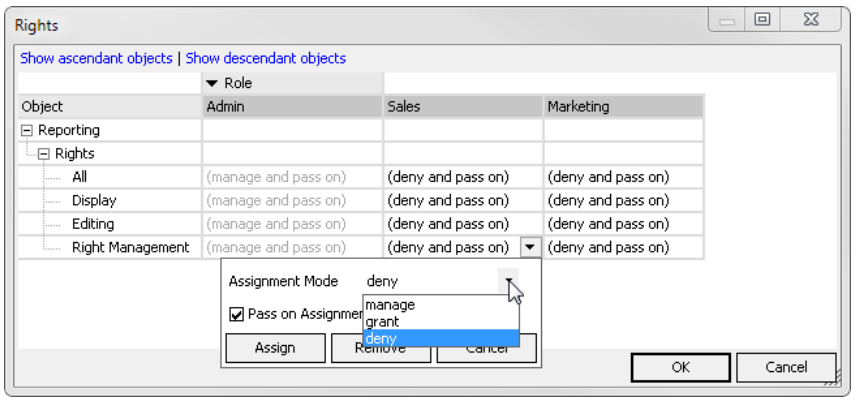
In the table cells, *DeltaMiner* displays the *Assignment mode* that applies to that object as well as to the respective right and role. Users with "right management" rights can edit the assignment mode using the following options:

- *Manage:* The role receives the respective access rights and is allowed to administer them as well. In other words, this role is allowed to assign this right to other roles as well. In this case, the role must at least have the right to assign access rights for the respective object.

- *Grant*: The role receives the respective access rights but is not allowed to administer them.
- *Deny*: The role does not receive the respective access rights.

If the cells are formatted in red, you cannot change the assigned rights because either you have been assigned this role and are not allowed to assign yourself other rights or you do not have the rights to make changes for that specific combination of object, type of access right, and role. Cells formatted in blue can be edited.

Postscript: This window was reorganized in DeltaMiner 5.5.0. The objects are now displayed in a hierarchal structure and the access rights are below them. Using the links at the top of the window, you can Show (and hide) ascendant and descendant objects. This helps you maintain an overview of which rights apply and allows you to change them independently of the object via which you opened the window.



(m) Inheriting rights

When you assign access rights, you can specify if the assignment should be inherited by descendant objects or limited to the current object. Since it makes sense to inherit these rights in most cases, the *Pass on assignment mode* option is enabled by default. You only need to interrupt the inheritance and thus restrict access rights to the current object in special circumstances (e.g. write access for a session where you don‘t want to automatically allow users to edit the objects it contains). Please note that when you assign access rights, this might affect other assigned rights if they contradict the latest change.

To assign access rights, mark the cell for the respective role and select the desired assignment type in the drop-down menu. *DeltaMiner* displays all rights that were not explicitly defined for the object and result from the object context (inheritance) in italics. To explicitly define access rights, use the drop-down menu for the respective cell. To stop the current assignment process without passing on the value to the cell, press the *Esc* key to exit the drop-down menu. You can revoke existing or unintentionally assigned rights by hitting the *Del* key, in which case the font appears in italics again. To confirm the access rights, click on *OK* in the *Rights* window. If *DeltaMiner* identifies any inconsistencies vis-à-vis existing right assignments, it informs you that it cannot accept these rights in the current form and prompts you to change your entries. If you have already assigned explicit rights to descendant objects, you must first ensure that these comply with the change that you are about to make.

If you do not have access rights for a specific object, *DeltaMiner* generally disables or hides the corresponding menu item. If the menu item is enabled or can be selected but you do not have the appropriate access right, *DeltaMiner* will state that you are unauthorized to access this section.

Even though the *Rights* window clearly shows the effective and explicit rights for a single object, the assignment of access rights takes the object hierarchy (currently in terms of folders and reports) into account as a matter of principle. *DeltaMiner* identifies which access rights effectively apply by examining the explicit

assignments of access rights along the path to the root of the object hierarchy. Effective rights can stem from any of the following scenarios:

Explicitly defined assignments of access rights for the respective object

Access rights that were either denied or passed on from ascendant objects

Implicit denials caused by the fact that *DeltaMiner* could not identify any explicit assignment of rights along the path

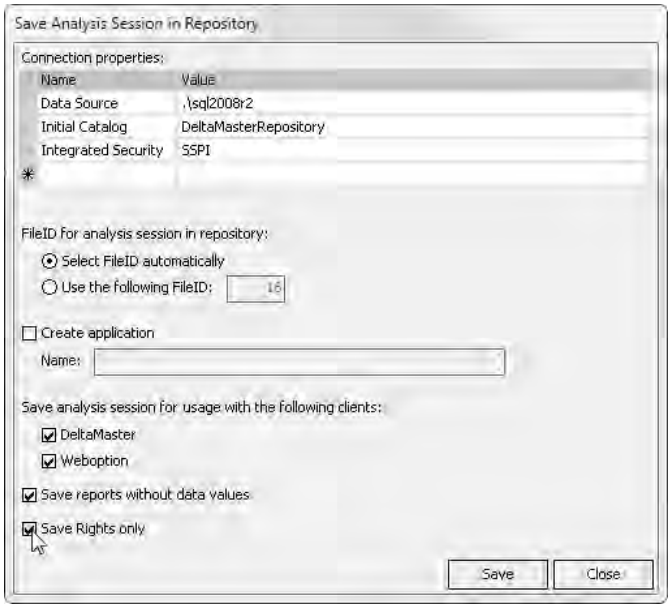
In general, *DeltaMiner* uses a restrictive approach for access rights. If no rights have been defined, the user is not able to use these rights.

If a user is a member of several roles, *DeltaMiner* grants the most comprehensive rights. As a result, it might make sense to model rights strictly from a top-down point of view.

The assignment of access rights only takes definitive effect after they have been written back to *Repository* (see next section) and the users concerned open the application from *Repository*.

(n) Saving and updating access rights

Once you have edited the access rights, you must save the changes to *Repository* in order for them to take effect. To do this, you must use the same *Save analysis session to repository* option (*File* menu*)* that you originally used to transfer the analysis session to *Repository*. In order to save these changes, you must be a member of the ~~"I~~mport" role in the *Repository* database [see section (a)].



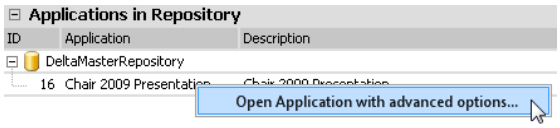
DeltaMiner normally saves the access rights when you save the entire analysis session. Alternatively, you can also opt to *Save rights only.* This speeds up the process if you have only changed the access rights and the reports etc. are to remain as they are.

To control access while saving, please note that parallel write operations are not permitted. If an error occurs, *DeltaMiner* will display an appropriate message. If you try to save an application that another user has already opened for reading, *DeltaMiner* will ask how it should proceed because in this case you are permitted to lock out the other user and force a restart of their application in *Repository*. You then have the choice of either allowing the read access by the other user (and thus canceling your write attempt) or locking out the other user and forcing a restart of their application from *Repository*. If you choose the second option, the next time the other user tries to read an object in the respective session, *DeltaMiner* will notify them that it cannot grant access and will reopen their session. If you force the write operation, *DeltaMiner* cannot not save any changes (either to *Repository* or as a file) that other users have made but have not saved up until that point.

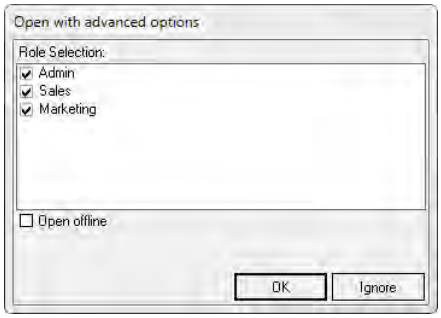
When you save your analysis session (either the session data as a whole or just the information on the access rights), any unmodified objects of this analysis session are retrieved from *Repository* and merged with the objects that you have modified. All of the data is then written back to *Repository*. At this time, the opened session is no longer dependent on the access to *Repository*. In other words, there are no longer any read locks or write locks that would conflict with other users. You will not see any changes made by other users to an analysis session (including any changes to the assignment of access rights) until you reopen the application from *Repository*.

When *DeltaMiner* has successfully saved your analysis session (either the session data as a whole or just the information on the access rights), it will confirm this with a separate dialog box showing the respective file ID.

(o) Opening applications with advanced options



If the selection of the available roles for the current session differs from the setting in *Repository GUI*, you can *Open [the application] with advanced options* from the *Portal* (context menu of *Applications in repository*).



You can now use these advanced options to select which roles you would like to use or exclude. If the access rights were already enabled for this session, *DeltaMiner* will open it taking into account the respective access rights for the selected roles. You can also opt to open the session in *Offline Reader* (i.e. without connecting to the OLAP or relational database) by enabling the *Open offline* option.

Read access to a *Repository* application from *DeltaMiner* is permitted as long as a write operation isn't being performed simultaneously. Similar to *WebClient*, multiple *DeltaMiner* instances can have simultaneous read access to an application. If access rights have been enabled for an analysis session but you do not have permission to display at least one of the required objects (i.e. at least one effectively visible folder or report), *DeltaMiner* will not open the analysis session. In this connection, *DeltaMiner* also takes into account any access right restrictions caused by a role selection.

(p) WebClient

The highest user level that you can access from *WebClient* is *Viewer*. As a result, only access right limitations that affect visibility have any impact on *WebClient*.

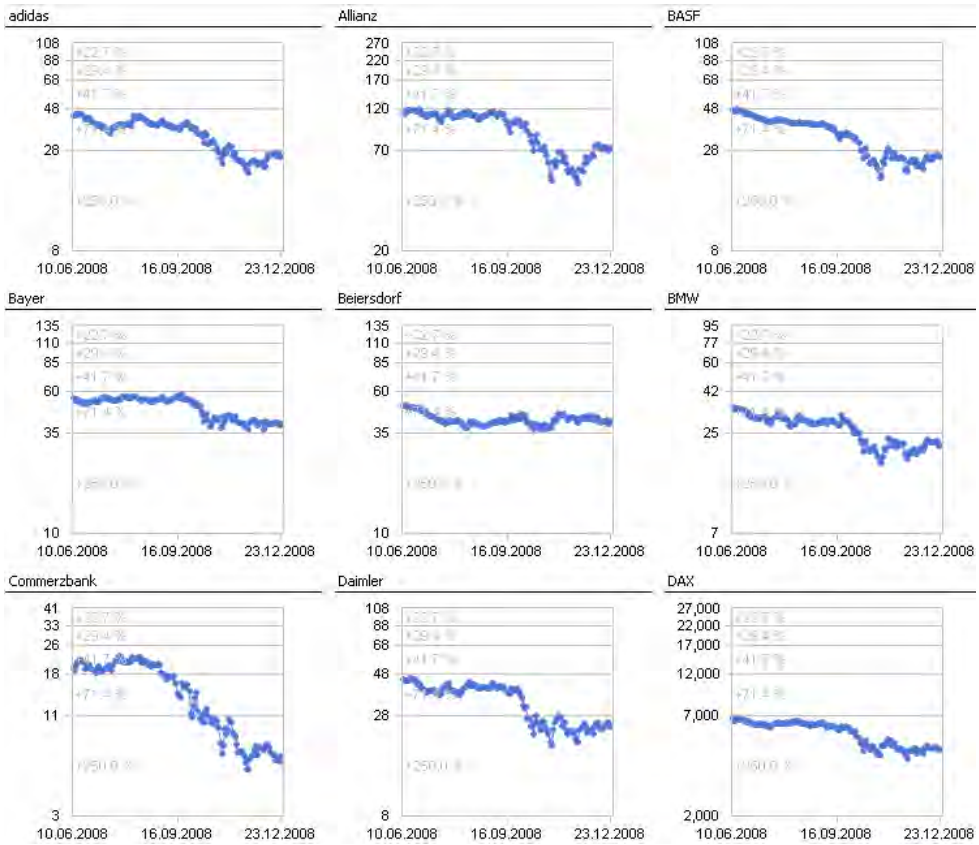
(q) Licensing

The „RepositoryService" requires a separate license. If you are already using *DeltaMiner WebOption* and have set up *Repository*, you can use it from your Windows client as well at no additional charge. For more information, please contact your *DeltaMiner* account manager.

(20) Small Multiples: Scaling Time Series Comparably and with Shared Reference Lines, Similar to the Wall Street Journal (WSJ)

When you are comparing time series, it's the relative (i.e. percentage) changes – and not the absolute ones – that are important most times. Now, making these comparisons in the *Small Multiples* analysis module is

easier than ever thanks to a new scaling option that creates comparable scales similar to those found in the Wall Street Journal (WSJ).



This scale is similar to a visualization that the WSJ regularly uses to show the development of different stock market indexes.

Moving the markets

At right, Europe's benchmark stock indexes and stocks Thursday. Below each index are its most actively traded stocks. The charts show the percentage change in each index's or stock's value, rather than the point change, for purposes of comparison. The index level or stock price is indicated on each axis. All indexes and stocks are shown in local currency terms.

WSJ.com

Follow the markets throughout the day, with updated stock quotes, news and commentary at WSJ.com/Europe. Also, receive email alerts that summarize the day's trading in Europe and Asia. To sign up, go to WSJ.com/Online Today

European indexes...

FTSE 100
U.K. 4169.21
▼ 0.31% or 12.81
Stocks bounced off lows late in a session that had little overall direction. Banks were weak again. HBOS lost 7% and Barclays fell 6.2%.

DAX
Germany 4649.52
▲ 0.62% or 28.72
Volume was low and impetus weak. Siemens rose 4.7% after confirming its 2009 outlook. Auto stocks rose, led by BMW's 6.6% gain.

CAC-40
France 3269.46
▲ 1.10% or 35.50
Defensive and oil-related stocks were the catalyst on a day of light trading. Total rose 3.1% and France Telecom was up 2.8%.

WIG
Poland 26702.48
▼ 3.22% or 888.11
A volatile session saw heavy losses on commodity stocks. Earnings weighed negatively on media company Agora, down 16%.

The WSJ format has the following characteristics:

1. The same slopes represent the same percentage changes – both within a single chart as well as for all four charts.

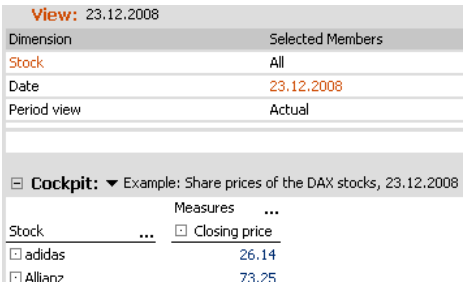
2. All charts show the same relative value range to compensate for differences in order of magnitude.

3. The reference lines go across all charts at the same height and divide them into five sections that show the exact same percentage change. For example: In the FTSE100, the lowest section covers 3,000 to 4,500. That is the equivalent of 50% growth – just as it is for the DAX (from 3,750 to 5,625), CAC-40 (from 2,500 to 3,750), and WIG (from 20,000 to 30,000) indexes.

4. The reference lines are placed at ~~r~~round" numbers for all charts.

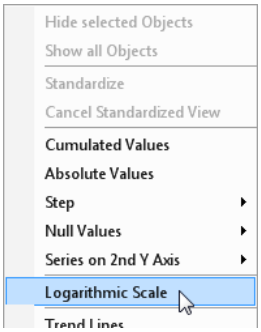
As a result, these charts are comparable and highly aesthetic alike.

What is also interesting is the explanation that WSJ prints next to these charts: ~~T~~The charts show the percentage change in each index's or stock's value, rather than the point change, for purposes of comparison." It doesn't point out that the charts use a logarithmic axis scale. It just mentions the effect – namely, that you can compare relative changes. This may help to reduce any fears that people have of logarithmic scales.

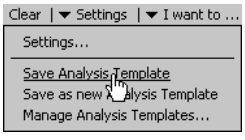


In *DeltaMiner*, you can access this scale option in *Small Multiples* over time series. We will explain how this feature works using the 2008 stock prices of DAX companies.

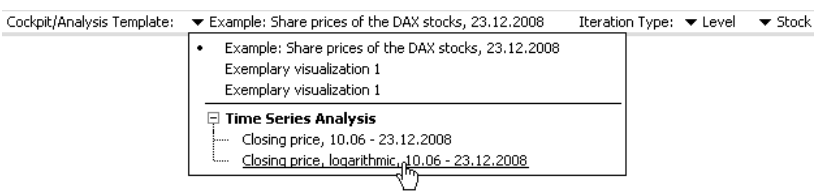
To start, you simply create a time series analysis for one of the stocks that you want to compare. Now, you can select the *Logarithmic scale*, which is essential for the WSJ method, from the context menu or *I want to* menu.



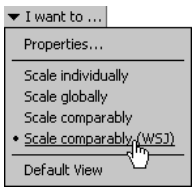
After you have saved these and other desired *Settings* as an *Analysis template*, you can switch to the *Small Multiples* analysis module.



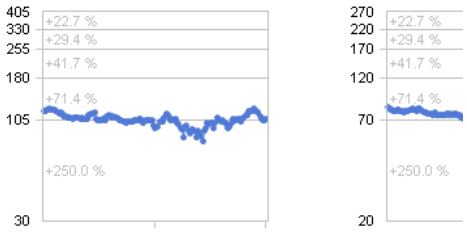
In the *Small Multiples* analysis module, select the saved settings as a *Cockpit/Analysis template* and pick the desired.



If the analysis template has been saved with a logarithmic scale, *DeltaMiner* will offer a fourth scaling option, based on the style used by the WSJ (context menu, *Properties*, or *I want to* menu). If *DeltaMiner* does not offer this option, the analysis template was saved without a logarithmic scale. In this case, enable this option in the time series analysis as described above.



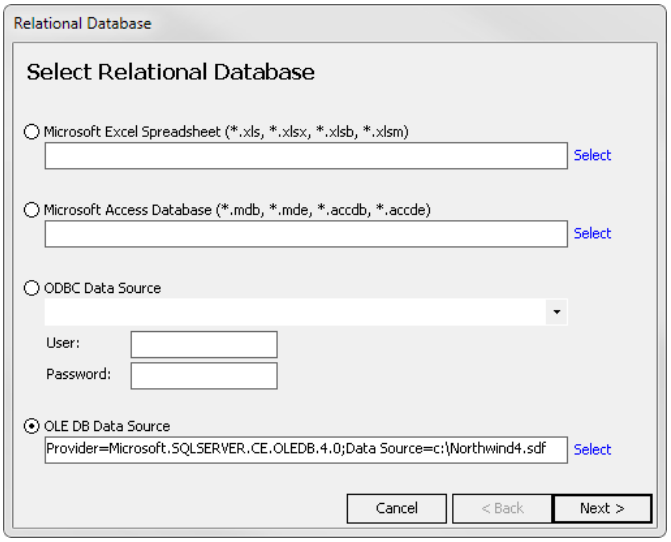
DeltaMiner will then create a chart that automatically shows reference lines and labels them with the relative change shown in this section.



(21) TableWizard: Accessing the Microsoft SQL Server Compact Edition and SAND Analytic Server

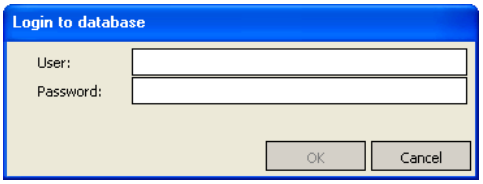
Since version 5.4.3, you have been able to use *DeltaMiner* in combination with purely relational applications that do not need an OLAP cube. Starting with this release, you can access two additional relational databases using *TableWizard*:

- Microsoft SQL Server Compact Edition 3.x and 4.x via the OLE DB interface
- SAND Analytic Server via the ODBC interface



For both programs, you will need to install the driver provided by the respective manufacturer. *TableWizard* itself is a subset of the former *ImportWizard*, which has been divided into the *CubeWizard* and *TableWizard* components since version 5.4.7. In order to use *TableWizard*, you will need a separate license as well as *Miner* access.

(22) WebOption: “Impersonation” after Login with User Name and Password



In combination with Microsoft Analysis Services, *DeltaMiner WebOption* now offers an additional login option. You can now also publish analysis sessions that do not use integrated Windows authentication or automatic login. Instead, *WebClient* asks you to enter a Windows user name and a password. If the authentication is successful, the —impersonation” takes place. In other words, *WebService* also runs in this constellation using the authentication data of the user entered in the dialog box and asserts the user‘s rights against the database

(23) Notes: Compatibility with Previous Versions and Installation

The following table shows if the new release contains any changes to the metadata schemas of *ReportServer* and *WebOption* as well as the *WebOption* configuration files.

Component	Files	Changes since version 5.4.8
ReportServer	„ReportServer.mdb" „ReportServer (SQL Server).sql" „ReportServer (Oracle).sql"	Yes
Repository	„Repository.sql"	Yes
WebService	„DeltaMaster.Service.exe.config"	No
WebClient	„web.config"	No
Repository GUI	„DeltaMaster.Repository.exe.config"	No

The metadata schema of ***ReportServer*** has changed. As a result, you should update your job definition database by running the „ReportServer (SQL Server).sql' or „ReportServer (Oracle).sql' script. If you use the „ReportServer.mdb' Access database, *DeltaMiner* will do the update for you automatically. As always, you should update the „ReportServer.exe' file as well as the respective DLLs so that they match the current *DeltaMiner* version. The ODBC connection string that specifies the job definition database is located in the „ReportServer.exe.config" file. Please create a backup copy of this file before you install the current version of the *ReportServer* files.

The ***WebOption*** components – *Repository GUI, WebClient,* and *WebService* – are also available in version 5.4.9. An update, therefore, is highly recommended. Since the database schema for the repository has changed in version 5.4.9, please update it with the „Repository.sql" script. Before you update *WebOption*, please create backup copies of the configuration files (see table above), any changed graphics in the „Images" folder (e.g. „Master_Top.png") as well as the style-sheet file (e.g. „DeltaMaster.css").

Since the configuration files of *WebService*, *WebClient*, and *Repository GUI* have not changed from version 5.4.8 to 5.4.9, you can reuse the older files without needing to make any changes. You can update *WebService, WebClient, and Repository GUI* by copying the new files into the respective folders. Once again, please make backup copies of these files before doing so. A separate setup is not necessary.

20 DeltaMiner deltas! 5.5.0

What's new in version 5.5.0 Find out in this overview of the Nov. 18 2011 release!

(1) Alias Sets: Options for Export and Import 3

(2) General: Automatic or User-defined Chart Size 4

(3) ReportServer: Export Format CSV Supported for SQL Drill Through Reports..... 6

(4) ReportServer: Passing the Job Definition Database with the "-DSN" Command Line Parameter..... 6

(5) ReportServer: New Export Format "ppt" for Generating PowerPoint Files 7

(6) ReportServer: Folder Selection Shows Hierarchical Structure of the Briefing Book 8

(7) CubeWizard: Optionally Creating Multiple Measure Groups Instead of Multiple Cubes 8

(8) CubeWizard: Enabling Writeback for Cube Files 8

(9) Dynamic Portfolio Analysis: New Analysis Module..... 9

(10) Export: New Default Folder for Export Templates 14

(11) Export: Options Dialog Rearranged..... 15

(12) Export: Generating PowerPoint Files..... 15

(13) Licensing: Sentinel RMS 8 Required for 32-Bit Edition (As Always for 64-Bit Editions) 15

(14) Notation: Priority Control for Notation Rules..... 16

(15) Oracle Essbase: Choosing the Measure Dimension for New Analysis Models 16

(16) Pivot Table: Accessing the Axis Definition via the Context Menu 17

(17) Pivot Table: Removing a Row/Column from Member/Measure/Tuple Selection 17

(18) Portal: Copying the Path of Portal Folders or Analysis Files to the Clipboard 17

(19) Presentation Mode Starts with Assigned Start Report 17

(20) Repository: Command Line Parameter "-appX" for Starting an Application from the Repository .. 18

(21) View: Multi-column List 19

(22) View Context: Restricting Member Selection by MDX Expression..... 19

(23) SQL Drill Through: Enabling Fixed Columns..... 20

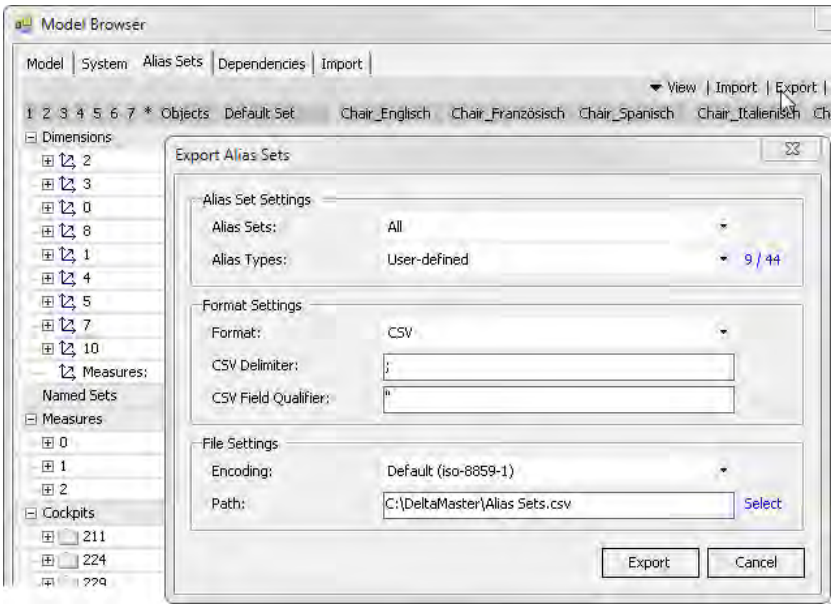
(24) WebClient: Exporting to a PowerPoint File..... 21

(25) WebService: Specific Customer or Application Folders for Export Templates..... 21

(26) Notes: Compatibility with Previous Versions and Installation..... 21

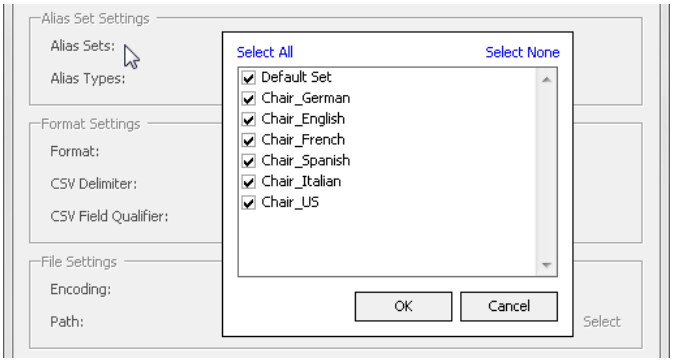
(1) Alias Sets: Options for Export and Import

DeltaMiner offers various options for importing and exporting alias sets. You can edit these settings to adjust the format and specify in detail which objects you wish to import or export.

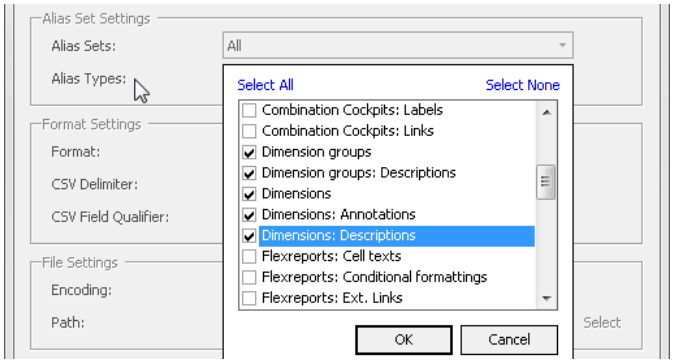


You can access these options in a new dialog box, which opens as soon as you start an *Import* or *Export* (*Model* menu, *Model browser*, *Alias sets* tab).

If you now select a *User-defined alias set*, you can choose which languages you want to import or export.



You can also specify if you want to import or export all *Alias types* or merely selected ones (e.g. just descriptions of dimensions, the names of reports or cockpits, or descriptions).



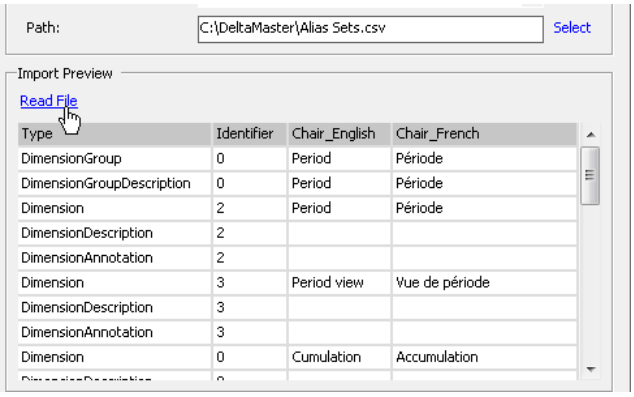
In addition, you can also define which *Delimiter* and *Field qualifier* you would like to use in CSV (Comma-Separated Values) format. The delimiter splits up the individual fields within a row (in this case, the different languages). The field qualifier, in contrast, keeps the text together within a field so that the delimiter can appear within it without automatically splitting up that field. In most cases, you will probably want to use quotation marks as your field qualifier and either a comma, semicolon, or tab (i.e. "\t" without the quotation marks) as the delimiter.

In addition to CSV, you now can also import and export alias sets in *XML* format.

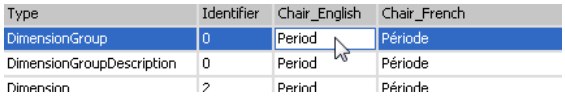
Under *File settings*, you can define which *Encoding* (e.g. Unicode or ASCII) you want to use as well as the name of the file you wish to import or export.

To *Export* an alias set using your settings, simply click on the respective button.

Importing a file, in contrast, is a two-step process. After you have entered the *Path* (including the file name), you need to *Read [the] file* by clicking on the respective link. *DeltaMiner* then displays the entire content of the file as an *Import preview*. Here, you can check how *DeltaMiner* has interpreted the file and how it would insert it into the analysis model. This way, you can check the import before you actually start it.



If desired, you can directly delete rows or their content in the *Import preview*. To delete a row, simply click on it with your mouse so that it is highlighted and press the *Del* key. When you delete a row, you do not change the underlying file. *DeltaMiner* simply excludes "deleted" rows from the import. You can edit the text by double clicking on the desired field. Alternatively, you can navigate the file using the arrow keys and edit the field content by pressing *Enter* or the *F2* key.



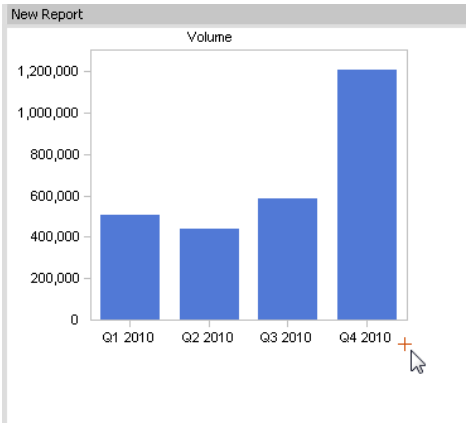
During an import, the selected alias sets act as a filter. *DeltaMiner* only imports the columns from the file that were selected in the *Alias set settings*.

Once you have *Read* the file, you can *Import* it by clicking on the respective button.

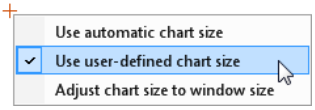
You can import and export alias sets with *DeltaMiner* 5.4.2 and higher. This function is primarily used to design multilingual applications. For more information on creating or working with .csv files, please read *DeltaMiner deltas!* 5.4.2, feature #1.

(2) General: Automatic or User-defined Chart Size

You can now define the size of pivot charts and graphical views in many analysis modules.



A small plus sign in the bottom-right part of the screen indicates that you can change the chart size. Once you open the context menu of this symbol, you can select from the following size options:



- *Use automatic chart size*: *DeltaMiner* automatically selects the width and height of the chart. The size varies based on the number of objects to be displayed. If there are only a few, *DeltaMiner* uses a small chart and if there are many, it allots more space. In doing so, *DeltaMiner* attempts to keep the size of the individual chart elements (e.g. columns or bars) constant. As of *DeltaMiner 5.5.0*, the automatic chart size is the default setting for all new charts that you create. Besides selecting this option in the context menu, you can convert existing charts to this option by simply double clicking on the plus sign.

- *Use user-defined chart size*: This option lets you define the maximum size of the chart explicitly. In this mode, you can use your mouse to move the plus sign with which you opened the context menu. The plus sign marks the lower-right corner of the space that is available for the chart. The window of your *Cockpit, Analysis, or Report* marks the upper-left corner of the space available.

  If you mouse over the plus sign, you will see that the shape of the mouse pointer changes. This shows the direction in which you can currently move the plus sign.

  A vertical arrow indicates that you can only change the height. The width remains constant.

  A horizontal arrow indicates that you can only change the width. The height remains constant.

  A diagonal arrow indicates that you can change the width and the height. In other words, you can move the plus sign in any direction.

  The space set this way for a user-defined chart size is the maximum space that *DeltaMiner* will use for the chart. If you open the analysis session on a laptop with a low resolution, for example, *DeltaMiner* will squash the chart up if necessary. If your screen has a higher resolution, however, the chart will not be larger than the user-defined size.

  Please note that the user-defined chart size option does not work in *Combination Cockpits*. The size defined in the combination cockpit will override it. The same holds true in *Small Multiples*, where *DeltaMiner* automatically measures and positions the individual tiles.

- *Adjust chart size to window size:* If you select this option, the chart will take up the entire space available in the window (e.g. the entire cockpit window or nearly the entire screen in presentation mode).

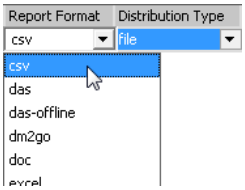
DeltaMiner sizes all charts that were created in any version prior to *DeltaMiner* 5.5.0 as before, in other words, it adjusts the chart size to the window size. It does not automatically alter the size option. In the past, the option for adjusting the chart size to the window size occasionally created awkward-looking charts because *DeltaMiner* would display a relatively small amount of data using very large chart elements – simply because there was space available. With the new default setting (*Use automatic chart size*), this won't happen anymore. For existing reports, you can change the option and select either the *user-defined* or *automatic* sizing options.

The new size options are available in all pivot charts (e.g. pivot tables in the *View* as a *Chart* or as a combined table and chart) as well as in most analysis modules that have or offer a chart view, namely: *Cross Table*

Analysis, *Time Series Analysis*, *Trumpet Curve*, *Portfolio Analysis*, *Regression*, *Navigation*, *Waterfall Analysis*, *Comparator,* and *Dynamic Portfolio Analysis* (see feature #9). *DeltaMiner* does not currently support automatic sizing for certain chart formats such as pie charts, rings, or radar charts. As part of a serious, matter-of-fact, and unobtrusive reporting style, however, you would only want to use these formats in well justified individual cases in which you would then select a user-defined size.

By the way: Whenever you wish to refine the design of your reports, check and see if it isn't time to replace your charts with graphical. These eliminate size issues. And if *DeltaMiner* needs to add new objects after updating the report, it simply extends the table without changing the way it deals with the graphical elements.

(3) ReportServer: Export Format CSV Supported for SQL Drill Through Reports



Since version 5.4.9, you can use *ReportServer* to export pivot tables to CSV (comma-separated values) format. Starting in version 5.5.0, however, you can also export reports from *SQL Drill Through* by simply selecting the "csv" report format in *ReportServer*.

This report export from *SQL Drill Through* works identically to the one for pivot tables. For more information about export templates, new *ReportServer* variables, etc., please read *DeltaMiner deltas! 5.4.9*, feature #9.

In order to use the CSV export option, you will require a separate license. If you would like a test license, please contact us for more information.

(4) ReportServer: Passing the Job Definition Database with the "-DSN" Command Line Parameter

When you open *ReportServer*, you can enter which job definition database you want to use in the command line. This way, you can use the very same *ReportServer* installation with different databases that, for example, are maintained in decentralized locations by different users. Thanks to the command line parameter, centrally run batch files can trigger jobs that were defined in decentralized databases.

This new parameter is "-DSN=" followed by the name of the ODBC data source. For example:

"C:\Program Files\DeltaMaster 5.5.0\ReportServer.exe" **-DSN**=DeltaMasterReportServer ALL

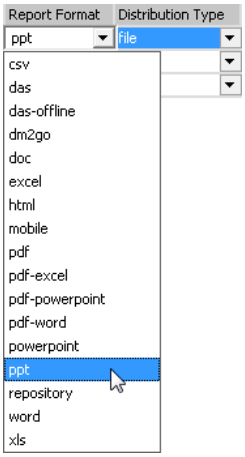
The user account that is used to run *ReportServer* must have read access to the specified database. In addition, the metadata schema of all databases to be used must match the version of the *ReportServer* installation. In other words, if you are running *ReportServer* 5.5.0, the databases specified in the command line must correspond to that version. In the event of a new release, you may need to update all the databases that *DeltaMiner* uses. You can see if the schema has changed and an update is necessary for the new release in each issue of *DeltaMiner deltas!* in the final section titled "Notes: Compatibility With Previous Versions and Installation".

Currently, you can only use this type of call to run batch jobs. If you have not entered any additional parameters (such as Job ID, Job Group, or ALL for all jobs), the interactive user interface automatically starts with the default database as listed in the "ReportServer.exe.config" file or in *ReportServer* under *Settings* on the *General* tab. We will change this setting in an upcoming release so that you can enter the job definition database in the command line for the interactive user interface as well.

The “-?” and “-help” parameters are also new in version 5.5.0. If you enter these parameters, *ReportServer* displays the supported command line parameters at the prompt.

(5) ReportServer: New Export Format "ppt" for Generating PowerPoint Files

ReportServer now supports an additional way to export PowerPoint files: It can directly generate export files without needing to automate Microsoft PowerPoint. In other words, you do not require a local PowerPoint installation (or associated license) to export a PowerPoint slide show. Since generating the files is much faster than automating them, it makes sense to use this method when you need to produce either very extensive reports or large quantities.



Compared to the automated export, there are three limitations to generating PowerPoint files:

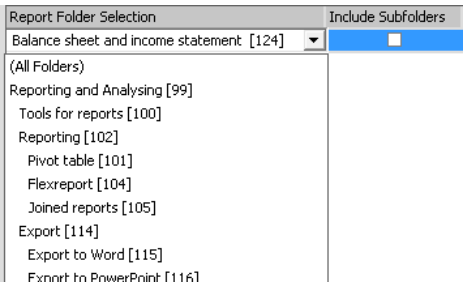
- It transfers the action title and any report comments without formatting.
- It cannot call the “AfterExport()” macro, which means that it does not automatically start script-driven postprocessing of the generated slide shows.
- The target format must have the same format as the template. If you want to generate files in PowerPoint 2007/2010 (.pptx) format, therefore, you need a .potx or .potm template. For PowerPoint 2000/XP/2003, you need a .pot template.

If you want to use the new component to generate PowerPoint files, simply select “ppt” as the *Report format* in *ReportServer*. If you instead want to automate Microsoft PowerPoint, select “powerpoint” or “pdf-powerpoint” as the report format. In all three cases, you need a “ReportServer Office” (“DM-RPSO”) license.

You can also use this new export option for performing an ad hoc export from *DeltaMiner.* See feature # 12 for more information.

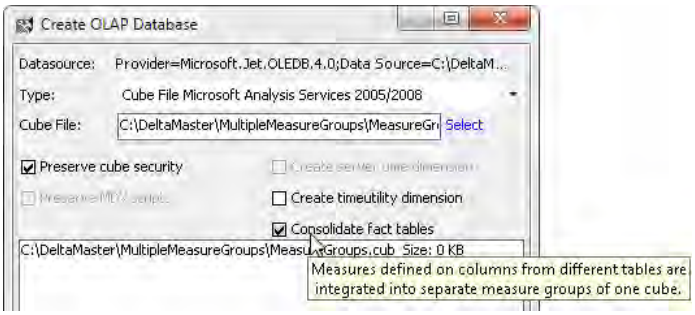
(6) ReportServer: Folder Selection Shows Hierarchical Structure of the Briefing Book

The *Report folder selection* list is clearer than before. It now uses indentations to show the same hierarchical structure as used in the *Briefing book*.



(7) CubeWizard: Optionally Creating Multiple Measure Groups Instead of Multiple Cubes

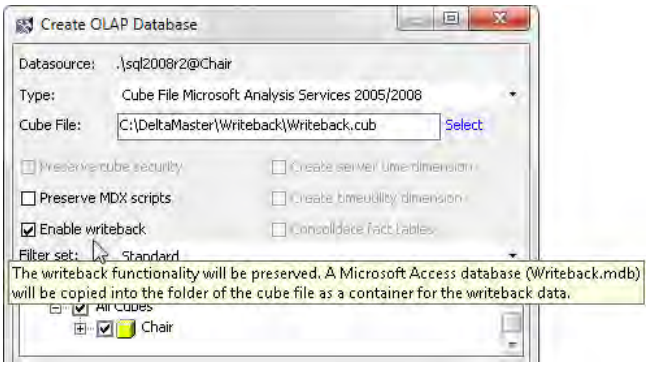
With the new option for creating OLAP databases (*Model* menu), you can now *Consolidate fact tables* into <u>one</u> cube. *DeltaMiner* then stores each fact table as its own measure group in the new cube. If you want to generate a separate cube for each fact table as in the past, simply do not enable this new option.



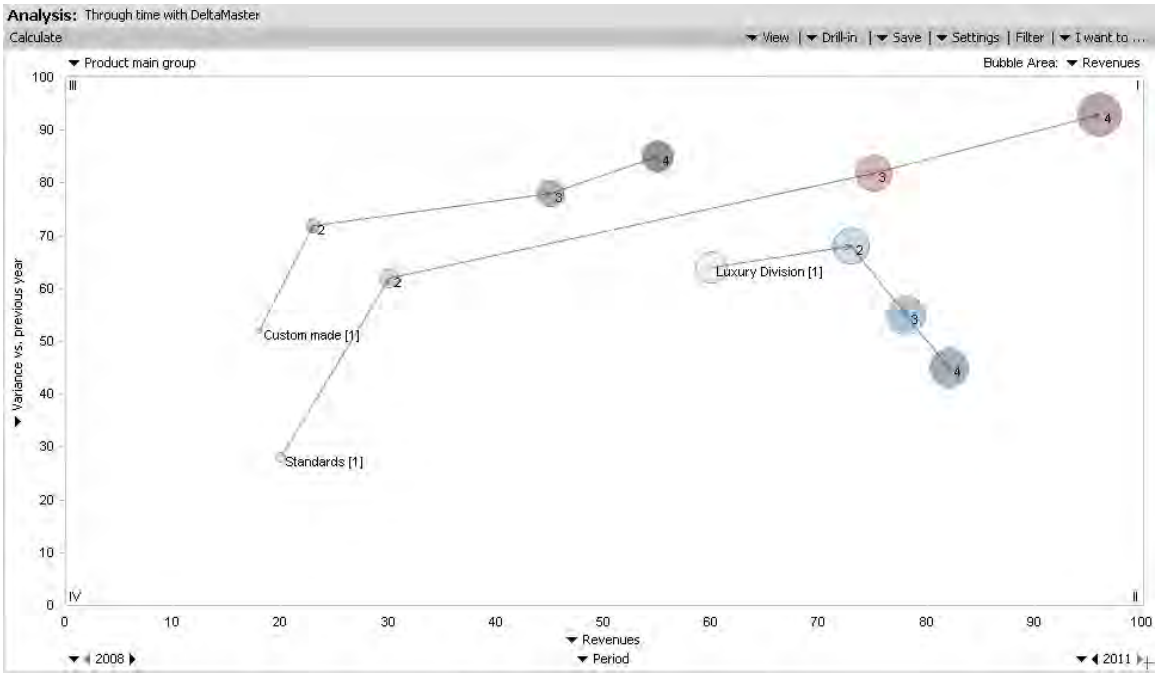
(8) CubeWizard: Enabling Writeback for Cube Files

If you create a cube file from a server-based OLAP database (*Model* menu), you can now *Enable writeback* functionality in order to save entered data to the cube. This functionality is very useful in simulations and planning applications.

DeltaMiner automatically generates an Access database with the necessary structure as the storage location for the entered data. This .mdb file is generated in the same folder as the .cub file.



(9) Dynamic Portfolio Analysis: New Analysis Module



DeltaMiner now offers a new analysis module: *Dynamic Portfolio Analysis*, which adds a time component to the existing functionality of a *Portfolio Analysis*. Instead of displaying the portfolio as a snapshot of a certain time period, the *Dynamic Portfolio Analysis* shows how the objects that you are analyzing perform over time. In other words, this module works like an interactive time lapse. Using the wheel of your mouse, you can shorten or extend the time frame on your screen to view the performance of different groups of customers, products, etc. over time. This dynamic, animated presentation can provide valuable insight into developments that would be harder to identify in a static presentation.

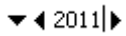
The Dynamic Portfolio Analysis module is similar to a Movement Analysis, which tracks Concentration Analyses – as opposed to Portfolio Analyses – over time.

(a) Handling

The *Dynamic Portfolio Analysis* is easy to learn because it combines the handling of the *Portfolio Analysis* and *Time Series Analysis* modules. Similar to a *Portfolio Analysis*, you first select which measures *DeltaMiner* should display on the Y and X axes, for example, by dragging and dropping them from a cockpit onto the labels or selection fields on the respective axes. If desired, you can also include a third measure in the bubble area (“Revenues” in the previous screenshot). You can now select the dimension level that you wish to analyze in the field on the left above the chart (“Product main group” in the previous screenshot).

The dynamic component that gives this module its name comes into play through the controls below the portfolio chart. Here, you can select the desired level of the time dimension (e.g. years, quarters, or months) as well as the start (on the left) and end (on the right) periods. These controls work just like they do in a *Time Series Analysis*. For more information, please read *DeltaMiner deltas!* 5.3.2, feature #34.

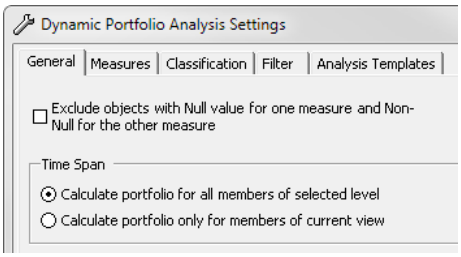
To create an initial portfolio chart, simply click on *Calculate*. *DeltaMiner* now displays a bubble for each member of the selected dimension level (possibly filtered by the selection in the *View* window or any filters under *Settings)* and for each point in time for the selected time frame.



You can use the **wheel of your mouse** to change the time period without having to recalculate the analysis – this is especially useful for the end period. Simply click on the period so that the control switches to input mode. When you now move the wheel of your mouse, *DeltaMiner* runs through the periods while interactively displaying new bubbles or removing existing ones in the portfolio chart.

With the exception of *Regression lines,* you can access all of the options that are available in the "static" *Portfolio Analysis* in the context menu or the *I want to* menu. The *Settings* are also almost identical to those for the regular *Portfolio analysis* except for the options for virtual hierarchies (C*lassification* tab, see next section) and the additional options for the *Time span*.

In the Dynamic Portfolio Analysis Settings on the General tab, you can choose the desired Time span for the analysis: either for all members of [the] selected level (regardless of the selection in the View window) or only for members of [the] current view. With this option and an appropriate member selection in the View, you could also display gaps, or leaps, for example, just the fourth quarter of each year, or all weeks except for holiday closedowns.

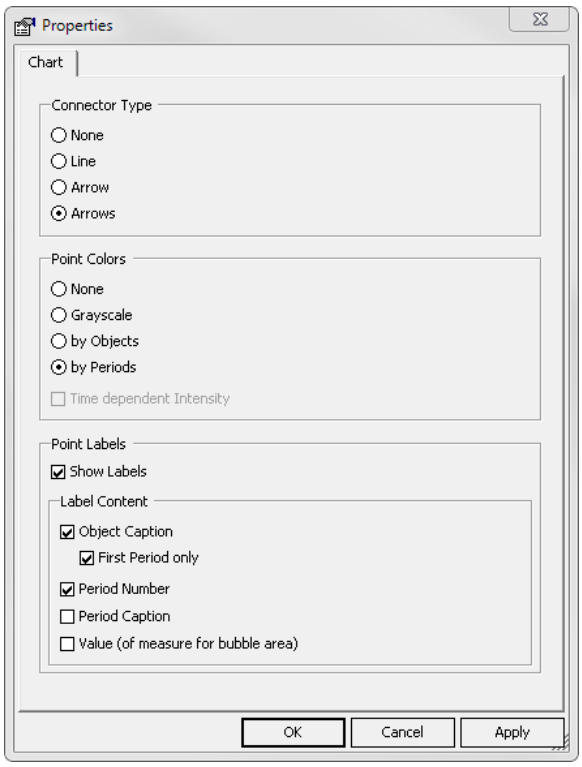


You can only edit these *Settings* in *Miner* mode.

(b) Threaded Analysis Technology

If you double click on a data point in *Miner* mode, you transfer the respective object and period to the *View* (Threaded Analysis Technology).

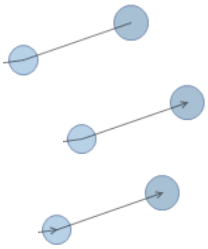
You can only create a virtual hierarchy with the static *Portfolio Analysis* – not with the dynamic one. As a result, these options are not included on the *Classification* tab in the *Settings* of the *Dynamic Portfolio Analysis*.



(c) Properties

You can edit the properties of this analysis module in either the context menu or the *I want to* menu on all user levels from *Reader* to *Miner*. Here, you can change the *Connector type* between the data points of the objects, the *Point colors* as well as the *Point labels*.

To visualize the time sequence graphically, you can use the following *Connector types* to connect the individual data points of the respective object:

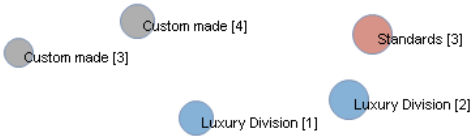


- *Line*: A solid line connects the data points.
- *Arrow*: A solid line connects the data points and ends with an arrow at the last one.
- *Arrows*: A solid line connects the data points, the end of each line between two data points has an arrow.

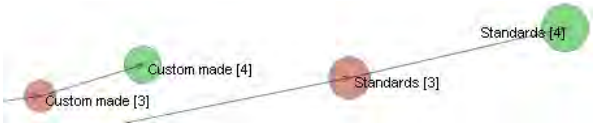
If you are working with multiple objects, *Point colors* can add clarity to the portfolio. Here, you can choose from the following options:

None: The bubbles are displayed as hollow circles as in a static *Portfolio Analysis*.

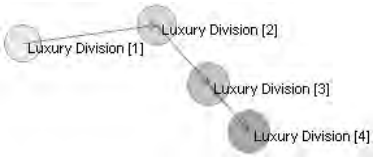
- *Gray scale*: The bubbles are displayed as filled circles.
- *By objects*: All data points of the same object have the same color for all periods (e.g. all data points of the "Custom made" object are gray). *DeltaMiner* allocates the colors to the objects automatically.



- *By periods*: All data points of the same period have the same color for all objects (e.g. all objects in period 3 are red while all in period 4 are green). *DeltaMiner* allocates the colors to the periods automatically.



If you choose *Gray scale* or the point color *by objects*, you can also apply a *Time-dependent intensity*, which applies the lightest shade to the first data point and the darkest to the last one. This way, the base color indicates which object you are viewing and the color's intensity shows how current each data point is.



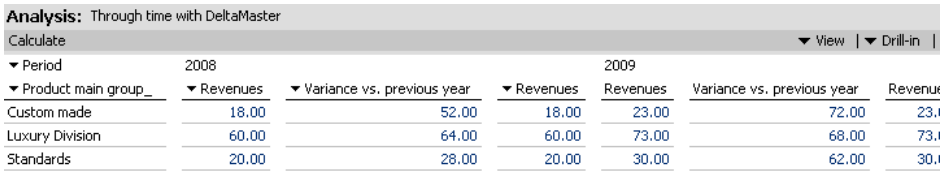
In the *Label content* section, you can define if and how *DeltaMiner* should label the data points. If you want it to *Show labels*, you can further select from the following options:

- *Object caption*: The name of the object (e.g. the respective business unit, customer, or product group). *DeltaMiner* displays the caption for each period, in other words, for each bubble. Alternatively, you can opt to show the name of the respective period on the *First period only* so that the chart contains less text and might be easier to read.
- *Period number*: The number of the period. Period 1 is the period set as the start period on the chart's X axis. In combination with the object caption, *DeltaMiner* lists the period number in square brackets behind the caption.
- *Period caption*: Name of the respective member from the time dimension (e.g. "2011"). In combination with the object caption, *DeltaMiner* lists the period caption in square brackets behind the object

caption. In combination with the period number, it lists the period number followed by a colon and then the period caption (e.g. “[4: 2011]”).

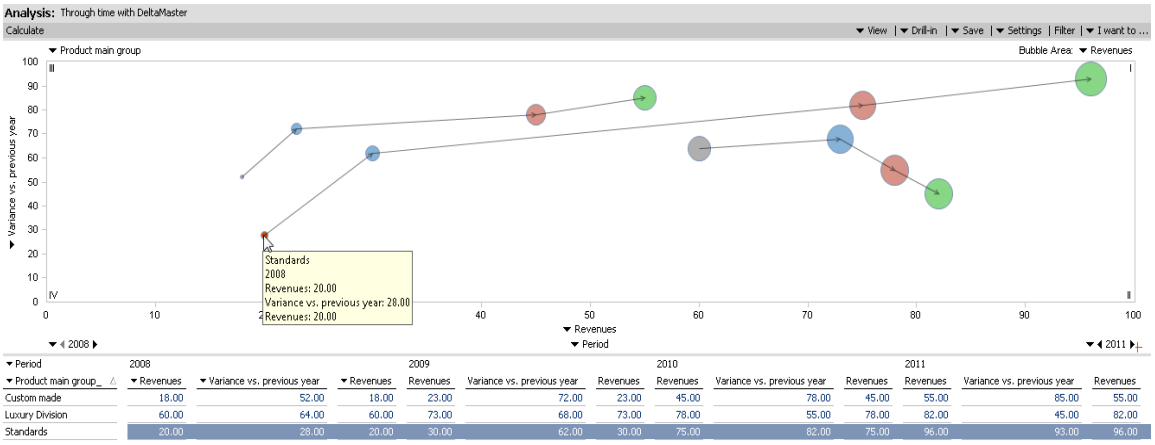
- *Value:* The value of the *Measure for bubble area* (e.g. revenues or gross margin – i.e. with a certain object in a certain period). *DeltaMiner* displays the value in a second row below the other captions as it would in a static *Portfolio Analysis*.

Instead of using a purely graphical view, you can display the data as a table just as you can in many other analysis modules (*View* menu, *Table*). This way, you can see the exact values for the individual periods right before your eyes. If you select the table view, however, you cannot interactively use the wheel of your mouse.



Period	2008			2009			
Product main group_	Revenues	Variance vs. previous year	Revenues	Revenues	Variance vs. previous year	Revenue
Custom made	18.00	52.00	18.00	23.00	72.00	23.(
Luxury Division	60.00	64.00	60.00	73.00	68.00	73.(
Standards	20.00	28.00	20.00	30.00	62.00	30.(

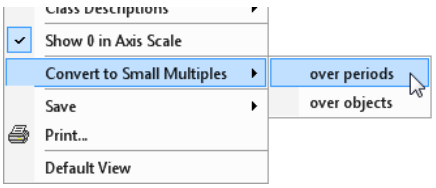
Just as in the *Portfolio Analysis* module, you can also display a *Chart* and *Table* simultaneously. If you select an object in the chart, *DeltaMiner* highlights the corresponding row in the table. Alternatively, if you select a row in the table, it highlights all of the data points for this object.



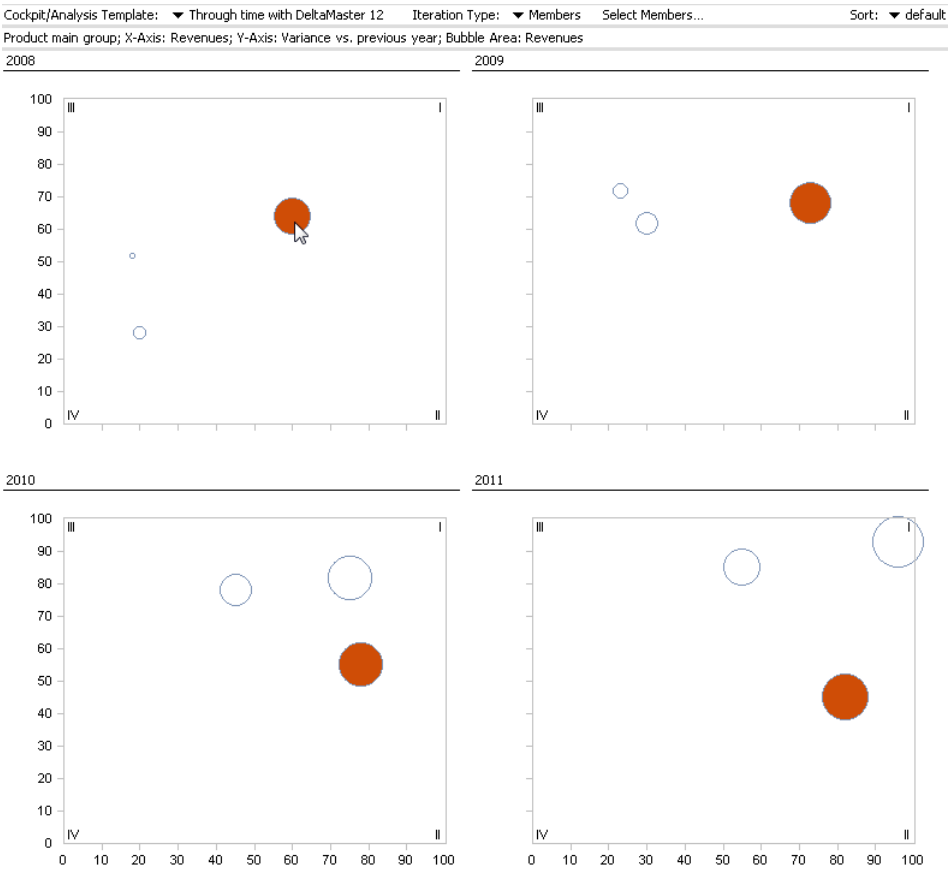
Period	2008		2009			2010			2011			
Product main group_	Revenues	Variance vs. previous year	Revenues	Revenues	Variance vs. previous year	Revenues	Revenues	Variance vs. previous year	Revenues	Revenues	Variance vs. previous year	Revenues
Custom made	18.00	52.00	18.00	23.00	72.00	23.00	45.00	78.00	45.00	55.00	85.00	55.00
Luxury Division	60.00	64.00	60.00	73.00	68.00	73.00	78.00	55.00	78.00	82.00	45.00	82.00
Standards	20.00	28.00	20.00	30.00	62.00	30.00	75.00	82.00	75.00	96.00	93.00	96.00

(d) Convert to Small Multiples

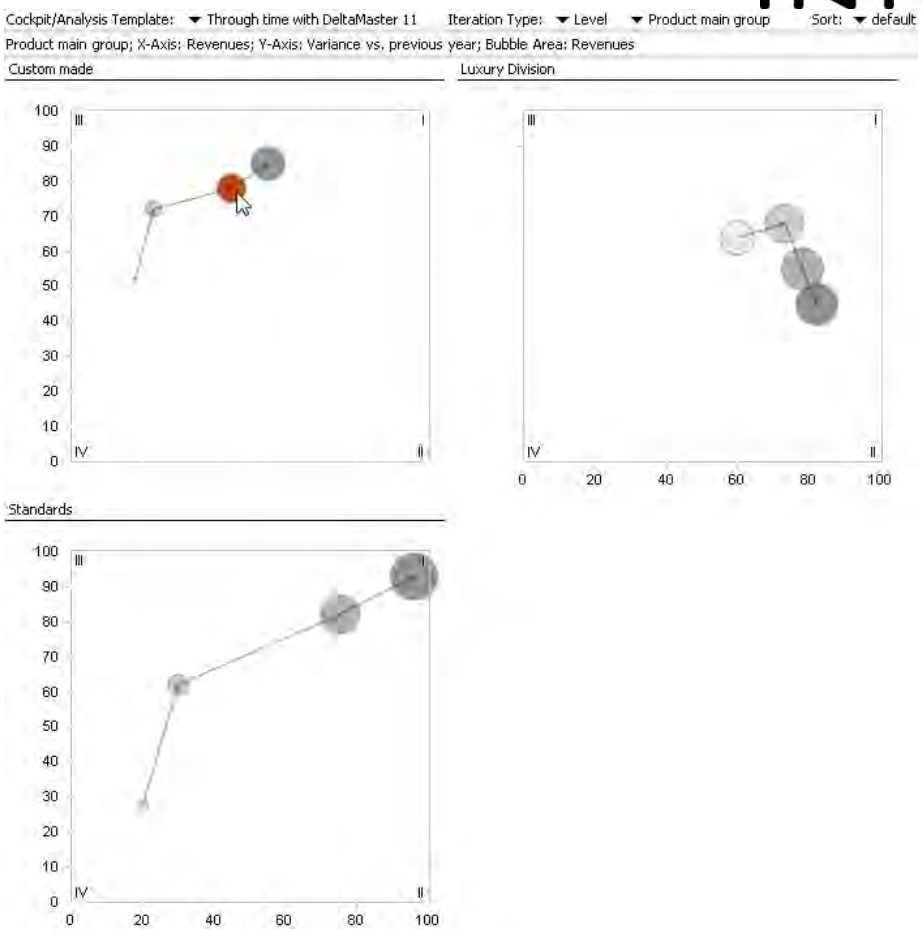
In *Miner* mode, you can easily convert the portfolio view to *Small Multiples*. This action “serializes” or breaks down the different sequences into several, individual views or tiles. From the context menu or the *I want to* menu, you can start a conversion to *Multiples* either *Over periods* or *Over objects*.



As you can see in the screenshot below, a conversion *Over periods* shows the development of all objects in the individual periods – one period per multiple. Each multiple shows a static *Portfolio Analysis*. *DeltaMiner* generates the necessary analysis template automatically.



The *Over objects* option, which is depicted in the screenshot below, shows the development of the individual objects over time – one object per multiple. Each of these multiples shows a *Dynamic Portfolio Analysis* – but only for one object and without the interactive functionality of the mouse wheel. *DeltaMiner* generates the necessary analysis template automatically.



In both cases, the *Small Multiples* module formats the individual tiles and arranges them on your screen automatically. For more information about working with *Small Multiples*, please read *DeltaMiner deltas!* 5.3.7, feature #1.

(e) User levels and licensing

The *Dynamic Portfolio Analysis* is only available on the *Miner Expert* user level. As always, although you need *Miner Expert* access to create and save a *Dynamic Portfolio Analysis*, you can access the saved reports on all user levels without requiring an additional license. In addition, you can edit the *Properties (*e.g. point colors and captions) on all user levels as well. To change the time period, however, you will need *Miner* access. If you would like to test this new module, simply contact us to request a temporary *Miner Expert* license.

(f) Other information

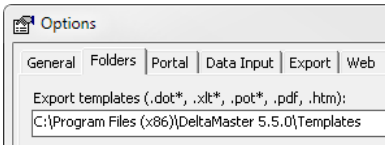
DeltaMiner labels all reports based on this module in the *Briefing book* under the acronym DPF (“DPF”).

You can also use the analysis templates of the *Dynamic Portfolio Analysis* in combination cockpits.

(10) Export: New Default Folder for Export Templates

When you install *DeltaMiner*, the program creates a subfolder called “Templates” in the installation folder. This folder contains the default export templates such as “DeltaMaster.dot”, “DeltaMaster.htm”, “DeltaMaster.pot”, and “Folder.htm”. These files were previously stored directly in the *DeltaMiner* installation folder. If you use the .zip file to update *DeltaMiner* without a setup, you can also find these templates in a subfolder “Templates”.

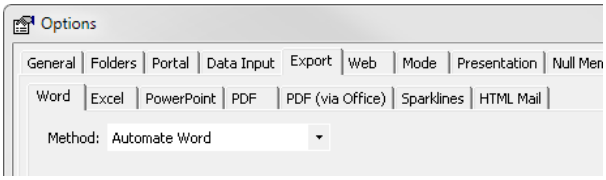
As in the past, you can define which folder contains the export templates in the *Extras* menu under *Options* on the *Folders* tab. The default setting for new installations is the "Templates" folder as described above (e.g. "C:\Program Files\DeltaMaster 5.5.0\Templates".



When you update an older installation, *DeltaMiner* automatically changes the setting for the folder if the currently selected folder for the export templates matches the current *DeltaMiner* program folder (i.e. installation into the same folder) and *DeltaMiner* cannot find the templates in this folder (i.e. after deinstalling the previous version) but it does find them in the "Templates" folder.

(11) Export: Options Dialog Rearranged

The dialog box containing the export options for analyses, reports, and cockpits now groups the options for each export format on a separate tab.

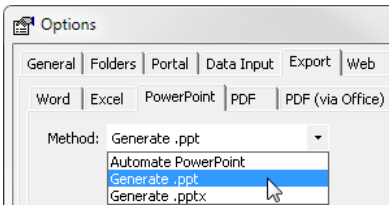


As in the past, you can change these settings in the *Extras* menu under *Options* on the *Export* tab.

(12) Export: Generating PowerPoint Files

DeltaMiner now supports an additional way to export PowerPoint presentations. This method directly generates the export files without automating Microsoft PowerPoint. As a result, you do not need a local PowerPoint installation (and, therefore, no separate license) to export PowerPoint presentations. In addition, generating these files is much faster than automating them.

You can activate the new export option in the *Extras* menu under *Options* on the *Export/PowerPoint* tab. Previously, there was only one export option: *Automate PowerPoint*. Now, you can also choose from two additional *Methods* – *Generate .ppt* in PowerPoint 2000/XP/2003 format or *.pptx* in PowerPoint 2007/2010 format.



DeltaMiner uses a template in PowerPoint 2000/ XP/2003 format (e.g. "DeltaMaster.pot") to generate .ppt files and a PowerPoint 2007/2010 template (e.g. "DeltaMaster.potx" or, if not found, "DeltaMaster.potm") to generate .pptx files.

DeltaMiner searches for these templates in the folder listed under *Options* (*Extras* menu) on the *Folders* tab for *Export templates*. In many cases, this is a subfolder of the *DeltaMiner* installation folder (e.g. "C:\Program Files\DeltaMaster 5.5.0\Templates" – see feature #10).

When you export a PowerPoint file, *DeltaMiner* uses the same component that *ReportServer* uses for a "ppt" export (see feature #5). As a result, the same limitations also apply (i.e. transfer of action title and comments without formatting, no "AfterExport()" macro, export format = template format).

(13) Licensing: Sentinel RMS 8 Required for 32-Bit Edition (As Always for 64-Bit Editions)

Starting in 5.5.0, *DeltaMiner* will use Sentinel RMS 8 for both the 32-bit version (x86) and the 64-bit version (x64). The older version, SentinelLM 7, will no longer be supported in *DeltaMiner* 5.5.0. If you run an

installation that uses SentinelLM 7 to administer concurrent licenses, you must upgrade the license server to Sentinel RMS 8. Otherwise, you cannot use concurrent licenses in *DeltaMiner* 5.5.0.

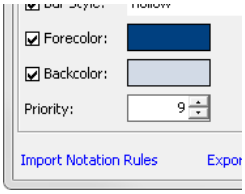
If you are still running an older license server version, *DeltaMiner* 5.5.0 displays a corresponding message when you start it.

You can get detailed instructions explaining when as well as how to change your current installation in a separate document, which you can find in the login section of our homepage.

(14) Notation: Priority Control for Notation Rules

Due to the combinatorics in pivot tables, *DeltaMiner* may apply contradictory notation rules to a cell. For example, you might have defined a certain background color for revenues, another one for budget-actual variances (as a member of a “Value type” dimension), and a third for the variance to the previous year (as a member of the “Period view” dimension). So which background color should *DeltaMiner* give a cell that shows the change of this year’s budget-actual variance for revenues compared to that of the previous year?

For situations like these, you can now assign a *Priority* to each rule. This priority control is similar to the “Solve Order” function in MDX expressions. A rule with a *Priority* of “1” has the greatest weight. All rules in the default setting have a *Priority* of “10”.

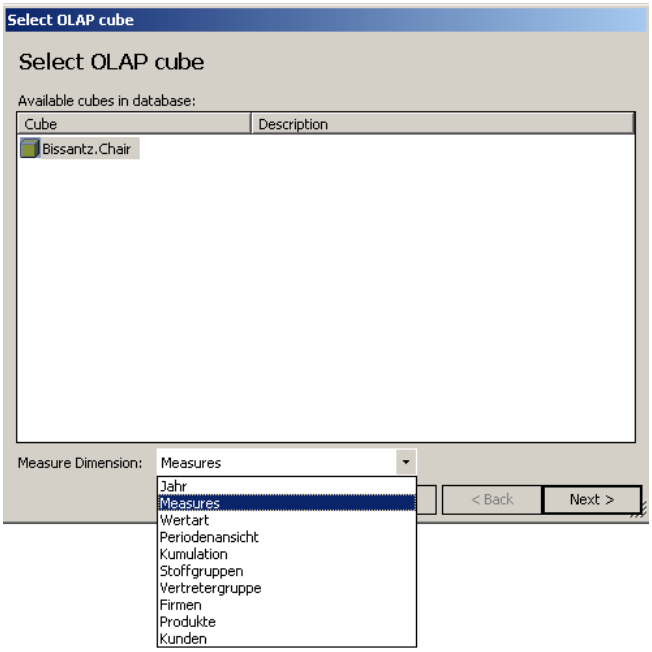


For the example above, you can define priorities for each rule. These priorities then determine which rule prevails and which color the cell receives.

You can change the current *Notation* in the editor of the *Model* menu.

(15) Oracle Essbase: Choosing the Measure Dimension for New Analysis Models

Up until now, *DeltaMiner* has always used the measure dimension that was designated as such by the Essbase XMLA provider (i.e. the dimension that was categorized as the “Accounts” dimension in the Essbase Outline). This dimension often contains measures or accounts that are arranged in a hierarchy and are transferred to a flat list in the event of use as a measure dimension. In order to use the hierarchical structure, we recommend that you create a dummy dimension containing one member (e.g. “Value”), and select this as a measure dimension. Then display the “Accounts” dimension as a normal dimension with its original hierarchical structure in the *View* window.

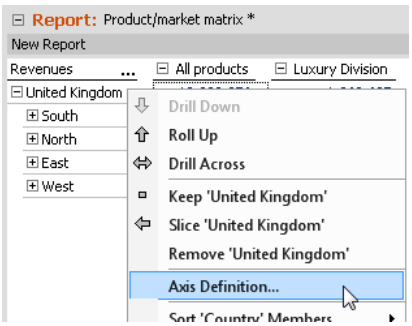


You can select the measure dimension when you create a new analysis model based on Oracle Essbase.

(16) Pivot Table: Accessing the Axis Definition via the Context Menu

You can now edit the *Axis definition* of pivot tables using a new entry in the context menus for fixed columns and rows.

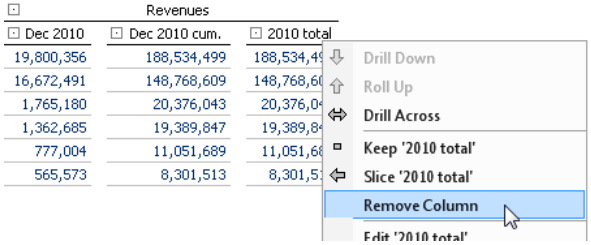
This function is particularly useful in the following situation: To open the *Axis definition*, many users click on the three dots behind the hierarchy caption. When the hierarchy caption is hidden as in the screenshot on your right, however, *DeltaMiner* does not display these three dots. Previously, you could only access the *Axis definition* in these types of tables from the *Report definition* or *Cockpit definition*. Thanks to the new entry in the context menu, however, you no longer need to take this roundabout route and you can access the *Axis definition* directly from the pivot table even when the hierarchy caption is hidden.



DeltaMiner will *Show hierarchy captions* if the respective control box has been checked in the *Table properties* on the *General* tab.

(17) Pivot Table: Removing a Row/Column from Member/Measure/Tuple Selection

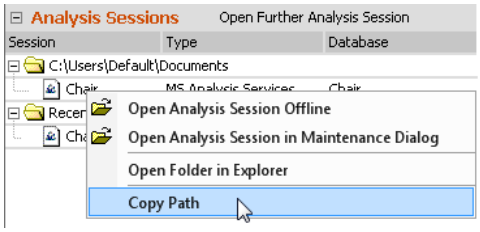
In pivot tables, you can now *Remove* individual rows or columns faster than ever before using a new entry in the context menu of the column or row header.

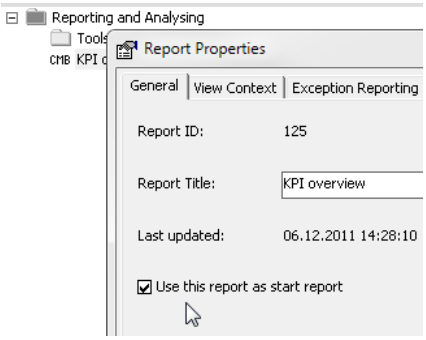


Removing columns or *rows* changes the *Axis definition* and you can thus access this menu entry on *Pivotizer*, *Analyzer*, and *Miner* levels. In order for this to work, however, the axis must be defined as a *Member selection, Tuple selection*, or as a set of measures. Please note that this command is not supported in a *Level selection* or *User-defined MDX expressions.*

(18) Portal: Copying the Path of Portal Folders or Analysis Files to the Clipboard

You can now copy the path of an analysis file (.das/.dam) or a portal folder directly from the *DeltaMiner portal* onto your Windows clipboard. To copy a path, simply select the new entry in the context menus of the folder or any files that are displayed in the *Portal*. In the case of an analysis session, *DeltaMiner* copies the absolute path including the file name to the clipboard. In the case of a portal folder, it copies the absolute path including the folder name.





(19) Presentation Mode Starts with Assigned Start Report

If you have chosen a *Start report* under *Report properties, DeltaMiner* opens this report when you begin a *Slide show* (*View* menu or *F5* key). This also applies when you start a presentation using the command line parameter “-slideshow“.

In past versions, *DeltaMiner* displayed the title page of the first folder in the *Briefing book.* The start report merely referred to the report that was shown at the beginning of a session.

For more information on start reports, please refer to *DeltaMiner deltas!* 5.4.4, feature #4.

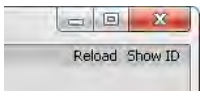
(20) Repository: Command Line Parameter "-appX" for Starting an Application from the Repository

You can now use a new option in the command line so that *DeltaMiner* automatically opens a specific application from the repository when it is started. When you create this type of shortcut on a desktop, for example, you can directly open the desired application without having to select it from the *DeltaMiner Portal*. This function also simplifies the collaboration with external applications because you can now directly open a specific application that is stored in the repository. Previously, you could only enter the name of an analysis session (e.g. the .das file) on the command line, which meant that you could automatically open an analysis session but not applications that were saved in the repository.

The new command line parameter is "**-app**X". The "X", which stands for the ID of the application in the repository, should be placed directly after "-app" without a space. Using the sample command and command line parameter below, *DeltaMiner* would start the shortcut target and open application 2 from the repository:

"C:\Program Files\DeltaMaster 5.5.0\Client.exe" **-app**2

If you select the *Show ID* link in the upper-right corner of the *Repository GUI*, *DeltaMiner* displays the ID before the *Application name* in the *Repository GUI*.



If you combine the command and command line parameter from above with the "-report" option, *DeltaMiner* then opens the application to a specific report:

"C:\ Program Files\DeltaMaster 5.5.0\Client.exe" **-app**2 **-report**102

The start report that is listed on the command line overrides a start report that was defined in the application (see *DeltaMiner deltas!* 5.4.4, feature #4). You can view the report ID in the *Report properties* as well as in the tooltip that appears when you hold the *Alt* key down while mousing over a report in the *Briefing book.*

Please note that you should not combine the "-appX" option with an analysis file. In this case, *DeltaMiner* will ignore the application from the repository and open the specified analysis session. If you have specified either no *Repository* or several, *DeltaMiner* will display an error message and will not open any application.

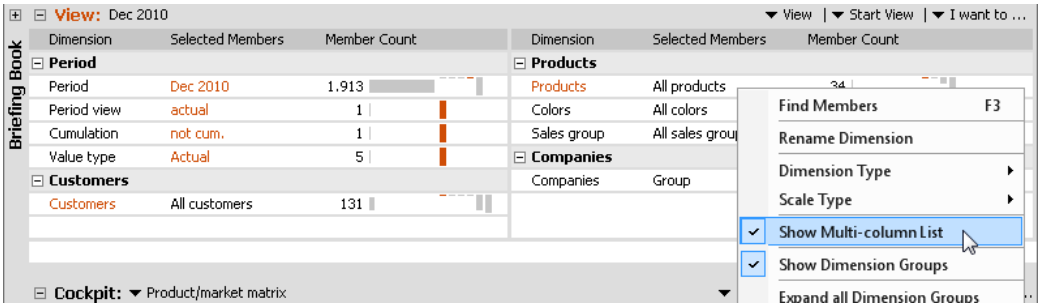
Further actions that you can start from the command line are as follows:

- Opening a report with "-reportX" (see *DeltaMiner deltas!* 5.3.2, feature #29)
- Starting the application in presentation mode with "-slideshow" (just as you would with the *F5* key, see *DeltaMiner deltas!* 5.3.8, feature #6)
- Starting the application in kiosk mode (see *DeltaMiner deltas!* 5.4.5, feature #13)

The parameters “-?” and “-help” are new as well. If you enter these parameters, *DeltaMiner* displays the supported command line parameters at the prompt.

(21) View: Multi-column List

You can now display the dimension list of the *View* window in multiple columns to save space.



We have added this new feature in response to today’s wider (but not higher) computer screens, a hardware trend that is rather unfortunate for business users. These screens may be nice for watching movies but management reports need space – primarily vertically. Through the multi-column structure of the *View* window, you can now use the available horizontal space more effectively and, accordingly, gain more vertical space for reports, cockpits, and analyses.

You can enable the *Show multi-column list* option in the context menu of the *View* window. *DeltaMiner* automatically determines the number of columns it needs to use: It simply arranges as many columns next to each other so that it doesn’t need to use any vertical scrollbars. If you want to allocate more height to the *View* window, the dimensions will simply move to the left. If a column becomes redundant in the process, *DeltaMiner* removes it automatically. If you want to reduce the height of the *View* window instead, *DeltaMiner* will move the dimensions to the right and, if necessary, break them down into new columns.

The status of the option to display the dimensions as a multi-column list is saved in the analysis file (.das/.dam).

(22) View Context: Restricting Member Selection by MDX Expression

You can now also use an MDX expression to restrict the *View context* in the *Report properties* and *Folder properties*. With this option, you can dynamically determine which members the users working in *Viewer* level

can access from the *Dimension browser*. In previous versions, you could only hide explicitly selected members (or entire dimensions, hierarchies, and levels) from *Viewer* users.

By defining the member selection as an MDX expression, you can control the selection possibilities in a much more granular and dynamic manner, for example, depending on the selection that the user has made in the *View* as well.

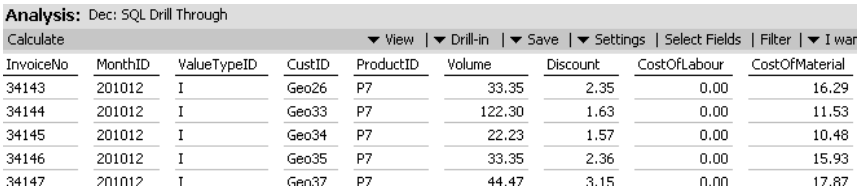
Example: The following expression only returns those customers that have generated a “relevant” amount of revenues (defined here as more than 1,000) for the current period. As a result, the users working in *Viewer* mode will only be offered this member *Selection* but not the others.

```
Filter([Customers].[Customers].[Customer].Members, (<view2>,
[Measures].[Revenues]) > 1000) -- All customers with revenues > 1000 in the
current period
```

In this expression, “<view2>” is a variable that *DeltaMiner* replaces with the current selection in the dimension having the ID 2. You can also use these types of variables in other areas of *DeltaMiner*, for example in the axis definition, named sets, and report names. You can see the dimension ID by holding down the *Alt* key while mousing over a dimension in the *View* window.

(23) SQL Drill Through: Enabling Fixed Columns

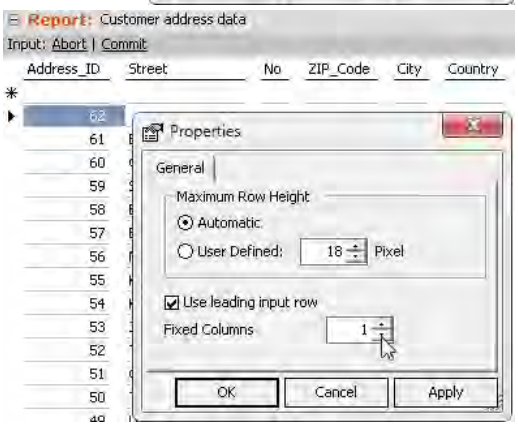
With this new option, you can define a configurable number of *Fixed columns* in the *SQL Drill Through.* These columns will remain visible even when you scroll from left to right.



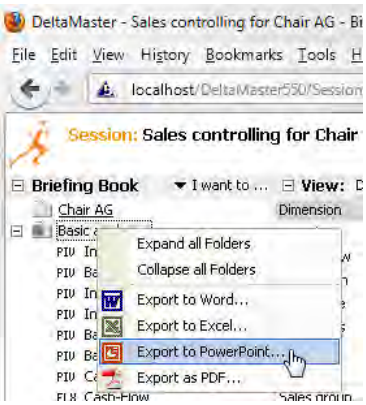
You can access the new option under *Properties* (context menu or *I want to* menu). The maximum value equals the total number of visible columns. *DeltaMiner* always “freezes” the columns starting from the left-most column and extends this column by column from left to right based on the defined value.

In the data input mode of the *Viewer* user level, there is a preceding column, which contains an asterisk indicating that you can enter data into this record. *DeltaMiner* does not count this column when fixing columns.

To cancel the fixed columns, simply change the value back to 0 or switch the display to the *Default view* (context menu or *I want to* menu).



(24) WebClient: Exporting to a PowerPoint File



You can now export individual reports or entire folders as PowerPoint presentations from a Web browser as well. Since *DeltaMiner WebClient* contains the necessary export mechanisms, you don't need to have Microsoft PowerPoint installed on your Web server.

You can start the export from the context menu of folders or reports or from the *I want to* menu in the *Briefing book* or *Report* window. If you want to start an export for a folder, *DeltaMiner* will first ask if you want to export the *current report folder* or *all report folders*.

You can access the same export options that you already know from the Windows client in *WebClient.* These options are stored in a configuration file. For more information, please read the documentation for *WebOption*.

(25) WebService: Specific Customer or Application Folders for Export Templates

In *WebOption*, you can now use specific export templates for individual customers or applications.

Normally, *WebOption* uses the template folder that was entered in the "DeltaMaster.Service.exe.config" file under the "TemplatePath" key.

In addition, *WebOption* now checks if any of the following subfolders exist:

- <TemplatePath>\<Database>
- <TemplatePath>\App <X>
- <TemplatePath>\<Database>\App <X>

"<Database>" stands for the name of the client-specific repository (see *DeltaMiner deltas!* 5.4.1, feature #22) if you already use this feature. "<X>" is the application ID. The last folder that *DeltaMiner* finds containing the known template types (i.e. "DeltaMaster.dot", "DeltaMaster.xlt", "DeltaMaster.pot", "DeltaMaster.pdf") takes precedence.
The template folders could have names such as:

- C:\Export Templates
- C:\Export Templates\Repository_for_Customer_X
- C:\Export Templates\Repository_for_Customer_X\App 7
- C:\Export Templates\App 7

(26) Notes: Compatibility with Previous Versions and Installation

The following table shows if the new release contains any changes to the metadata schemas of *ReportServer* and *WebOption* as well as the *WebOption* configuration files.

Component	Files	Changes since version 5.4.9
ReportServer	“ReportServer.mdb” “ReportServer (SQL Server).sql” “ReportServer (Oracle).sql”	Yes
Repository	“Repository.sql”	Yes
WebService	“DeltaMaster.Service.exe.config”	No
WebClient	“web.config”	No
Repository GUI	“DeltaMaster.Repository.exe.config”	No

The metadata schema of ***ReportServer*** has changed. As a result, you should update your job definition database by running the “ReportServer (SQL Server).sql” or “ReportServer (Oracle).sql” script. If you use the “ReportServer.mdb” Access database, *DeltaMiner* will do the update for you automatically. As always, you should update the “ReportServer.exe” file as well as the respective DLLs so that they match the current *DeltaMiner* version. The ODBC connection string that specifies the job definition database is located in the “ReportServer.exe.config” file. Please create a backup copy of this file before you install the current version of the *ReportServer* files.

The ***WebOption*** components – *Repository GUI, WebClient,* and *WebService* – are also available in version 5.5.0. An update, therefore, is highly recommended. Since the database schema for the repository has changed in version 5.5.0, please update it with the “Repository.sql” script. Before you update *WebOption*, please create backup copies of the configuration files (see table above), any changed graphics in the “Images” folder (e.g. “Master_Top.png”) as well as the style-sheet file (e.g. “DeltaMaster.css”).

Since the configuration files of *WebService*, *WebClient*, and *Repository GUI* have not changed from 5.4.9 to 5.5.0, you can reuse the older files without needing to make any changes. You can update *WebService, WebClient, and Repository GUI* by copying the new files into the respective folders. Once again, please make backup copies of these files before doing so. A separate setup is not necessary.

21 DeltaMiner deltas! 5.5.1

What's new in version 5.5.1? Find out in this overview of the Feb. 18 2012 release!

(1) General: Collapsing the Analysis Menu 3

(2) General: Displaying the Analysis Menu by License Levels 3

(3) General: DeltaMiner Certified as Compatible with Windows 7 3

(4) General: Shorter Main Menu Bar 4

(5) General: Command Line Parameter "-language:X" and "-aliasset:X" for Setting the User Interface Language and Alias Set 4

(6) General: MDX Variables in Action Titles 5

(7) General: New Dialog Box "Object Dependencies" 6

(8) Apps: Notifications with SSL Encryption and Password Protection 9

(9) Apps: ReaderApp with List View for Briefing Books and Return Option for Reports Across Multiple Levels 9

(10) Apps: TickerPortal with Cache and Refresh Functions 10

(11) Briefing Books: MDX Variables in the Title Page URL 10

(12) ReportServer: Applying HTML Format to E-mail Texts in the Job Definition 12

(13) ReportServer: Global Settings for DeltaMiner Notifications with SSL and Password Protection12

(14) ReportServer: Dialog Box for Selecting the Job Definition Database 13

(15) Cockpit Browser: Highlighting Unused Cockpits 14

(16) CubeWizard: Hiding Unknown Members 14

(17) Dimension Browser: Editing Members 14

(18) Export to Microsoft Word without Sub-headlines for Charts and Tables 15

(19) Flexreport: New Cell Formatting Option: Empty Right Gap 15

(20) Flexreport: Using Pivot Table Links as Links in a Cell 16

(21) License Manager: Updated Version 18

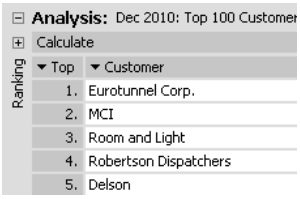
(22) MDX Editor: Show Available MDX Functions 19

(23) Pivot Table: Creating References to Measures as Conditions in Links 19

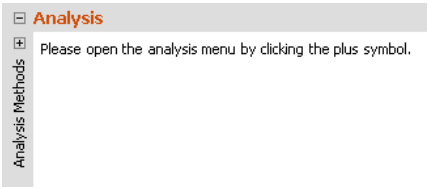
(24) Pivot Tables: Searching Row Axes for Members, Member Properties, and Measures 19

(25) Pivot Table: Circles as New In-cell Chart Type 20
(26) Pivot Tables: Revamped Context Menus, Property Dialog Boxes, and Default Settings..... 21
(27) Pivot Table: Return Option for Links..... 23
(28) Search for Cockpits..... 24
(29) Maintenance Dialog Box: Renaming Dimensions and Hierarchies 24
(30) Time Series Analysis: Scale Options Restructured 25
(31) Access to Microsoft SQL Server 2012 Database Engine and Analysis Services (“Denali”) 25
(32) Notes: Compatibility with Previous Versions and Installation 27

(1) General: Collapsing the Analysis Menu



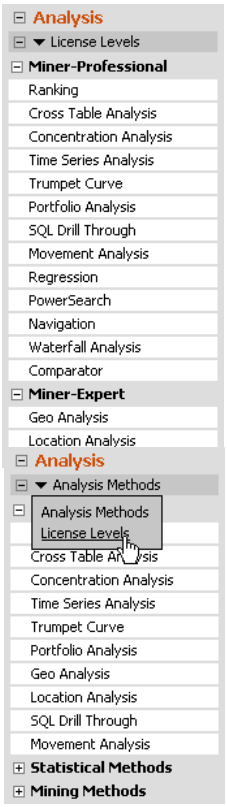
You can now collapse the analysis menu instead of displaying it as a column in the *Analysis* window. When the menu is collapsed, the currently active analysis module will appear as a small vertical bar on the left-hand side of the screen.



To collapse the menu, simply click on the "-" symbol in the upper part of the analysis menu. You can restore it by clicking on the "+" menu or double clicking on the small, vertical bar.

The *Analysis* window is available in *Analyzer* and *Miner* user modes. The collapse function works similarly to the user mode.

(2) General: Displaying the Analysis Menu by License Levels



You can now display the analysis modules in *Miner* mode based on license levels. *DeltaMiner* will then group the modules by *Miner Professional* and *Miner Expert* modes.

You can still use the previous breakdown by *Base methods*, *Statistical methods,* and *Mining methods*. Simply choose the *Analysis methods* option from the selection list on the upper part of the analysis menu.

DeltaMiner 5.5.1 does not include the *Zelazny* analysis set, which was a group of analysis modules that supported the ideas of Gene Zelazny. This set recommended five basic types of comparisons (i.e. structure, ranking, time series, frequency, correlation) as well as suitable chart types. Version 5.5.1 no longer contains this classification because it became difficult to display due to the many different analysis methods in *DeltaMiner*.

(3) General: DeltaMiner Certified as Compatible with Windows 7

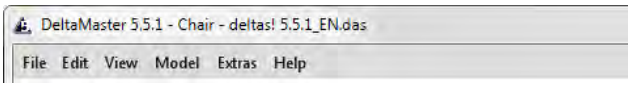
DeltaMiner has supported the Microsoft Windows 7 operating system since its launch in July 2009. We made this announcement shortly beforehand in *DeltaMiner deltas!* 5.4.1. Now, Microsoft has officially certified the Windows 7 compatibility for both the 32-bit and 64-bit versions of *DeltaMiner*.

As part of the Microsoft Windows 7 certification process, *DeltaMiner* underwent a thorough assessment process that covered its installation, performance, reliability, and security. *DeltaMiner* has passed these tests and may now use the "Compatible with Windows 7" logo. You can view the certified compatibility at Microsoft's Windows Compatibility Center:

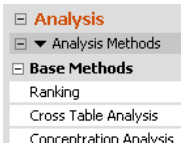
http://www.microsoft.com/windows/compatibility/windows-7/en-us/Search.aspx?l=en-us&type=Software&s=deltamaster

(4) General: Shorter Main Menu Bar

The main menu bar of *DeltaMiner's* application window now contains six menus instead of nine. We have omitted the *Mode*, *Analysis, and Export* menus because the options offered were redundant. You can easily access these options as follows:

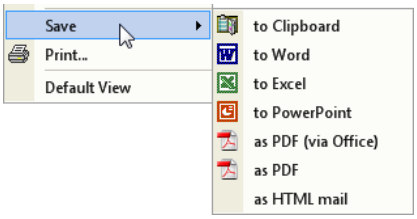


- You can change the user level (*Reader*, *Viewer*, *Pivotizer*, *Analyzer*, *Miner*) in the mode bar (instead of the *Mode* menu).

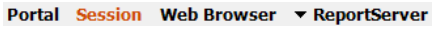


- You can select the analysis methods in *Miner* level from the analysis menu in the *Analysis* window (instead of the menu in the main menu bar).

- You can export your findings using the respective options in the context menu, the *Save* menu of the *Cockpit*, *Report,* and *Analysis* windows, or the briefing book in the *I want to…* menu.



The *View* menu is now somewhat shorter as well because the *Portal*, *Session, Web browser,* and plug-in options (e.g. *ReportServer*) were removed in version 5.5.1. You can now access these pages of the *DeltaMiner* application window through the mode bar.



If the mode menu bar is collapsed, *DeltaMiner* will display these pages in the status menu bar on the bottom-right corner of the *DeltaMiner* window. The *Analysis menu* view option has also been removed; see feature #1 for more information.

As you will see on the coming pages, the context menu of the pivot table (feature #26) and the scale options of the *Time Series Analysis* module (feature #30) have been restructured in *DeltaMiner* 5.5.1 as well. Since the user interface has fewer redundancies, you profit from a cleaner screen and more stringent usability.

(5) General: Command Line Parameter "-language:X" and "-aliasset:X" for Setting the User Interface Language and Alias Set

Using two new command line parameters, you can now specify which language(s) *DeltaMiner* should use to start the application and open the analysis file. The first parameter "language:X" sets the language of the *DeltaMiner* user interface – just as if you had selected it under *Options* (*Extras* menu, *General* tab). The parameter "X" is the acronym for the desired language.

DeltaMiner's user interface is currently available in eight different languages:

Parameter value	Language	Parameter value	Language
de	German	it	Italian
en	English	nl	Dutch
es	Spanish	pt	Portuguese

fr	French	ru	Russian

To start *DeltaMiner* in English, you could use the command line:

"C:\Program Files\DeltaMaster 5.5.1\Client.exe" **-language:en**

The language that you have selected in the command line only affects the session that you have already begun. If you open the program again without the parameter, *DeltaMiner* will start in the default language.

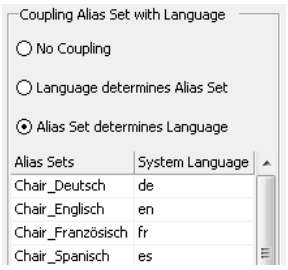
The second new parameter "-aliasset:X" determines which alias set *DeltaMiner* should use after opening the analysis file. The parameter "X" is the name of the alias set as it is displayed on the respective tab either in the *Options* (*Extras* menu) or *Model browser* (*Model* menu). As a result, this option only makes sense when an analysis file (e.g. .das-, .dam-, or .dm2go file) is also listed on the command line.

If you want to open the "Chair.das" analysis session with the "Chair_English" alias set, you could use the following command line:

"C:\Program Files\DeltaMaster 5.5.1\Client.exe" **-aliasset:"Chair_English"** "C:\DeltaMaster\Chair.das"

If there are no spaces in the names of the alias sets, you can omit the parentheses around them.

Coupling the alias set and language



In the *Options* (*Extras* menu) on the *Alias sets* tab, you can link the alias set and language so that the *Alias set determines [the] language* of the interface or the *[Interface] Language determines the alias set*. In addition, you can define which alias set *DeltaMiner* should use. This setting also applies when the language and alias set were defined in the command line. If the entries do not match, *DeltaMiner* will apply the settings defined on the *Alias sets* tab. In other words, if the command line lists French as the language (i.e. "-language:fr") and Spanish as the alias set (e.g. "Chair_Spanish") but the option in the analysis file states that the alias set should determine the language, *DeltaMiner* will select Spanish (or the respective language of "Chair_Spanish") for both the interface and system language.

Command line switches are very useful when many users access the same application in different languages. With this option, each user can create personal language settings for both the *DeltaMiner* interface and the analysis session.

(6) General: MDX Variables in Action Titles

You can now use the same MDX variables that you know from report titles in *Action titles* as well. These include "{cp}" for the "current period" or "<viewX>" for the member that was selected in the *View* window in the dimension with the ID "X". If you use variables, *DeltaMiner* will automatically update the *Action title* when the view changes.

For more information on using MDX variables in report titles – and, therefore, action titles as well – please read.

In previous *DeltaMiner* versions, we deliberately did not offer MDX variables for *Action titles* because the whole idea behind them is to summarize the core message of a report – optimally as a complete sentence – before displaying the report itself. An *Action title* should state something more than what is simply shown in a report. It wants to emphasize, recommend, rouse, or even warn about something – and that requires a human editor who writes the *Action Title* in careful consideration. As soon as the data or view changes, therefore, the message will change as well because you are observing something completely different. Using variables to automatically create *Action titles*, therefore, doesn't really make sense in these cases.

Many applications, however, also use *Action titles* as a design element (e.g. a headline that has different typeface than the report's content) and not for communicating a specific message. Since MDX variables would make it easier to reference the current view, we have added this functionality in version 5.5.1.

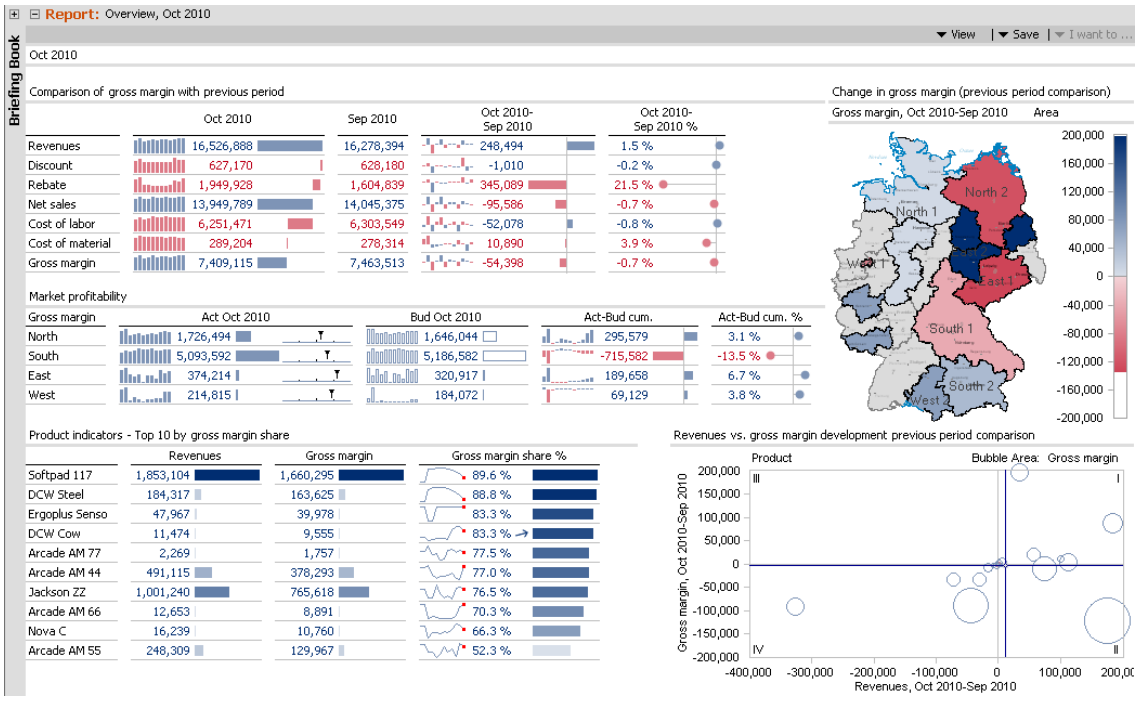
(7) General: New Dialog Box "Object Dependencies"

With the help of a new dialog box, you can now observe the dependencies of objects that were created in *DeltaMiner* as well as edit these object definitions. Let's say, for example, that you are working in a combination cockpit and realize that you need to modify a measure. Now you can access the measure properties directly from the combination cockpit through the *Object dependencies* dialog box if you are working on *Pivotizer*, *Analyzer,* or *Miner* levels.

(a) Combination cockpits: A collage of objects

One of the reasons why *DeltaMiner* is so flexible is that you can easily create large, complex applications by combining several smaller components on different levels of the application.

The following screenshot illustrates the concept of combination cockpits more clearly.

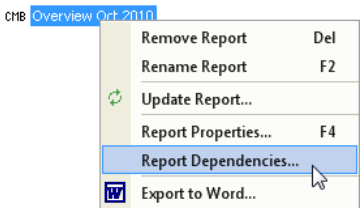


For users working on *Reader* level, this "dashboard" is a report. This report is based on a combination cockpit and a view (i.e. "Oct 2010"). The combination cockpit, in turn, consists of three pivot tables (i.e. "Comparison of gross margin with previous period", "Market profitability", and "Product indicators – Top 10 by gross margin

share") and two analysis templates (i.e. *Geo Analysis* and *Portfolio Analysis*). The first pivot table showing the gross margin comparison has a row and a column axis. The row axis contains several members: five of them come directly from the database while "net sales" and "gross margin" are user-defined measures that were created in *DeltaMiner*. The column axis contains four *Time calculated members*, which were also created in *DeltaMiner*. The third pivot table (i.e. "Top 10 by gross margin share") has a named set on its row axis. This named set is a top 10 ranking of products based on the gross margin share, which was defined as a quotient measure in *DeltaMiner* – and, in turn, is based on the user-defined measure "gross margin".

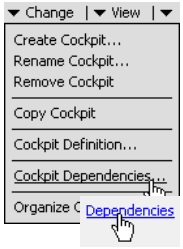
For now, we won't go into further details regarding the breakdown of the combination cockpit. After all, that is the whole purpose of the *Object dependencies* dialog box. We just wanted to emphasize that you can to easily create and combine many different components into powerful analytical applications with *DeltaMiner*. That also means, however, that you need to maintain an overview of multiple objects as well as make changes in different areas of the analysis model. This is where the new *Object dependencies* dialog box comes into play.

(b) Opening the object dependencies

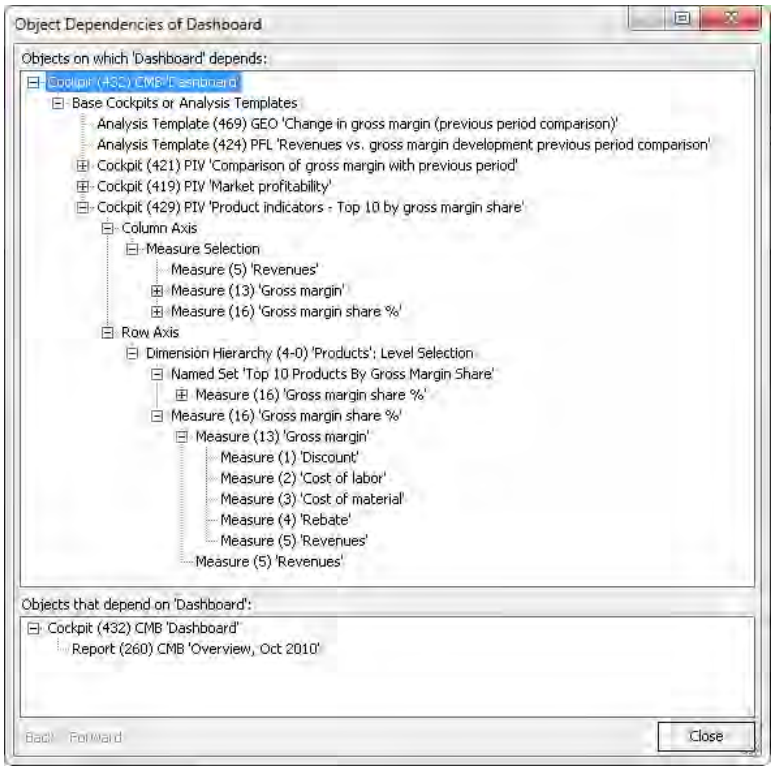


You can open the *Object dependencies* in eight different places:

- *Report dependencies* – context menu of reports in the *Briefing book*
- *Folder dependencies* – context menu of folders in the *Briefing book*
- *View dependencies* – context menu of views in the *History* window
- Cockpit dependencies – Change menu of the Cockpit window
- Dependencies link – Editor for named sets
- Dependencies link – Measure properties on the General tab
- Dependencies link – Editor for calculated members
- Dependencies link – Editor for time analysis members



Although you could already view the dependencies for most of the listed object types in the past, you had to work with various dialog boxes and tabs. In addition, you could not edit these objects directly. Now, you have one dialog box where you can view and edit the object dependencies as well as switch to different object types.



(c) Dialog box setup

No matter which object you have used to open the dialog box, the setup is always the same. Let's walk through the setup using the combination cockpit screenshot on the previous page as an example.

The upper part of the dialog box shows the objects *on which* the cockpit is dependent, in other words, the objects that it contains or simply a "list of parts". As described in section (a), you can see that the combination cockpit "Dashboard" consists of multiple *Base cockpits* or *templates* which are based on multiple *DeltaMiner* objects.

In the bottom part of the dialog box, you can see which other objects *depend on* the cockpit, in other words, a "usage list" where this cockpit appears. Our combination cockpit, for example, is saved as a report which, in turn, is dependent on the cockpit.

Both sections of the dialog box are built as a hierarchal tree that shows subordinate and superordinate objects. By clicking the "+" and "-" symbols, you can expand or minimize the branches – just like in a pivot table.

In the context menu of the individual nodes, you can either *Select* or *Show* the object.

(d) Navigation between objects

To maintain an overview of deeply nested views, you can *Select* an object from the context menu. Similar to a slice in a pivot table, this function displays the dependencies of the selected object.

Going back to the example in section (c), let's now assume that you have selected "Top 10 products by gross margin share", a named set as shown in the screenshot above. The dialog box will now display the *Object dependencies* of this named set instead of the entire combination cockpit. To return to the combination cockpit, click on the *Back* link in the lower left part of the dialog box. If you now want to view the named set again, simply click *Forward*.

You can *Select* objects as well as navigate them using *Back* and *Forward* in the upper and lower parts of the dialog box.

(e) Displaying and editing objects

If you select the second option in the context menu of the object, *DeltaMiner* will *Show* the respective object. You can even edit select object types:

- When you *Show* a pivot table, Flexreport, or a combination cockpit, *DeltaMiner* will open this cockpit in the *Cockpit* window. From here, you can edit and save these objects as usual.
- When you *Show* an analysis template, *DeltaMiner* will activate the respective analysis module and open the template in the *Analysis* window.
- If you *Show* a named set, *DeltaMiner* will open that set in the *Editor for named sets*.
- If you *Show* a calculated member or a time-calculated member, *DeltaMiner* will open that member in either the *Editor for calculated members* or the *Editor for time-calculated members.*
- If you *Show* a measure, *DeltaMiner* will open its *Measure properties*.

Since the *Object dependencies* remain open when you *Show* an object (i.e. a modeless dialog box), you can quickly switch among the objects to modify them.

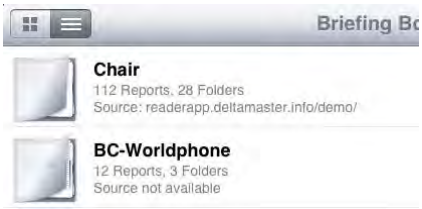
When you *Show* objects, *DeltaMiner* will only account for the current user level and grant access to objects that you can edit on that particular level. For example, you can only access *Measure properties* on *Pivotizer*, *Analyzer,* and *Miner* levels, Flexreports on *Miner* level, and certain analysis templates such as *Geo Analysis* on *Miner Expert* or *Miner Professional* levels – provided, of course, that you have a valid license for the *Geo Analysis* module.

(8) Apps: Notifications with SSL Encryption and Password Protection

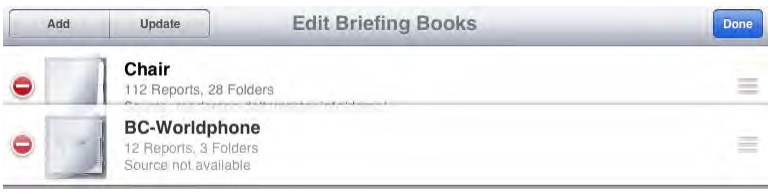
The *DeltaMiner Notifications* app now supports two new features for secure communications with the *DeltaMiner Notifications Service*: SSL encryption for the data transfer as well as the authentication of iPad/iPhone devices with the service. The *Secure connection* via SSL ensures that third parties cannot read the transferred data while the device authentication guarantees that only authorized people can use the service to receive notifications.

You can configure both features for *DeltaMiner Notifications Service* (see feature #13 for more information). If you require additional documentation, please contact your Bissantz & Company team.

(9) Apps: ReaderApp with List View for Briefing Books and Return Option for Reports Across Multiple Levels



With the *DeltaMiner ReaderApp*, you can now choose to display your *Briefing books* in a new list view. This view provides additional information about the briefing book such as the number of reports and folders as well as the source for updating the briefing book (URL or iTunes). If the briefing books were generated in *ReportServer* 5.5.1 (or higher), you will also see the export time as shown for “BC Worldphone” in the screenshot on your right. To switch between tile and list views, simply use the buttons on the upper-left corner of the app.



You can also change the order of the briefing books in the list. Simply touch the *Edit briefing books* button on the upper-right corner of the app and move the bars to the “rippled” areas on the right-hand side.

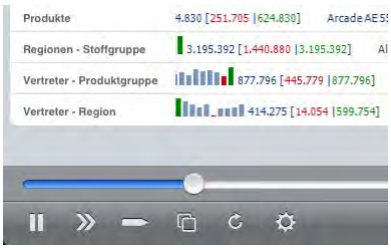
There are also two improvements to the reports as of version 5.5.1:

The title menu now contains the report’s position as well as the number of reports in the folder. The notation ”2/5”, therefore, means that it is the second of five reports in that folder.

Using the button on the upper-left side, you can now return to the “parent” report folders and briefing books from any given report. With a quick tap on the dark-gray arrow “Report tools” in the example on your right, for example, the app will

switch back to the current folder and display the reports it contains – just as in the past. If you now touch the button a bit longer (i.e. a long tap), the app will display the menu shown on your right. This menu shows the hierarchy of folders and briefing books up to the current report. You can return to the desired level with a simple tap, which is also called “breadcrumb trail” navigation.

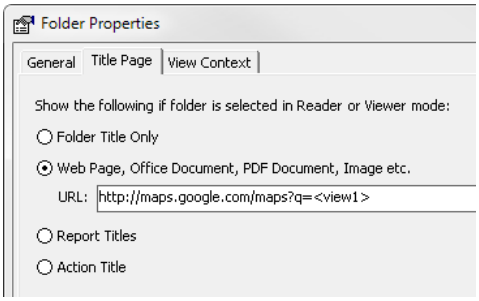
(10) Apps: TickerPortal with Cache and Refresh Functions



You can now use the *DeltaMiner TickerPortal* app either with or without a current Internet connection by saving the tickers and any additional data to your iPad/iPhone devices. If your device is offline when you start the *TickerPortal,* the app will use the existing data.

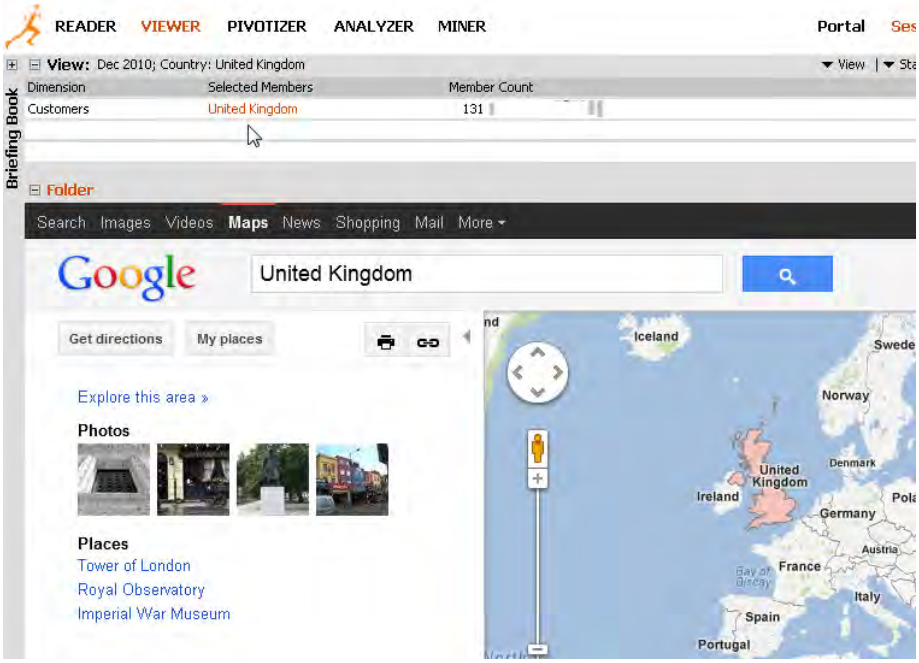
The *DeltaMiner TickerPortal* is an app for your iPad/iPhone devices. This app runs the tickers that you have created in *DeltaMiner* in an endless loop on your screen. Although you don’t need to scroll or refresh the queries in the *TickerPortal*, you can use your fingers to manually scroll through the ticker, zoom in or out, and access detailed information.

(11) Briefing Books: MDX Variables in the Title Page URL



DeltaMiner now supports the same MDX variables that are available in report titles or action titles in the *URL* of a folder title page (see feature #6). These include the variables “{cp}” for the “current period” or “<viewX>” for the member that was selected in the *View* window in the dimension with the ID “X”. If you use variables, *DeltaMiner* will automatically update the *URL* of a folder title page when the view changes.

In the screenshot on your right, *DeltaMiner* has transferred the member that is selected in the *View* for dimension 1 as a parameter to Google Maps. In the “Chair” reference model, that member is the customer dimension.



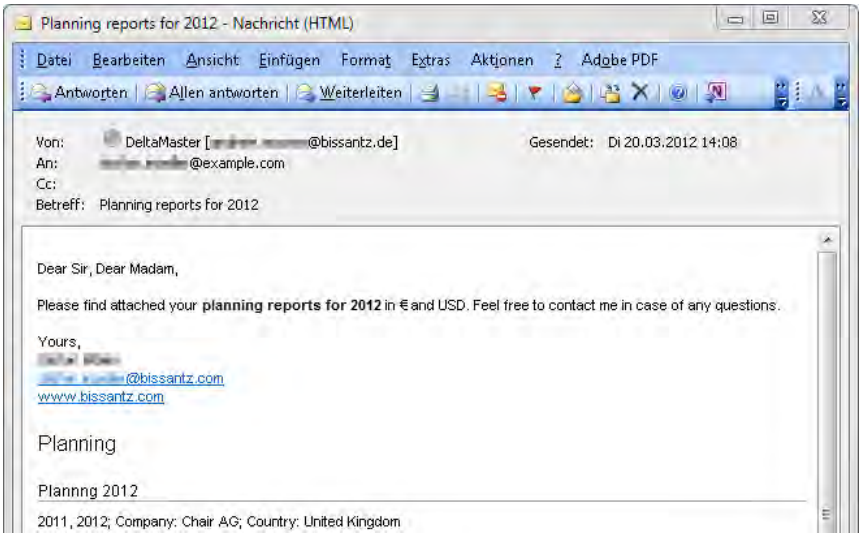
In addition, the view in *DeltaMiner* was restricted so that *Viewer* users could only select members on the “Country” level (i.e. country names) in the “Chair” model. Using this functionality, you can add a simple navigation for Google Maps to the briefing book. (To create more sophisticated solutions with Google Maps, you can also use the *Location analysis* module.

You can edit the *Title page* on the respective tab of the *Folder properties* (context menu of folders in the *Briefing book*). *DeltaMiner* only displays the title page on *Reader* and *Viewer* levels.

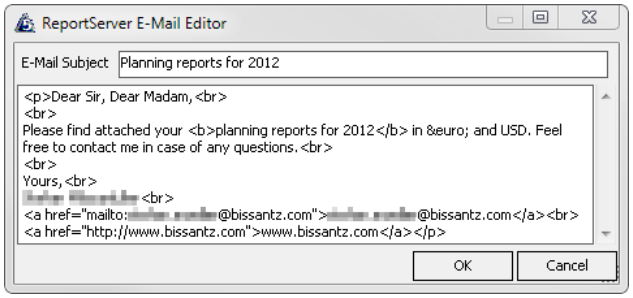
(12) ReportServer: Applying HTML Format to E-mail Texts in the Job Definition

If your HTML export template contains the variable "##reportservermailbody##" *ReportServer* will place the content of the *E-mail text* field of the *Job definition* into HTML file output.

Starting in this release, you can now add hyperlinks, text formatting, or other HTML code to this field. This was previously not possible because the entire field content was in HTML code. As a result, characters such as "<" and ">" that are used as HTML tags in the *E-mail text* were converted, entered, and displayed as normal text in the target document. This has changed in *DeltaMiner* 5.5.1. When *ReportServer* recognizes that the *E-mail text* is written in HTML, it will enter the text without converting these characters into the target file.



ReportServer will recognize the *E-mail text* as HTML content if the text begins and ends with HTML tags (e.g. " … " or " … "). Please do not use "<html>" or "<body>" tags in the *E-mail text* because they may only appear once in an HTML file and are already included in the template. If you want to use special characters (e.g. umlauts in German), please write them in HTML code (e.g. "ä" instead of "ä").



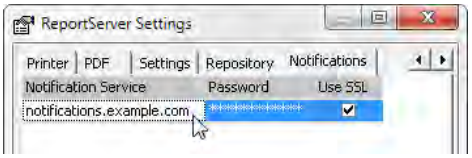
In order to enter the e-mail text, the *Report format* for the job must be set to "html" and the *Export template* "DeltaMaster.htm" must contain the variable "##reportservermailbody##". For reasons of simplicity, the standard template included in new *DeltaMiner* releases contains this variable as a comment (i.e. "<!-- … -->"), which *ReportServer* will ignore. Once you remove the comment tags, *ReportServer* will activate the variable and replace it with the *E-mail text* when you run the job.

```
<body>

    <p class="intro"> </p>

    ##reportservermailbody##

    ##folderbegin##
    <h2>##foldertitle##</h2>
    ##folderend##

    ##reportbegin##
```

If you have not selected a specific *Export template* for the respective job, *ReportServer* will use the "DeltaMaster.htm" file in the directory listed under *Options* (*Extras* menu) on the *Folder* tab for *Export templates* or the respective file in the "Templates" subdirectory of the *DeltaMiner* installation directory (e.g. "C:\Program Files\DeltaMaster 5.5.1\ Templates").

(13) ReportServer: Global Settings for DeltaMiner Notifications with SSL and Password Protection

iPad and iPhone users can now profit from the simplified configuration as well as new security mechanisms in *DeltaMiner's* notification service.



On the *Notifications* tab, you can now enter global *Settings* for the *Notification server* running the *DeltaMiner Notification Service*. As a result, you can omit the server name in the job definition. In the *Notifications* field (previously: *Notification URL*), simply enter the service call and URL parameter (e.g. “notification-WithNamedSound?receiverUserNames=Bella&messageText=… &soundName=A”. You may reuse any previous entries without having to modify them first. If the field starts with “http://”, *ReportServer* will recognize it as a URL and not combine the content of the field from the job definition with the *Notification server.*

If desired, you can also secure the connection between *ReportServer* and the *DeltaMiner Notification Service* through SSL encryption. In order to use this feature, you will first need to purchase an SSL certificate for the *DeltaMiner Notification Service* and configure the service accordingly. This process is described in detail in a separate documentation. As far as *ReportServer* is concerned, however, you simply need to tick the *Use SSL* box.

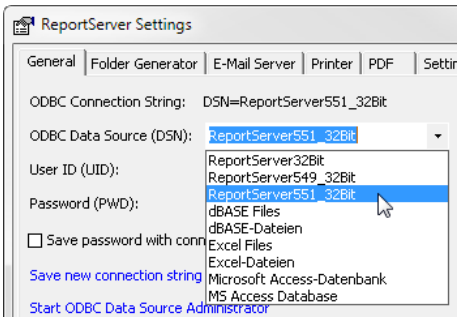
You can also apply password protection as a further security measure for the *DeltaMiner Notification Service*. This ensures that users can only access the service when the requesting *ReportServer* has the correct password. You can enter the password in *ReportServer’s Settings* on the *Notifications* tab. To protect the password from spyware, you can use this feature in combination with SSL encryption. The necessary steps for setting up password protection are described in a separate documentation.

The *DeltaMiner Notifications* app is also available in version 5.5.1 and will be automatically updated through your iPad/iPhone. In the latest version you can use authentication to register devices. This process is also described in detail in a separate documentation.

DeltaMiner Notifications, an app for iPad/iPhone devices, was introduced back in *DeltaMiner* 5.4.9. In combination with *ReportServer* and the *DeltaMiner Notification Service*, you can use this app to send messages – for example, notifications of new reports or events – as push services to various report consumers.

(14) ReportServer: Dialog Box for Selecting the Job Definition Database

You can now use a dialog box to select which job definition database *ReportServer* should use. This feature makes it easier to configure and work with multiple databases. If you are running development, test, and productive systems from different databases, for example, you can activate the desired database with a mouse click instead of having to edit the *ODBC connection string.*



The dialog box displays the available *ODBC data sources* as a selection list. If you need to use different login data for the selected database than you did for the previous one, simply enter the *User ID* and *Password* in the respective fields.

The selection of an ODBC data source only affects the current *ReportServer session*. The next time you start *ReportServer,* it will use the standard data source that is listed in the configuration file (i.e. “ReportServer.exe.config”). By clicking the respective link in the dialog box, you can *Save [the] new connection string* to the configuration file so you can use it as the start setting in subsequent *ReportServer* sessions. *ReportServer* will hide the password when you enter it into the field. If you opt to *Save [the] password with the connection string*, however, it will be visible in the configuration file.

You can access these options in the *ReportServer* properties on the *General* tab.

(15) Cockpit Browser: Highlighting Unused Cockpits

Thanks to a new option in the *Cockpit browser*, you can *Highlight unused cockpits* to organize your analysis sessions more easily. If you browse through the cockpit list in this mode, you can quickly see which cockpits are not being used in the analysis session so that you can delete or archive them.

A cockpit is considered “unused” if you can delete it without changing other *DeltaMiner* objects. In other words, the cockpit is not saved as a report, referenced in a Flexreport, integrated in a combination cockpit, iterated in a *Small Multiples* analysis, or used as a short cut target.

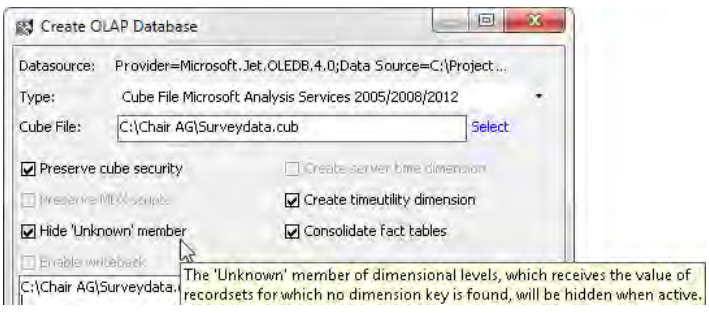
You can *Highlight unused cockpits* in the context menu or *I want to…* menu of the *Cockpit browser*. To open the *Cockpit browser*, simply click on the respective entry in the *Model* menu or in the *Cockpit* window using the *Organize cockpit* option in the *Change* menu or below in the cockpit list.

When you select this option, *DeltaMiner* will highlight the unused cockpits in orange. It will not, however, open any subfolders automatically. In order to view the entire list including all subfolders, you can *Expand all folders* at once in the *I want to… menu.* Alternatively, you can press and hold the *Shift* key while clicking the “+” sign to open or close all folders.

DeltaMiner will highlight the unused cockpits until you deactivate the menu option or close the *Cockpit browser*.

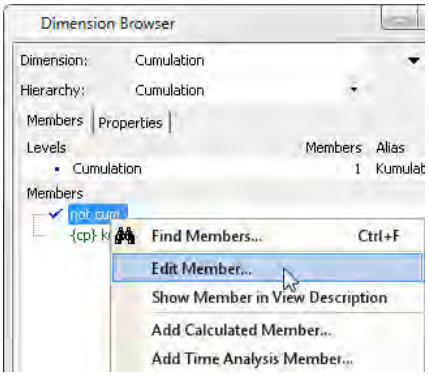
(16) CubeWizard: Hiding Unknown Members

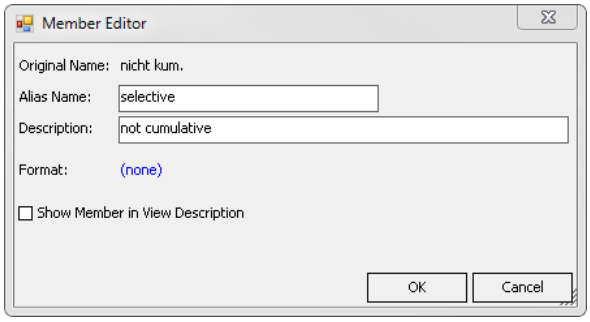
If you *Generate [an] OLAP database* from a relational application (*Model* menu), *DeltaMiner* will create an “Unknown” member on each dimension level where it will store any non-assignable values. Since you don’t always need these members in the OLAP database, many users previously defined them as null members so that they could hide them in the *DeltaMiner* analysis model. This workaround is no longer necessary as of version 5.5.1. When you now generate an OLAP database, you can determine if the *CubeWizard* should *Hide “unknown” members* or show them in all dimensions as in the past.



(17) Dimension Browser: Editing Members

Thanks to a new function in the *Dimension browser*, you can now rename or edit further properties of dimension members that come directly from the database. As a result, you can replace technical terms through more understandable names or apply a common terminology to different reporting applications.



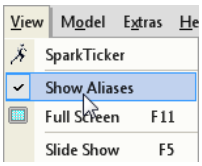


In the *Member editor,* you simply enter the desired *Alias name* in the respective field.

You can also add a *Description* for your internal documentation and define a special *Format* such as percentages or no decimals.

By checking the box, you can also specify if *DeltaMiner* should *Show [this] member in the view description.* It makes sense to hide “actuals”, “current”, “non-cumulated”, or other standard members that are self-explanatory for all users. As in the past, you can change this option directly in the context menu of the member in the *Dimension browser*.

You can also use other functions to modify the displayed name: *Notation*. If a name is defined as a notation rule, it will override the *Alias name* from the *Member editor* as described above. In this case, the *Alias name* is not a component of an alias set. If you want to use that member in more than one language, you should work with alias sets as in the past.



In the *View* menu, you can specify if *DeltaMiner* should *Show aliases* or not. This option also affects the alias name from the *Member editor*.

When you rename a member, this only applies to how it is displayed in *DeltaMiner*; the database is not affected. You can edit members on *Pivotizer*, *Analyzer,* and *Miner* user levels.

(18) Export to Microsoft Word without Sub-headlines for Charts and Tables

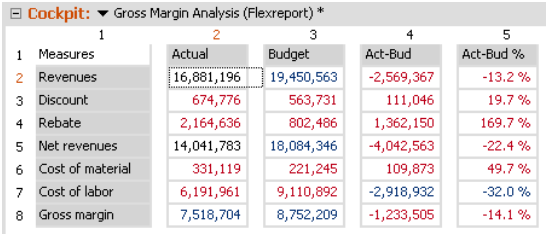
In previous versions, *DeltaMiner* exported reports to Microsoft Word with the sub-headlines “Table” and “Chart”. These sub-headlines, however, are usually unnecessary because you can generally recognize a chart as a chart and a table as a table. Starting in version 5.5.1, therefore, *DeltaMiner* will no longer generate these sub-headlines – provided that the export is based on a template (e.g. “DeltaMaster.dot“) containing a style sheet component called “space”:

- If the document template contains the paragraph style sheet component named “space”, *DeltaMiner* will enter an empty paragraph instead of the sub-headlines.
- If the document template does not contain “space“, *DeltaMiner* will export the sub-headlines and format them using the “head-part” style sheet component.

The document template “DeltaMaster.dot” that comes with *DeltaMiner* 5.5.1 already contains the “space” style sheet component which will remove the sub-headlines for “Table” and “Chart”. If you want to use a customized document template, please add “space” as a style sheet component to remove the sub-headlines in your document template.

Not affected by this change are sub-headlines for report components that are not self-explanatory. A *Concentration Analysis*, for example, contains two tables: the details and the summary. In this case, *DeltaMiner* will continue to create sub-headlines for these components.

(19) Flexreport: New Cell Formatting Option: Empty Right Gap

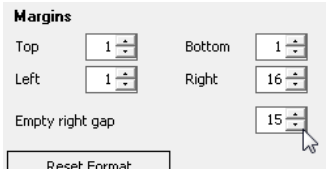

Cockpit: Gross Margin Analysis (Flexreport) *

	1	2	3	4	5
1	Measures	Actual	Budget	Act-Bud	Act-Bud %
2	Revenues	16,881,196	19,450,563	-2,569,367	-13.2 %
3	Discount	674,776	563,731	111,046	19.7 %
4	Rebate	2,164,636	802,486	1,362,150	169.7 %
5	Net revenues	14,041,783	18,084,346	-4,042,563	-22.4 %
6	Cost of material	331,119	221,245	109,873	49.7 %
7	Cost of labor	6,191,961	9,110,892	-2,918,932	-32.0 %
8	Gross margin	7,518,704	8,752,209	-1,233,505	-14.1 %

Starting in version 5.5.1, you can now perform a typical formatting task in Flexreports more easily than ever before. To create a space between two data columns you can now define an *Empty right gap* – instead of having to add an additional empty column between the data columns as you normally would in a spreadsheet.

To illustrate how this new option works, we have deactivated the *White style* (*Extras* menu, *Options*, *Presentation* tab) and transformed a pivot table to a Flexreport in the screenshot on your right. The *Cell coordinates* above the table show that is has 5 columns and that the gaps between the tables are not columns. You can also see this in the highlighted cell "Revenues, Actual". This cell includes an empty space that lies outside of the cell's frame.

You can define the *Empty right gap* in the *Cell properties* on the *Format* tab. Since *DeltaMiner* counts this gap as part of the right margin, the number for the *Right* margin must be at least as large as the value for the *Empty right gap*.



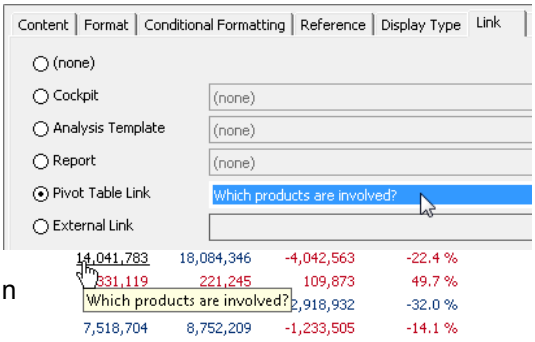
The gap is "empty" because it does not contain a frame. It breaks through horizontal lines as you can see in the screenshot above. *DeltaMiner* applies the same *Background color* to the gap that it would use for *normal cells* as defined in the *Table properties*.

When you enter a gap instead of an additional column as a formatting option, your table will be more robust and easier to maintain. If you want to *Enter references* (context menu), for example, an empty column can be a problem because *DeltaMiner* would enter the referenced cells in a column that was actually intended for spacing. A gap defined in the format, in contrast, has no effect on the table structure.

(20) Flexreport: Using Pivot Table Links as Links in a Cell

DeltaMiner introduced *Links* for pivot tables back in version 5.4.7. Once you define these links in *Miner* level, users working in *Viewer*, *Pivotizer,* and *Analyzer* modes can access them in pivot tables from the context menu of data cells to access further analyses on the respective value. *DeltaMiner* will automatically transfer the same links to the context menu of Flexreport cells that reference the pivot table cells with active links.

Starting in *DeltaMiner* 5.5.1, you can now define this *Pivot table link* as a target for Flexreport cells (*Cell properties, Link* tab). That means that you can either open the link with a right or a left mouse click (i.e. cell's context menu or direct click respectively). When only one link is defined, it is easier for the user to just click it directly.

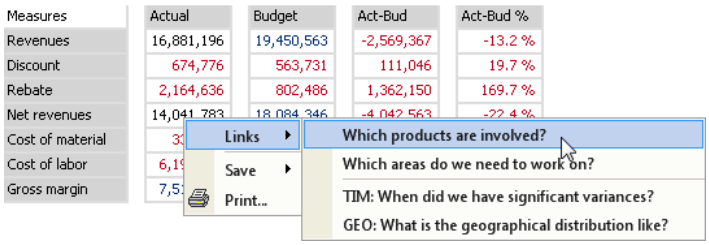


As with other types of links, *DeltaMiner* will underline the cell content when you mouse over it and display the *Caption* defined in the *Pivot table link* or the link target as a tooltip.

In previous versions of *DeltaMiner*, you could also create links to cockpits, analysis templates, and reports in Flexreports. What makes the pivot table links so unique is that when you open the target link, *DeltaMiner* will maintain the view of the original report including any filters that are defined for the cell in the row or column axis of the pivot table. The Flexreport will also account for conditional links in the pivot table.

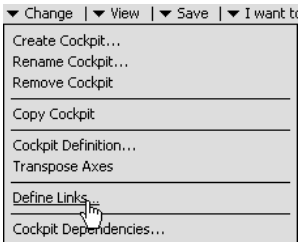
ADDENDUM: Overview of the links in pivot tables

Pivot table links were introduced back in *DeltaMiner* 5.4.7 with additional functionality



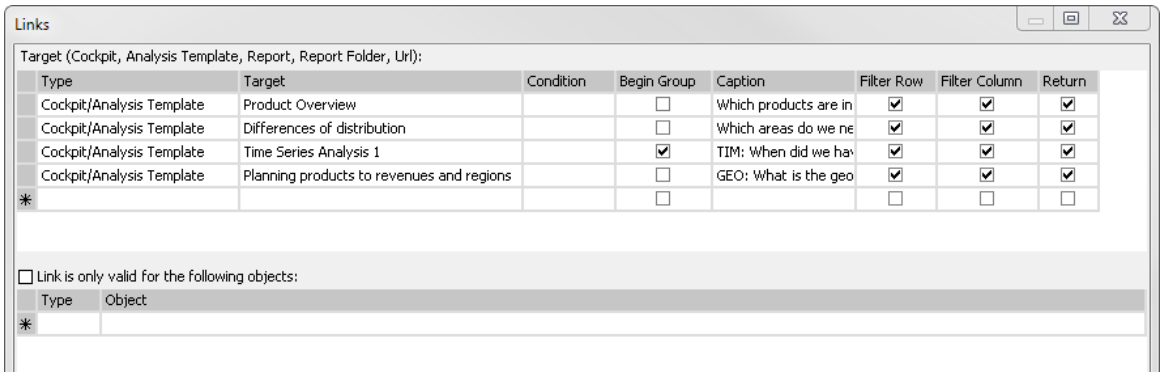
added in the 5.4.8 release. This addendum contains a short summary of what these links can do and how you can use them.

If you add *Links* to pivot tables and Flexreports based on these pivot tables, users on *Viewer* level can jump from a table cell to further predefined reports, cockpits, or analysis templates to examine that measure in more detail or from a different perspective. The current *View* remains unchanged, which is a major new improvement. If you open a report from the *Briefing book, DeltaMiner* will always enter the view saved with the report. If you use a link, however, you can always "transfer" the current view similar to cockpits in *Miner* mode. *Viewer* users can open the links from the context menu of individual data cells.



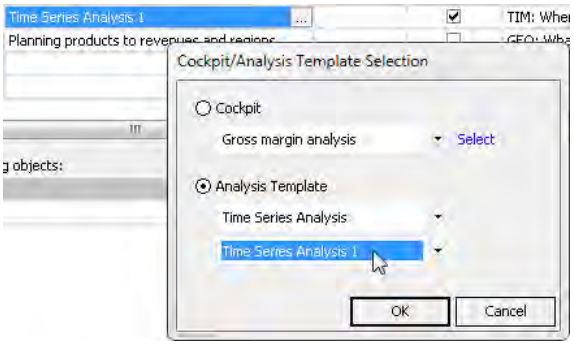
You must define these links, however, in pivot tables on *Miner* level (*Change* menu in the *Cockpit* window). When you create a Flexreport, *DeltaMiner* will automatically transfer any links that apply to the referenced pivot table.

If desired, you can assign multiple *Links* to each pivot table. *DeltaMiner* will list these links for *Viewer* users in the context menu using the same order that they are listed in the dialog box. To change this order, simply drag the small gray fields in the first column and drop them to the desired location.



To define a link, you must complete the following two fields:

- The *Type* of link target. The most important type is "Cockpit/Analysis template". Alternatively, you can also create links to a specific report/report folder, the first report of a certain folder, or an external URL.



- The link's *Target*. Here you can select the target cockpit or analysis template for the link, for example, another pivot table or a specific analysis that you have created in an analysis module in *Miner* mode and saved as an analysis template. *DeltaMiner* will then open the same selection dialog box that you already know, for example, from a combination cockpit.

Once have selected the link *Type* and *Target,* the link will work. If desired, you can also apply the following options in the link definition:

- The *Condition* is an MDX expression which you can use if you only want to offer the link in the context menu under certain conditions (e.g. revenues in the respective cells are greater than zero). See feature #23 for more information.

- If you use a link to *Begin [a] group* (as shown on the screenshot on the last page before the *Caption* “TIM: When did we have significant variances?”), *DeltaMiner* will add a horizontal rule. You can use this option to organize the context menu.

- You can also add an individual *Caption*, which will appear in *Viewer* mode as a context menu command in the pivot table. You can even write these captions as full questions – the clearer, the better! After all, the users working in *Viewer* mode will decide if they want to open the link or not based on the caption in the context menu alone. If you choose not to enter a caption, *DeltaMiner* will automatically display the target name.

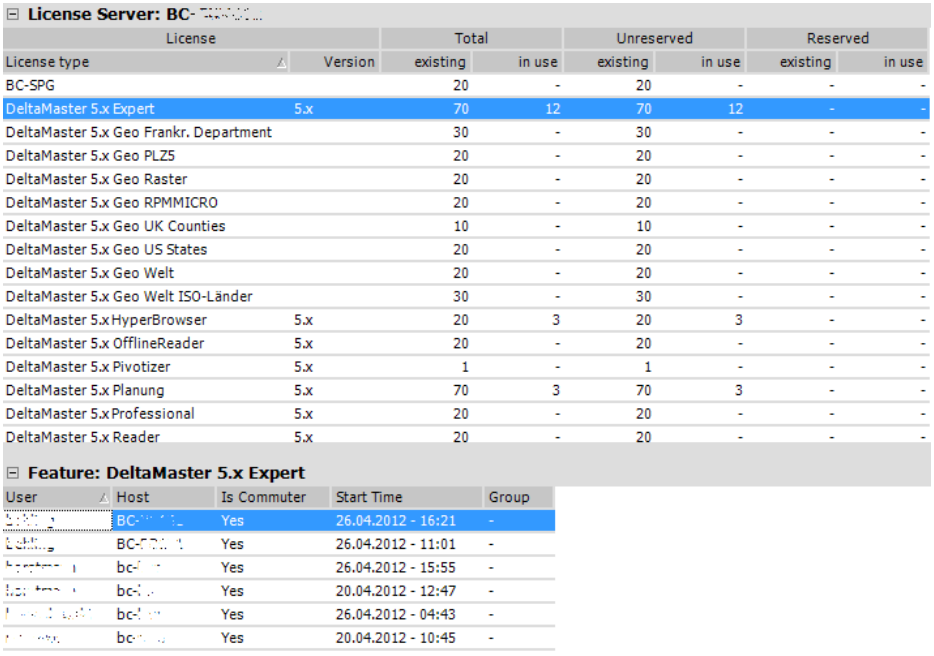
- The check boxes to *Filter rows* and *Filter columns* affect the view for the link target. In general, *DeltaMiner* will keep the current view when you open the link. If you decide to *Filter rows*, *DeltaMiner* will also transfer the row members of the selected data cell into the view of the link target. In the screenshot above, the customers are on the rows and different time periods are in the columns. If you filter the rows, therefore, *DeltaMiner* will transfer the respective customer region into the view of the target cockpit. If you filter the columns, it will transfer the time periods.

- When a *Viewer* user opens a link, you can also offer an option in the target report to *Return* back to the original report (see feature #27 for more information).

In the bottom half of the dialog box, you can determine if the active link in the upper part of the dialog box should only be valid for certain objects. In other words, *DeltaMiner* will only offer the link in *Viewer* mode if the data cell that the user has clicked on contains the respective measure.

(21) License Manager: Updated Version

An updated version of *License Manager*, a free tool that displays the number of used and unoccupied licenses, is now available.



License Server: BC-

License		Total		Unreserved		Reserved	
License type	Version	existing	in use	existing	in use	existing	in use
BC-SPG		20	-	20	-	-	-
DeltaMaster 5.x Expert	5.x	70	12	70	12	-	-
DeltaMaster 5.x Geo Frankr. Department		30	-	30	-	-	-
DeltaMaster 5.x Geo PLZ5		20	-	20	-	-	-
DeltaMaster 5.x Geo Raster		20	-	20	-	-	-
DeltaMaster 5.x Geo RPMMICRO		20	-	20	-	-	-
DeltaMaster 5.x Geo UK Counties		10	-	10	-	-	-
DeltaMaster 5.x Geo US States		20	-	20	-	-	-
DeltaMaster 5.x Geo Welt		20	-	20	-	-	-
DeltaMaster 5.x Geo Welt ISO-Länder		30	-	30	-	-	-
DeltaMaster 5.x HyperBrowser	5.x	20	3	20	3	-	-
DeltaMaster 5.x OfflineReader	5.x	20	-	20	-	-	-
DeltaMaster 5.x Pivotizer	5.x	1	-	1	-	-	-
DeltaMaster 5.x Planung	5.x	70	3	70	3	-	-
DeltaMaster 5.x Professional	5.x	20	-	20	-	-	-
DeltaMaster 5.x Reader	5.x	20	-	20	-	-	-

Feature: DeltaMaster 5.x Expert

User	Host	Is Commuter	Start Time	Group
	BC-	Yes	26.04.2012 - 16:21	-
	BC-	Yes	26.04.2012 - 11:01	-
	bc-	Yes	26.04.2012 - 15:55	-
	bc-	Yes	20.04.2012 - 12:47	-
	bc-	Yes	26.04.2012 - 04:43	-
	bc-	Yes	20.04.2012 - 10:45	-

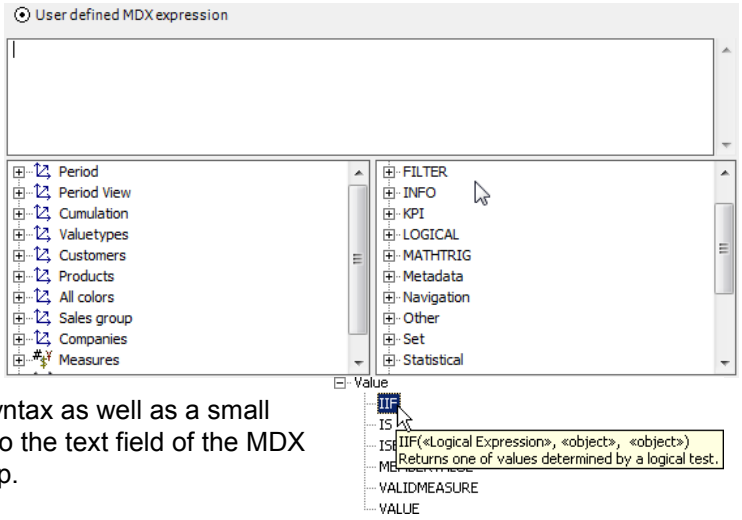
As in the past, you can use the license manager as a plug-in for the *DeltaMiner* application window. In order to use this plug-in, you will need Sentinel RMS License Server (8.4.1.5 or higher), which you can download from our Web site at: http://www.bissantz.com/login.

In addition, you can now run *License Manager* as a separate program. This standalone version also works with License Server 8.1.1 und 8.2.3.

If you would like to use *License Manager*, we would be happy to send you the necessary files and installation guide. Simply send us an e-mail to support@bissantz.com.

(22) MDX Editor: Show Available MDX Functions

Version 5.5.1 contains an enhanced *MDX editor*, which you can use to create user-defined queries and calculations. The editor now shows the MDX functions supported by the underlying database or its provider on the right-hand side below the text field for the MDX expression. As in the past, you can view the dimensions and measures of the current analysis module on the bottom-left corner.



If you mouse over a function, you can view its syntax as well as a small description as a tooltip. To transfer a function into the text field of the MDX editor, simply use a double click or drag and drop.

The same MDX editor appears in multiple dialog boxes where you can create MDX expressions – for example: *Axis definition* (as shown above), *Editor for named sets, Measure properties, Editor for calculated members,* or the wizard for creating new measures.

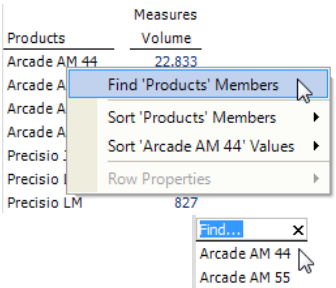
(23) Pivot Table: Creating References to Measures as Conditions in Links

As you probably already know, you can use the MDX expression “[Dimension].[Hierarchy].CurrentMember” to reference the current dimension member of the row or column axis as a condition. Starting in the 5.5.1 release, you can now apply this same functionality to measures on the axis with the expression “[Measures].CurrentMember”.

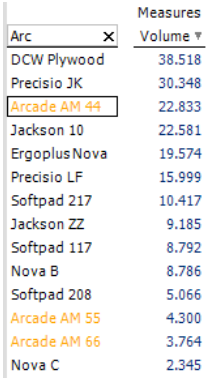
For more information about pivot links, please read the addendum in feature #20.

(24) Pivot Tables: Searching Row Axes for Members, Member Properties, and Measures

You can now search the row axis of a pivot table. This gives you a better orientation when you are working with long tables of customer names, material numbers, account names, etc.



You can start a search from the context menu of members, member properties, or measures on the row axis. This functionality is supported on all user levels from *Offline Reader* to *Miner Expert*.



You can enter the desired search term in an input field at the very top of the respective column.

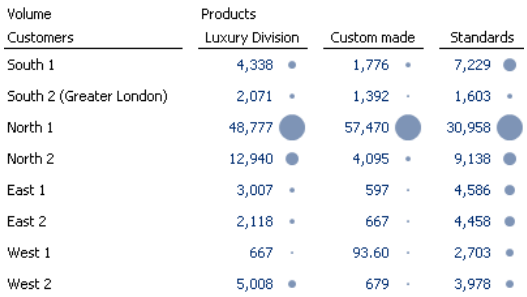
While you are entering the term (in other words, after each letter you enter) *DeltaMiner* will search for this combination of letters anywhere in the member name, property measures, or the measure name – and highlight any matches in orange.

When you hit the *F3* key, *DeltaMiner* will jump to the next row containing a match. If you hit *Shift+F3*, it will return to the previous row with a match.

To leave the search mode, simply press the *Esc* key or click on the "x" on the right side of the input field.

This search functionality is currently not available in the *WebClient*.

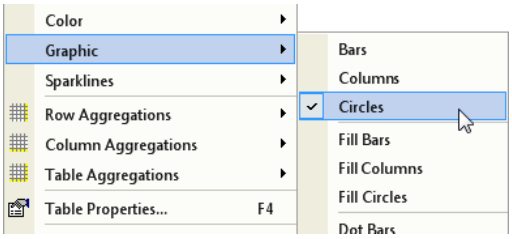
(25) Pivot Table: Circles as New In-cell Chart Type



To clearly illustrate proportionate values, you can now add circles to the cells of pivot tables. *DeltaMiner* draws each circle so that the area is proportional to the value that it represents.

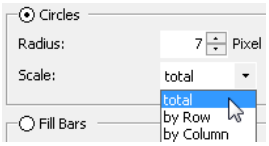
In-cell circles have their pros and cons in comparison to in-cell bars and columns, which *DeltaMiner* has supported for quite some time. Circles have the advantage that you can make optical comparisons in two different directions: vertically and horizontally as well as by rows and columns. Bars or columns cannot. You can only compare bars well if they are in columns, and columns in rows.

Circles, however, also have their disadvantages. The reader has to compare areas instead of lengths or heights, which isn't easy for the human eye. If you try to guess the numerical value of an area, your estimate will probably have a higher error rate than if you were just comparing the length or height. Nevertheless, you can classify which objects are smaller or larger based on the size of the circles. You can also automate them as part of an efficient, "industrial-style" reporting process.



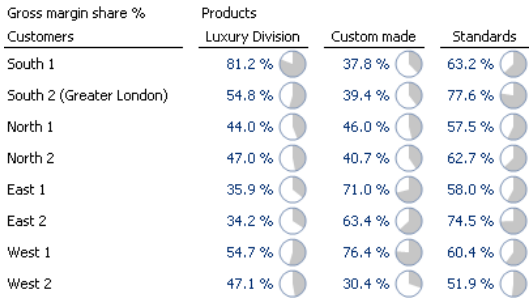
You can display *Circles* from the *Chart* option in the context menu of the pivot table. (Please note that this menu has been reorganized, see feature # 26 for more information.)

To ensure that you can make comparisons in both directions, you should choose a scale that applies to the *Total* table. You can define the *Scale* in the *Table properties* (context menu, *I want to…* menu) on the *Graphic (1)* tab. From here, you can also set the *Radius* which, in turn, depends on the row height; a user-defined setting on the *General* tab is not possible.



If you export the pivot table to Microsoft Office, *DeltaMiner* will include the circles provided that you export them as images. You cannot, however, export circles to Microsoft Excel.

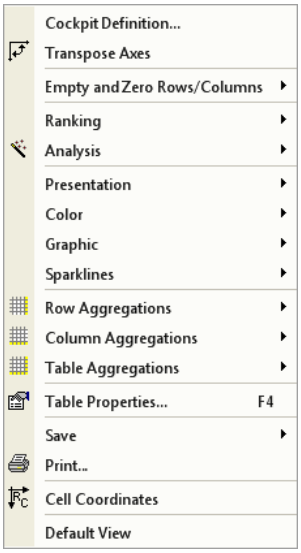
Fill circles are an alternative form of circles that you can use to visualize proportional measures such as a market share or gross margin share (as shown in the screenshot on your right). *DeltaMiner* will display positive values with a blue border and negative ones with a red one. Please be careful, however, if you are working with measures that can exceed 100 percent. *DeltaMiner* will simply draw them as filled circles and you won't be able to differentiate them from a value of 100 percent. For these types of measures, you should work with bars or columns – or redefine the measure so that the values lie between –100 and +100 percent.



Gross margin share %	Products		
Customers	Luxury Division	Custom made	Standards
South 1	81.2 %	37.8 %	63.2 %
South 2 (Greater London)	54.8 %	39.4 %	77.6 %
North 1	44.0 %	46.0 %	57.5 %
North 2	47.0 %	40.7 %	62.7 %
East 1	35.9 %	71.0 %	58.0 %
East 2	34.2 %	63.4 %	74.5 %
West 1	54.7 %	76.4 %	60.4 %
West 2	47.1 %	30.4 %	51.9 %

In our blog post "Criss-crossing circles" (http://blog.bissantz.com/criss-crossing-circles), we have compared in-cell circles to bars, columns, lines, and sparklines using the example of airline accident statistics for different years and regions. Despite the known issues with area comparisons, graphical tables with circles proved to be a good solution in that visualization scenario.

(26) Pivot Tables: Revamped Context Menus, Property Dialog Boxes, and Default Settings



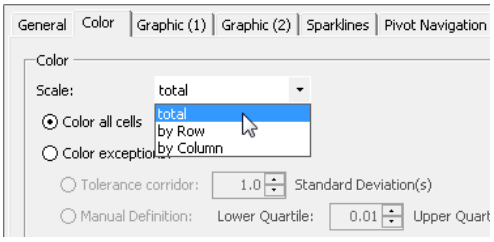
The context menu of pivot tables has been reorganized in version 5.5.1. Many of the options have been regrouped or renamed to make the display clearer and more compact. The scale options, for example, are now only available in the *Table properties*. In previous versions, they were spread over cascading menus and the *Table properties*.

In the default setting for new tables, *DeltaMiner* automatically applies scale options to the respective chart type. These settings are optimized so that you won't need to make any further adjustments in most cases. For example, *DeltaMiner* will apply a scale *by columns* as the default setting for bar charts and draw negative and positive values *to the left and right*. For columns, however, it will use a scale *by rows* in the default setting. *DeltaMiner* will generally scale sparklines *by cell* and with 13 columns depending on the underlying data so that when you visualize monthly values, you can also include the respective month from the previous year.

The context menu now also contains entries for *Color*, *Graphic,* and *Sparklines*.

(a) Color

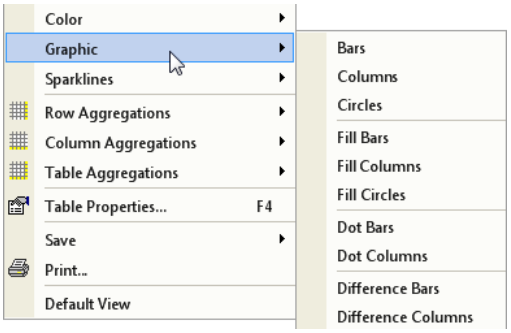
Color is equivalent to the former entry *Cell color*. The options – *Traffic light colors*, *Business colors,* and *Grayscale* – remain the same. *No cell color*, however, is not listed as a separate option as of version 5.5.1. If now you want to remove an existing color, simply deactivate the selected option.



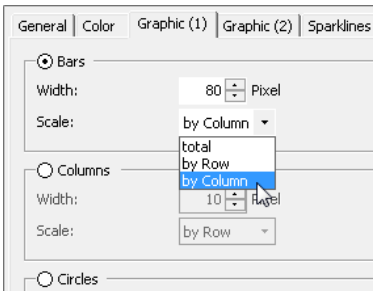
The following scale options are now located in the *Table properties* (context menu, *I want to…* menu, *F4* key) on the newly redesigned *Color* tab: *Total* (which was not listed in the previous menu), *By row,* and *By column*. Starting in version 5.5.1, *DeltaMiner* will apply colors to the *Total* table in the default setting.

(b) Graphic

The menu item *Graphic* contains all graphical elements that the displayed cell values can visualize, specifically: *Bars*, *Columns*, *Circles* (see feature #25), *Fill bars, Fill columns, Fill circles, Dot bars, Dot columns*, *Difference bars,* and *Difference columns*. *Waterfall*, which was previously listed as a separate format, is now listed as a presentation option under *Bars* (see below).



Similar to the colors, you can now access the scale options in the *Table properties* – not as cascading options in the context menu of the pivot table. The *Graphic (1)* tab includes options for *Bars*, *Columns*, *Circles*, *Fill bars, Fill columns,* and *Fill circles* while the *Graphic (2)* tab contains those for *Dot bars, Dot columns, Difference bars*, *Difference columns,* and *Outliers.*



The *Waterfall* presentation option, which you can use for additive measure schemas, is now an option under *Bars*.

Using the option button in front of the individual chart types, you can change the visualization from the *Table properties* without having to close the dialog box. This makes it easier for you to try out different types of visualizations. You simply select the desired chart type and options in the *Table properties, Apply* them instead of selecting clicking *OK*, and observe the results in the pivot table shown in the background. In previous versions, you could only enter options for the current chart type in the *Table properties*. In order to select a different chart type, you had to close the dialog box, choose a different chart type in the pivot table, and then pick the desired options in the *Table properties*. Now, you can complete all of these steps from a single dialog box.

As of version 5.5.1, you can only enter the width and height for members in pixels. Previously, you could also select a maximum differentiation based on the respective size. This option has been removed to make the dialog box more compact.

(c) Sparklines

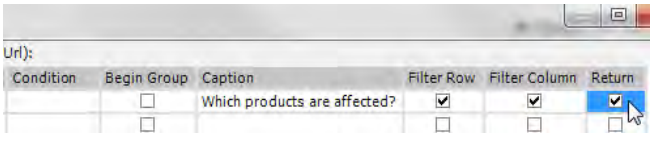
The menu item *Sparklines* contains three different presentation options for sparklines (*Columns*, *Lines,* and *Dot lines*) as well as the structure-driven *Drill sparklines* . As in the case of colors and charts, the scale options are now offered in the *Table properties* – not as cascading options in the context menu of the pivot table.

(d) Miscellaneous

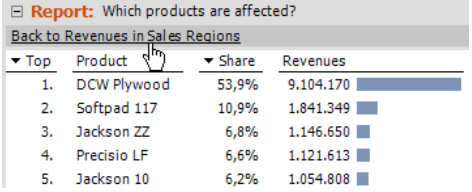
In *Viewer*, *Pivotizer*, or *Analyzer* mode, *DeltaMiner* will display any *Links* defined in *Miner* mode as the first entry in the context menu so that casual users can find them more easily.

(27) Pivot Table: Return Option for Links

Using a new check box in the *Link* definition (*Change* menu in the *Cockpit* window), you can determine if *DeltaMiner* should offer an option in the link target to return back to the current view.



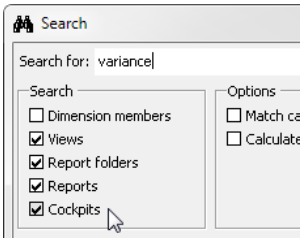
If the box is checked, *DeltaMiner* will display a link above the target report so that the user can *Return* to the calling report. If the box is not checked, there will be no link.



For more information about pivot links, please read the addendum in feature #20.

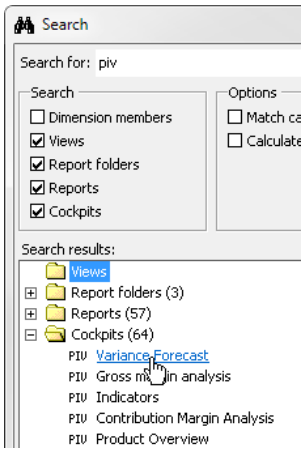
(28) Search for Cockpits

You can now search for cockpits in addition to dimension members, views, report folders, and reports in the universal search option.



You can open this dialog box from the menu *Edit, Search* or using the short cut *Ctrl+F*. In addition, you can also enter search terms into the data entry field of the menu bar of *DeltaMiner's* application window (default setting).

To open a cockpit, simply click on its name in the *Search results*. Just as with other searchable objects, *DeltaMiner* will then open a search window so that you can quickly switch from one cockpit to another.

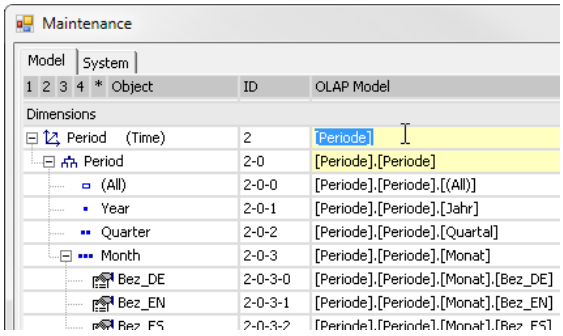


DeltaMiner will search the cockpit's name, description, and acronym, which is displayed as an icon in front of the cockpits. If you search for "PIV", *DeltaMiner* will display all pivot tables. A search for "FLX" or "CMB" will return all Flexreports or combination cockpits respectively. The search, however, will not include the cockpit's content; this functionality is only offered in calculated reports.

Another change in the search function is that the check box for dimension members is generally deactivated when you open the dialog box for the first time. Since it is very time-consuming to search dimensions with thousands of members, you should only activate this option when you really need it.

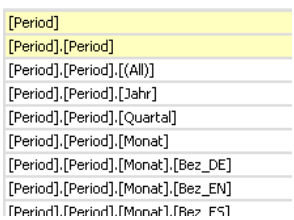
(29) Maintenance Dialog Box: Renaming Dimensions and Hierarchies

When the names of dimension or hierarchies have changed in the data model, you can now enter their new names in the maintenance dialog box. As a result, you can reuse any analysis files (.das, .dam) that are based on them.



In the maintenance dialog box, *DeltaMiner* will highlight any fields that you can edit in yellow. If the German dimension "Periode" was renamed "Periods" in the database, for example, you could enter the new name in the respective fields. Please enter any names of dimensions or hierarchies in brackets.

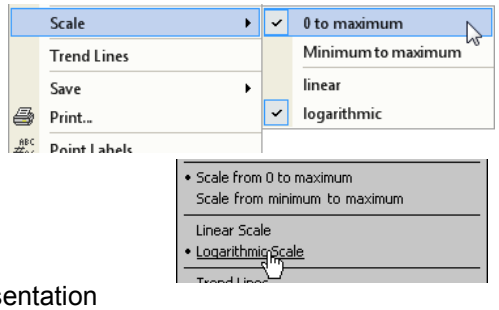
As soon as you press the *Enter* key to confirm, *DeltaMiner* will automatically rename the levels and member properties. At the same time, it will also update the names within the analysis session. After searching the entire analysis session for the respective dimensions and hierarchies, *DeltaMiner* will then replace the old names with the new ones in the axis definitions, named sets, calculated members, user-defined measures, and other components that reference dimensions and hierarchies.



If you click on *OK* to exit the maintenance dialog box after you have made a change, *DeltaMiner* will then open the file selection dialog box and prompt you to save the file. Your changes will only take affect after you have saved the file.

To open an analysis file *in the maintenance dialog box*, simply select the respective option from the context menu of the file in *Portal* or select the *Maintenance* command from the *Model* menu. If the analysis file is currently open, you will have to close it first.

(30) Time Series Analysis: Scale Options Restructured



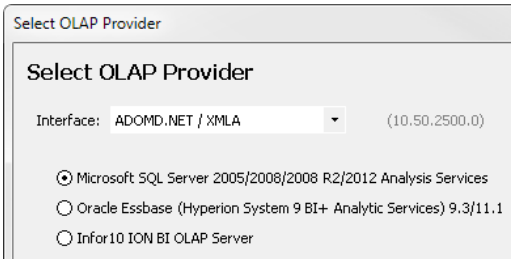
The scale options in the *Time series analysis* have been reorganized in version 5.5.1. You can now edit the settings for the presentation area (*0 to maximum*; *Minimum to maximum*) as well as the scale type (*linear* or *logarithmic*) in the context menu under *Scale.*

Alternatively, you can select these options in the *I want to…* menu.

In the previous versions, you had to change the options for the presentation area in the *Settings* and modify the scale type in the context menu or in the *I want to…* menu.

(31) Access to Microsoft SQL Server 2012 Database Engine and Analysis Services ("Denali")

Microsoft has announced that it will launch Microsoft SQL Server 2012 in the first half of the year. *DeltaMiner* is prepared for the new release – and already supports Microsoft SQL Server 2012's relational and multidimensional databases (i.e. Analysis Services).



One of the main changes in Analysis Services 2012 is a new architecture option called Vertipaq Engine. This column store engine promises high-performance query speed because it compresses data and loads it completely into memory. The new version also contains the MOLAP Storage Engine that is used in previous versions of Analysis Services. You can either run an Analysis Services 2012 instance in tabular mode using Vertipaq Engine or in multidimensional mode using MOLAP Storage Engine. *DeltaMiner* supports multidimensional as well as tabular mode.

To access an Analysis Services instance in multidimensional mode, you can use the ADOMD.NET interface in versions 10 or 11 from the "Microsoft.AnalysisServices.AdomdClient.dll" file. Version 10 of this file is located in the *DeltaMiner* installation directory. With this interface you can access an Analysis Service instance in multidimensional mode without have to make any additions or changes.

If you want to access an instance in tabular mode, you will need version 11 of the ADOMD.NET interface. To use it, please follow these instructions:

1. You will need two files from the SQL Server 2012 installation:
    - "Microsoft.AnalysisServices.dll" stored in "C:\Program Files\Microsoft SQL Server\110\Setup Bootstrap\"

- “Microsoft.AnalysisServices.AdomdClient.dll” stored in “C:\Program Files\Microsoft .NET\ADOMD.NET\110”

2. Copy both of these files into the *DeltaMiner* installation directory (e.g. “C:\Program Files\DeltaMaster 5.5.1”. Here, you will find two files with the same names but for version 10. Please overwrite these files.

3. You will need to change the configuration file (i.e. “client.exe.config”) in the same directory so that *DeltaMaster* can load the new DLLs. In this file, for example, you can define that *DeltaMiner* should use the newer version instead of the older one. To adapt ADOMD.NET 10 to the version 11 DLLs, you will need to update two sections of the file as shown on the following page. You can identify both “<dependentAssembly>” blocks though the following component in the middle of the blocks:

```
<?xml version="1.0"?>
<configuration>
    <configSections>
        <section name="Modules" type="DeltaMiner.Client.ModuleConfigurationSect
    </configSections>
    <Modules></Modules>
    <runtime>
        <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
            <!--
            <dependentAssembly>
                <assemblyIdentity name="Microsoft.AnalysisServices.AdomdClient"
                <bindingRedirect oldVersion="10.0.0.0" newVersion="9.0.242.0" /
            </dependentAssembly>
            <dependentAssembly>
                <assemblyIdentity name="Microsoft.AnalysisServices" publicKeyTo
                <bindingRedirect oldVersion="10.0.0.0" newVersion="9.0.242.0" /
            </dependentAssembly>
            -->
            <!--
            <dependentAssembly>
                <assemblyIdentity name="Microsoft.AnalysisServices.AdomdClient"
                <bindingRedirect oldVersion="10.0.0.0" newVersion="11.0.0.0" />
            </dependentAssembly>
            <dependentAssembly>
                <assemblyIdentity name="Microsoft.AnalysisServices" publicKeyTo
                <bindingRedirect oldVersion="10.0.0.0" newVersion="11.0.0.0" />
            </dependentAssembly>
            -->
            <!--
            <dependentAssembly>
                <assemblyIdentity name="Oracle.DataAccess" publicKeyToken="89b4
                <bindingRedirect oldVersion="10.2.0.100" newVersion="2.102.3.2"
            </dependentAssembly>
            -->
        </assemblyBinding>
        <generatePublisherEvidence enabled="false" />
    </runtime>
```

<bindingRedirect oldVersion="10.0.0.0" newVersion="11.0.0.0" />

Please remove the comment tags in front of and behind these blocks (“<!—“ and “-->”).

The *DeltaMiner CubeWizard* (*Model* menu, generate *OLAP database*) currently only supports multidimensional mode.

DeltaMiner 5.5.1 also supports Microsoft SQL Server 2012’s relational database engine for connectivity to relational models, *SQL Drill Through,* cell comments, *Repository* schema, or job definition database of *ReportServer*.

(32) Notes: Compatibility with Previous Versions and Installation

The following table shows if the new release contains any changes to the metadata schema of ReportServer and *WebOption* as well as the *WebOption* configuration files.

Component	Files	Changes since version 5.5.0
ReportServer	'ReportServer.mdb' 'ReportServer (SQL Server).sql' 'ReportServer (Oracle).sql'	Yes
WebRepository	'Repository.sql'	No
WebService	'DeltaMaster.Service.exe.config'	No
WebClient	'web.config'	No
GUI repository	'DeltaMaster.Repository.exe.config'	No

The metadata scheme of **ReportServer** has changed. As a result, you should update your job definition database by running the 'ReportServer (SQL Server).sql' or 'ReportServer (Oracle).sql' script. If you use the Access database 'ReportServer.mdb', *DeltaMiner* will do the update for you automatically. As always, you should update the 'ReportServer.exe' file as well as the respective DLLs so that they match the current *DeltaMiner* version. Die ODBC connection string that is specified in the job definition database is located in the "ReportServer.exe.config" file. Please create a backup copy of this file before you install the current version of the *Report Server* files.

The **WebOption** components – *Repository GUI, WebClient,* and *WebService* – are available in version 5.5.1. An update, therefore, is highly recommended. The database schema for the repository has not changed in version 5.5.1. Before you update *WebOption*, please create backup copies of the configuration files (see table above), any changed graphics in the "Image" folder (e.g. "Master_Top.png") as well as the style sheet file (e.g. "DeltaMaster.css").

Since the configuration files of *WebService*, *WebClient*, and *Repository GUI* have not changed from 5.5.0 to 5.5.1, you can reuse the older files without needing to make any changes. You can update the *WebService, WebClient, and Repository GUI* by copying the new files into the respective directories. Once again, please make backup copies of these files before doing so. A separate setup is not necessary.

22 DeltaMiner deltas! 5.5.2

What's new in version 5.5.2? Find out in this overview of the May. 18 2012 release!

(1) General: Expanding/Retracting the Mode Bar with a Double Click 2

(2) ReportServer: Applying the New Job Option "Optimize for Viewer" 2

(3) ReportServer: Saving Generated Office Files as PDFs 2

(4) ReportServer: Revised Export for DeltaMiner TickerPortal 3

(5) Diagnosis: Removing All Log and Trace Files at Program Startup 7

(6) Export: Exporting Mobile Briefing Books for iPad/iPhone Devices 8

(7) Export to Microsoft Word: Exporting Charts with a Left Alignment 8

(8) Export: Generating PDF Files in Word, Excel, or PowerPoint Format 9

(9) Flexreport: Convert to Flexreport and Keep White Style 10

(10) Geo Analysis: Using Updated Maps 10

(11) Model Synchronization: Changing DeltaMiner's Behavior if Dimension Members Are Missing 11

(12) Pivot Tables: Option to Only Draw Bars to the Left and Right for Variances 12

(13) Pivot Tables: Showing Only One Aggregate Line per Node in Nested Hierarchies 13

(14) Pivot Table: Defining Tuples as a Level Selection, with Several Measures, and in MDX 14

(15) Relational Connectivity: Determining a Data Source with a Relative Path 15

(16) Repository: Activating Options for Saving to a Repository and Administering User Rights 16

(17) Small Multiples: Sorting by the Smallest Value 17

(18) SQL Drill Through: Show Images if URL Field Contains an Image 18

(19) Location Analysis: Centering Maps Automatically Using Markers 18

(20) TableWizard: Using Fast Modelling Mode 19

(21) Access to IBM Cognos TM1 10.1 20

(22) Notes: Compatibility with Previous Versions and Installation 20

(1) General: Expanding/Retracting the Mode Bar with a Double Click

With a double click, you can now expand and retract the menu bar to switch among the different user modes (e.g. *Reader*, *Viewer*).

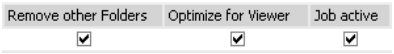
To retract the bar, click on the white space surrounding the names of the user levels. This function will store the mode bar on the left side of the application window to save space.

To expand the bar, double click on the gray space below the names of the user levels. *DeltaMiner* will then display the mode bar horizontally across the entire width of the application window.

The mode bar now has the same behavior as the analysis menu. You can also double click on the analysis menu to expand it from a vertical to a horizontal position (see *DeltaMiner deltas!* 5.5.1, feature #1). Starting in *DeltaMiner deltas!* 5.5.2, you can even collapse this menu back to the left-hand side by double clicking on the word *Analysis methods*.

(2) ReportServer: Applying the New Job Option "Optimize for Viewer"

ReportServer can now export *DeltaMiner* analysis sessions or applications using less memory than in the past. If you activate this *Optimize for viewer* option, *ReportServer* will only export the cockpits and measures that are used in the generated reports – and ignore the others.



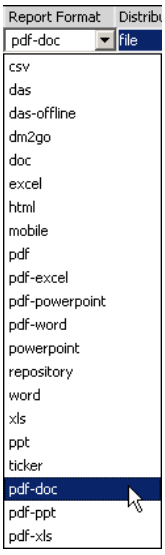
Although this option is called *Optimize for Viewer*, you can certainly use the resulting analysis sessions or applications on another user level as well. These analysis sessions and applications, however, would lack all of the *Report source* components [e.g. cockpits that aren't (yet) saved as a report] that are not required in *Viewer* mode. This functionality is probably not sufficient for users accustomed to working in *Pivotizer*, *Analyzer*, or *Miner* – hence the name, *Optimize for viewer*.

This option affects the proprietary "das" and "repository" *Report formats* in *DeltaMiner*. If you check both the *Optimized for Viewer* and *Remove other folders* options, *ReportServer* will only export the selected *Report folders* (i.e. the name of the window in *ReportServer*) to the generated analysis session or application. Cockpits and measures that are used in reports located in other folders will not be exported.

This "optimization" refers to the internal structures of analysis sessions or reports – not the report design or naming conventions for report elements.

(3) ReportServer: Saving Generated Office Files as PDFs

ReportServer now supports another method for exporting files to PDF format. It generates the reports that you want to export as temporary Microsoft Office files and then saves the results in PDF format. Since the *DeltaMiner* installation contains all of the components you need to run the export, you don't need to have Microsoft Office or a virtual printer driver installed on the system.



You can specify how *ReportServer* should export a PDF file in the job definition under *Report format*.

- "pdf": This format was introduced as a separate export format in *ReportServer* 5.4.8. It generates reports based on the layout defined in a special export template. This template must be available in PDF format.

- “pdf-doc”, “pdf-ppt”, “pdf-xls”: These formats generate temporary output files which are converted to PDF format. No separate installations of Microsoft Office or virtual printer drivers are required. These formats are named after the endings of the temporary files. Due to the better formatting options, these formats are preferable to simple “pdf” exports.

- “pdf-excel”, “pdf-powerpoint”, “pdf-word”: These formats automate the respective Microsoft programs and a separate virtual printer driver converts the file into PDF format. They are named after the Microsoft programs that are automated.

Previous versions of *ReportServer* have also supported functions for generating reports (i.e. “xls” since version 5.3.2, “doc” since version 5.4.0, “ppt” since version 5.5.0). What’s new is that *ReportServer* can directly convert these files into PDF format without needing a virtual printer driver or other third-party components.

Generating reports directly has several advantages over automating Office programs:

- Report generation can be performed on server systems. You can use *ReportServer* or *WebOption*, for example, to automatically generate and distribute reports. This is not the case for Microsoft Office. In fact, Microsoft specifically advises against automating Office in server applications and does not support these types of configurations (KB257757).

- No additional installation packages are necessary. All of the components you need are included in the *DeltaMiner* installation.

- No special access rights are required.

- Generating files is much faster than automating Office programs.

Generating reports directly, however, also has its disadvantages:

- You cannot apply a macro to automatically edit the generated document following an export.

- You cannot utilize program-specific and interactive functions (e.g. refreshing page numbers in the table of contents of Word files.)

- You cannot directly transfer formatted texts (e.g. action titles or report comments). This formatting will be removed – except in “pdf” report format.

These new export options are also available in *DeltaMiner*, see feature #8.

(4) ReportServer: Revised Export for DeltaMiner TickerPortal

As you probably already know, you can use *ReportServer* to automatically export reports as a ticker. During the export process, *ReportServer* arranges the values one after the other in a long row and saves them as bitmap images. You can use these images, in turn, as a ticker that runs across the screen in an endless loop.

This function has been completely revised in version 5.2.2. One reason was the growing need to automatically present key figures in companies. Some companies, for example, want to provide a constant flow of sales, production, logistics, or service data on large-screen monitors to communicate important information without requiring any interaction or waiting for setup times. The demand for tickers on iPads and other portable devices is also increasing, especially when the device is set up as a picture frame. For other examples of using tickers, read our blog posts on “The Wall”, in particular: http://blog.bissantz.com/walls-of-monitors.

Due to this revision, you now have better options for displaying higher-quality tickers and configuring exports.

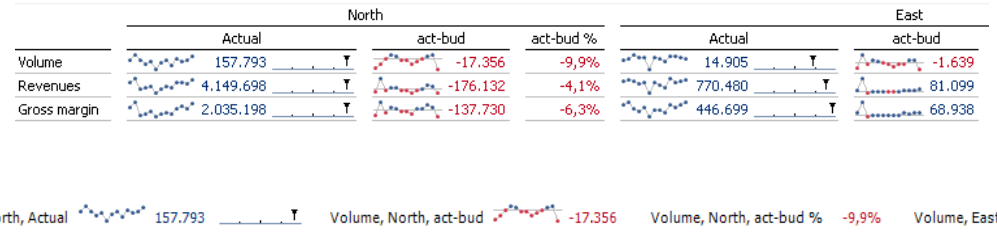
(a) Supported report types

You can export tickers for three report types:

- Pivot tables
- Rankings
- SQL Drill Through

Pivot tables are run row by row from top to bottom, and from left to right within the row.

The two screenshots below show how the pivot table (top) would be exported as a ticker (bottom).



	North			East	
	Actual	act-bud	act-bud %	Actual	act-bud
Volume	157.793	-17.356	-9,9%	14.905	-1.639
Revenues	4.149.698	-176.132	-4,1%	770.480	81.099
Gross margin	2.035.198	-137.730	-6,3%	446.699	68.938

ReportServer exports the following elements for each data cell of a **pivot table**:

- A caption consisting of the measure and dimension member of the current cell. These captions will first be taken from the rows and then the column headers.
- The cell value
- The sparkline (columns, lines, or dot lines)
- The trend barometer
- The scale

ReportServer will not export aggregations (e.g. sums or means of the rows and columns) that can be displayed using the context menu of the pivot table. The minimum and maximum values in a sparkline will no longer be exported either. If you want to classify the current value within the range of the sparkline values, you can use the *Scale* instead.

ReportServer will export the following elements for each entry of a ***Ranking***:

- The entry's rank
- The dimension member
- The value

The following screenshots, therefore, show how *ReportServer* would export a *Ranking* (right) to a ticker (below).

Top	Product	Share	Revenues	Percentage margi...
1.	DCW Plywood	53,9%	9.104.170	30,9%
2.	Softpad 117	10,9%	1.841.349	87,1%
3.	Jackson ZZ	6,8%	1.146.650	78,0%
4.	Precisio LF	6,6%	1.121.613	46,6%
5.	Jackson 10			
6.	Softpad 217			
7.	Arcade AM 44			
8.	Arcade AM 55			
9.	Softpad 208			

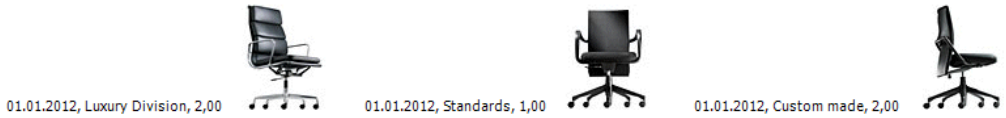
Period	Product main group	Count	Url
01.01.2012	Luxury Division	2,00	
01.01.2012	Standards	1,00	
01.01.2012	Custom made	2,00	

Corresponding to the report's settings in the report,

ReportServer will either export the *top* or *bottom* objects. If the report shows the *top and bottom objects,* the ticker will only include the top ones. Otherwise, you cannot see if an entry belongs to the top or bottom part of the ranking. *ReportServer* does not include the share and the percentage margin in the export.

ReportServer exports all of the fields that you can see in the *Table view* for each row in a ***SQL Drill Through*** report. The values of the fields are separated by a comma. The export includes the column selection defined in the *Settings* as well as the *Format*, *Display order*, *Sort,* and *Sort criteria order*.

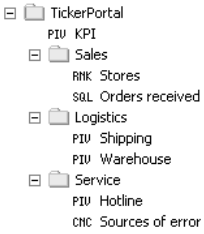
The following screenshots show how *ReportServer* would export a *SQL Drill Through* (right) to a ticker (below).



(b) Organizing reports in a briefing book

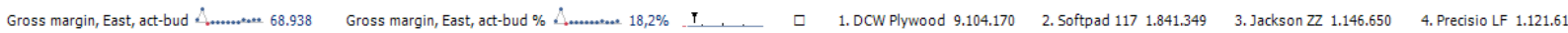
During an export, *ReportServer* combines all reports from a given folder into a single ticker. In other words, each exported folder in the *Briefing book* becomes a separate ticker. The ticker only includes reports that are directly located in the folder – not its sub-folders. Subfolders produce separate tickers. A ticker (and, therefore, a folder) can contain various report types. *ReportServer* will ignore any non-supported report types during the export.

ReportServer, for example, would create four tickers based on the folder structure shown on the right. The first ticker would show the pivot table “KPI“. The second ticker would combine the *Ranking* and *SQL Drill Through* reports in the “Sales” folder (i.e. “Stores”, “Orders received”). The third ticker would include both pivot tables in the “Logistics” folder. The fourth ticker would be based on the “Hotline” pivot table from the “Service” folder; the *Concentration Analysis* (i.e. “Sources of error“) in the same folder would not be included because this report type is not supported.



ReportServer will enter one or more delimiters between two reports so that you can see where one report ends and the next one begins. You can select the delimiter of your choice [see Section (e) below].

The following ticker combines a pivot table containing sparklines and a *Ranking*; these reports are separated by an empty box, the standard delimiter symbol.



In previous versions of *ReportServer*, you had to first select the reports in the analysis session in order to export them to the *SparkTicker*. This is no longer necessary. *ReportServer* now exports all of the supported report types without needing a special configuration in the analysis session.

(c) Job execution and exported files

In the *Address* field of the job in the job definition, please enter a directory and not a file name - because *ReportServer* generates several files in this report format and automatically names them based on a predefined schema.

When you *Run* the job, *ReportServer* generates an image file in PNG format for each exported report folder and names the files based on the following schema: “ticker<folder ID>.png“. Since this name contains the folder ID shown in the *Folder properties*, you can anticipate the name of the file even when the size of the *ReportServer* job changes. This makes it much easier to transfer the generated image files into other applications – especially to display modules [see Section (f)].

If a ticker contains column or dot-line sparklines, it will generate an additional file called “ticker<folder ID>.xml”. This file contains information (e.g. the coordinates of a column or dot, the value, and the caption) that you need to display in tooltips. You can then use this data, for example, to create an image map in HTML.

Finally, *ReportServer* will generate an XML file called “ticker.xml” for the entire job. This file lists the exported tickers with their respective file names, the name and ID of the folder in the briefing book, the ticker’s height in pixels, and a link to the corresponding XML files (if necessary). If you use the *DeltaMiner TickerPortal* app, “ticker.xml” is the ideal index file for the ticker you wish to display. Other applications, however, can use the information contained in the file as well.

If a report contains no values, *ReportServer* will export an empty ticker. This also happens if there is an output error, for example because the maximum image size has been exceeded [see section (d)]. The empty tickers ensure that previously exported tickers cannot be reused. (*ReportServer* does not delete any files prior to an export.) Any warnings and errors will be documented in trace files. If a folder does not contain any supported report types (i.e. pivot table, *Ranking*, or *SQL Drill Through*), *ReportServer* will ignore the folder and not generate an image file.

(d) Display in the exported tickers

The appearance of the report in the analysis session determines how the values, sparklines, etc. are displayed in the ticker. For example, sparklines use the same scaling option defined in the analysis session. If desired, you can edit the font type and size in the configuration file [see section (e)].

All elements (e.g. text, sparklines, trend, scale, images) are bottom-aligned from a common baseline. If you are using pivot tables, the height of the ticker will be equivalent to the row height. If you have selected an *automatic* row height (*Table properties*, *General* tab), the height of the column or dot-line sparklines (*Sparklines* tab) will determine the row height and, therefore, the height of the ticker as well. A *user-defined* row height determines the height of the line sparklines and, therefore, the height of the ticker. If the pivot tables have no sparklines, *ReportServer* will export them with a height of 14 pixels regardless of the *user-defined* row height. The height of a ticker originating from a *Ranking* or *SQL Drill Through* is 14 pixels. If the *SQL Drill Through* includes images (see feature #17), *ReportServer* will adjust the ticker’s height so that the image fits in its original resolution. If it needs to export reports with varying row heights into the same ticker, it will apply the largest row height to the entire ticker.

In each of these cases, you can adjust the output using a scaling factor in the configuration file [see Section (e)].

Tickers can have a maximum size of 1 megapixel. If they are larger, they might be cut in length or may not even run at all.

(e) Configuring the export (export template)

ReportServer applies an *Export template* (setting in the job definition) to determine the ticker’s format. This template is a configuration file that has a similar setup to an .ini file. The *DeltaMiner* installation includes a sample export template called “DeltaMaster.ticker.txt” located in the “Templates” subdirectory. You can edit and customize this file with a standard text editor like “notepad.exe”.

The following settings are supported:

Term, Default setting	Explanation
Scale =1	Factor for scaling the height of the ticker. Factors may contain a decimal.
TextFont =Tahoma	Name of the font used for text and numbers
Delimiter = \u25a1	Character used to separate reports that are exported to the same ticker. A delimiter can consist of one or more characters. To use a special character or symbol, simply enter the prefix "\u" followed by its four-digit hexadecimal Unicode character number. If you wish to use a backslash as a delimiter, enter it twice ("\\"). The standard symbol is an empty box ("□").
DelimiterFont =Tahoma	Name of the font used for delimiters. Since you can select a different font than you used for text and numbers, you can also use "Wingdings" or other symbol fonts for the delimiter.

You can also embed comments using the prefix "--" or "//" (e.g. "-- Scale = 2").

The standard font size is 8.25 points. *ReportServer* will multiple this size by the scaling factor.

(f) Displaying a ticker on iPad/iPhone devices or in a Web browser

ReportServer's job is to generate tickers – not display them. To present them, you will need additional components that are not part of *ReportServer's* functionality.

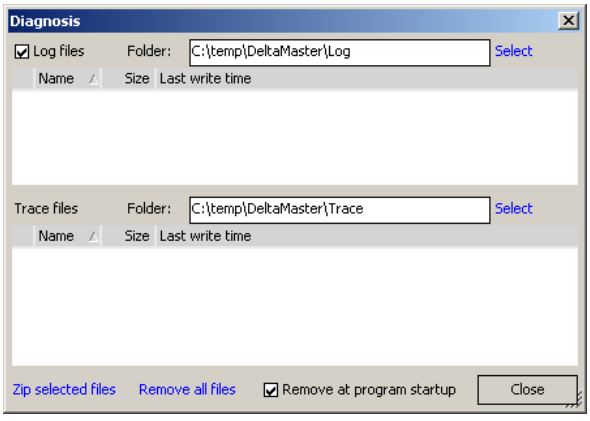
To display tickers on iPad devices, we have developed an app called *DeltaMiner TickerPortal*, which you can download for free from the Apple App Store. This app displays multiple tickers simultaneously in an endless loop across the screen without the need for user interaction (e.g. scrolling, running new queries). If desired, users can use gestures to scroll through the ticker, make the display larger or smaller, and access detailed information.

You can display the tickers on large-screen monitors with the help of a Web browser. We will be happy to provide you with a presentation component based on HTML and JavaScript upon request.

(g) Licensing

To export tickers, you will need a valid license for *ReportServer TickerPortal* ("ReportServer-TickerPortal"/"DM-RPST") or "ReportServer-Apps"/"DM-RPSR"). Simply contact us if you wish to receive a test license.

(5) Diagnosis: Removing All Log and Trace Files at Program Startup



If desired, *DeltaMiner* can remove all existing log and trace files at the start of the program. This option makes it easier to analyze database queries and errors since the files only contain entries from the current session.

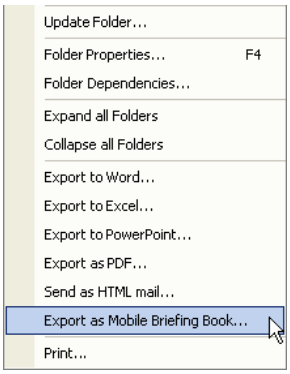
You can activate the automatic delete function in the *Diagnosis* dialog box (*Help* menu or *Ctrl+D*) by selecting

the *Remove at program startup* option. *DeltaMiner* will save this setting for each user in the Windows registry ("HKEY_CURRENT_USER"). This setting applies to all analysis files that a user edits on that computer.

(6) Export: Exporting Mobile Briefing Books for iPad/iPhone Devices

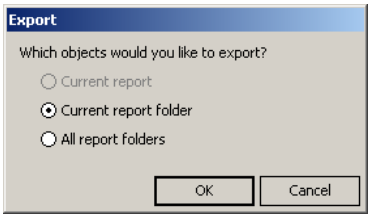
You can export reports and report folders as mobile briefing books, which users can open on their iPad or iPhone devices using *DeltaMiner ReaderApp*. With a valid license ("DeltaMiner 5.5 Export Apps" or "DM-EAP"), you can use this export functionality on all *DeltaMiner* user levels (i.e. from *Reader* to *Miner)*.

ReportServer has supported exports to iPad/iPhone devices since version 5.4.9 (see *DeltaMiner deltas!* 5.4.9, feature #3). Now, you can generate the export file directly from *DeltaMiner* so that you can spontaneously give yourself or someone else mobile access to it from an iPad or iPhone. If you prepare mobile reports on a regular basis or are distributing them to a large group of users, *ReportServer* is still the better option for automatically generating and distributing briefing books.



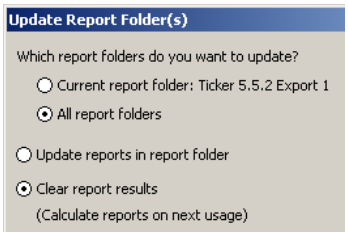
To export a folder and its reports *as a mobile briefing book*, simply click on the respective entry in the folder's context menu. If a folder is selected, you can also access this command from the *I want to…* menu of the *Briefing book*.

As you already know from other types of exports, *DeltaMiner* will ask if you want to export the *Current report folder* or *All report folders*. Since *DeltaMiner ReaderApp* always administers reports in folder structures, you cannot export a single report without a folder. If you wish to transfer individual reports to an iPad or iPhone, you can use the *Send as HTML mail* option instead.



In the next step, you can now select a name for the mobile briefing book as well as the location for saving it. *DeltaMiner* will display the progress of the export in the status bar of the application window.

DeltaMiner will not automatically update calculated reports during an export. Before you start the export, therefore, you should select the *Clear report results (Update report folder(s)* option in the folder's context menu or the *I want to…* menu) to ensure that all reports contain the latest numbers from the database.



DeltaMiner will generate two files during the export. The file ending with ".dmmobile" hosts the mobile briefing book while the one ending with ".dmmobile.hash" contains a checksum so that *DeltaMiner ReaderApp* can recognize if something has changed in a briefing book saved to an iPad/iPhone device and needs to be updated.

You can transfer both files to your iPad/iPhone using iTunes, Dropbox, or e-mail. Afterwards, you can open or update the mobile briefing book using *DeltaMiner ReaderApp* (see *DeltaMiner deltas!* 5.4.9, features #3b and #3c for more information). If you send the mobile briefing book via e-mail, you don't need to include the ".dmmobile.hash" file because the app cannot automatically check for updates on files that were sent this way.

(7) Export to Microsoft Word: Exporting Charts with a Left Alignment

When you export a file to Microsoft Word, *DeltaMiner* can now align all charts to the left instead of centering them in the paragraph. The prerequisite is a specially prepared template ("DeltaMaster.dot"):

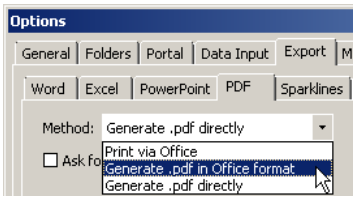
- If your template contains a style element called “Chart left”, *DeltaMiner* will apply this new formatting to the paragraph containing the chart. In this style element, the paragraph justification should be left-aligned.

- If the template does not contain a style element called “Chart left”, *DeltaMiner* will apply the style element “Chart centered” to the paragraph containing the chart. In this style element, the paragraph justification is usually center-aligned.

The Word template “DeltaMaster.dot” contained in the *DeltaMiner* 5.5.2 installation contains the style element “Chart left” which aligns both paragraphs and charts to the left. If you wish to use a customized Word template, you can add the “Chart left” style element to justify all paragraphs and charts accordingly.

DeltaMiner will search for the “DeltaMaster.dot” export template in the directory listed under *Options* (*Extras* menu) on the *Folder* tab for *Export templates*. In *ReportServer*, you can choose the export template for each individual job.

(8) Export: Generating PDF Files in Word, Excel, or PowerPoint Format



DeltaMiner now supports a new method for exporting files into PDF format. It generates temporary Office files for the analyses, cockpits, and reports you wish to export, and saves the results as a PDF file. Since the software installation contains all of the necessary components for this export method, you do not need to have Microsoft Office or a virtual printer driver installed on the system.

As a result, *DeltaMiner* now supports three different methods for exporting PDF files:

- *Print via Office*: *DeltaMiner* automates Word, Excel, or PowerPoint to generate the export files. After creating the document, *DeltaMiner* will send a print command to the respective program and print the file to a virtual printer driver. If you use this method, the respective Office programs and a virtual printer driver must be installed on the system.

- *Generate .pdf in Office format*: This is the new method described above. *DeltaMiner* generates a temporary file and saves it to PDF format without using a virtual printer driver.

- *Generate .pdf directly*: This method was introduced in *DeltaMiner* 5.4.8 as a self-contained export format. It generates reports using the layout defined in the export template “DeltaMaster.pdf”. If you use this method, you do not need to have Microsoft Office or a virtual printer driver installed on the system. In comparison to the other methods, the formatting capabilities are more limited. The export, however, is faster because it does not generate any temporary files in the process.

You can access these three export methods under *Options* (*Extras* menu) on the newly designed *Export* tab. The separate sub-tabs for *PDF* and *PDF (via Office)* are now combined into one.

The selected export method applies to all cockpits, analyses, and reports in the current analysis session. Although you cannot change the export method, you can change the *Table export options* as well as the page alignment for individual reports under *Report properties* (context menu of reports in the *Briefing book*) on the *Export* tab.

Which export method is right for you depends on how you intend to use it:

- *Print via Office*: This option makes sense for end users who interactively work with *DeltaMiner* on their computers and occasionally save their results as PDF files. Through the automation of Microsoft

Office, they can leverage the interactive functions and specific strengths of Office programs (e.g. updating page numbers in the table of contents of Word files). *DeltaMiner* can also run a macro following the export to automatically edit the generated documents ("AfterExport", see *DeltaMiner deltas!* 5.1.5, feature #18 for more information). Automating Microsoft Office, however, takes significantly longer than generating files and requires both a Microsoft Office installation and suitable printer driver.

- *Generate .pdf in Office format*: This option is also suitable if Microsoft Office is not available. Due to the significantly higher processing speed, this method is also suitable for report editors who regularly export extensive briefing books. Since *DeltaMiner* generates the PDFs from temporary Office files, they can define specific formatting options (e.g. font types or sizes) in the export templates to modify the PDF output.

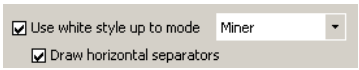
- *Generate .pdf directly*: This option is the fastest way to generate PDFs since *DeltaMiner* does not need to generate temporary Office files. This method, however, only offers limited formatting capabilities and requires special PDF tools (e.g. Acrobat Pro) to edit templates. Due to these reasons, you would probably want to choose one of the other export options most of the time and only use this one in special cases.

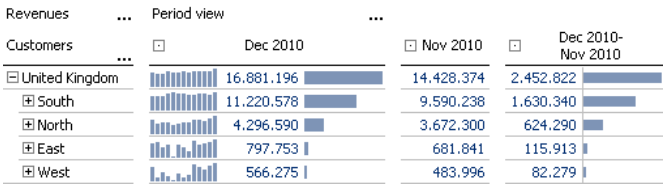
These new export options are also supported in *ReportServer* (see feature #3).

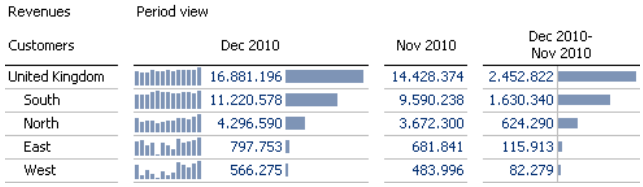
(9) Flexreport: Convert to Flexreport and Keep White Style

If you convert a pivot table into a Flexreport (*Change* menu in the *Cockpit* window), *DeltaMiner* will now apply the settings for *White style* and horizontal separators. As a result, *DeltaMiner* will preformat the Flexreport in a single step so that it closely resembles the current appearance of the pivot table.

You can select *White style* in the *Extras* menu under *Options* on the *Presentation* tab. *DeltaMiner* will then apply this formatting to the Flexreport if you *Use white style up to Miner mode*. Selecting the *Draw horizontal separators* option improves the rows' readability.







The screenshots on your right show a pivot table (top) that was converted to a Flexreport (bottom). The horizontal separators were included in the Flexreport; the line breaks on the column edges were created using an empty right gap (see *DeltaMiner deltas!* 5.5.1, feature #19).

(10) Geo Analysis: Using Updated Maps

DeltaMiner 5.5.2 contains three updated maps (i.e. data from November 2011) for *Geo Analysis*: Germany by zip code areas (i.e. five-digit zip codes) and counties as well as Europe by zip code regions. Both maps of Germany are included in the *DeltaMiner* installation ("DPLZ1112.LTG" and "DKRE1112.LTG"). If you wish to receive the updated map of Europe, simply send a request to support@bissantz.com.

DeltaMiner will search for map files in the directory listed in the *Extras* menu under *Options* on the *Folder* tab (e.g. "C:\Program files\DeltaMaster 5.5.2\Maps"). If you open an analysis session that includes a *Geo Analysis* in *DeltaMiner* 5.5.2 and *DeltaMiner* finds an updated map in the designated folder, it will automatically apply the new maps to the reports. As a result, you should use these new maps in the entire installation including *ReportServer* und *Weboption* – and not just on individual workstations. The easiest way to do this is to store

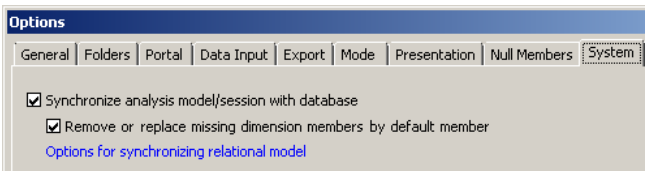
the maps to a folder on a server. If you wish to continue working with the previous maps and not take advantage of the updated versions, simply delete the newer files in the map folder.

(11) Model Synchronization: Changing DeltaMiner‘s Behavior if Dimension Members Are Missing

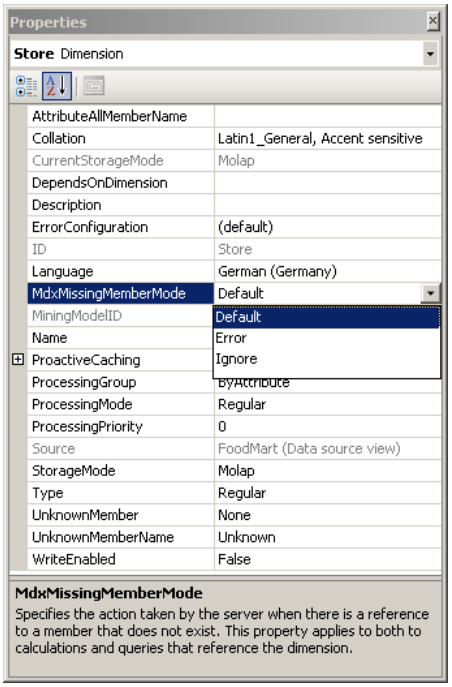
Thanks to a new option in version 5.5.2, you have more control over how *DeltaMiner* reacts when it detects missing members during the model synchronization.

During the model synchronization, *DeltaMiner* checks if all of the dimension members used in the analysis sessions are still available in the database. If a member is missing, for example, because it was renamed, deleted, or the user doesn’t have the necessary access rights, *DeltaMiner* will try to correct the respective definitions (i.e. query expressions). If additional members are selected next to the missing one in the same dimension, it will delete it. In the case of a member selection (i.e. pick list), you can assume that the selection would still deliver valid results even without the missing member. If the missing member was the only selected member, however, *DeltaMiner* will replace it with the dimension’s default member (e.g. “All …“). This is also the case for views because a selection is mandatory in OLAP models. As a result, *DeltaMiner* will replace the member that was previously selected and now is missing.

This type of replacement is not desirable in certain situations because it can lead to unexpected results. As a result, *DeltaMiner* 5.5.2 contains a switch in which you can select how *DeltaMiner* should deal with missing members. The previous behaviour, *Remove or replace missing dimension members by default member,* is now the standard setting.



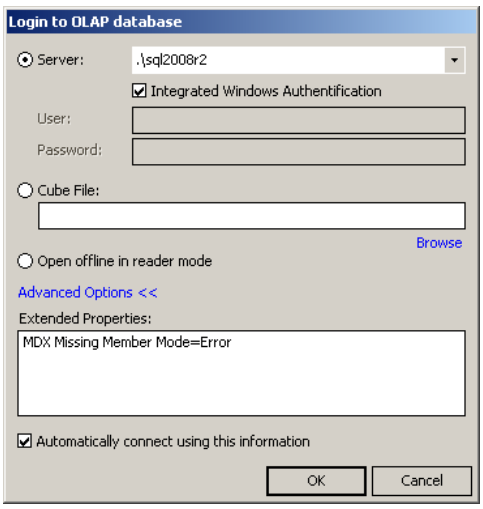
If you deactivate this setting (*Extras* menu under *Options* on the *System* tab), *DeltaMiner* will not check if any members are missing. This should accelerate the synchronization process. How *DeltaMiner* reacts if any members are missing depends on the database.



In Microsoft Analysis Services 2005 and higher, you can define what should happen if any members are missing in MDX expressions. This property “MdxMissingMemberMode” can be set for each dimension. “Error” means that the database should return an error to *DeltaMiner. DeltaMiner* will display this error, which isn’t the worst reaction to a change in the database. The setting “Ignore” returns nulls but no errors.

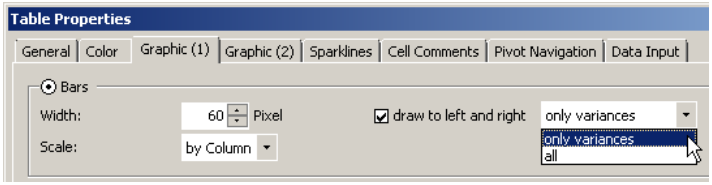
You can also set the “MDX Missing Member Mode” in the *Advanced properties* of the *OLAP database login*. The setting listed here applies to all dimensions.

If the automatic delete/replace function is deactivated, you can correct the changes manually in the analysis model. If the “MdxMissingMemberMode” is set to “Error”, this is easier than “Ignore” because the changes can be recognized better.



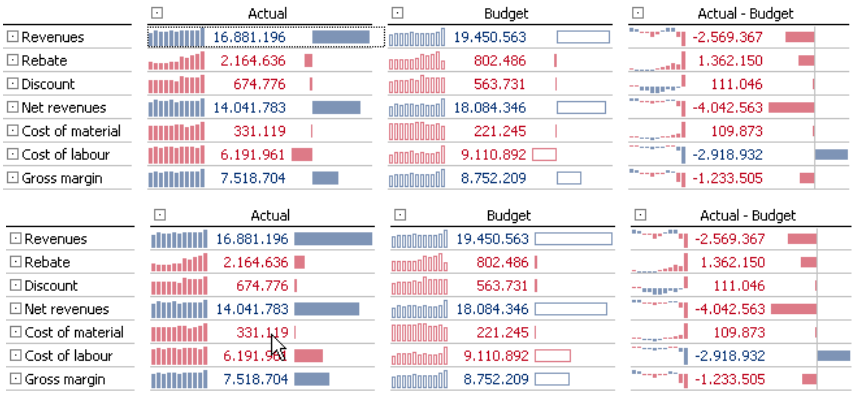
(12) Pivot Tables: Option to Only Draw Bars to the Left and Right for Variances

In the Table properties on the Graphic (1) tab, you can define that DeltaMiner should Draw [bars] to [the] left and right only [for] variances.



If you then work with pivot tables containing positive and negative values, it is easier to differentiate the bars that show variances from those that don’t. In addition, any change of direction (i.e. from right to left instead of left to right) shows a change, movement, or variance of values – and not simply a different algebraic sign or business effect.

The two screenshots on your right illustrate the difference. *DeltaMiner* draws bars for all values to the left and right in the top screenshot but *only for variances* in the bottom one. One side effect is that the bottom screenshot provides better differentiation because the bars containing negative values lie in the same range as those containing positive ones.



For this option to work correctly, the respective dimension members (e.g. budget-actual variances, variances to the previous year) must be designated as variances. *DeltaMiner* automatically recognizes certain elements as variances, for example, *Time-calculated members* that are defined as *absolute*, *relative,* or *weighted variances* or variances that were created using the *Editor for calculated members* on the *Variance* tab. In the case of *user-defined calculated members* that you generate as a MDX expression, you can designate the member as a *Variance* by activating the new check box on the bottom-left part of the dialog box. If a variance is already defined in the database, you can choose the *Edit member* option (context menu of the member in the *Dimension browser*, see *DeltaMiner deltas!* 5.5.1, feature #17) and designate it as a *Variance* by clicking on the check box in the *Editor for members*.

(13) Pivot Tables: Showing Only One Aggregate Line per Node in Nested Hierarchies

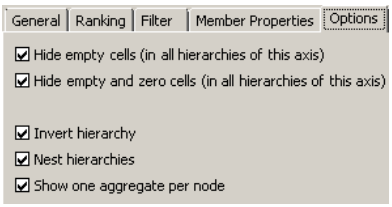
To ensure that pivot tables don't get too complex when you are working with nested hierarchies, you can hide certain subtotals. This is especially useful when several aggregated values meet at a node.

In the following example from our "Chair" reference model, the table on the left shows a case where several aggregated values meet at a node. The "Products" and "Colors" dimension are nested (and inverted, but only for didactical reasons):

		Revenues
⊞ Luxury Division	Antique	162.625
	Blue Acqua	1.652.431
	Silverline	231.378
	⊟ All colours	2.046.434
⊞ Custom made	Antique	12.772
	Blue Acqua	2.006.732
	Metal	10.334.606
	⊟ All colours	12.354.110
⊞ Standards	Antique	279.195
	Silverline	2.201.458
	⊟ All colours	2.480.652
⊟ All products	Antique	454.591
	Blue Acqua	3.659.163
	Metal	10.334.606
	Silverline	2.432.835
	⊟ All colours	16.881.196

		Revenues
⊞ Luxury Division	Antique	162.625
	Blue Acqua	1.652.431
	Silverline	231.378
	⊟ All colours	2.046.434
⊞ Custom made	Antique	12.772
	Blue Acqua	2.006.732
	Metal	10.334.606
	⊟ All colours	12.354.110
⊞ Standards	Antique	279.195
	Silverline	2.201.458
	⊟ All colours	2.480.652
⊟ All products	⊟ All colours	16.881.196

The "All Products" node at the bottom of the left table shows the aggregated revenues for all product categories differentiated by colors due to the nesting. These values (e.g. "All Products/Antique": 454,591, "All Products/Blue Aqua": 3,659,163, etc.) are aggregates. They show the total revenues for each color up to the product categories. Sometimes, however, you simply want to show the total sum here without a further breakdown.



You now can hide these type of aggregates using a new option in the *Axis definition*. On the *Options* tab, you can determine that *DeltaMiner* should *Show one aggregate per node* only. This option only works in combination with *Nest hierarchies*, which will be automatically activated as soon as you choose to *Show only one aggregate*.

You can see how this option works in the right table of the screenshot above. In the "All Products" node, "All Colors" is shown as an aggregate and is no longer broken down by colors.

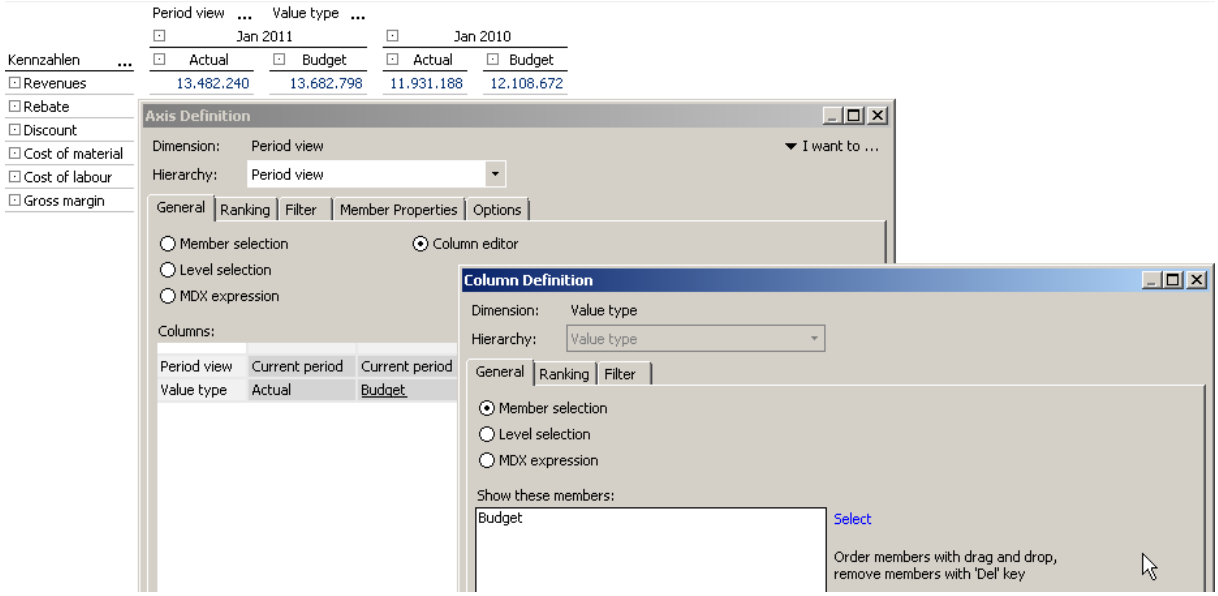
Abstractly speaking, *DeltaMiner* will suppress aggregates in a hierarchy if the hierarchy in the *Axis definition* is defined as a *Level selection* with several levels **and** if the hierarchy to the left of it (or in the column axis above it) contains members from multiple levels, either due to a drill down or a selection of more than level. If these conditions apply, *DeltaMiner* will only show the members of the highest selected level of the inner hierarchy for all members of the outer hierarchy above the lowest selected level in the inner hierarchy.

If that sounds a bit confusing, let's walk through that same abstract description again while referencing the table above. *DeltaMiner* will suppress aggregates in a hierarchy (i.e. "Colors") if the hierarchy in the *Axis definition* is defined as a *Level selection* with several levels (i.e. "All" and "Colors") and if the hierarchy to the left of it (i.e. "Products") contains members from several levels (i.e. "All", "Product Categories") due to a drill down or a selection of several levels. If these conditions apply, *DeltaMiner* will only show the members of the highest selected level of the inner hierarchy (the lowest selected one is "Colors"; only "All" is above it) for all

members of the outer hierarchy above the lowest selected level in the inner hierarchy (the lowest selected one is “Product categories”; only “All” is above it).

(14) Pivot Table: Defining Tuples as a Level Selection, with Several Measures, and in MDX

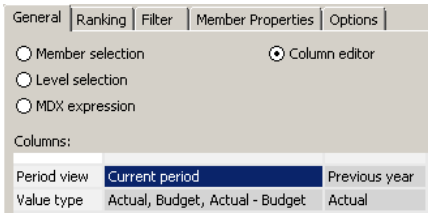
The tuple selection is now more flexible because you can select members from the respective dimensions using a *Level selection* or *MDX expressions.* In addition, you can now pick multiple members in the *Member selection*.



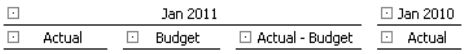
If you want to create tuples from members of several dimensions using the *Column* or *Row editor*, at least two of the dimensions must be located on the column or row axis. If this is the case, *DeltaMiner* will show the *Axis definition* on the *General* tab of the *Column editor*. (If it involves the *Axis definition* of the row axis, this option will be called the *Row editor*. The following descriptions for working with the *Column editor* also apply to the *Row editor*).

If you activate the *Column editor*, *DeltaMiner* will show a preview of the table structure on the bottom part of the axis definition – as before. See *DeltaMiner deltas!* 5.3.7, feature #8.

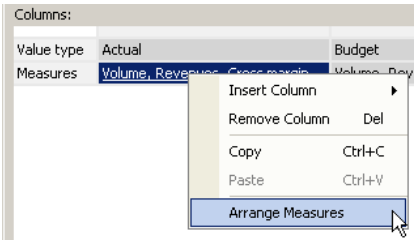
What is new is that when you click on one of the members in the preview, *DeltaMiner* will open the *Column definition* (or *Row definition*) dialog box. Here you can define which members from the respective dimensions you want in the tuple – in the same way that you know from the *Axis definition*: using a *Member selection* (i.e. an explicit selection, a pick list), *Level selection,* or *MDX expression*. Just as in the *Axis definition*, you can sort and filter the tuple members (*Ranking* and *Filter* tabs). These different possibilities to select members and their order (i.e. ranking, filtering, or dynamically through MDX) give you more flexibility in creating the table. In previous versions of *DeltaMiner*, you could only select a single tuple member.



If several members are selected in a cell in the preview, *DeltaMiner* will combine all these members with a subordinate one. In the screenshot on your right, three scenarios (i.e. “Actual”, “Budget”, and the variance “Actual-Budget”) are selected for a member of the period view. In the pivot table, *DeltaMiner* will then generate three columns for the scenarios that are all allocated to the current period.

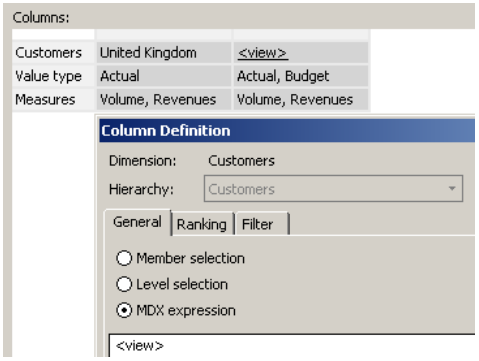


In order to create this type of presentation with previous versions of *DeltaMiner*, you would have had to select the same member of the period view (i.e. “Current period”) three times in the column editor. As you can see from the example above, the new column editor makes this task much easier. Dynamic selections in which different view settings would lead to varying results, depending e.g. on filters or rankings, could not be defined at all previously.



Multiple selections are now also possible for measures. Using a new entry in the context menu of the cells, you can determine the order of the measures. This will open the known dialog box in which you can *Arrange [the] measures* via drag and drop.

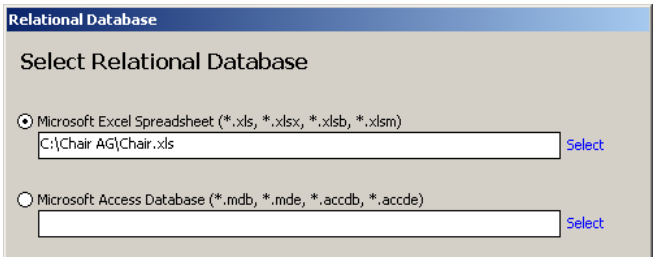
In MDX expressions, you can also use the variable “<view>”, which stands for the members of the respective dimensions that are selected in the *View* window. You can use this variable to create tables containing a few columns that cannot be changed (i.e. “United Kingdom” in the screenshot on your right) and others that report consumers can select themselves, even on *Viewer* level.



(15) Relational Connectivity: Determining a Data Source with a Relative Path

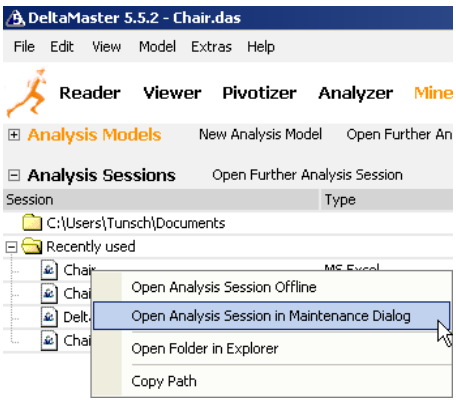
As you already know, you can use *DeltaMiner TableWizard* to base an analysis session directly on a Microsoft Excel or Access file without the need for an OLAP cube. Starting from version 5.5.2, you can now enter the data source as a relative path to the .das file. This function makes it easier to distribute these types of applications. If you save an analysis session (.das file) and the underlying data source [e.g. an Excel spreadsheet (.xls file)] to the same directory, you can copy them both to a different directory or move them without having to change the path to the data source.

When you create a *New analysis model* (*File* menu), simply select the *Relational database* using its absolute path. This is necessary because the analysis session does not yet exist and, therefore, you cannot enter a relative path between the data source and analysis session.

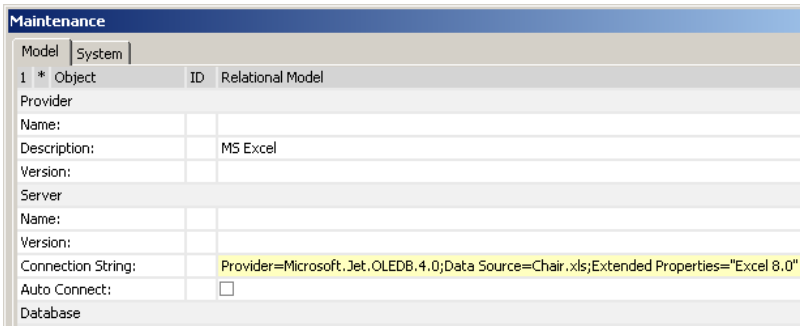


You can *Save* the new analysis model as an analysis session (*File* menu, *Ctrl+S*) – ideally in the same directory as the Excel or Access file or a subdirectory of it. Since the session now has a path, you can enter a relative reference from the .das file to the respective Excel or Access file.

The absolute path, however, is still saved in the analysis session. You can change this in the *Maintenance dialog*. Simply *Close* the analysis session (*File* menu) so that you can *Open [it] in the maintenance*



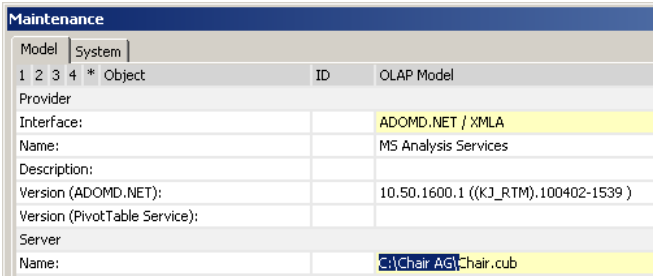
dialog (context menu of the analysis session on the *Portal* page; alternatively, *Maintenance* in the *Model* menu).



Under *Maintenance,* you can edit the *Connection string* and change the path to a relative one by deleting the letter of the drive and any absolute path strings.

If the Excel or Access file is located in the same directory as the *DeltaMiner* file, you now only need to enter its name. An example of a reference to an Excel file in a parent directory would be "..\Customer_Survey.xls". A reference to a file in a subdirectory could be "..\Data\Customer_Survey.xls" or simply "Data\Customer_Survey.xls".

When you click on *OK* to confirm the changes, *DeltaMiner* will prompt you to save the analysis session. To keep the relative reference, you should leave the files in the same location as before.

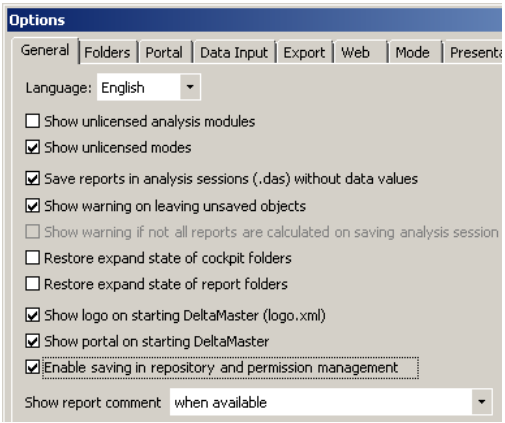


Starting in *DeltaMiner* 5.4.8, you can also enter local cube files (.cub) using a relative path to the analysis session. To do this, simply follow the same steps as described above for relational sources: open the analysis session in the maintenance dialog box and change the data source to a relative path (*Name* field in the *Server* section) by removing the letter of the drive and any absolute path strings.

As an alternative to the maintenance dialog box, you can also enter the relative path in both instances (relational and OLAP) by opening the saved analysis session and editing the path entry in the login dialog box. Before you can do this, you must ensure that the automatic login is not activated or is only activated after you have entered the relative path.

If you use *DeltaMiner CubeWizard* to generate a local cube file using relative paths, you should first configure the relational source with a relative path. In that case the path to the relational source in the .cub file will also be saved as relative.

(16) Repository: Activating Options for Saving to a Repository and Administering User Rights



You no longer need a special license to save an analysis session with *DeltaMiner* to the repository or administer access rights. Instead, you can select the option to *Enable saving in repository and permission management* in the *Extras* menu under *Options* on the *General* tab. Previously, a special "DeltaMaster WebService" ("DM-WSV") license was required.

This option is available to users working on *Pivotizer*, *Analyzer,* and *Miner* levels. You can save this setting for individual users in the Windows registry ("HKEY_CURRENT_ USER) and it applies to all analysis files that a user edits on a given computer. If no analysis file is open, *DeltaMiner* will not display this option. If *DeltaMiner* notices during the start that the repository has already

been used, it will automatically activate this option.

This new setting helps you clean up the user interface. If users are not using the repository or don't have write access, they don't need access to certain controls.

If this option is activated, *DeltaMiner* will display the following elements:

- File menu: Save analysis session to the repository
- Briefing book: Session, Briefing book, Folder, and Report access rights
- Report properties: Web tab
- Options (Extras menu): Web tab

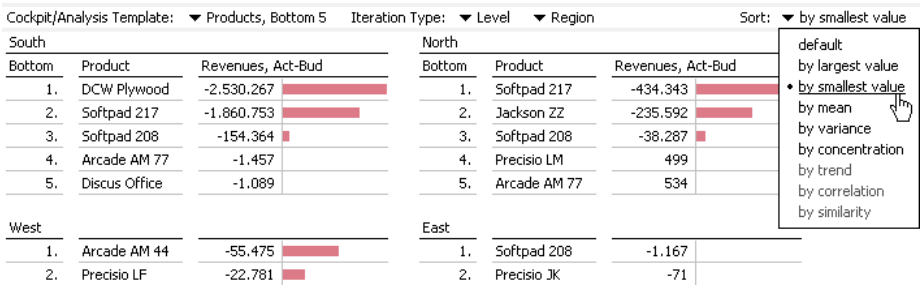
DeltaMiner will instantly apply any changes to this option. A separate restart is not necessary.

The repository is a database-supported option for sharing analysis sessions. Instead of distributing sessions as .das files, you can save them as applications to a central database. As of *DeltaMiner* 5.4.9, you can administer detailed access rights for sessions, briefing books, folders, and even individual reports in these types of applications (see *DeltaMiner deltas!* 5.4.9, feature #20).

(17) Small Multiples: Sorting by the Smallest Value

In *Small Multiples,* you can now sort the individual multiples by the smallest value. This is especially relevant for negative values. Mathematically, the largest value lies closest to zero. In business, however, the numbers that tend to interest people the most are those that are the furthest away from zero.

After determining the smallest value in each multiple, *DeltaMiner* will sort the multiples in ascending order from this value. Even if this sounds similar, arranging values in ascending order by the smallest value is different from sorting them in descending order by the largest value – especially if you are dealing with negative values. The following example illustrates this point well.



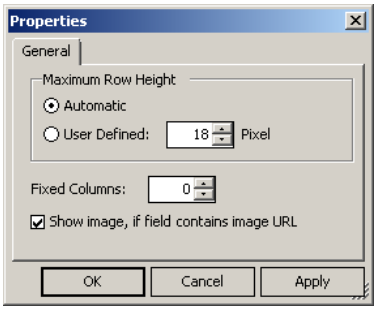
The analysis in the screenshot on your right is based on a ranking of the five products with the largest negative budget-actual variance (i.e. "Bottom 5"). This ranking is calculated for each region. In this type of analysis, the regions with a very strong negative variance should be displayed on top. When you *Sort by the smallest value, DeltaMiner* will arrange the multiples based on the values of the top-placed products. If you have negative values as in the screenshot above and sort them in descending order based on the largest value, *DeltaMiner* would arrange the values in the fifth-place position on top.

You can also sort the values by the smallest value for all report types that you can sort by the largest value – namely, *Pivot Table*, *Ranking*, *Cross Table*, *Time Series*, *Portfolio*, and *Geo Analyses* as well as *Regression* and *PowerSearch*.

(18) SQL Drill Through: Show Images if URL Field Contains an Image

You can now display bitmap images (e.g. product pictures, customer logos, maps) in *SQL Drill Through* reports.

You can activate this new option, Show image if [a] field contains [an] image URL, in the Properties of a SQL Drill Through (context menu or I want to… menu).



If this option is activated, *DeltaMiner* will check each data field to see if it contains the address of an image file. It first compares the end of the field value with the typical file endings for images (e.g .bmp, .gif, .jpg, .jpeg, .png, .tif, .tiff). If the ending refers to an image, *DeltaMiner* will examine the beginning of the field value to determine if it is an address of a file system or a Web/Internet server. Addresses of a Web or Intranet server begin with "http://". File system addresses (e.g. paths and file names), however, can either be absolute or relative paths. If the path is relative, *DeltaMiner* will first interpret the address as being relative to the analysis session (.das file); if the file is not there, *DeltaMiner* will interpret the path as being relative to the directory in which *DeltaMiner* was started ("Client.exe").

If it cannot locate an image at the assumed address, *DeltaMiner* will instead display the field value (i.e. the assumed address) as text.

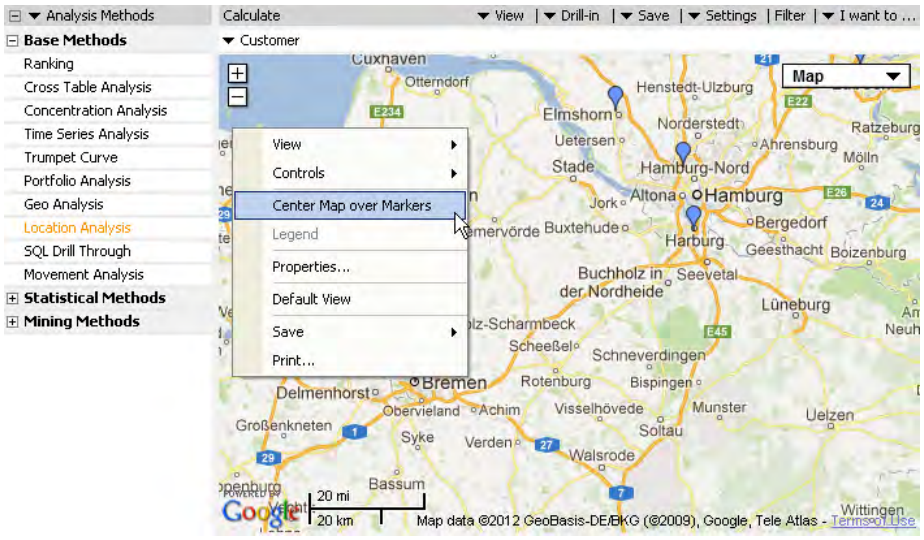
Period	Product main group	Count	Url
01.01.2012	Luxury Division	2,00	.\Chair\Produkte\Luxusmodelle.png
01.01.2012	Standards	1,00	.\Chair\Produkte\Standardmodelle.png
01.01.2012	Custom made	2,00	.\Chair\Produkte\Sondermodelle.png

DeltaMiner will display all images on the upper-left side of their table cells. If the *Automatic row height* option is set in the *Properties, DeltaMiner* will adjust the row height to the image height. If a *User-defined row height* is selected, it will reduce the size of the image so that it fits in the defined row. The width of the displayed images depends on the row height, whereby *DeltaMiner* will keep the same ratio of the page to the original image. Images that are smaller than the defined row height will be shown in their original size (i.e. not enlarged).

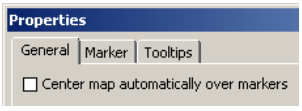
If you export a ticker, *ReportServer* will include these images (see feature #4). *WebClient* cannot display any images at the present time.

(19) Location Analysis: Centering Maps Automatically Using Markers

DeltaMiner can now automatically center a map segment from Google Maps when you open or recalculate a report or analysis.



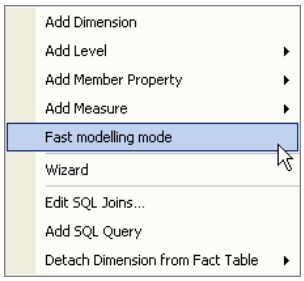
This option automatically centers the marker, a function that you already could have started from the context menu. *DeltaMiner* will select the map segment using the largest possible zoom level so that you can see each marker without having to scroll.



You can activate the *Center map automatically over [the] markers* option in the *Properties* (*I want to…* menu or context menu). This option ensures that you can easily see the markers each time you change the view in the dimension defined in the *Mapping* (*Settings* menu). We recommend you use this option for reports distributed via *ReportServer* as well. Here, too, the locations that you select will automatically shift to the center of the generated reports.

If this option is deactivated, *DeltaMiner* will simply display the map section that is saved in the report.

(20) TableWizard: Using Fast Modelling Mode



DeltaMiner TableWizard now has a *Fast modelling mode* that is designed to facilitate working with very large databases. When this mode is activated, you can quickly create dimensions and dimension levels as well as sort dimension levels by refraining from performing certain calculations with the metadata at this time.

During the modeling process, *DeltaMiner* requires a certain number of members in a dimension or level (i.e. cardinality). The database delivers this information by counting how many different values occur in the respective columns (“COUNT DISTINCT”). In this case, it must consider the entire table – not just the section displayed in *DeltaMiner*. When tables are very large, this process can take a considerable amount of time.

In *Fast modelling mode, DeltaMiner* doesn’t use these calculations and, therefore, saves time. This mode, however, also has two limitations:

- Since the record count is not constantly updated, you cannot be sure that the correct number of members is displayed in the dimension browser. If you need to know the current number ad hoc, you have to synchronize the relational model (*Model* menu).

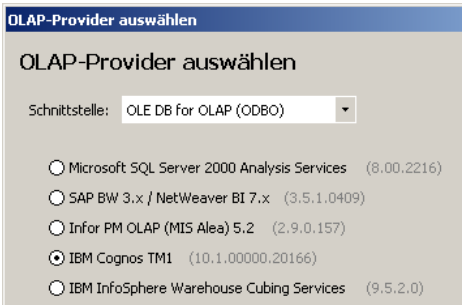
- The automatic level sorting option is not available. In the normal modelling mode, *DeltaMiner* will attempt to automatically bring the levels into the correct hierarchies. Levels with fewer members will be sorted higher up in the hierarchy while those with more members will be placed further below. This

automation does not apply, however, if the member counts are unknown. You can still sort the levels manually in the dimension browser via drag and drop.

You can activate the fast modelling mode in the context menu of fact or dimension tables. This setting will not be saved. When you open the analysis session at a later point in time, this mode will be deactivated so that *DeltaMiner* can determine and display the correct number of members.

(21) Access to IBM Cognos TM1 10.1

DeltaMiner now supports IBM Cognos TM1 10.1. Version 5.5.2 contains all of the necessary changes to run your application on the latest release of this OLAP database.



(22) Notes: Compatibility with Previous Versions and Installation

The following table shows if the new release contains any changes to the metadata schema of ReportServer and *WebOption* as well as the *WebOption* configuration files.

Component	Files	Changes since version 5.5.1
ReportServer	'ReportServer.mdb' 'ReportServer (SQL Server).sql' 'ReportServer (Oracle).sql'	Yes
WebRepository	'Repository.sql'	No
WebService	'DeltaMaster.Service.exe.config'	No
WebClient	'web.config'	No
GUI repository	'DeltaMaster.Repository.exe.config'	No

The metadata scheme of **ReportServer** has changed. As a result, you should update your job definition database by running the 'ReportServer (SQL Server).sql' or 'ReportServer (Oracle).sql' script. If you use the Access database 'ReportServer.mdb', *DeltaMiner* automatically update it for. As always, you should update the 'ReportServer.exe' file as well as the respective DLLs so that they match the current *DeltaMiner* version. Die ODBC connection string, which is specified in the job definition database, is located in the "ReportServer.exe.config" file. Please create a backup copy of this file before you install the current version of the *Report Server* files.

The **WebOption** components – *Repository GUI, WebClient,* and *WebService* – are available in version 5.5.2. An update, therefore, is highly recommended. The database schema for the repository has not changed in version 5.5.2. Before you update *WebOption*, please create backup copies of the configuration files (see table above), any changed graphics in the "Image" folder (e.g. "Master_Top.png") as well as the style sheet file (e.g. "DeltaMaster.css").

Since the configuration files of *WebService*, *WebClient*, and *Repository GUI* have not changed from 5.5.1 to 5.5.2, you can reuse the older files without needing to make any changes. You can update the *WebService, WebClient, and Repository GUI* by copying the new files into the respective directories. Once again, please make backup copies of these files before doing so. A separate setup is not necessary.

Updated versions of DeltaMiner **apps** (DeltaMiner ReaderApp, DeltaMiner TickerPortal, DeltaMiner Notifications) are available at the App Store as usual.

23 DeltaMiner deltas! 5.5.3

What's new in version 5.5.3? Find out in this overview of the August. 24 2012 release!

(1) General: "Action Titles" Now Renamed "Headings" 2

(2) General: DeltaMiner Runs on Windows 8 2

(3) General: Printing by Directly Generating PDF Files 2

(4) General: General: MDX Variables for Measures in Report Titles, Folder Titles, and Headings (Action Titles) 6

(5) Export to the Clipboard: Copying Tables as Text or an Image and Copying Images as a Bitmap or Metafile 9

(6) Flexreport: Using MDX Variables for Measures in Text Cells 9

(7) HTML Export: Displaying Omissions in Pivot Tables with User-defined Column Widths as a Tooltip 9

(8) Pivot Tables: Scaling Difference Bars and Columns Based on Comparative Values (New Standard) 10

(9) Pivot Table: Hiding Columns/Rows with Difference Values for Difference Bars/Columns 12

(10) Pivot Tables: Skip Levels without Members in an Indentation 12

(11) Pivot Table: Hiding Selected Member or Measure Names in the Column Definition 13

(12) Pivot Table: Hiding Graphical Elements and Sparklines in Selected Rows (Row Properties) 14

(13) Pivot Table: Displaying Relative Variances of Percentage Points as Decimals 15

(14) Pivot Tables: Drawing Relative Values as Bars Instead of Waterfall Charts 15

(15) Pivot Table: Combining Actual and Budget Values in Sparklines 16

(16) Pivot Table: Calculating Preview Values with Forecasting Methods and Depicting Them as Sparklines 17

(17) Pivot Table: Grouping Rows and Columns with Gaps 18

(18) Pivot Table: Labeling Rows Upright 20

(19) Presentation Mode: Displaying the Hyperbrowser in Viewer Mode (Ctrl + H) 21

(20) Small Multiples: Truncating Labels at Tile Width 22

(21) Small Multiples: Hiding Tile Labels 23

(22) Small Multiples: Setting the Aspect Ratio of Time Series Charts with Banking to 45° 23

(23) Small Multiples: Iterating Trumpet Curves 24

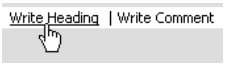
(24) Start Wizard: Creating Default Cockpits and Reports 25

(25) Time Series Analysis: Setting the Aspect Ratio of Charts with Banking to 45° 31

(26) Time Series Analysis: Showing Difference to Start Value as Area 32

(27) Notes: Compatibility with Previous Versions and Installation 33

(1) General: “Action Titles” Now Renamed “Headings”



DeltaMiner reports have a name and, if desired, a separate heading. In the past, this heading was called an “Action title”, a term commonly used in presentation techniques – but rarely elsewhere. As a result, an “Action title” is simply called a *Heading* starting in the 5.5.3 release. For more information about its functionality.

Besides having a new name, *Heading*s have gained functionality in the 5.5.3 release as well. You can now add MDX variables to dynamically display and update measures based on the current view (see feature #4).

(2) General: DeltaMiner Runs on Windows 8

Microsoft has wrapped up work on its new Windows 8 operating system and has begun delivery to developers and business customers. We have already tested *DeltaMiner* with the available beta versions and have made the necessary changes to ensure compatibility. The result: *DeltaMiner* now runs on Windows 8.

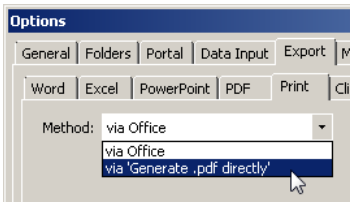
(3) General: Printing by Directly Generating PDF Files

DeltaMiner now supports two different printing methods. As in the past, you can export reports, cockpits, and analyses to Microsoft Office and print them there. Starting in *DeltaMiner* 5.5.3, however, you can also generate a PDF file directly without having to first convert it to an Office template. *DeltaMiner* will directly transfer the generated PDF file to Adobe Reader or Adobe Acrobat and automatically open the print dialog for that program. No additional components (e.g. Microsoft Office or a special print driver) are necessary. Instead, *DeltaMiner* uses a built-in component and its own PDF template to generate the print file.

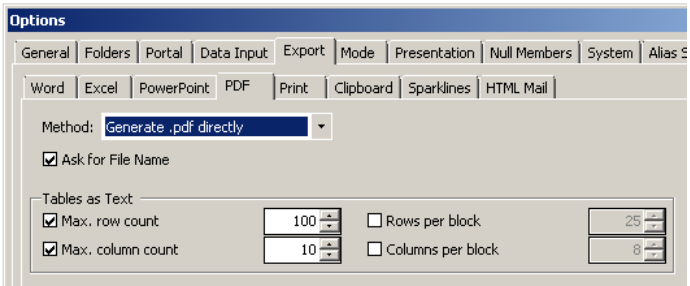
In order to use this feature, Adobe Reader or Adobe Acrobat must be installed on the computer and registered as the standard program for displaying PDF files. Other programs for displaying PDF files are currently not supported.

(a) Selecting a print method

To select a print method, go to the *Extras* menu and select *Options,* the *Export* tab, and then *Print*. Now you can select the print method *Generate .pdf files directly.* In this case, “directly” means that *DeltaMiner* prepares the files for printing using its own PDF template instead of first generating an Office file and then converting it. In most cases, printing a directly generated PDF file is noticeably faster. If you choose this method, however, you cannot use application-specific formatting (e.g. using fonts in Microsoft Word templates or arranging report components in PowerPoint slides). *DeltaMiner* exports all charts as metafiles for high-resolution printing.



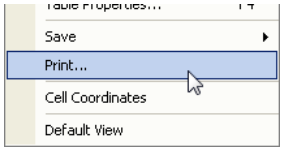
You can customize the parameters for directly generating PDF files under *PDF*, the neighboring tab on the left. For printing purposes, the *Ask for File Name* option is irrelevant because *DeltaMiner* only saves the PDF file temporarily and runs a print command when transferring it to Adobe Reader/Adobe Acrobat. *DeltaMiner* then deletes the PDF after the file is printed. If you wish to keep the file, simply *Export* your report as a PDF instead of printing it.



The remaining tab options, which determine how *DeltaMiner* should treat complex tables, are the same ones that it offers when you export tables *as text* to Microsoft Word. You can configure these options to print abridged tables with a *Maximum number of rows* or *columns (*counted from the cell on the upper-left side) or you can divide them into *Blocks,* which are printed on separate pages.

These individual *Options* apply to all reports. You can, however, customize the settings for an individual report in its *Report properties* (context menu of reports in the *Briefing book*). Here, you can also set the *Page alignment* of the PDF file for individual reports (*From Template*, *Portrait,* or *Landscape*).

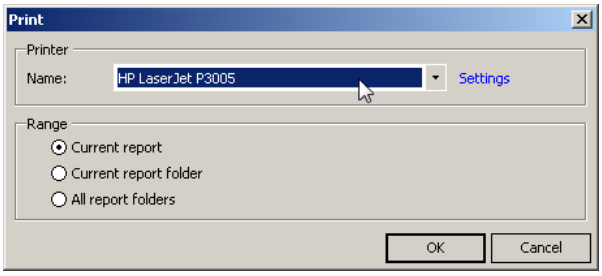
(b) Printing reports, cockpits, and analyses



DeltaMiner lists the print command in several places (as in the past):

- In the context menu of the *Report* window for the current report
- In the context menu of the *Cockpit* window for the current cockpit
- In the context menu of the *Analysis* window for the current analytical findings
- In the context menu of the *Briefing book* for the selected report, all reports in the selected folder, or all reports in all folders

If you select the print command in the *File* menu or press *Ctrl+P*, *DeltaMiner* will print the currently active window. You can also print from presentation mode.



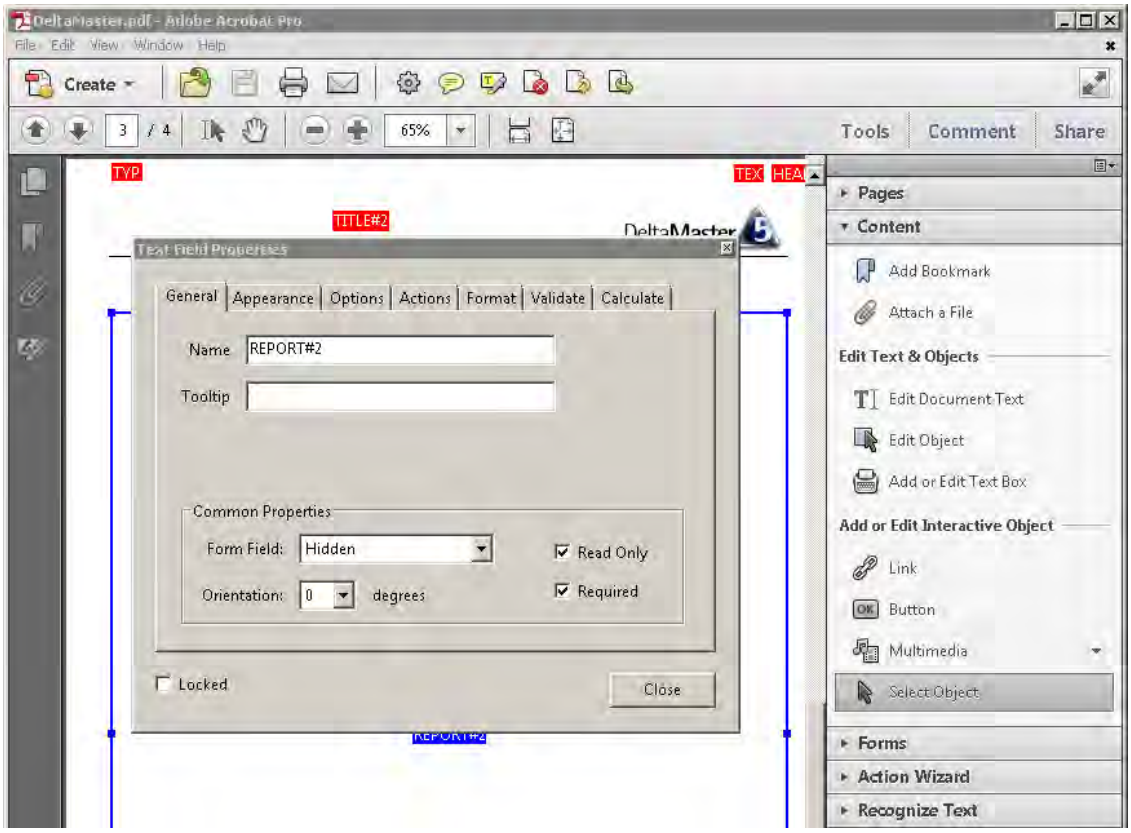
Once you select the print command, *DeltaMiner* will prompt you to select the desired *Printer* and then transfer your selection to Adobe Reader or Adobe Acrobat so that the program can address the correct printer. The screenshot on your right also shows options for selecting which *Range* (i.e. *Current report, Current report folder, or All report folders*) it should print. *DeltaMiner* will display this part of the dialog box only if you have opened the print command in the *Briefing book.* If you choose to print *via Office*, the dialog box will ask if it should apply a Word, Excel, or PowerPoint template. *DeltaMiner* will not show this option, however, if the option to directly generate PDF files is activated in the *Options*.

DeltaMiner will include a title page if you print complete report folders. It will not, however, for a single report, cockpit, or analysis.

(c) Customizing the PDF template

DeltaMiner generates these printer-friendly reports using a special template in PDF format. The *DeltaMiner* installation includes a PDF template called “DeltaMaster.pdf”. *DeltaMiner* will search for this file in the folder that is listed in the *Extras* menu under *Options* on the *Folder* tab for *Export templates* (e.g. “C:\Program Files\DeltaMaster 5.5.3\Templates”).

Similar to PowerPoint templates, PDF templates contain different page sections based on form fields (in this case, text fields). *DeltaMiner* then fills these sections during an export or print job. To edit these sections or other properties, you will need Adobe Acrobat Pro or a comparable PDF editor.



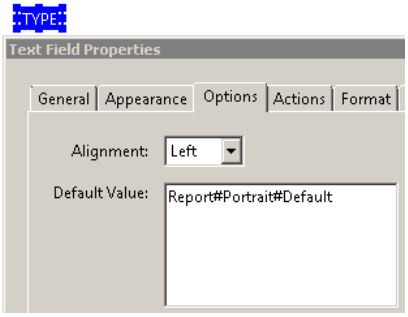
In other words, if you want to create or edit a PDF template, you cannot simply create a document with Microsoft Office 2007/2010 and save it as a PDF or export it to a PDF print driver. You can only adjust the internal properties using special PDF editors such as Adobe Acrobat Pro. If you want to edit the PDF template and do not have a suitable PDF editor, please contact our support team.

PDF templates can be defined in two different versions. Version 1 works with *DeltaMiner* 5.4.8 and higher while version 2 works with *DeltaMiner* 5.5.1 and higher. This version number is triggered by a key word in the document properties of the PDF file. For version 2, this is “Templateversion=2”. If there is no entry, *DeltaMiner* will apply version 1.

DeltaMiner calls up the text fields that it fills during exports and print jobs using their unique names. As a result, the names of these sections may not be changed. In addition, all form fields in the template must be categorized as *Hidden, Read Only,* and *Required* as shown in the screenshot above.

DeltaMiner recognizes the following fields in PDF templates. All of these fields are supported as of *DeltaMiner* 5.4.8 **except** for “TYPE”, which is only supported in *DeltaMiner* 5.5.1 and higher.

Name	Field
TITLE	Report title
VIEW	Report view
STATUS	Status text of the report (e.g. notes regarding the scale used for graphic elements or the time frame in sparklines)
REPORT	Main section of the page. This field contains the actual report as well as the

Name	Field
	heading and any comments from the analysis session.
PAGE	Page number or number of pages if filled with the respective variables (see below)
TYPE	The *Standard value* of this field shows when the page should be used as the template for a title page or report, the template for reports exported or printed in portrait or landscape format, and the default template for page orientation if not explicitly stated in the export or print job.  The *Standard value* is a *Text field property* in Adobe Acrobat Pro (*Options* tab). *DeltaMiner* will look in this field for a character string that consists of two or three components separated by a "#". The first component lists the page type (e.g. "Title" or "Report"), the second lists the page orientation (e.g. "Portrait" or "Landscape"), and the third is an optional "Default" setting, which states if this page should be used as a template if the page orientation was not stated during the export or print job. For example, the standard value "Report#Portrait#Default" means that this page is the template for reports in portrait format and that *DeltaMiner* should generally export or print reports in portrait format (using this template) if not otherwise stated.
HEADER	Format for export and print headings. The formatting of this field will be applied to sub-headings that *DeltaMiner* adds to export or print files. This "HEADER" field is rarely used because very few report types use sub-headings (e.g. *Navigation* analysis module: drill-down path and the name of the dimension level in the drill down).
TEXT	Format for other text. The formatting in this field is applied to text outside of the actual report in export and print files. This "TEXT" field is rarely used because this only occurs in a few report types (e.g. the SQL expression in an *SQL Drill-Through*).

DeltaMiner reads the format (e.g. font type, font size, alignment, border color, and fill color) that is defined for a text field and applies this format when entering the texts and report objects. In other words, the PDF template generally determines the formatting of the printed file. One exception is the "REPORT" field, which uses the original formatting from *DeltaMiner*.

In template version 1, the "REPORT" field is mandatory. If the template contains more than one page, the last one will always be used to add new pages. The first pages are interpreted as title pages. If the template only has one page, a standard title page (similar to the one in the Word export) will be generated.

Template version 2, however, has two mandatory fields: "TYPE" and "REPORT". If there are several pages of the same type and none of them are defined as "Default" in the "TYPE" field, the page designated as "Portrait" will be used as the standard template. If the template does not contain "Title" pages, none will be generated or printed.

All other form or text fields in the template are preserved during an export or print job so that you can enter additional texts or design elements.

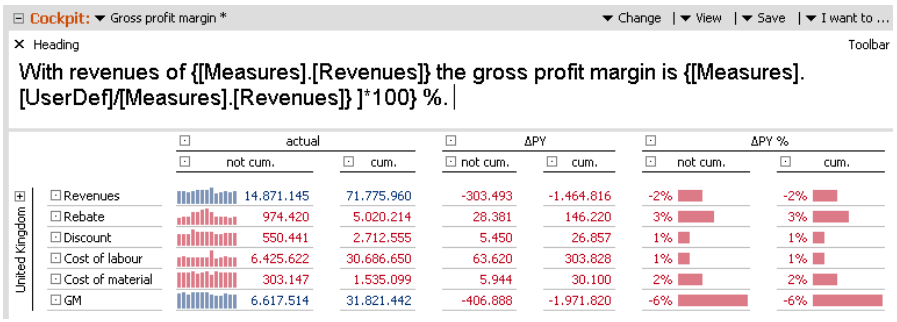
(d) Export variables

Aside from the special text fields described above, *DeltaMiner* will evaluate the standard value of all text fields and replace the following variables (just as in a Microsoft Office export, see *DeltaMiner deltas!* 5.1.6, feature #13). The “PAGE” field is also supported.

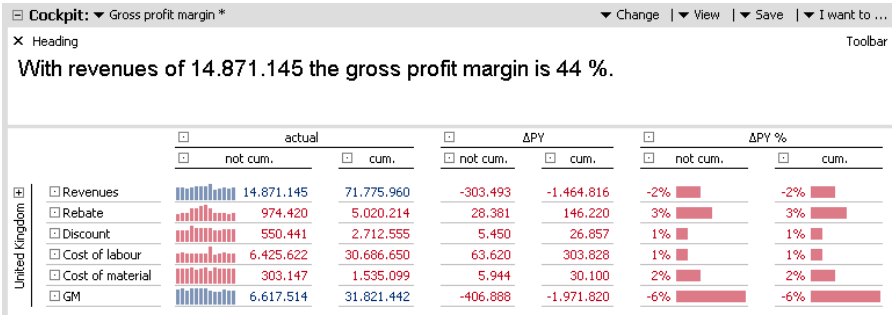
Variable	Meaning
@shortdate	Date of the export/print job in abbreviated form based on the Windows settings (e.g. “08/24/2012”)
@shorttime	Time of the export/print job in abbreviated form based on the Windows settings (e.g. “1:59 P.M.”)
@longdate	Full day and date of the export/print job based on the Windows settings (e.g. “Friday, August 24, 2012”)
@longtime	Exact time of the export/print job in abbreviated form based on the Windows settings (e.g. “1:59:12 P.M.”)
@database	Database used in the analysis session
@cube	OLAP cube used in the analysis session
@folder	Name of the folder that is exported/printed
##PAGENUMBER##	Current page number (will only be replaced in the “PAGE” field)
##PAGECOUNT##	Total pages of the PDF file (will only be replaced in the “PAGE” field)

(4) General: General: MDX Variables for Measures in Report Titles, Folder Titles, and Headings (Action Titles)

You can now use MDX variables to reference measures in report titles, folder titles, headings, and text cells of Flexreports. As a result, you can take and prominently present the findings of an individual report or even show additional values that you could not see just by reading it. When you update the report, *DeltaMiner* will automatically update these values as well.

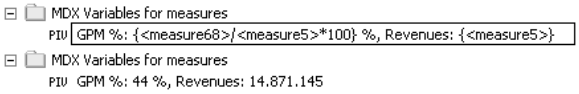


Previous editions of *DeltaMiner* only supported references to dimension members with expressions such as “<viewX>”, “[Dimension].CurrentMember”, and “{cp}”. Referencing measures is new in version 5.5.3.



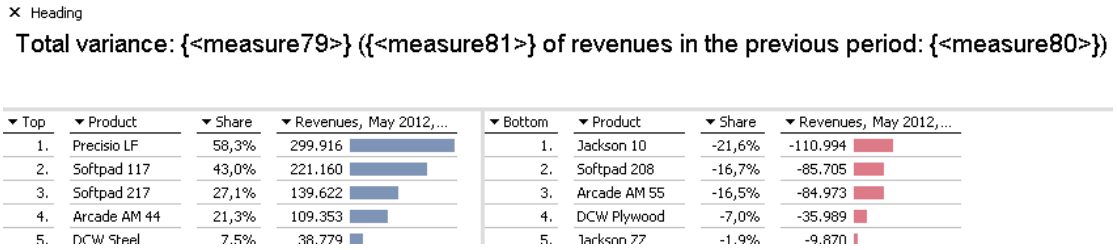
You can edit headings as well as add measures or calculations by clicking on the heading section in *Pivotizer*, *Analyzer,* and *Miner* user modes. The example on your right, for example, includes the revenue figure from the database {[Measures].[Revenues]}" and calculates the gross margin percentage: "{[Measures].[UserDef 2]/ [Measures].[Revenue]*100}". See below for more information on the exact syntax.

As soon as you exit edit mode (e.g. by clicking on the report), *DeltaMiner* will replace the variables with concrete values.

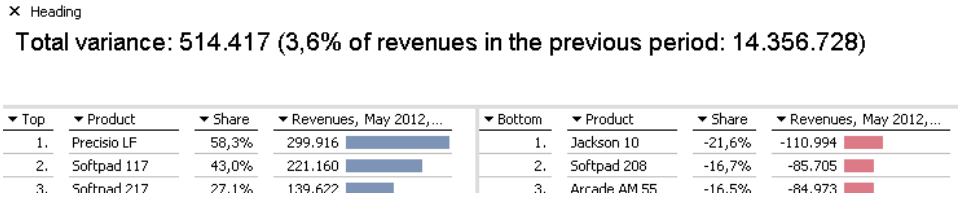


You can also use variables to enhance report titles or titles of folders containing a saved view. This way, your readers can already view the current measures in the *Briefing book* before they even open the report. The example on your right uses the same measures as above but in a different syntax (e.g. "{<measure5>}" instead of "{[Measures].[Revenue]}").

If you work with detailed reports, you may want show the relationship to parent measures or objects in your headings or report titles. The *Ranking* shown below, for example, breaks down the variance to the previous period by products.



The variables in the heading add additional information about the total variance as well as its percentage of total revenues from the previous period:



You can reference measures using three different syntax variations:

1. MDX name of the measures in curly brackets

   Example: {[Measures].[Revenue]}

   You can view the MDX name of a measure in the *Measure properties* on the *System* tab under the *OLAP* section or in the *Model browser* (*Model* menu) on the *Model* tab under the *Measures* section. Please include the curly brackets surrounding "[Measures]" as well as the name of the measure.

2. MDX expression with a measure in curly brackets (just as in user-defined measures)

   Examples: {[Measures].[Revenues]/[Measures].[Units sold]}

{([Measures].[Revenues], [Products].[All products])/1000}

With this option, you can use MDX to create any number of calculations as long as they have a numeric return value and use the measure dimension ("[Measures]"). You could, for example, calculate the average price (first example above) or round out the total revenues for all products by dividing it by 1,000 (second example above). If you wish to use more complex calculations, you should create a user-defined measure rather than writing the calculation in the heading.

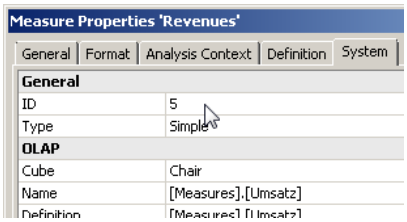
You can also use the short form "<measureX>" to add measures in MDX [see section c) below].

3. Short form "<measureX>", where "X" is the measure ID

   Examples: <measure5>

   {<measure5>/[Measures].[Units sold]}

We have introduced this syntax in the style of "<viewX>", a notation that has a long tradition in *DeltaMiner* and refers to the currently selected member in the dimension "X". If the text only contains one variable, you may remove the curly brackets surrounding "<measureX>".



The measure's *ID* and the MDX name are both listed in the *Measure properties* on the *System* tab.

If you are working with relational models (i.e. without OLAP cubes), you can only use the syntax option described in section c). MDX names and expressions are not supported.

The following statements apply to all syntax options:

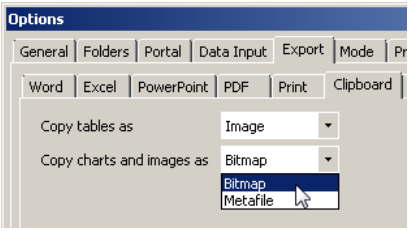
- The output of the variable calculation must be numeric. Measures with the type "Text" are not supported.
- If the variable clearly references a certain measure, *DeltaMiner* will display it using its respective format, scale, and unit. If it cannot clearly classify a measure, it will format the value as a whole number (.NET format character string "n0" – no decimals, commas separating thousands). If you wish to format the number, create a user-defined measure instead.
- If a measure appears in several cubes of the analysis model with the same name, please list the name of the cube in front of the measure name, e.g. "{Plan data:[Measures].[Revenues]}".

In folder titles, you can only use variables if a view is defined or inherited, which is not the case for most folders. If *DeltaMiner* recognizes a variable in the title of a folder without a view, it will display the message: *Variables cannot be replaced as long as no view is saved or inherited to the folder.* There are many different ways that you can save views for folders:

- In *Viewer*: If you select a folder in the briefing book and then select members in the *View window*, *DeltaMiner* will save this selection for the folder as well as all of the reports and subfolders within in that folder.
- In Pivotizer, Analyzer, and Miner: You can select the Save current view or Restore view options in the Folder properties.
- In *Miner*: You can also save the view to the selected report folder from the *View* window.

If an error occurs during the calculation, *DeltaMiner* will simply remove the variable or expression and not display anything. You can retrieve the error message from the log files (*Diagnosis* in the *Help* menu or *Ctrl+D*).

(5) Export to the Clipboard: Copying Tables as Text or an Image and Copying Images as a Bitmap or Metafile



You can now define how *DeltaMiner* should copy tables, graphics, and images to the *Clipboard* (*Extras* menu, *Options*, *Export* tab, *Clipboard* tab).

Starting in version 5.5.3, you can copy tables either as text or an image. “Text” is equivalent to the copy format that was offered in previous *DeltaMiner* versions. It transfers the values so that you can reuse them in other applications (e.g. for a side calculation in Microsoft Excel). The text is not formatted and the fields are separated by a delimiter. Numbers are formatted the same way that they are displayed in the table. If you copy the table as an image, *DeltaMiner* will transfer the entire report view, not the individual values. In this case, you would copy an entire *DeltaMiner* analysis into a longer Microsoft Word document or PowerPoint presentation. The second selection field on this tab determines how the image will be exported.

You can copy charts and images either as a bitmap or metafile. Bitmaps are based on pixels and are suitable for situations where you only need a typical screen resolution (e.g. a Power Point presentation that you want to present on a LCD projector or screenshots in an internal documentation). Metafiles, in contrast, are based on vectors. That makes them highly scalable and good for printing. On a screen, however, metafiles may appear pixely in some cases.

“Tables” in this sense can refer to pivot tables, Flexreports, or a table view in various analysis modules. *DeltaMiner* always copies combination cockpits and *Small Multiples* as bitmaps to the clipboard. Combined chart and table views (e.g. the table of a *Concentration Analysis* to the left of a Lorenz curve) will not be copied to the clipboard.

Tip: Before you export pivot tables as an image (regardless if you choose bitmaps or metafiles), switch to *Reader* or *Viewer* mode first. In these user modes, *DeltaMiner* will remove the plus, minus, and point symbols which reflect the hierarchy structures.

(6) Flexreport: Using MDX Variables for Measures in Text Cells

You can now use MDX variables (e.g. “{[Measures].[Revenues]}“) in *Flexreport* cells with the *Type Text*. As a result, you can dynamically visualize measures and calculated results in a cell and combine them with static text. *DeltaMiner* will automatically adjust the values when these cells are refreshed.

For more information about the variables for measures, please read feature #4.

In previous versions of *DeltaMiner*, you could only reference dimension members and enter them in the text of a Flexreport cell; measures were not supported.

(7) HTML Export: Displaying Omissions in Pivot Tables with User-defined Column Widths as a Tooltip

When you now export pivot tables with user-defined column widths to an HTML file or e-mail, *DeltaMiner* will keep the tooltips showing the complete names of abbreviated terms.

If you are working with pivot tables that have a *User-defined column width* for *fixed columns* (and the row break option is deactivated), *DeltaMiner* will use an ellipsis ("…") to show that the name of a measure, member, or member property is too long and, therefore, is only displayed in an abbreviated form. If you mouse over a text that was abbreviated in this fashion, *DeltaMiner* will display the full text as a tooltip. In the second row of the tooltip, it will also show a description of the measure (if available). Since *DeltaMiner* now exports this information into HTML code as well, these tooltips now appear in HTML files or HTML-formatted e-mails which you export and/or send through *DeltaMiner* or *ReportServer*.

DeltaMiner only generates tooltips for pivot tables in HTML exports and mails. You can define a *User-defined column width* in the *Table properties* on the *General* tab separately for both *Fixed columns* and *Data columns*.

(8) Pivot Tables: Scaling Difference Bars and Columns Based on Comparative Values (New Standard)

As part of our efforts to establish good reporting standards, we have simplified the functions for difference bars and columns. As a result, *DeltaMiner* 5.5.3 applies a different scaling method than in the past. For the sake of simplicity, we will only talk about difference bars in the following section. The same functions, of course, work for difference columns as well.

The screenshot on your right shows a pivot table with difference bars based on this new method.

The order of the columns plays an important role in how the difference bars work:

- The column displaying the difference bars shows the current period or the actuals.
- The column to the right of it shows the difference values, which are marked as red or blue offset pieces. *DeltaMiner* defines these values as the difference between the first column and the comparative value, for example, "Current period – Previous period" or "Actual – Plan". Although you can hide this column (see feature #9), *DeltaMiner* needs it for the calculation.
- The third column contains the values of the previous period. This column is irrelevant for displaying difference bars. We have simply included it here for didactic reasons.

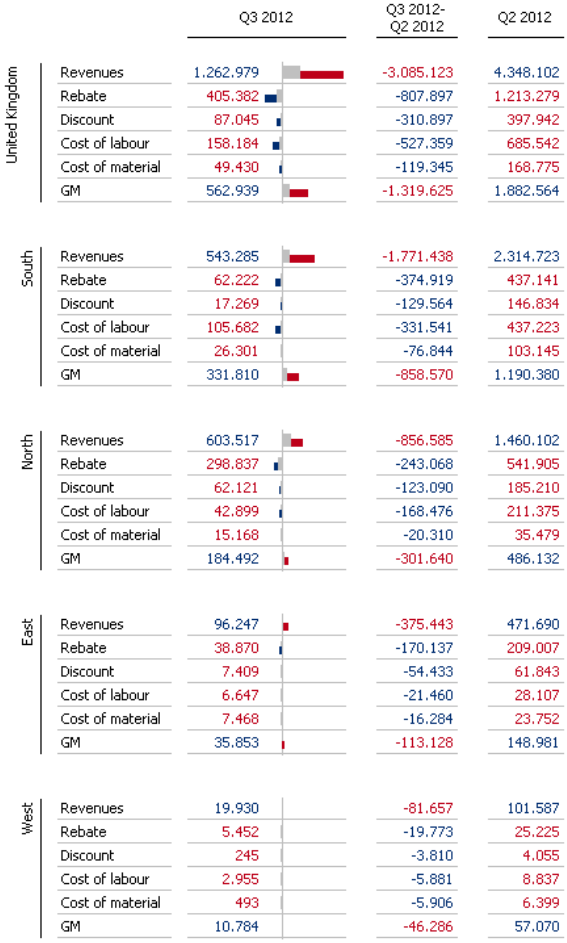
		Q3 2012	Q3 2012-Q2 2012	Q2 2012
United Kingdom	Revenues	1.262.979	-3.085.123	4.348.102
	Rebate	405.382	-807.897	1.213.279
	Discount	87.045	-310.897	397.942
	Cost of labour	158.184	-527.359	685.542
	Cost of material	49.430	-119.345	168.775
	GM	562.939	-1.319.625	1.882.564
South	Revenues	543.285	-1.771.438	2.314.723
	Rebate	62.222	-374.919	437.141
	Discount	17.269	-129.564	146.834
	Cost of labour	105.682	-331.541	437.223
	Cost of material	26.301	-76.844	103.145
	GM	331.810	-858.570	1.190.380
North	Revenues	603.517	-856.585	1.460.102
	Rebate	298.837	-243.068	541.905
	Discount	62.121	-123.090	185.210
	Cost of labour	42.899	-168.476	211.375
	Cost of material	15.168	-20.310	35.479
	GM	184.492	-301.640	486.132
East	Revenues	96.247	-375.443	471.690
	Rebate	38.870	-170.137	209.007
	Discount	7.409	-54.433	61.843
	Cost of labour	6.647	-21.460	28.107
	Cost of material	7.468	-16.284	23.752
	GM	35.853	-113.128	148.981
West	Revenues	19.930	-81.657	101.587
	Rebate	5.452	-19.773	25.225
	Discount	245	-3.810	4.055
	Cost of labour	2.955	-5.881	8.837
	Cost of material	493	-5.906	6.399
	GM	10.784	-46.286	57.070

The gray bars in the screenshot represent the comparative values – again, previous period (gray, like the shadows of the past) or plan values. The red and blue offset pieces represent the difference value, in this case, the variance to the previous period. The current values (first column) are

equivalent to either the total length of the gray bar plus the offset piece (e.g. in cases with positive values and positive deltas), or the part of the gray bar that is not covered with an offset piece (e.g. as the revenues in the screenshot above).

The screenshot on your right is inverted compared to the one on the previous page. The gray bar here represents the actuals, in other words, the values that are shown in the same column.

To create this visualization, simply select the *Show differences inverted o*ption in the *Table properties* on the *Graphic (2)* tab. If the visualization is inverted, the gray bar will stand for the values in the same column. The red and blue offset pieces represent the difference values in the columns. The comparative value ("Previous period" or "Plan") either equals the piece of the gray bar that is not covered with an offset piece, or the total length of the gray bar plus the offset piece (e.g. revenues in the screenshot on the right).



		Q3 2012	Q3 2012-Q2 2012	Q2 2012
United Kingdom	Revenues	1.262.979	-3.085.123	4.348.102
	Rebate	405.382	-807.897	1.213.279
	Discount	87.045	-310.897	397.942
	Cost of labour	158.184	-527.359	685.542
	Cost of material	49.430	-119.345	168.775
	GM	562.939	-1.319.625	1.882.564
South	Revenues	543.285	-1.771.438	2.314.723
	Rebate	62.222	-374.919	437.141
	Discount	17.269	-129.564	146.834
	Cost of labour	105.682	-331.541	437.223
	Cost of material	26.301	-76.844	103.145
	GM	331.810	-858.570	1.190.380
North	Revenues	603.517	-856.585	1.460.102
	Rebate	298.837	-243.068	541.905
	Discount	62.121	-123.090	185.210
	Cost of labour	42.899	-168.476	211.375
	Cost of material	15.168	-20.310	35.479
	GM	184.492	-301.640	486.132
East	Revenues	96.247	-375.443	471.690
	Rebate	38.870	-170.137	209.007
	Discount	7.409	-54.433	61.843
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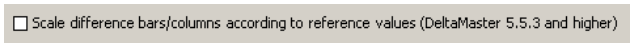
	Rebate	5.452	-19.773	25.225
	Discount	245	-3.810	4.055
	Cost of labour	2.955	-5.881	8.837
	Cost of material	493	-5.906	6.399
	GM	10.784	-46.286	57.070

Starting in version 5.5.3, *DeltaMiner* now applies new calculation rules to non-inverted difference bars. Gray bars now stand for comparative values (e.g. previous period or plan). Depending on the underlying data, this change may create a different visualization than in the past. **As a result, if you have any analysis sessions that contain difference bars or columns and were created with *DeltaMiner* 5.5.2 or an earlier version, you should convert them to these new rules.** Instead of converting the reports automatically, *DeltaMiner* offers a special conversion option so that no one thinks that these reports need to be interpreted differently just because they look differently.

In order to convert them, you will need to make two changes:

1. Activate the option that *DeltaMiner* should apply the new scaling method.

   In the Options (Extras menu) on the System tab, you can define that DeltaMiner should Scale [the gray bars in non-inverted] difference bars/columns according to reference values. The additional information in parentheses serves as a reminder that DeltaMiner will apply this method as the standard starting in 5.5.3.

   This option is only visible in three circumstances: 1.) *Pivotizer*, *Analyzer*, or *Miner* mode must be activated, 2.) the analysis session must have been created prior to *DeltaMiner* 5.5.3, and 3.) the analysis session must contain reports or cockpits with difference bars or columns. As mentioned above, this option is not active in the default setting, and *DeltaMiner* will not perform the conversion automatically.

2. Check the column order in the pivot table.

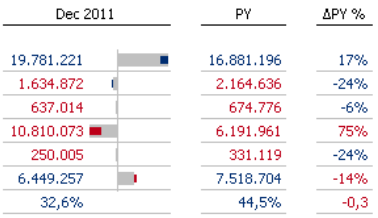
   The current values (i.e. actuals) should be located in the column where *DeltaMiner* should draw the bars.

In analysis sessions that are either new or do not contain difference bars/columns, you do not need to make any changes. *DeltaMiner* 5.5.3 simply creates the difference bars and columns using the new, simplified method; the previous method is no longer supported. If you *Invert* the presentation (*Table properties),* you will see the same one that was used in previous *DeltaMiner* versions (i.e. with an inverted presentation).

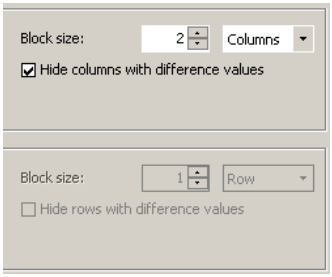
If you work with this new method, you will notice a change if you are working with difference bars and columns with a block size larger than two. If you use these types of visualizations, please check the new method. If you wish to continue using the former presentation style, simply deactivate this setting in the *Options* so that *DeltaMiner* draws the difference bars and columns as in the past. In this case, we recommend using an *inverted* presentation.

(9) Pivot Table: Hiding Columns/Rows with Difference Values for Difference Bars/Columns

You can now opt to hide columns or rows that are needed to calculate difference bars and columns but do not need to be displayed. In difference bars and columns, the red or blue offset pieces represent differences (e.g. budget-actual variances or the changes from the previous period or the previous year). *DeltaMiner* takes difference values from the column to the right of the one containing the difference bars or the row below the one containing difference columns. In some reports, however, you may only want to draw difference bars or columns without actually displaying the difference.

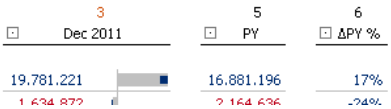


This is the case in the *DeltaMiner* standard report “Quarterly view” (see feature# 24): The “Current” column contains difference bars which should illustrate the changes to the previous year. The actual values of the absolute changes, however, are not needed because the values from the previous year and the relative changes suffice.



If DeltaMiner should Hide the columns or rows with difference values, simply activate the respective option in the Table properties on the Graphic (2) tab.

This option does not work if difference bars are hidden in a column or difference columns are hidden in a row. If you have a block size of 1, this option is not available because there are no columns or rows containing reference values in this configuration.

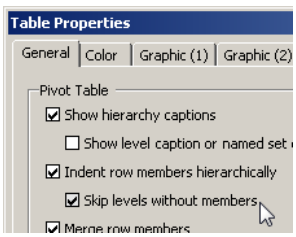


Since hidden columns and rows still exist, they can be accessed by references in a Flexreport or variables in *ReportServer*. If you show the C*ell coordinates* in the pivot table (context menu or *I want to…* menu), you can see that *DeltaMiner* has only removed the difference values from the presentation and that they are still a component of the table.

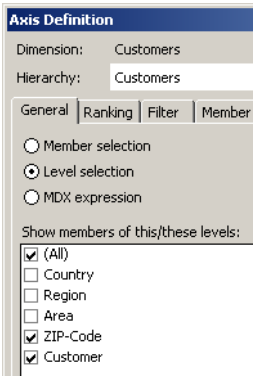
As in the past, *DeltaMiner* will account for hidden rows and columns in row and column aggregations.

(10) Pivot Tables: Skip Levels without Members in an Indentation

You can now *Skip levels without members* for indented row members in pivot tables as a potential space-saving measure. This option is located in the *Table properties* on the *General* tab.



In most pivot tables, row members are indented to emphasize the relationships in the hierarchy. The further the indentation, the deeper the member is located in the hierarchy. In the default setting, *DeltaMiner* makes the indentation larger for each level – even if it has no member to display (e.g. because this level is hidden on the *Axis definition* or all of the members on that level have been filtered out).



The following screenshots will illustrate what this option does. Here, we have selected the highest and the two lowest levels in the “Customer” dimension from the “Chair” reference model. In doing so, we have omitted the three levels in between.

In the default setting, the size of the indentation will include levels in which no members are displayed. Between “All customers” and “826110”, for example, you will find a relatively large horizontal gap due to the three levels which were omitted. Between “826110” and “Eurotunnel Corp.”, however, the horizontal gap is small because they are direct successors in the hierarchy.

Customers	Measures GM
All customers	83.440.228
826110	56.518.005
Eurotunnel Corp.	56.518.005
826101	1.992.375
Delson	1.989.229
Highman	3.146
826037	57.576
Albert & Albert	57.576
826086	404.616
GMD	404.616

When the *Skip levels without members* option is activated, *DeltaMiner* will only include the levels that exist in the table. As a result, the gap between “All customers” and “826110” is now just as small as the one between “826110” and “Eurotunnel Corp.”. Although you can no longer see that certain hierarchy levels were removed, this table is more uniform and compact as a whole.

Customers	Measures GM
All customers	83.440.228
826110	56.518.005
Eurotunnel Corp.	56.518.005
826101	1.992.375
Delson	1.989.229
Highman	3.146
826037	57.576
Albert & Albert	57.576
826086	404.616
GMD	404.616

This option applies to all hierarchies of the row axis.

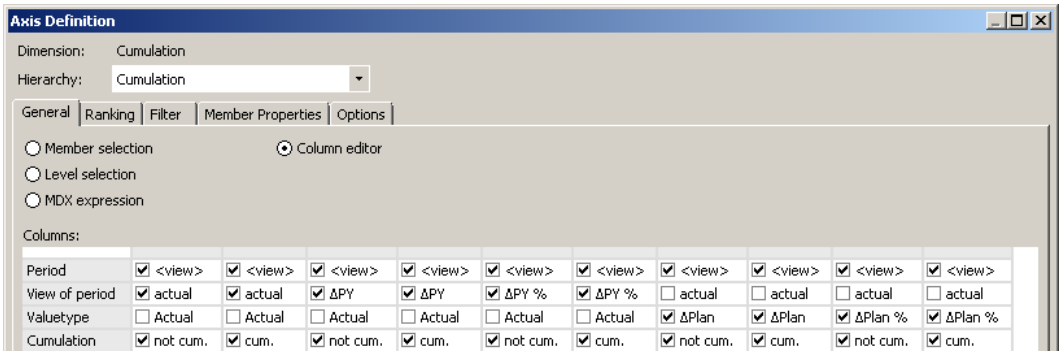
(11) Pivot Table: Hiding Selected Member or Measure Names in the Column Definition

If you are working with multiple dimensions on the column axis, *DeltaMiner* now offers a more space-saving way to label them. You can now hide the names of specific members or measures in the column header for tuples, which are combinations of attributes set up as columns.

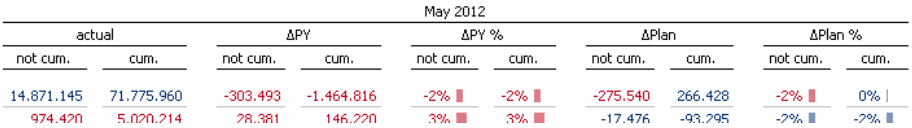
The *DeltaMiner* standard report “Monthly view” (see feature #24) is one example. The left side of this report focuses on the comparison to the previous year (dimension = “Period view”) while the right side shows a budget-actual comparison (dimension = “Scenario”).

Both dimensions contain a default member, which *DeltaMiner* will display if no other information is given. The default member for the scenario is “Actual” because you can assume that the report is showing them unless otherwise mentioned. Scenarios such as “Plan” or “ΔPlan%”, however, would need to be designated as such. Similarly, the default member for the period view is “Current”. If you hide these standard members in the label, the table would still be clear and easy to understand.

In order to hide a member or measure name, you can deactivate the respective checkbox in the *Column editor* (in the *Axis definition*). If you are navigating through the dialog box with your keyboard, you can activate and deactivate the checkbox by hitting the *Space bar*.



By omitting one member per column, the default report now only needs three rows for the column headers although it shows four dimensions.



This option only works, however, if each column displays the same number of names. In other words, the same number of hidden names must be selected in each column. You cannot hide one member in the first column (and show three) and then hide two members (and show two) in the second. In the case of this type of report configuration, *DeltaMiner* will not hide any names – and label all columns completely.

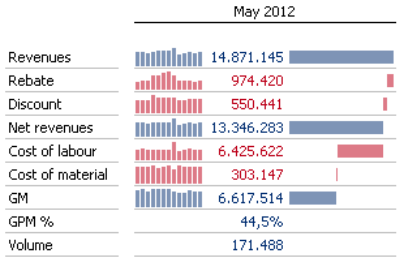
In this case, "hidden" only refers to the table's labeling. The hidden members and measures still work as a filter.

This feature is designed for tables with a common setup on the column axis. It will not work if:

- There is a drill down on the column member.
- New columns are created through the pivot navigation.
- Empty columns are hidden (option in the *Axis definition*, context menu, or *I want to…* menu).
- Member properties are selected on the column dimension.

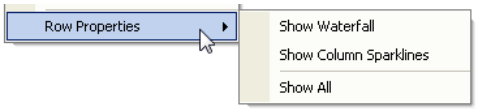
Currently, you can only hide member and measure names on the column axis. The *Row editor* does not contain this check box, and the row axis will always display all names.

(12) Pivot Table: Hiding Graphical Elements and Sparklines in Selected Rows (Row Properties)



You can now hide graphical elements and sparklines for individual rows of pivot tables. Previously, you could only hide them in specific columns.

Let's say that you would like to enhance a chart that combines additive measures and a few other ones. For example, instead of just listing the gross margin, you also want to show its percentage of revenues as well as the number of units sold. Although *DeltaMiner* can list these measures under the additive ones, it wouldn't make sense to visualize them with the same bars or waterfall elements used for the additive measures because they deal with different business content and use other units. You can visualize numbers in euros, percentages, items, etc. all in the same table. Their respective charts, however, are not comparable.



That's why *DeltaMiner* allows you to hide graphical elements and sparklines in the *Row properties* (context menu of row elements). As with columns, *DeltaMiner* will initially activate visualizations for the entire table. Afterwards, you can hide specific graphical elements in individual columns – and now tables. In the *Row properties,* you can view a list of all graphical elements that are activated in the table.

These *Row properties* are currently not supported in the WebClient.

(13) Pivot Table: Displaying Relative Variances of Percentage Points as Decimals

You can now improve the readability of pivot tables where two percentage values converge by automatically adjusting the number formatting. In these cases, *DeltaMiner* will display the number as a decimal, without percentages – a common mathematical format when units cancel each other out. This format helps emphasize that you are dealing with a relationship of percentage points in the table.

The pivot table shown on your right shows the "Gross Profit Margin %", which is defined as the ratio between gross margin and revenues, in comparison to that of the previous period. In the *Measure properties*, the measure is formatted as a percentage with a decimal point. The "View of period" dimension on the column axis contains four time-calculated members: the previous period ("Nov 2011), the current period ("Dec 2011"), the absolute variance to the previous period, and the relative variance to the previous period. The numbers in the fourth column are formatted as a percentage with two decimal places while the remaining time-calculated members do not have a separate format.

	Measures	View of period GPM %		
Customers	Nov 2011	Dec 2011	ΔPP	ΔPP %
United Kingdom	44,5%	32,6%	-23,4%	-0,27
South	41,5%	28,6%	-2,5%	-0,31
North	49,0%	44,1%	91,4%	-0,10
East	58,0%	39,6%	73,3%	-0,32
West	52,5%	76,4%	-0,3%	0,45

In other words, two calculations converge in the fourth column and both are formatted separately as percentages. As a result, *DeltaMiner* will display the values in the fourth column as decimals.

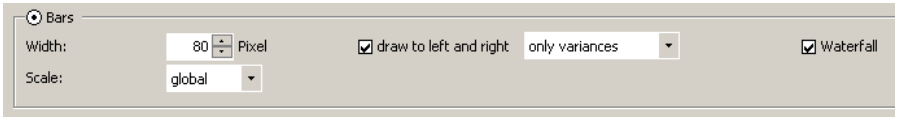
(14) Pivot Tables: Drawing Relative Values as Bars Instead of Waterfall Charts

As part of our efforts to establish high-standard reporting standards, we have set a new rule for pivot tables containing waterfall charts. *DeltaMiner* will automatically draw relative values with bars and not waterfall charts.

	Actual	ΔPlan %
Revenues	16.304.061	-6,6%
Rebate	2.090.631	22,9%
Discount	651.707	-0,6%
Net revenues	13.561.723	-10,2%
Cost of labour	5.980.270	-9,8%
Cost of material	319.798	11,9%
GM	7.261.655	-11,3%

Waterfall charts illustrate how a start value (e.g. revenues) changes by successively adding and subtracting other values until a final one (e.g. gross margin) remains. Although this logic also works for absolute variances and changes, it does not work for relative ones. Since relative values are not additive, it does not make sense to use them in combination with a waterfall chart.

That is why *DeltaMiner* now automatically selects another visualization form when waterfall charts are used in pivot tables containing columns with relative values. *DeltaMiner* automatically draws bars instead of waterfall charts in these columns. *DeltaMiner* recognizes relative values because they are formatted as a percentage (setting in the *Member editor*, *Calculated member editor*, *Time analysis member editor,* or in the *Measure properties*).

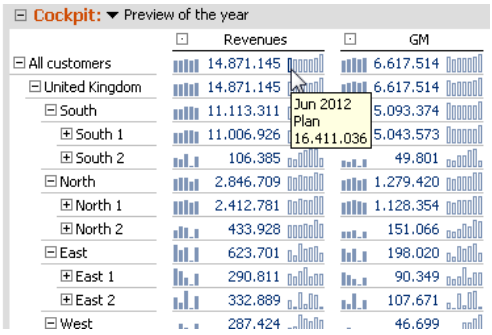


The settings in the *Table properties* determine how *DeltaMiner* draws bars. On the *Graphic (1)* tab, you can define if *DeltaMiner* should *Draw* [bars] *left and right* as well as when (i.e. always or only for variances, see *DeltaMiner deltas!* 5.5.2, feature #12).

The scale of the bars depends on the scale of the waterfall charts. If you choose a G*lobal scale*, *DeltaMiner* will view all columns containing waterfall charts as a whole and draw them using a common scale – and all bars for relative variances as well. If you select a *Scale by column, DeltaMiner* will apply a separate scale to each waterfall and bar column.

If you have defined a *Notation rule* that applies a *Style* to relative values (*Model* menu), you will not notice the effects of this new behavior because the notation rules draw bars or dot lines (i.e. pinpoints) to the left and right of a vertical line in place of waterfall charts.

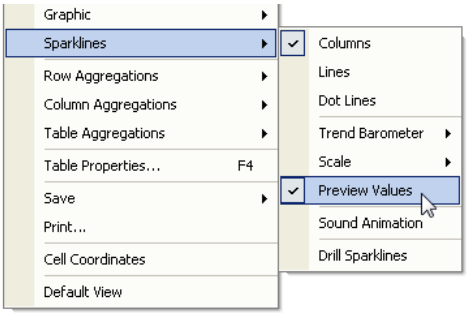
(15) Pivot Table: Combining Actual and Budget Values in Sparklines



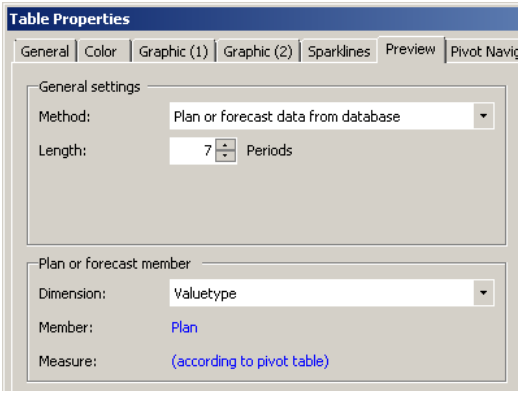
In pivot tables, you can now display sparklines that show actuals up to the current period and then budget values for the future ones. If a *Notation* is also defined, *DeltaMiner* will even display the columns or dots of actuals as filled bars or dot-line sparklines and leave those of the budget values hollow. This function is based on a special type of sparklines which show forecast values from forecasting methods. See feature #16.

DeltaMiner will display values to the right of the number or next to an existing trend arrow. The first column or first dot behind the number stands for the next period. The screenshot above right, for example, is saved for May 2012. Up until that period, the sparklines are based on current values. Following the numbers, *DeltaMiner* will then proceed with June 2012 and show budget values as sparkline columns for all periods to follow. The displayed numbers reference the data point to the left of them – in other words, the current period as always.

If you mouse over a column or dot, a tooltip will appear showing the period, number, and scenario that refer to that number.



If you want to extend the sparklines with budget values for the periods to come, you must first activate the *Sparklines* in the context menu of the pivot table (step 1). As soon as *DeltaMiner* displays these sparklines, you can see additional functions in the context menu and opt to display *Preview values* as well (step 2).



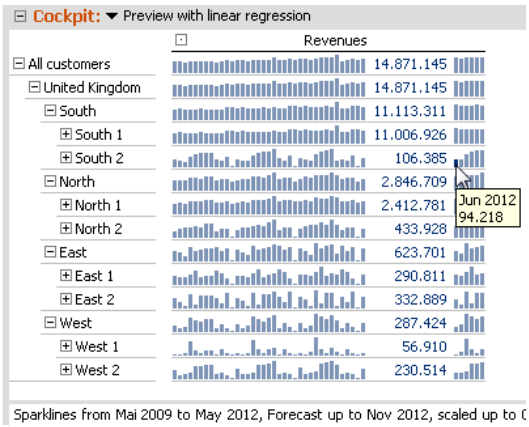
Finally, go to the *Table properties* on the *Preview* tab and select that *DeltaMiner* should use *Plan or forecast values from the database* (step 3). When you select this option, *DeltaMiner* will display an additional section in which you can specify the *Plan or forecast member*. Simply select the *Dimension*, (e.g. “Scenario”) as well as the desired *Member* (e.g. “Plan”, “Simulation”, “Forecast”). In the selected dimension, *DeltaMiner* will draw the sparklines up until the current period for the member shown in the *View* or *Axis definition*. For the following period, it will use the member selected in the dialog box.

So what happens when the budget or forecast values are located in another measure group or are not modeled in a dimension member such as “Plan” but are available as a separate measure (e.g. “Revenues”, “Plan”) instead? In this case, you would simply select the respective *Measure* in the *Plan or forecast member* section. This option is only works, however, if the pivot table contains a single measure. If you select *Measure*, *DeltaMiner* will then ignore your selections for *Dimension* and *Member*.

When you export sparklines to Microsoft Office **as an image**, *DeltaMiner* will include the preview values. Preview values, however, are not supported in Flexreports.

Preview values are also not supported in previous versions of *DeltaMiner*. If you open cockpits or reports containing preview values in older versions of the software, *DeltaMiner* will not display them.

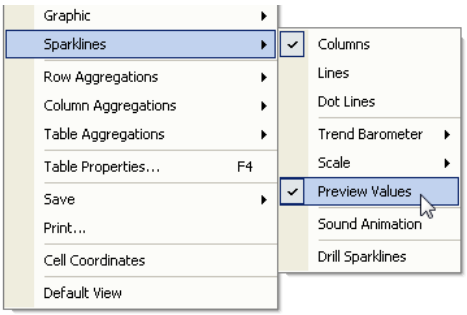
(16) Pivot Table: Calculating Preview Values with Forecasting Methods and Depicting Them as Sparklines



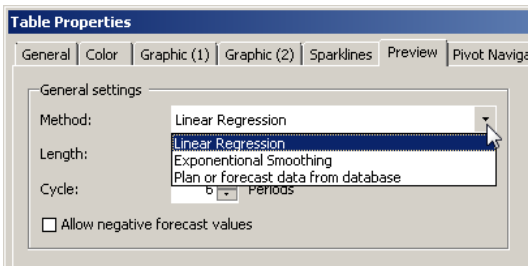
You can now use two forecasting methods in *DeltaMiner* pivot tables. This way, you can extrapolate the past development of values to preview how they could develop in the future.

Sparklines serve as the medium for the forecasting function. This new option allows you to display actuals up to the current period and then show forecast or budget values for the following ones.

To calculate forecast values for subsequent periods and include them in the sparklines, you must first activate *Sparklines* in the context menu of the pivot table (step 1). As soon as *DeltaMiner* displays the sparklines, it will expand the context menu. Now you can click on the *Preview values* option (step 2).



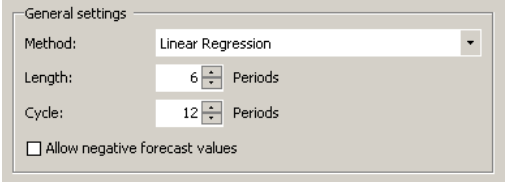
In step 3, you can select the *Method* that *DeltaMiner* should use to calculate the preview values. In the *Table properties* on the *Preview* tab, you can choose from three *Methods*:



- Linear regression
- Exponential smoothing (first order)
- Plan or forecast data from database

The *Plan or forecast data from database* option is a special case because *DeltaMiner* does not calculate this data based on historical values. Instead, it simply uses the budget values, forecasts, and other values that already exist in the analysis model and were defined using calculated members or measures. For more information about this option, please read feature #15.

In the case of linear regression or exponential smoothing, *DeltaMiner* will calculate a seasonal component. The following two parameters are required for both methods:



- The *Length* is the number of forecast values that you wish to include, in other words, the length of the continuation of the sparkline.
- The *Cycle* is the number of periods that repeat themselves following the seasonal pattern. When you

create a forecast based on monthly values, you usually work with a cycle length of 12. A cycle length of 1, in turn, would annul the seasonal component.

A further option determines how *DeltaMiner* should treat negative forecast values, which can occur in calculations based on forecast algorithms even when negative values are not possible in the application from a business standpoint. In the default setting, *DeltaMiner* corrects negative values to 0. Since this correction takes place after the forecast, it has no effect on the other values. If you *Allow negative forecast values*, *DeltaMiner* will not correct these values.

DeltaMiner bases these forecasts on the (historical) values shown in the sparklines. To create feasible results, you must choose a relatively long history, in other words, the sparkline must be significantly longer than one that you would use for reporting purposes. Please consider, for example, that if a forecast is only based on historical values from the past 24 months, *DeltaMiner* can only base its projection for each future month on two historical monthly values. If only one cycle or a part of one is displayed in the sparkline, *DeltaMiner* cannot make a real prognosis and, therefore, will only show the values from the previous year (or the previous cycle) as preview values. *DeltaMiner* will note these circumstances as a tooltip, which appears when you mouse over the preview sparkline.

You can determine the length of the sparkline as usual in the *Table properties* on the *Sparklines* tab.

When you export sparklines to Microsoft Office **as an image**, *DeltaMiner* will include the preview values. Preview values are not supported in Flexreports.

Preview values are not supported in previous versions of *DeltaMiner*. If you open cockpits or reports containing preview values in older versions of the software, *DeltaMiner* will not display them.

(17) Pivot Table: Grouping Rows and Columns with Gaps

You can now improve the readability of pivot tables with nested axes. This new option applies larger gaps to illustrate how the dimensions are nested in each other and make the table structure clearer.

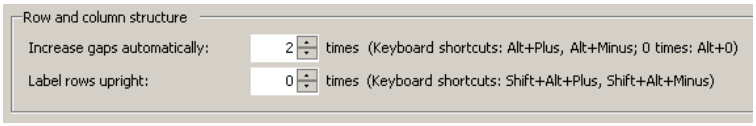
Revenues		Customers	Valuetype	Cumulation					
		South				North			
		Actual		Plan		Actual		Plan	
Products	Colors	not cum.	cum.	not cum.	cum.	not cum.	cum.	not cum.	cum.
Luxury Division	All colors	543.285	4.476.968	565.016	4.545.322	603.517	4.022.659	627.658	4.071.231
	Antique	140.574	989.974	146.197	1.003.940	17.899	155.384	18.615	157.304
	Blue Acqua	289.751	2.569.884	301.341	2.611.487	538.867	3.339.051	560.422	3.386.371
	Silverline	112.960	917.110	117.478	929.895	46.751	528.225	48.621	527.555
Custom made	All colors	9.759.203	68.937.196	10.149.571	69.883.647	1.733.132	12.478.371	1.802.457	12.634.291
	Antique	4.441	32.089	4.619	32.586	3.430	28.709	3.567	28.974
	Blue Acqua	1.481.809	10.355.566	1.541.081	10.485.051	587.595	4.056.915	611.099	4.100.199
	Metal	8.272.953	58.549.541	8.603.871	59.366.009	1.142.107	8.392.747	1.187.791	8.505.118
Standards	All colors	371.037	3.163.891	383.087	3.192.408	688.699	3.697.586	621.123	3.661.323
	Antique	47.806	339.805	49.718	343.604	23.812	141.839	24.764	143.618
	Silverline	323.232	2.824.086	333.369	2.848.804	664.888	3.555.747	596.359	3.517.705

The table above shows five dimensions – three on the column axes (e.g. “Customers”, “Value type”, “Cumulation”) and two on the row axes (“Products”, “Colors”). In spite of its complexity, this table is very easy to read due to its clear structures – and this, in turn, is due to the use of gaps. Take a closer look: Between the columns “not cum.” and “cum.”, you can see a small gap. The gap between the “Actual” and “Plan” columns is larger, just as the one between “South” and “North”. These larger gaps group the subordinate members so that you can differentiate and classify them. The gaps in the rows, in turn, help you quickly see where a new member begins in the product dimension.

Now compare the table above with this one that does not apply gaps:

Revenues		Customers	Valuetype	Cumulation					
		South				North			
		Actual		Plan		Actual		Plan	
Products	Colors	not cum.	cum.	not cum.	cum.	not cum.	cum.	not cum.	cum.
Luxury Division	All colors	543.285	4.476.968	565.016	4.545.322	603.517	4.022.659	627.658	4.071.231
	Antique	140.574	989.974	146.197	1.003.940	17.899	155.384	18.615	157.304
	Blue Acqua	289.751	2.569.884	301.341	2.611.487	538.867	3.339.051	560.422	3.386.371
	Silverline	112.960	917.110	117.478	929.895	46.751	528.225	48.621	527.555
Custom made	All colors	9.759.203	68.937.196	10.149.571	69.883.647	1.733.132	12.478.371	1.802.457	12.634.291
	Antique	4.441	32.089	4.619	32.586	3.430	28.709	3.567	28.974
	Blue Acqua	1.481.809	10.355.566	1.541.081	10.485.051	587.595	4.056.915	611.099	4.100.199
	Metal	8.272.953	58.549.541	8.603.871	59.366.009	1.142.107	8.392.747	1.187.791	8.505.118
Standards	All colors	371.037	3.163.891	383.087	3.192.408	688.699	3.697.586	621.123	3.661.323
	Antique	47.806	339.805	49.718	343.604	23.812	141.839	24.764	143.618
	Silverline	323.232	2.824.086	333.369	2.848.804	664.888	3.555.747	596.359	3.517.705

You can activate the *Row and column structure* option in the *Table properties* on the *General* tab. This setting has two options: *Increase gaps automatically* (described here) and *Label rows upright* (see feature #18).



With the “X times” setting, you can define how many hierarchies should have a larger gap size. In this case, *DeltaMiner* counts the hierarchies from the outside in, in other words, starting with the furthest nested dimension. This option for increasing the gap size applies to the column and the row axis provided that both axes contain the same number of hierarchies. Otherwise, *DeltaMiner* will only increase the gap for the axis containing more hierarchies until there is an equal number remaining on both axes. At that point, it will apply the changes to both axes at the same time.

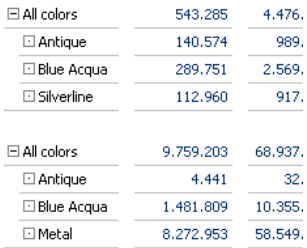
Let’s clarify this using the screenshot above. “One time” means that *DeltaMiner* will increase the gap between the members of the outermost hierarchy on the column axis. This is the customer dimension containing the members “South” and “North”. “Two times” means that *DeltaMiner* will increase the gaps between the members of the two outermost hierarchies. In the example above, this would be the customer dimension (“North”, “South”) and the value type dimension (“Actual”, “Plan”). Following this step, *DeltaMiner* would synchronize the column and row axes, thereby increasing the gap in the row axis as well. “Three times”, therefore, would also increase the gap between the members of the cumulation dimension (“not cum.”, “num.”). One exception: *DeltaMiner* will not increase the gap on the lowest level on the row axis.

If you want to change the layout without having the *Table properties* dialog box hide your view on the table, you can also use the following keyboard shortcuts:

Alt+Plus	Increase gap
Alt+Minus	Decrease gap
Alt+0	Reset gaps

These keyboard shortcuts are also listed in the *Table properties;* these shortcuts do not work, however, in *Reader* and *Viewer* modes.

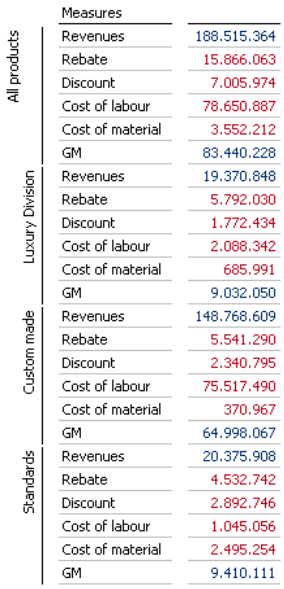
One design option is only supported through the keyboard shortcuts. In addition to the grouping gaps, *DeltaMiner* will switch between *Automatic row height* and a larger, user-defined row height.



In order for *DeltaMiner* to create the additional gaps, several conditions must apply: The pivot table must use row and column axes, at least one axis must include more than one hierarchy, *White style* must be activated (*Extras*, *Options*, *Presentation* tab), and the option to *Merge row members* and *column members* must be activated (*Table properties, General* tab).

When you export a pivot table to Microsoft Office **as an image**, *DeltaMiner* will include increased gaps. WebClient does not currently support this option and will simply display the rows and columns using the standard gaps. When you convert a pivot table to a Flexreport, *DeltaMiner* will not transfer these gaps.

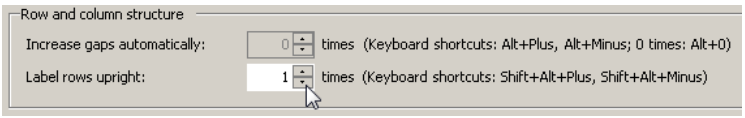
(18) Pivot Table: Labeling Rows Upright



	Measures	
All products	Revenues	188.515.364
	Rebate	15.866.063
	Discount	7.005.974
	Cost of labour	78.650.887
	Cost of material	3.552.212
	GM	83.440.228
Luxury Division	Revenues	19.370.848
	Rebate	5.792.030
	Discount	1.772.434
	Cost of labour	2.088.342
	Cost of material	685.991
	GM	9.032.050
Custom made	Revenues	148.768.609
	Rebate	5.541.290
	Discount	2.340.795
	Cost of labour	75.517.490
	Cost of material	370.967
	GM	64.998.067
Standards	Revenues	20.375.908
	Rebate	4.532.742
	Discount	2.892.746
	Cost of labour	1.045.056
	Cost of material	2.495.254
	GM	9.410.111

You can now label the rows of pivot tables in an upright position (i.e. vertically) in order to save space horizontally. This setting does not affect the row height because *DeltaMiner* will simply cut off the text if it does not fit in the cell. This type of labeling is ideal for nested axes because you can show that multiple rows (with horizontal writing) belong to a member that is labeled vertically.

If you are working in *Pivotizer*, *Analyzer*, or *Miner* modes, you can define that *DeltaMiner* should *Label rows upright* in the *Table properties* on the *General* tab.



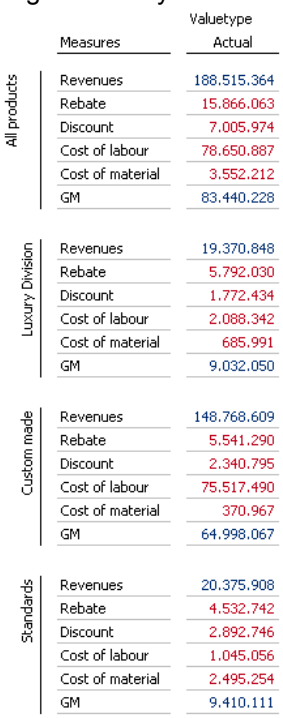
The entry “X times” determines how many row headers should be written upright. One (1) time means that the first (i.e. outermost) hierarchy of the row axis will be labeled upright. Two (2) times means that that the first two (i.e. outermost) hierarchies of the row axis will be labeled upright. Member properties are part of their hierarchy and will be displayed in the same way as the dimension members.

You can also use a keyboard shortcut to define how many row headers *DeltaMiner* should align in upright position. This allows you to adjust the setting without having the *Table properties* dialog box hide your view on the table. These shortcuts are:

Shift+Alt+Plus: Align one more row header in upright position

Shift+Alt+Minus: Align one less row header in upright position

These keyboard shortcuts are also listed in the *Table properties;* these shortcuts do not work, however, in *Reader* and *Viewer* modes.



	Valuetype	
	Measures	Actual
All products	Revenues	188.515.364
	Rebate	15.866.063
	Discount	7.005.974
	Cost of labour	78.650.887
	Cost of material	3.552.212
	GM	83.440.228
Luxury Division	Revenues	19.370.848
	Rebate	5.792.030
	Discount	1.772.434
	Cost of labour	2.088.342
	Cost of material	685.991
	GM	9.032.050
Custom made	Revenues	148.768.609
	Rebate	5.541.290
	Discount	2.340.795
	Cost of labour	75.517.490
	Cost of material	370.967
	GM	64.998.067
Standards	Revenues	20.375.908
	Rebate	4.532.742
	Discount	2.892.746
	Cost of labour	1.045.056
	Cost of material	2.495.254
	GM	9.410.111

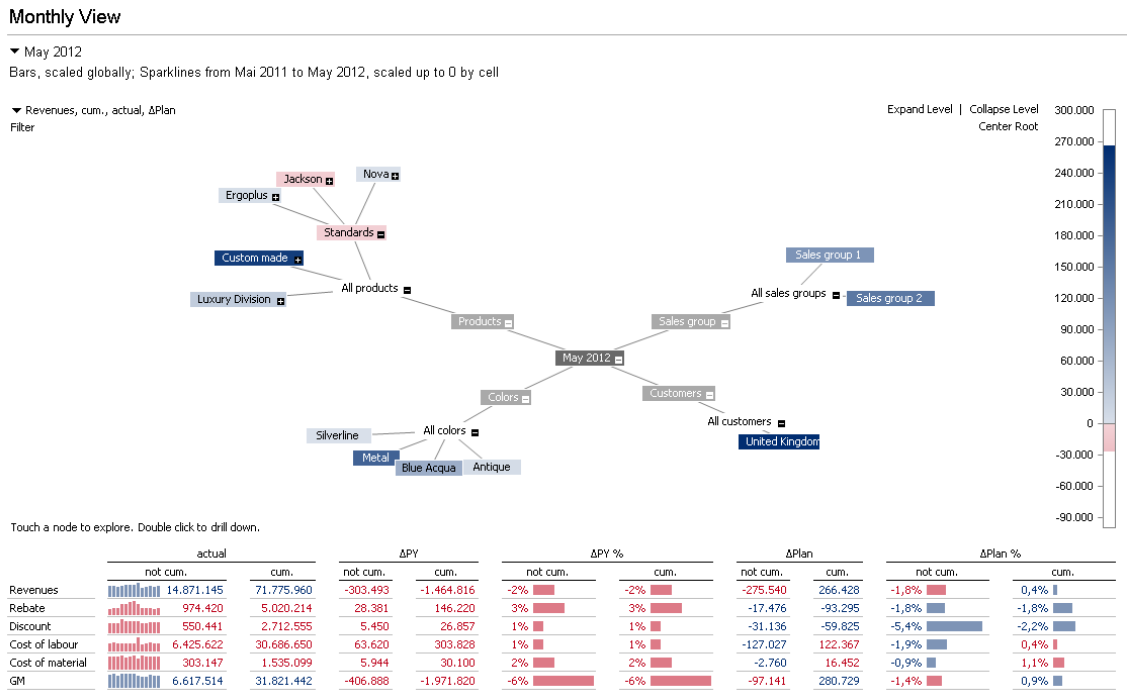
In addition to saving space horizontally, this upright alignment also clarifies the structure of the table when you are working with nested axes. Upright labeling encloses the horizontally labeled members like a parenthesis. This structure becomes even more apparent if you also opt to *Automatically increase gaps*, another new option in the *Table properties* (see feature #17). In order to use this option, you must have at least one dimension on the column axis. In the pivot table shown on the previous page, for example, you could add the “Value type” dimension. The screenshot on your right has increased the gap one (1) time.

This presentation form is currently not supported in WebClient. In its place, *DeltaMiner* will display the labels in the standard horizontal position.

The *Label rows upright* option will be deactivated in the *Table properties* if the pivot table does not use a row axis or *White style* (*Extras* menu, *Options*, *Presentation* tab), which are both required settings for upright labels.

(19) Presentation Mode: Displaying the Hyperbrowser in Viewer Mode (Ctrl + H)

One of *DeltaMiner's* most striking features is the Hyperbrowser, which shows a graphical view of the analysis model. Now, you can display the Hyperbrowser along with a report and all of its analytical capabilities in presentation mode.



With this new feature, you can effortlessly switch to other views, access measures to various objects without having to open another window, or analyze a value directly from the report by dragging and dropping it in the Hyperbrowser.

This function opens many new opportunities for meetings and presentations. You can use the Hyperbrowser to flexibly react to ad hoc questions and present the desired numbers interactively. Not to mention, its ease of use and fluid movements will fascinate and impress your audience. (As a data analyst, you know that extracting insights is more important than making impressions but, then again, a presentation must be effective in order for it to have an effect on your audience.)

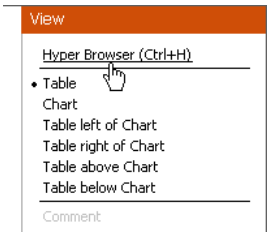
To use this new feature, you must have access to the Hyperbrowser outside of presentation mode (i.e. you are working in Miner mode or have an additional license for *Viewer*, *Pivotizer,* or *Analyzer* modes).

You can use Hyperbrowser in presentation mode just as you would anywhere else. In case you are not familiar with its functionality, here are a few ways that you can use it in a typical presentation scenario:

- If you place the pointer of your mouse on a node in the tree, *DeltaMiner* will display the report in the lower-half of the screen for this member only.

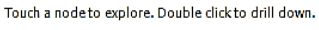
- To examine a value in more detail, simply drag it from the report and drop it into the Hyperbrowser. Please note that if you are working with an application or report with an activated planning function,

press and hold the *Shift* key before you “grab” the value and keep holding *Shift* until you drop the value.



The easiest way to display the Hyperbrowser is to use the keyboard shortcut *Ctrl+H*.

Alternatively, you can also display the Hyperbrowser using a command in the menu which opens if you mouse over the right corner of the screen (see *DeltaMiner deltas!* 5.4.3, feature #3). The keyboard shortcut is also displayed here. You can use this same keyboard shortcut or click on the menu command to hide the Hyperbrowser if you no longer need it.

Between the Hyperbrowser and the report there is an invisible divider. 

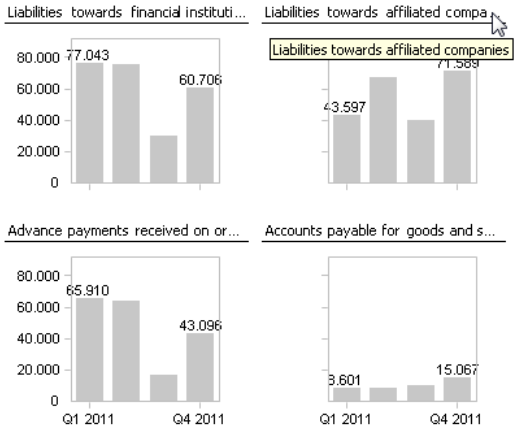
By moving it up or down, you can adjust the amount of space that you allot to the Hyperbrowser and the report. The divider is located directly below the “Touch a node to explore. Double click to drill down.” message and runs across the width of the entire screen. If the mouse pointer appears above the line, it will change its form so that you can clearly see the line. You can move the line via drag and drop.

When you use this feature in presentations, you may want to set up your measures so that the Hyperbrowser only shows select dimensions or includes members up to a certain hierarchy level. This will ensure that *DeltaMiner* doesn’t have to calculate thousands of (unnecessary) members with each click.

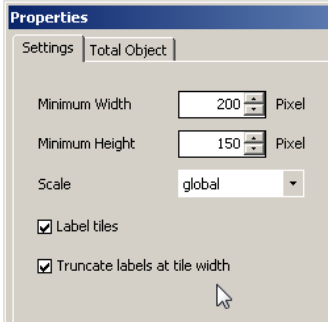
(20) Small Multiples: Truncating Labels at Tile Width

DeltaMiner offers a new option that improves the presentation of *Small Multiples.* In the past, *DeltaMiner* determined the tile width based on the size of the label. In the case of very long member, measure, or level names, the tiles sometimes became wider than they really needed to be for a balanced presentation. This new option changes that because *DeltaMiner* can automatically cut off (i.e. truncate) the labels so that they don’t make the tiles wider.

When you mouse over a shortened label, you can view its full name in a tooltip.



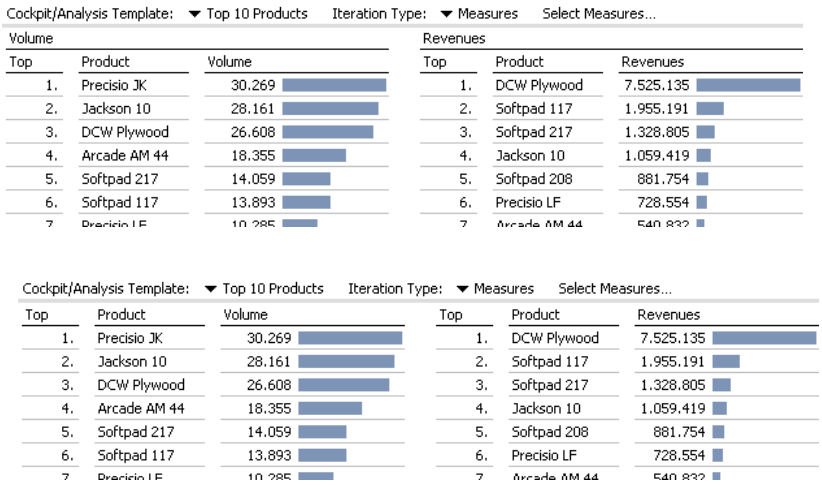
This option is located in the *Properties* of *Small Multiples* (*I want to…* menu or the context menu). In the default setting, the check box is deactivated and *DeltaMiner* will display the labels in their full length.



(21) Small Multiples: Hiding Tile Labels

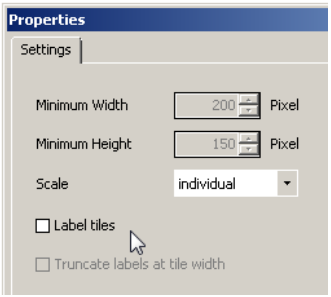
You can now apply a new option to reduce redundant labels in *Small Multiples*. In this case, *DeltaMiner* will label each tile with the name of an object that is displayed (iterated) in this tile. If this object is also contained in the underlying cockpit or the analysis template, *DeltaMiner* will display the name twice: in the tile as well as the label. To avoid this problem, you can now hide the tile label if necessary.

For example, the screenshot on your right shows a *Ranking* (i.e. “Top 10 Products”) that was iterated for two measures “Units sold” and “Revenues”. In the default setting, *DeltaMiner* displays the measure names below the titles and as well as captions in the column containing the values. In addition, the measure names appear as a label of the tiles above both top 10 tables.



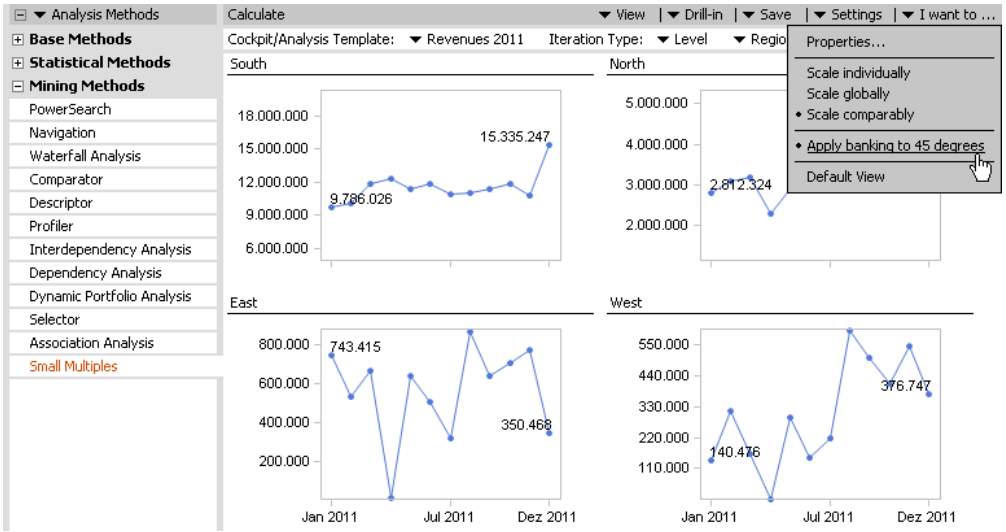
If you hide the title label, however, *DeltaMiner* will only display the measure name once as a component of the table.

The option is located in the *Properties* of the *Small Multiples* method (*I want to…* menu or the context menu). In the default setting, the check box is activated and the tiles will be labeled as before.



(22) Small Multiples: Setting the Aspect Ratio of Time Series Charts with Banking to 45°

You can now set a chart’s width and height so that it is very easy to read. This new option, which is based on William S. Cleveland’s 45° rule, uses angle variations to make the differences among values as clear as



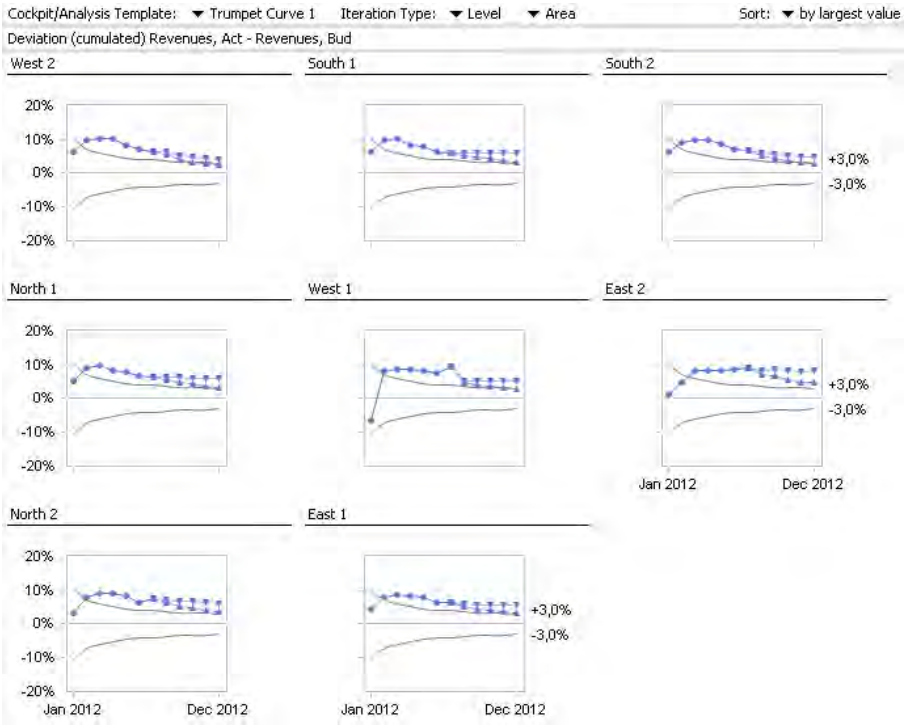
possible. You can also use this optimization technique, which is described in feature #25, as a new option for *Time series analyses*.

You can also apply this rule to *Small Multiples* containing *Time series analyses*. In this case, *DeltaMiner* will assess the values of all time series and calculate the optimal width and height for all tiles. Whether the 45° rule is activated in the analysis template or not makes no difference for *Small Multiples*.

You can access this option in the context menu or *I want to…* menu of all modes from *Reader* to *Miner*.

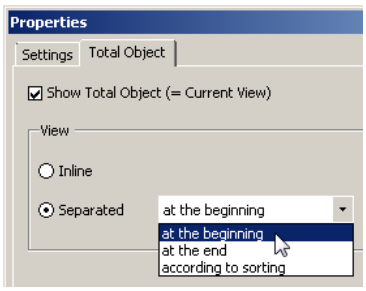
(23) Small Multiples: Iterating Trumpet Curves

You can now use the *Small Multiples* method to create multiple *Trumpet curve* analyses and save them to a single report.



With a *Trumpet curve*, you can analyze cumulative budget-actual variances in a time series to get an idea if a certain target can be attained. This analysis method tolerates certain fluctuations – more at the beginning of the year and less as the year's end approaches.

In the example on the previous page, we created a *Trumpet curve* for two measures "Revenues, Current" and "Revenues, Plan", saved them as an analysis template, and calculated them for the eight regions in the customer dimension of the "Chair" reference model. The diverging lines are called projections. They show how the difference will develop *with original plan data* or *with continued divergence*.



You can also make a comparison to the *Total object*, similar to the total object in *Small Multiples* of *Time Series Analyses* (see *DeltaMiner deltas!* 5.4.6, feature #9). The total object is equivalent to the current view in the dimension where the members were iterated (e.g. "All customers" or "United Kingdom" in our example). You can activate the *Total object* in the *Properties* on the tab

with the same name (*I want to…* menu or context menu). You can add it either as *Embedded* gray lines in the individual tiles or as a *Separate* tile placed *at the beginning* or *end* of a report or *according to sorting.*

If you are working with *Small Multiples* across *Time Series Analyses,* you can also opt to observe the mean of the iterated objects (instead of the current view) as a total object. Since you need additive values to make a mean, this option does not work in combination with a *Trumpet curve* because it calculates relative variances that are non-additive.

You can calculate *Trumpet curves* using levels, members, and named sets as iteration types. Regardless of the iteration type, you can sort the tiles based on the *Largest value*, *Smallest value*, or *Mean*. The following table shows which combinations of cockpits/analysis templates and iteration types that you can use with *DeltaMiner* 5.5.3.

		Levels	Members	Named sets	Measures	Dimensions
PIV	Pivot Table	+	+	+	(+)[1]	(+)[2]
FLX	Flexreport	+	+	+		
RNK	Ranking	+	+	+	+	+
XTB	Cross Table Analysis	+	+	+	(+)[1]	+
TIM	Time Series Analysis	+	+	+	+	
TRU	Trumpet Curve	+	+	+		
PFL	Portfolio Analysis	+	+	+		+
GEO	Geo Analysis	+	+	+	+	
REG	Regression	+	+	+		+
PWR	PowerSearch	+	+	+	+	+

[1] Requirement: The pivot/cross table may only contain one measure

[2] Requirement: The row axis may only contain dimensions (one or more)

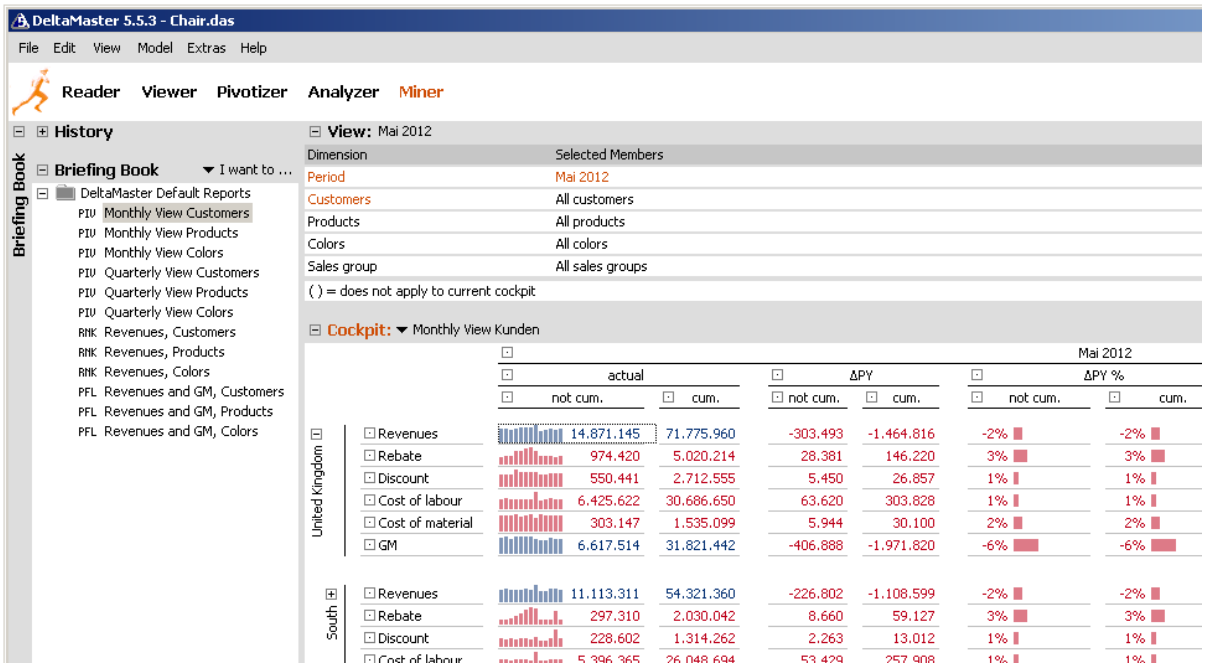
(24) Start Wizard: Creating Default Cockpits and Reports

DeltaMiner now offers a new wizard which makes creating new analysis sessions and applications faster and easier than ever before. After a short, interactive general parameterization, *DeltaMiner* will automatically complete typical work sequences so that once you connect to the database, you can access a basic selection of cockpits and reports instead of opening an empty analysis session. What's more, the start wizard automatically creates the necessary time analysis members (e.g. variances to the previous period, cumulations) or calculated members for budget-actual variances.

In particular, people who create new *DeltaMiner* applications on a regular basis (e.g. as the application "owner" in a company or someone who creates applications for consulting projects or prototypes) will profit from this new start wizard.

(a) Standard analysis session

The following illustration shows a new analysis session that was automatically generated by the start wizard. Please note, nothing in this screenshot was created by hand!



The start wizard has automatically:

- Created pivot tables for a typical monthly view of the most important measures and dimensions (e.g. for the management team and operating units).
- Generated pivot tables for a typical quarterly view of the most important measures and dimensions (e.g. for supervisory board members and analysts).
- Set up *Rankings* which show revenues broken down by the most important dimensions.
- Created *Portfolio Analyses* for revenues and gross margin (or a similar measure) in the most important dimensions.
- Defined calculated members and time-calculated members in the “Period view” dimension (e.g. the current period, previous period, the same period in the previous year, variances) and descriptions for dropdown menus.
- Generated calculated members for absolute and relative budget-actual variances.
- Set up a year-to-date cumulation in the “Cumulation” dimension.
- Written notation rules for applicable members.
- Hidden standard members from the view description (e.g. “Actual” in the “Value type” dimension and “Not cum.” in the “Cumulation” dimension).

- Hidden the names of all levels in the “Period view”, “Cumulation”, and “Value type” dimensions from the view description.
- Created a cockpit folder and a report folder.
- Defined a start report.
- Generated a dimension group for the “Period”, “Value type”, and “Utility” dimensions.
- Set the previous month as a view in reports and in the report folder.
- Defined the BI factor for cost measures as negative.

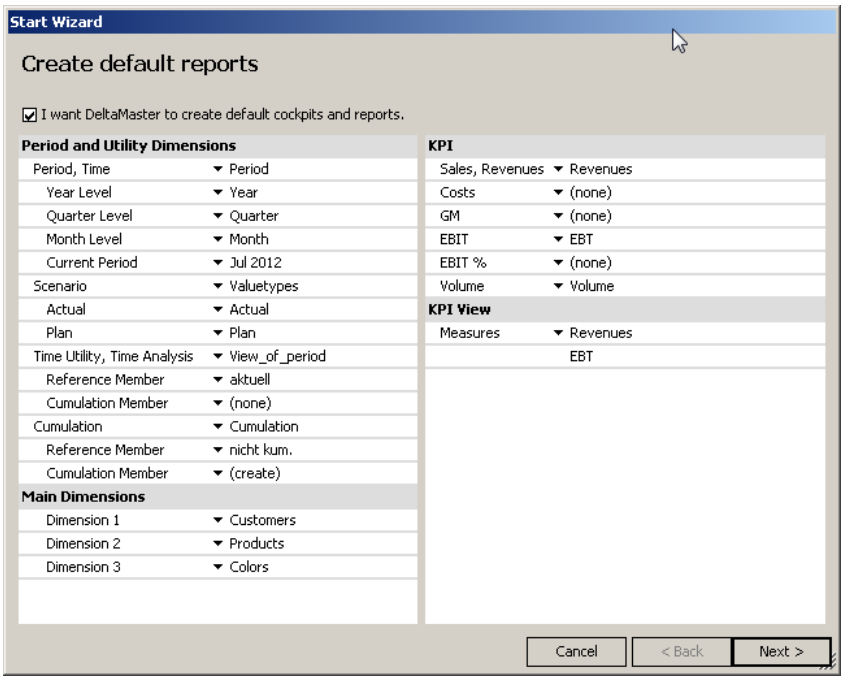
These automatically generated reports are standard reports which can be used for periodical, automated reporting. Their setup, content, and layout are based on the best practices and lessons learned in countless *DeltaMiner* projects. You can edit the reports and all other settings created in the start wizard just as you did in the past. These standard reports do not differ from those that you create by hand.

What’s more, you don’t have to worry if individual components of a standard session are missing in your model. If you don’t use a cumulation dimension or didn’t enter a measure for gross margin in the initial parameterization, you can still use the start wizard.

The list above illustrates the advantages of using the start wizard. It takes care of many small tasks from connecting to a database to displaying the first representative results. Beyond that, you profit from the tried-and-true standards for designing high-quality standardized reports.

(b) Setting parameters in the start wizard

Before *DeltaMiner* can set up the reports, the start wizard will ask how the properties that make up these standard reports are called in your data model. Some of the standard reports, for example, deal with budget-actual comparisons. In this case, *DeltaMiner* must know in which dimension it can find the budget and actual members as well as what they are called in your system. When you create a new analysis model in *Miner Expert* mode, the start wizard will appear as a dialog box after you have selected the OLAP cube or connected to the relational model.



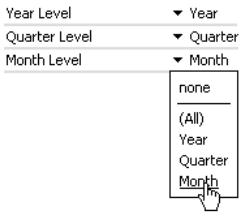
With this dialog box, you can map your data model to the standard analysis session of *DeltaMiner.* In other words, you define where the properties of the new analysis session are located in your data model as well as how they can be derived. You could state, for example, that budget data and actuals are stored in the “Value

type” dimension and that the member “A” stands for “Actual” and “P” stands for “Plan”. If your data model does not contain any budget values, *DeltaMiner* should know that as well so that it can omit the respective reports or report components.

What’s more*, DeltaMiner* even tries to simplify this match-up process. Before the start wizard opens, *DeltaMiner* will analyze the data model and try to locate the most important dimensions, levels, members, and measures on its own. That’s why some or even all of the fields in the start wizard are filled with a suggested value from your data model. To support this match-up, *DeltaMiner* will access an internal list of typical terms in both English and German. If the OLAP cube contains a dimension called “Value type”, *DeltaMiner* will assume that it is the same value type dimension that it requires for the standard reports and suggest it as such. It also looks for aliases, which it recognizes based on the names of member properties (e.g. “TEXT” or “<Level>_BEZ”).

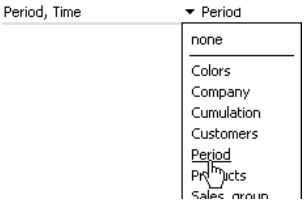
You can describe the properties for building standard reports and categories in four categories. The dialog box is broken down into these categories as well:

Period and Utility Dimensions

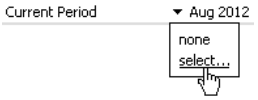


Period, Time

Here you can define which hierarchy of your data model should be the time hierarchy in the analysis session as well as which dimension level contains the years, quarters, and months. If the cube has multiple time hierarchies, the wizard will suggest the first one. If you wish to use another one, (e.g. the fiscal year instead of the calendar year), simply select it.



In the three rows under the time hierarchy, you can enter the *Level* containing the years, quarters, and months. This is a fixed schema in the start wizard, which means that you cannot make an alternative selection (e.g. days or calendar weeks). Here, you can select from all levels that are available in the time hierarchy that was selected above.



In this section, you can also select the *Current period*. *DeltaMiner* will open the *Dimension browser* in the time hierarchy that was previously defined. Here, you should choose the last complete month in the database (if the wizard hasn’t already done so automatically). This month will be preset in the reports of the analysis session. If you use the start wizard in August, for example, select “July” if the complete values for this month are already stored in the database.

The following assumptions and modelling recommendations apply to the time dimension:

1. There is only one time dimension, not multiple ones. If the underlying model contains different references to time (e.g. order date, delivery date, invoice date), you will need to create a separate dimension (e.g. “Time reference”).

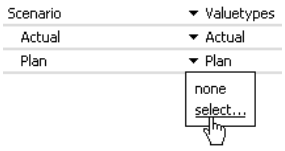
2. The time dimension is continuous. *DeltaMiner* will model time units such as months, quarters, and years in one and the same dimension, not in multiple ones.

3. The time dimension does not contain synthetic members. Cumulations (e.g. “Year to date”), rolling sums, time-calculated members to access previous periods, etc. will be modeled in separate dimensions (e.g. “Period view”, “Cumulation”).

4. Due to point #3 above, you should create one dimension for the period view and one for the cumulation in the data model. These dimensions are usually flat, which means that they have no hierarchy and no "All" member, and often only contain one member such as "Current" or "Not cum."

Aside from the start wizard, these recommendations serve as best practices for *DeltaMiner* applications. They ensure that you can access values from the previous period at the turn of the year and provide a certain amount of leeway for the analytical methods in *DeltaMiner* (for example, if you automatically search for the causes of variances).

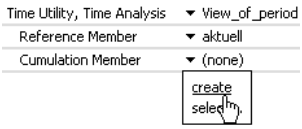
Value type / scenario



In this section, you can define the dimension containing the value types or scenarios "Actual" and "Plan" as well as their names in your data model. You can select the dimension from the list of available ones (see example for the time dimension above). With the help of the *Dimension browser*, you can *Select* the "Actual" and "Plan" members.

In the selected "Value type" dimension, *DeltaMiner* will create calculated members – the absolute and relative variance between "Actual" and "Plan" (i.e. between the members that you selected for these values).

Time utility, Time analysis



In this section you can define which dimension should be used for time analysis members (e.g. members such as "Previous period" or "ΔPP %"). This dimension, which is sometimes referred to as "Time utility", is a utility dimension and often only contains a single member, the reference member (e.g. "Current"). The actual purpose of this dimension is to hold the time analysis members defined in *DeltaMiner*. As a result, this dimension must be in the data model and contain at least one member.

- The *Reference member* represents the current period in time comparisons. When you click to *Select* it, *DeltaMiner* will open the *Dimension browser*.

- The *Cumulation member* is used to calculate accrued values (e.g. "Year to date"). If you click on *Create*, the start wizard will generate this member for you. If the cumulation is already defined in the database, simply select the respective member with the *Dimension browser*. When you are analyzing and designing reports, it often makes sense to model the cumulation as a separate dimension and not as a member in the period view. (The start wizard supports both approaches.)

Once you have configured the period view, the start wizard will automatically generate either eleven time-calculated members (if you let the wizard *Create* a cumulation member) or seven of them (if you don't).

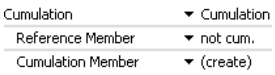
Description	Name	Comment
Current period	{cp}	"{cp}" will be replaced by the names of the currently selected periods in analyses, reports, cockpits, etc.
Cumulated	YTD	YTD = Year to date
Same Period Previous Year	PY	PY = Previous year
Same Period Previous Year, Cumulated	PY YTD	

Description	Name	Comment
Same Period Previous Year, Cumulated, Variance	ΔPY YTD	Δ = Delta = Symbol for difference
Same Period Previous Year, Cumulated, Variance %	ΔPY YTD %	
Same Period Previous Year, Variance	ΔPY	
Same Period Previous Year, Variance %	ΔPY %	
Previous Period	PP	PP = Previous period
Previous Period, Variance	ΔPP	
Previous Period, Variance %	ΔPP %	

DeltaMiner will only generate the entries with "YTD" in their names when you *Select* a cumulation member or *Create* one. In the *Hierarchy properties,* the start wizard will activate the option to *Display description instead of caption in selection lists*.

Cumulation

In this section, you can define which dimension *DeltaMiner* should use to model cumulations (e.g. "Year to date"). The start wizard treats the cumulation, which is also a utility dimension, in a similar way as the period view.

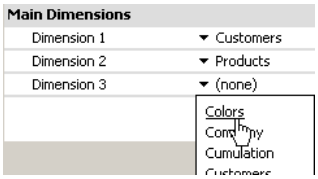


The *Reference member* stands for non-cumulative values. When you click on *Select*, *DeltaMiner* will open the *Dimension browser*.

If you click on *Create*, the start wizard will generate the *Cumulation member* for you. If the cumulation has already been defined in the database, simply select the respective member using the *Dimension browser*.

Main Dimensions

In this section, you can select up to three dimensions containing the main report components of your application (e.g. "Customers" and "Products" for a sales analysis). The start wizard will create standard reports for each dimension that you select.

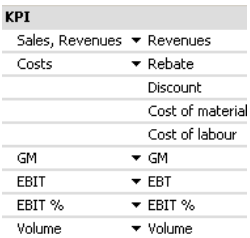


Non-selected dimensions, of course, are still available as usual. The start wizard will just not create any standard reports for them.

KPI

In this section, you can designate the most important measures in your data model.

Sales, Revenues are used in the Rankings and Portfolio analyses. DeltaMiner will open the Measure browser so that you can select them.



For *Costs*, you can select multiple cost types from the *Measure browser*. *DeltaMiner* will define the *Factor* for these select measures as negative in the *Measures*

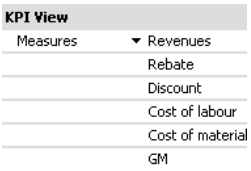
properties. This factor determines, for example, if the values are displayed in blue or red.

The *Gross margin* goes with the revenues into the automatically generated *Portfolio analyses*.

The *EBIT* or the *EBIT %* is used in quarterly reports. If your EBIT data is only available in absolute numbers and not as a percentage of revenues, you can *Create [a] new measure* (in this case, a *Quotient value*) as usual in the context menu or *I want to…* menu.

KPI View

The automatically generated pivot tables show a KPI view based on various perspectives and comparison types. You can select the measures that should belong in this schema from the *Measure browser*. You can rearrange values via drag and drop in the start wizard, which will automatically display them in that same order in the reports that it generates.



If you click on *Next,* the start wizard dialog box will close. Now you have completed all of the necessary steps for the set up.

Welcome to your new analysis session!

(c) Requirements

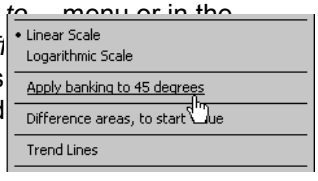
The start wizard feature is only available in *Miner Expert* and supported in combination with OLAP databases supporting MDX. You can only use this wizard to create a new analysis model – not afterwards.

(25) Time Series Analysis: Setting the Aspect Ratio of Charts with Banking to 45°

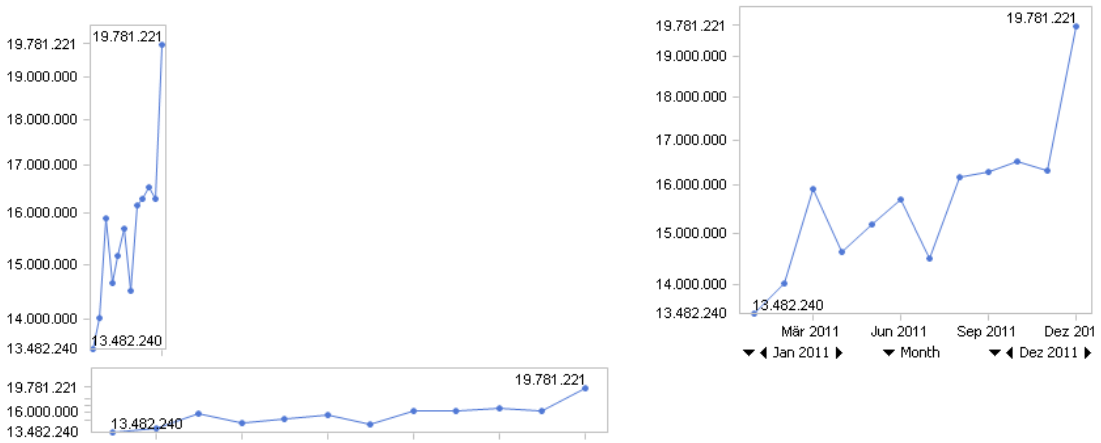
Version 5.5.3 offers a new option for displaying line charts. In addition to making them easier to read, this option also sets strong standards for a rather difficult question: How high and wide must a chart be in order to present its development in a fair and balanced manner?

Aspect ratios play an important role in how people interpret line charts. Depending on how high or wide you set up the chart, you can make a development appear to be as steep or flat as you wish. William S. Cleveland, a U.S. expert for statistics and computer science, has examined these relationships and suggests using an optimization technique to graphically show the maximum differentiation among differences in linear developments. To do this, you simply select the aspect ratio of the chart so that the average of all angles equals 45° – regardless if you are dealing with an “uphill” or “downhill” angle. With this method, the chart will display all value differences as clearly as possible through an “angle variation” of sorts. Cleveland calls his method “Banking to 45 degrees” (Cleveland, W. S., The Elements of Graphing Data, Murray Hill 1994, pp. 251-256). We simply call it the “45° rule”.

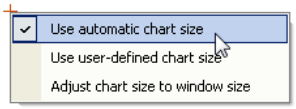
You can activate and deactivate the 45° rule using the respective entry in the *I want to…* menu or in the context menu of the *Time series analysis*. This is possible in all user modes from *Ofi Expert*. If you apply this rule, *DeltaMiner* will size the chart so that it completely uses spread (width or height) and automatically adjusts the other respective spread in ord aspect ratio based on the 45° rule.



The following charts show the same time series for revenues. The charts on the left have user-defined chart sizes, one being tall and skinny and the other short and fat. The chart on the right uses the 45° rule. *DeltaMiner* has optimized this chart graphically so that the angles show a maximum differentiation.



At a first glance, you could assume that the 45° rule was applied if a trend line placed through the line has a 45° angle or if the chart area is almost square in shape. This is not the case. Calculating the aspect ratio is much more complex (i.e. it maximizes the difference of the values of the derivations) and depending on the underlying data, the aspect ratio could be completely different than the one shown in the example above. Fortunately, you don't need to worry about these calculations. As long as the 45° rule is activated, *DeltaMiner* will generate the optimal aspect ratio.



The 45° rule is, more or less, an automatically defined chart size. As a result, *DeltaMiner* will automatically activate the respective option for the *Chart size* as soon as you apply the 45° rule. On the other hand, it will automatically deactivate this rule if you *Use [a] user-defined chart* or *Adjust the chart size to [the] window size* (options in the context menu of the orange cross in the upper-right corner of the chart, see *DeltaMiner deltas!* 5.5.0, feature #2).

If you activate the 45° rule, *DeltaMiner* will save this setting in the report and thus in the analysis session. Should the view change, *DeltaMiner* will automatically adjust the aspect ratio to reflect the new data. *DeltaMiner* also takes changing amounts of space into account. As a result, it would keep the aspect ratio according to the 45° rule even if you entered a time series chart in a combination cockpit.

You can also draw times series charts using the 45° rule in *Small Multiples* (see feature #22).

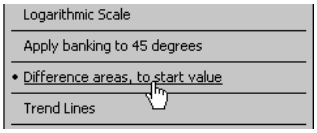
Our office dog Bella offered a simple explanation of this rule in her blog post, "Bad, better, banking" (http://www.bella-consults.com/45-degrees-rule).

(26) Time Series Analysis: Showing Difference to Start Value as Area

In a *Time Series Analysis*, you can now highlight the positive and negative changes from a start value by displaying these changes as an area and coloring them with *Business colors*.

When selecting the colors, *DeltaMiner* will account for the factor of the measures. Increased revenues and falling costs, for example, will be colored blue while falling revenues and increased costs will be red (i.e. blue is good; red is bad).

You can activate or deactivate these *Difference areas* in the respective entry in the *I want to…* menu or context menu of a *Time series analysis*. This is possible in all user modes from *Offline Reader* to *Miner Expert*.



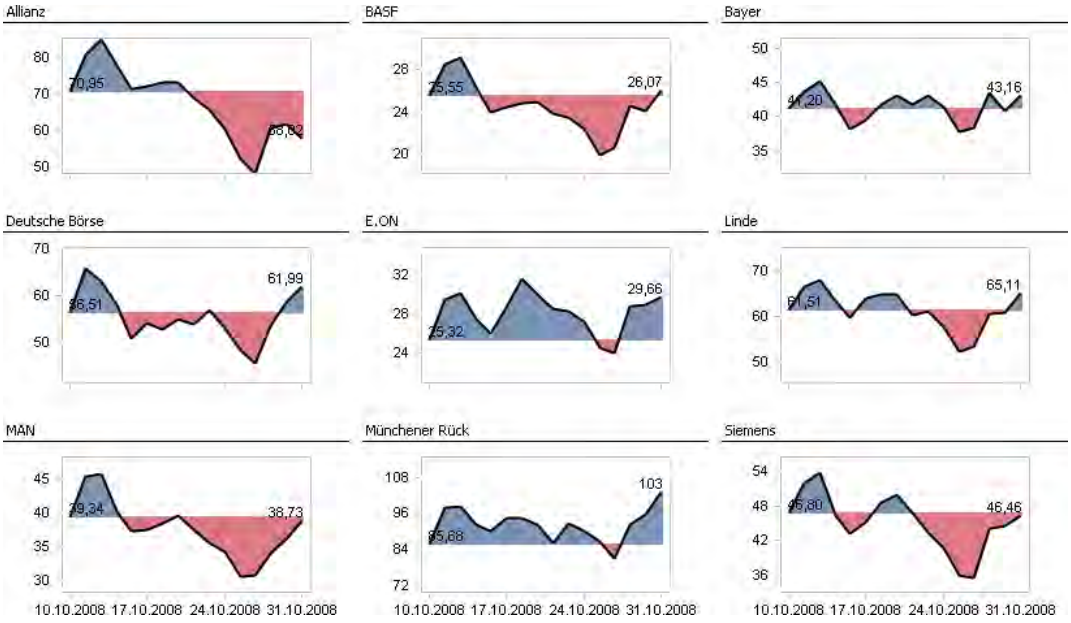
In order to display these areas, *DeltaMiner* will slightly change the line format so that it is thicker and light gray in color. If desired, you can edit the line color, thickness, and other presentation options in the *Settings* (context menu of data points and line segments).

In order for you to use this chart, the following conditions must apply:

- The time series analysis may only display one measure (not several)
- The chart is a line chart. (Coloring is not supported for columns, curves, or steps.)

If you are working with variance measures or others containing positive and negative ones, please note that the area stands for changes to the first value in the series – it does not indicate that the value is larger or smaller than zero. To avoid any confusion, you should clearly state this (e.g. in a report comment) or simply not use difference areas for variance measures.

If you iterate a *Time series analysis* with difference areas as *Small Multiples*, you can create very interesting comparisons. The following example shows how the prices of different stocks have changed since a set date. Large blue and red areas quickly direct your view to the stocks and time periods showing large gains and losses.



The illustration above shows how stock prices of nine DAX corporations have changed since 10 August 2008. The tiles use a comparable scale and are sized according the 45° rule. (See feature #22; both options are in *I want to…* menu or the context menu.) The line was colored black; the markers were hidden.

(27) Notes: Compatibility with Previous Versions and Installation

The following table shows if the new release contains any changes to the metadata schema of ReportServer and *WebOption* as well as the *WebOption* configuration files.

Component	Files	Changes since version 5.5.2
ReportServer	'ReportServer.mdb' 'ReportServer (SQL Server).sql' 'ReportServer (Oracle).sql'	No
WebRepository	'Repository.sql'	No
WebService	'DeltaMaster.Service.exe.config'	No
WebClient	'web.config'	No
GUI repository	'DeltaMaster.Repository.exe.config'	No

The metadata scheme of **ReportServer** has not changed. As a result, you do not need to update your job definition database by running the 'ReportServer (SQL Server).sql' or 'ReportServer (Oracle).sql' script. If you use the Access database 'ReportServer.mdb', *DeltaMiner* will automatically update it for you. As always, however, you should update the 'ReportServer.exe' file as well as the respective DLLs so that they match the current *DeltaMiner* version. The ODBC connection string that specifies the job definition database is located in the "ReportServer.exe.config" file. Please create a backup copy of this file before you install the current version of the *Report Server* files.

The **WebOption** components – *Repository GUI, WebClient,* and *WebService* – are available in version 5.5.3. An update, therefore, is highly recommended. The database schema for the repository has not changed in version 5.5.3. Before you update *WebOption*, please create backup copies of the configuration files (see table above), any changed graphics in the "Image" folder (e.g. "Master_Top.png") as well as the style sheet file (e.g. "DeltaMaster.css").

Since the configuration files of *WebService*, *WebClient*, and *Repository GUI* have not changed from 5.5.2 to 5.5.3, you can reuse the older files without needing to make any changes. You can update the *WebService, WebClient, and Repository GUI* by copying the new files into the respective directories. Once again, please make backup copies of these files before doing so. A separate setup is not necessary.

Updated versions of DeltaMiner **apps** (DeltaMiner ReaderApp, DeltaMiner TickerPortal, DeltaMiner Notifications) are available at the App Store.

24 DeltaMiner deltas! 5.5.4

What's new in version 5.5.4? Find out in this overview!

(1) General: Context-Sensitive Help 2
(2) General: Adding an Image to Headings 8
(3) Measure Browser: Releasing a Measure from a Hierarchy via Drag & Drop (Instead of with the Del Key) 9
(4) Measure Browser: Nesting Measure Groups (Multi-Level) 10
(5) Apps: Adjustments for iOS 6 and Retina Displays 10
(6) Named Set Browser: Copying Named Sets 10
(7) ReportServer: Protecting Generated PDF Documents with a Password 11
(8) ReportServer: Logging Job Execution in the Job Definition Database (Logbook) 11
(9) ReportServer: Specifying Language and/or Alias Set, and Iterating over Them 13
(10) CubeWizard: Creating Parallel Hierarchies in Server Databases or Cube Files 14
(11) Pivot Table: Restricting Data Input to Cells That Meet Conditions Expressed in MDX 14
(12) Pivot Table: Drill Symbols Removed for Elements without Children 15
(13) Pivot Table: Hiding Hierarchy or Level Captions for the Row Axis and the Column Axis Separately 16
(14) Pivot Table: Using the Wildcard Characters "?" and "*" in Member Property Filters (Microsoft Analysis Services only) 17
(15) Pivot Tables: Revamped Functionality of Trend Barometers 18
(16) Pivot Table: Wrapping Vertical Labels 19
(17) Object Dependencies: Including Member Properties of the Pivot Table 19
(18) Portfolio Analysis: Saving Hidden Objects 20
(19) Portfolio Analysis: Labeling Selected Objects Only 20
(20) Search: Using the Wildcard Characters "?" and "*" for Searching Dimension Members (Microsoft Analysis Services only) 21
(21) TableWizard: Creating Parallel Hierarchies 22
(22) Time Series Analysis: Showing Differences to Zero Line or Minimum as Area 24
(23) Notes: Compatibility with Previous Versions and Installation 25

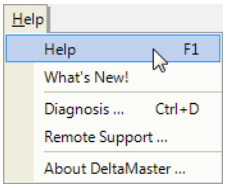
(1) General: Context-Sensitive Help

DeltaMiner now offers an integrated help function. As a result, you can now access a wide range of information – including general tips on usability, guidelines on when to use a certain analytic method, instructions on how to parameterize it, advice on selecting the best display options, good arguments for introducing new report formats, ideas for presenting analytic data in your company, and much more – all while you are working with *DeltaMiner*.

- *DeltaMiner* Help obtains its information from established sources – documents and Web sites where we have published everything there is to know about *DeltaMiner* (and good Business Intelligence in general) for many years now. The Help function serves as a central gateway to:
- All editions of DeltaMiner clicks!
- All editions of DeltaMiner deltas!
- Manuals and instructions for using DeltaMiner
- Documentation on additional features or products (e.g. WebOption or Modeler)
- All articles from the blog "Me, myself, and BI – Bissantz ponders", which contains in-depth postings on art and data analysis, design and management, and reporting and the media.
- All articles from the blog "Bella consults – Musings of the office dog at Bissantz", which primarily focuses on rules showing the correct way (as well as better ways) to design charts and tables.
- Other assorted documents and Web sites

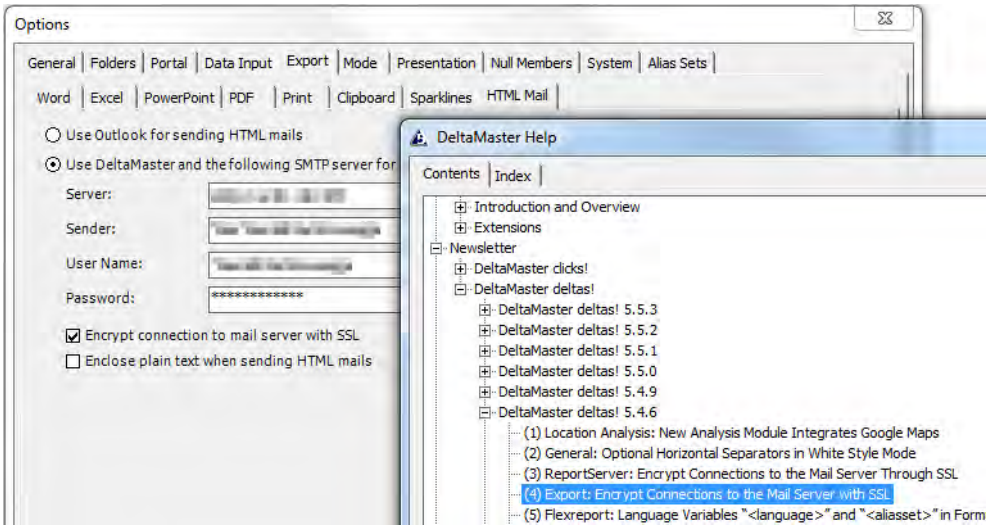
Since this Help function is based on regular publications, it is continually growing. At its initial release, it already contained over 60 MB of English PDF files alone – over 500 pages in 26 issues of DeltaMiner deltas! and another 500 pages in more than 90 editions of DeltaMiner clicks!. Plus, each new clicks!, deltas!, and blog post will increase the wealth of information that DeltaMiner Help has to offer.

(a) Opening der Hilfethe Help function



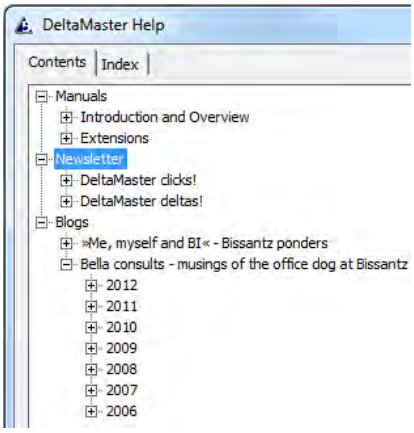
To open *DeltaMiner* Help, simply hit the *F1* key just as you would in other Windows programs. Alternatively, you could also open this function with the respective option in the *Help* menu. Since the Help function is context-sensitive, it tries to identify which module or function you are currently using and suggests an appropriate entry from the index or table of contents.

When you open the Help function, *DeltaMiner* carefully notes which control is currently active. If you hit the *F1* key in the *Options* (*Extras* menu), for example, the Help function will automatically open on the *Index* tab, select the "Options" category, and display the respective *Topics* in the dialog box below. If you hit *F1* in the *Export* tab, however, *DeltaMiner* Help will even select the keyword "Export" and the related topics. If you mouse over the subordinate *HTML mail* tab on the same *Export* tab, *F1* will return an even more specific view – namely, topics related to generating and sending HTML e-mails. If the check box for SSL encryption is activated in these settings, the Help function will select the edition of *DeltaMiner deltas!* that introduces and explains this option. If you click on this entry, you will open the respective document.



The *F1* key also works in the context menu. If you are working in a pivot table, mouse over the entry *Sparklines*, and hit *F1*, the Help function will open to the entry for the keyword “Sparklines”. If you mouse over *Trend barometer* in the submenu, *DeltaMiner* Help will select that keyword instead.

You can also use the Help function as a separate program without having to open *DeltaMiner*. Simply click on “Help.exe” from the *DeltaMiner* installation directory (e.g. “C:\Program Files\ DeltaMiner 5.5.4”). Since this program does not check for a valid license, no connection to the license server is necessary. The Help program only runs in a single instance. If you attempt to open it a second time, the program will automatically switch to the previously opened window.

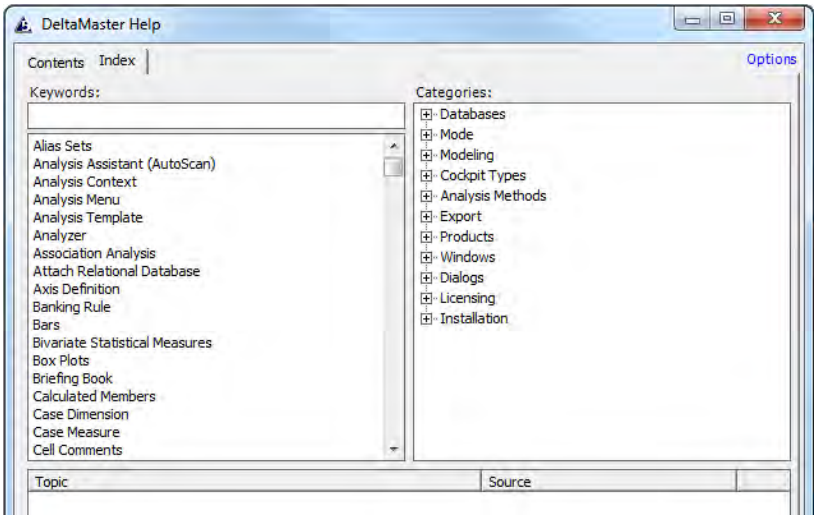


(b) Table of contents and index

There are two ways to access documents in the *Help* window.

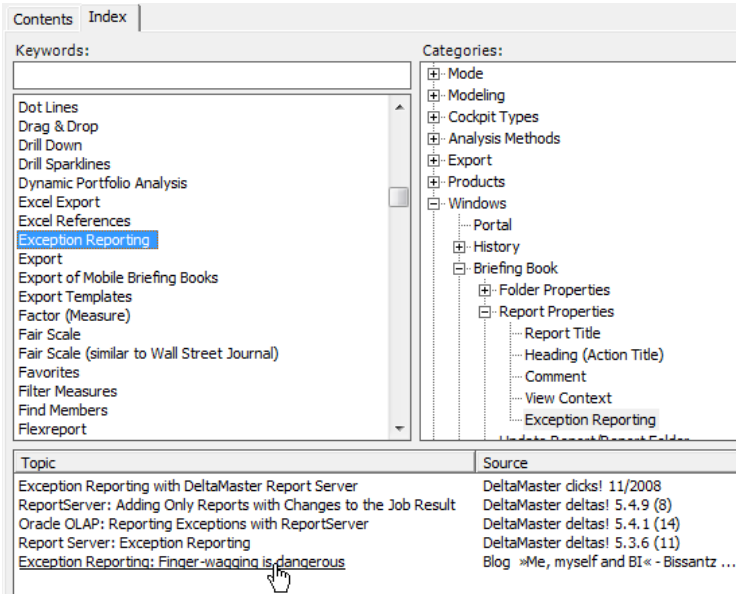
The *Contents* tab groups the available documents by type (e.g. “Manuals”, “Newsletters”, “Blogs“) and organizes them in a tree structure. The further classification depends on the type of document. While blog articles and *DeltaMiner clicks!* are categorized by years, *DeltaMiner deltas!* is broken down by the individual features of each release.

From the *Index* tab, you can open the list of keywords that are assigned to the individual documents. You can access the *Keywords* as an alphabetized list on the left side of the dialog box. On the right side, they are summarized by categories. You can filter these keywords by entering a term in the entry field above the list. *DeltaMiner* Help will automatically search through the keywords while you are typing (i.e. without having to press the *Enter key*) and will only show the words that contain the text that you have entered. The search term can appear anywhere in the



keyword; the keywords that contain the search term at the beginning, however, will be listed first.

They keyword search tolerates different ways of spelling words. Capitalization, for example, is irrelevant. The Help function will also only account for letters and numbers – not spaces, dashes, or parentheses. In other words, a search for “report server” will also find the term “ReportServer”.



If you select (i.e. click on) an entry on the left under *Keywords* or on the right under *Categories*, *DeltaMiner* Help will display the *Topic* and the *Source* in the bottom part of the dialog box. You can then open the document with a simple mouse click (see section c).

DeltaMiner Help synchronizes the list of *Keywords* and *Categories*. If you select a keyword in the list on your left, the Help function will display the (first) category containing that term. As a result, you can quickly see which context corresponds with that word. If you select a keyword in the *Categories*, in turn, *DeltaMiner* Help will jump to the respective term in the alphabetized list.

As you would expect, you can open or close the branches for the *Contents* and *Categories* by clicking the “+” or “-“ sign. If you hold the *Shift* key while clicking on one of these symbols, the entire tree structure will open or close at once as you may already know from the *Briefing book*.

(c) Displaying the Help documents

To display the help text, simply click on the desired term under *Contents* or on the *Topic* in the *Index*. *DeltaMiner* Help will then open the respective document. Help documents come in two different formats: PDF files and Web pages.

DeltaMiner Help opens PDF files in Acrobat Reader. If this program is not installed on your computer, it will open the standard program for opening PDF files in Windows. The PDF files must be either stored on your PC or a shared network in order to be displayed. If they are not, *DeltaMiner* Help will download the file from the Internet (see section e).

For entries such as the numbered features in *DeltaMiner deltas!*, *DeltaMiner* Help also includes a page number. Adobe Reader, therefore, automatically jumps to the page containing the topic so that you don’t have to do this manually. If the PDF file is already open in Adobe Reader, this automatic feature will not work. Adobe Reader will switch to the desired document but not to the correct page within it. Please note that page jumps are currently only supported in Adobe Reader.

DeltaMiner Help displays Web pages using the computer’s standard Internet browser. Since it does not cache these pages, an Internet connection is necessary.

(d) Help documents and help files

The help library contains, in part, the documents with the actual help texts. As explained above, these are either PDF files (e.g. *DeltaMiner deltas!* or *DeltaMiner clicks!*) or Web pages (e.g. articles from Bella’s blog). The other part of the help library, however, includes administrative information such as a list of all available documents, the structure of the table of contents, and the keywords. This metadata – or “help data” as we call it – is stored in the “Help.xml” file.

DeltaMiner Help loads the help data and documents from a specific directory – a folder on the computer or a network. In the default setting, this is a folder for local application data in the current user's profile:

- For Windows Vista, 7, and 8: "C:\Users\<user name>\AppData\Local\Bissantz & Company\DeltaMaster\Help"
- For Windows XP: "C:\Documents and Settings\<user name>\Local Settings\Application Data\Bissantz & Company\DeltaMaster\Help"

You can define this folder in the Help *Options* (link in the upper-right side of the *DeltaMiner* Help dialog box). When you change this link, *DeltaMiner* Help will copy all of the files from the previous help folder into the new one so that you can immediately start to work with the existing documents without having to download them again or move them manually. Just to be on the safe side, it will not delete the files in the previous folder.

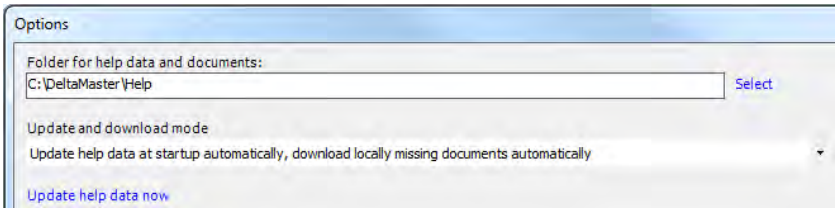
You can open and use the documents in this folder without needing to open *DeltaMiner* Help. Please, however, do not change the directory structure, location, or file names because they are all referenced in the help data.

The help directory may also be configured via the Windows registry so that a user cannot change it without administrator rights (see section h).

The help folder can be a network directory that multiple users access simultaneously. This way, the help files and documents in your company only need to be updated once.

DeltaMiner Help is designed so that you do not need to store any data locally in order to use it. It only retrieves the help data and documents from the Web server and saves them locally when you explicitly click on them. Once they are downloaded, the documents remain in the help directory so that you can immediately access them the next time without having to first download them again.

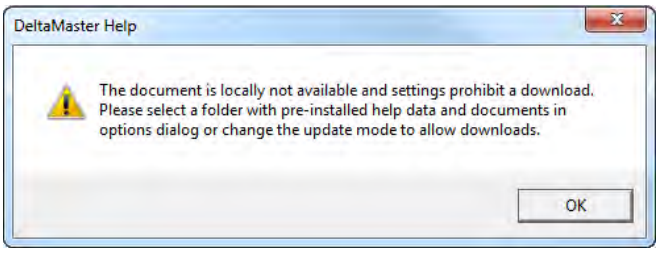
(e) Updating DeltaMiner Help



You can also use an update feature to automatically receive new or updated help data or documents. Under *Options* [or in the registry (see section h)], you can specify if help data updates and document downloads should be automatic or manual. In *Update and download mode*, *DeltaMiner* Help offers the following options:

1. Don't update help data, don't download locally missing documents (local installation of help required)

If you select this option, *DeltaMiner* Help will not update the help data – neither automatically nor following a user prompt – and, therefore, will not download any missing documents. This Help mode is designed for local usage only. Prior to using it, you should copy all help data and necessary documents to the respective directory (see section f).

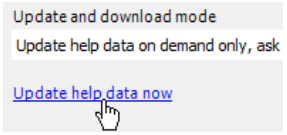


If you try to open a document that is not locally available, *DeltaMiner* Help will display the error message shown on your right. You can, however, access all Web sites referenced in Help because they are stored online, not locally.

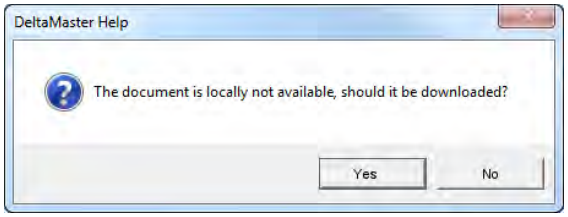
This mode is designed for larger installations in which an administrator or application manager maintains the help library for multiple users and

updates it centrally. In addition, you can also use it to block certain documents that would otherwise be generally available in Help.

2. Update help data on demand only, ask before downloading locally missing documents



In this mode, *DeltaMiner* Help only updates the help files when a user selects the *Update help data now* link under *Options*.



If you want to access a document that is not available locally, *DeltaMiner* Help will ask if it should be downloaded. If you answer "no", it will neither download nor display the file.
This mode allows you to control the growth of the help library because *DeltaMiner* Help will wait for users to request and confirm downloads of updates and new documents. This option makes sense, for example, when the help library is already filled with initial base of documents and you want to control the data transfer volume (e.g. due to the high costs of mobile Internet connections in other countries).

3. Update help data at startup automatically, download locally missing data automatically

If you select this mode, *DeltaMiner* Help will automatically update the help data as soon as you start the program. In addition, you can also manually start a search for new updates by clicking the respective link in the *Options*. If you want to open PDF files that are not locally available, *DeltaMiner* Help will automatically download them – without asking you to confirm this action – and save them to the help folder.

In this mode, *DeltaMiner* Help automatically updates the files without prior confirmation. As a result, you can always access the latest information.

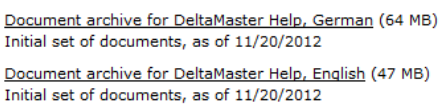
If several users access the same help folder and one user has already triggered updates and downloaded documents, all other users will be able to view them as well – even those who cannot download updates or new documents as in mode 1.

In all update modes, you can quickly check if the help files are up to date. With an HTTP query, you can compare the timestamp of the local "Help.xml" file with the one on the server. If newer help data is available, *DeltaMiner* Help will download, save, and immediately import the "Help.xml" file; a separate program restart is not necessary. Since the XML file is relatively small (currently
.4 MB), this update won't disrupt your work.

(f) Initial setup of the help library

Essentially, you could immediately start using *DeltaMiner* Help without a prior setup. It is designed so it only retrieves documents from the Internet when users need them.

Nevertheless, it often is useful to download and save an initial set of documents to a help folder so that the end users do not have to retrieve each document separately. This way, users who cannot download any documents (see mode 1 in section e) or laptop users who are frequently out of the office can still access a help folder containing the documents they need.



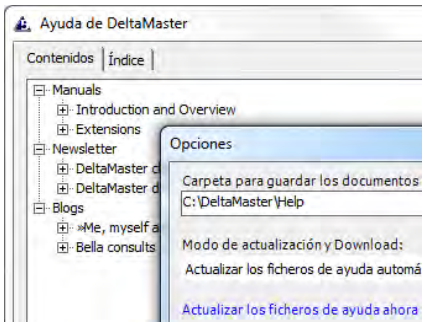
You can obtain this document archive in the login section of our homepage (http://www.bissantz.com/login/) as two ZIP files – one with English help data and documents (also for multilanguage environments, see section g) and one with the same files in German. The *Document archive for DeltaMiner* Help is (currently) listed in the *Miscellaneous* section at the bottom of the page. The ZIP files contain all(!) documents in *DeltaMiner* Help as of the stated publication date.

The documents in these ZIP files are already saved in the correct folder structure so that you can simply extract them to the help folder (see section d).

You generally only need the document archive for the initial setup. *DeltaMiner* Help will take care of the regular updates itself (see section e).

To ensure that the Help program can display the table of contents and index when new updates are blocked or there is no Internet connection, the *DeltaMiner* installation (starting in version 5.5.4) now includes the help data ("Help.xml") which contains the latest information as of the release date. This file is zipped and hidden in the installation directory (e.g. "C:\Program Files\DeltaMaster 5.5.4"). When you start *DeltaMiner* Help, it will check if a newer version of this help data is stored in the help folder. If the file in the installation directory is newer, the program will copy it into the help folder regardless of the current update mode. As a result, the help data will automatically be updated when you install a newer version of *DeltaMiner*.

(g) Multilanguage support



The user interface of *DeltaMiner* Help supports multiple languages. If you open the help function from *DeltaMiner* (*F1* key or *Help* menu), it will automatically apply the same language that you are using in the software. If you are using *DeltaMiner* Help as a standalone application (i.e. "Help.exe"), the language of the operating system will determine the program's language.

Help documents are available in English and German. There are slightly more German files than English ones. For example, *DeltaMiner clicks!* has been published in English since June 2005 while the German edition dates back to November 2004. The displayed language depends on the interface language of *DeltaMiner* Help. If it is German, it uses the German help library. For all other languages, it uses the English one. The help data (i.e. "Help.xml") is not language-dependent and always includes both languages.

Each language has a different subfolder (i.e. "en" and "de") in the same help folder. Since the ZIP files containing the complete document archive (see section f) already account for these language-dependent subfolders, you can simply unzip both of them in the same help folder.

(h) Options for administrators

The following information is for system administrators and application managers. End users can skip this section.

To prevent redundant document archives in installations with multiple workstations, you can use registry entries to manage all downloads and updates.

DeltaMiner Help will use one of the following three registry entries to determine which folder it should use to search for help data and documents. It checks the entries in the following order and will apply the first available entry and ignore the remaining ones.

```
HKLM\Software\Bissantz & Company\DeltaMiner 5.0\Help\LockedPath
```

```
HKCU\Software\Bissantz & Company\DeltaMiner 5.0\Help\LockedPath
```

```
HKCU\Software\Bissantz & Company\DeltaMiner 5.0\Help\Path
```

The key types are "REG_SZ", in other words, character strings.

If *DeltaMiner* Help cannot locate any of these entries, it will search the help data and documents in the folder specified in section d.

If one of the "LockedPath" entries are available, users will not be able to change the help folder under *Options*. You can use the following keys to define where it should be saved so that only users with administrator rights can change it.

The path defined in the *Options* is saved in the following registry entry:

`HKCU\Software\Bissantz & Company\DeltaMiner 5.0\Help\Path`

Likewise, the *Update and download mode* is defined in the following entries:

`HKLM\Software\Bissantz & Company\DeltaMiner 5.0\Help\LockedUpdateMode`

`HKCU\Software\Bissantz & Company\DeltaMiner 5.0\Help\LockedUpdateMode`

`HKCU\Software\Bissantz & Company\DeltaMiner 5.0\Help\UpdateMode`

These key types are REG_DWORD and have a value of 0, 1, or 2, which correspond with modes 1, 2, and 3 from section e. If none of these entries are found, mode 3 (i.e. *Update help data at startup automatically, download locally missing data automatically*) is the default setting.

If one of the "LockedUpdateMode" entries are available, users cannot change the mode under *Options*. You can use these keys to define the update and download mode so that end users (without administrator rights, of course) cannot change them.

The mode selected under *Options* is saved in the following registry entry:

`HKCU\Software\Bissantz & Company\DeltaMiner 5.0\Help\UpdateMode`

If an error occurs, it will be logged in a trace file ("Help.exe.trace"). With one of the following two keys, you can also specify the directory where the file should be saved:

`HKCU\Software\Bissantz & Company\DeltaMiner 5.0\TracePath`

`HKU\.DEFAULT\Software\Bissantz & Company\DeltaMiner 5.0\TracePath`

If none of these keys are available, this file will be saved in the temporary Windows directory ("%TEMP%").

(i) Data privacy statement

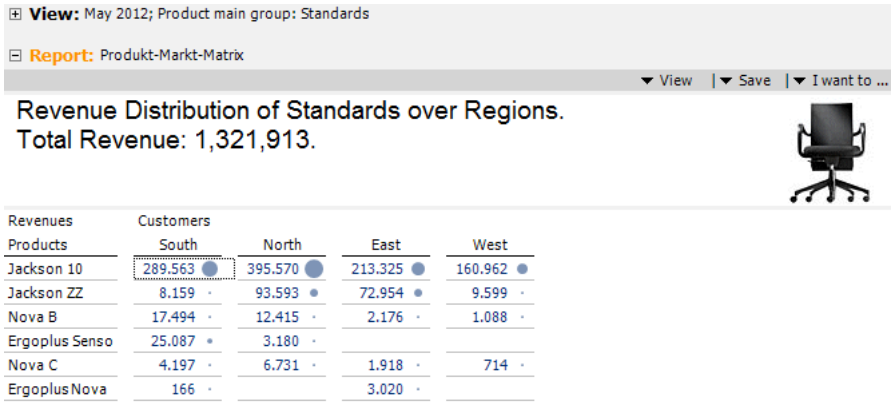
To update help data and download help documents, *DeltaMiner* Help accesses a Web server of Bissantz & Company. No *DeltaMiner* application or user data is transferred to the Web server as part of this access. The Web server logs HTTP queries in the usual fashion – in other words, with the date, time, IP address, and file name. The data transfer is not encrypted.

(j) Miscellaneous

You can no longer integrate a user manual file into the *Help* menu (see *DeltaMiner deltas!* 5.2.0, feature #9) as of *DeltaMiner* 5.5.4. Instead, you must open the manual from the *Contents* tab of *DeltaMiner* Help.

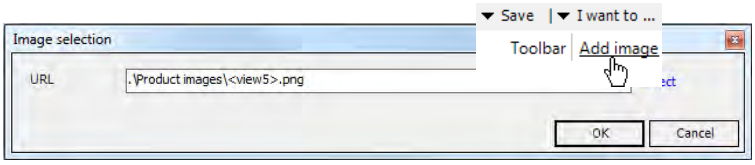
(2) General: Adding an Image to Headings

You can now add images to report headings (previously known as *Action titles*). This image will appear in the upper-right corner of the report.



We have added this functionality because images can make it easier to differentiate reports, for example, for specific product groups or regions. If you include variables such as “<viewX>”, you can reference members that are selected in the *View* window and, therefore, dynamically specify which image *DeltaMiner* displays.

You can edit headings in *Pivotizer*, *Analyzer*, and *Miner* modes. The area where you would enter the headline now contains a new *Add image* link on the right side.

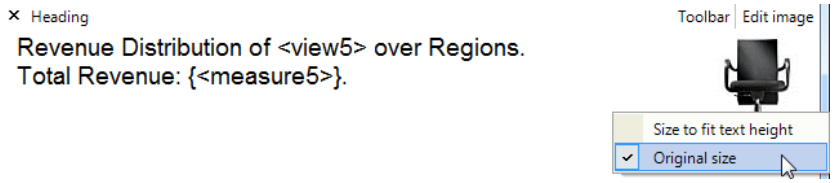


This will open the *Image selection* dialog box as shown on your right. You can *Select* the desired image – an image file in all standard formats (i.e. BMP, GIF, JPG, PNG, TIF) – or enter its respective *URL*. You can either enter this URL as an absolute path (i.e. starting with the hard drive letter), a UNC path (“\\Server\Share\...”), or a relative path to the folder containing the current analysis session (.das file). The last option makes it easy to copy and share the analysis sessions.

You can also include the variable “<viewX>” in the address to reference the members that are selected in the view. In this case, “X” stands for the dimension ID. You can find this ID, for example, in the *View* window by holding the *Alt* key and mousing over the desired dimension.

The screenshot above shows a relative path containing the variable “<view5>”. In our “Chair” reference model, this is the product dimension and, therefore, *DeltaMiner* will replace this expression with the name of the member that is selected in this dimension. If you take a look at the first screenshot in this section, the selected product category is “Standards”. *DeltaMiner*, therefore, displays the “Standards.png” image from the “Product images” folder, which lies in the same folder as the current .das file. In the edit mode of the heading (see screenshot below), you can see that “<view5>”as well as a variable for a measure (see *DeltaMiner deltas!* 5.5.3, feature #4) was used in the heading.

You can *Edit [the] image* by clicking the respective link, which will reopen the *Image selection* dialog box shown previously. To remove an image, simply delete the URL.



In the context menu of the image, you can choose from two sizing options: *Original size* or *Size to fit text height*. If you size the image to the text height, *DeltaMiner* will shrink the image proportionally so that the aspect ratio remains the same. If an image is smaller than the text height, *DeltaMiner* will display it in original size. No image will be enlarged, stretched, or cut. Regardless of how tall the image is, *DeltaMiner* will reserve the width across the entire heading area. If you use images in headings, therefore, you will have less room for text because the image appears next to the heading (not behind it) and the text breaks at the image’s left corner (instead of wrapping around it). Please note that you cannot change the image’s position, which is always the upper-right corner.

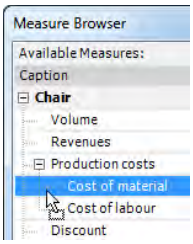
Images in headings are always linked to a file outside of the analysis session. Embedding images (as in a *Flexreport*) is not supported.

DeltaMiner will display these images in presentation mode and include them in exports to Microsoft Word, Microsoft PowerPoint, HTML e-mails, or PDF files.

(3) Measure Browser: Releasing a Measure from a Hierarchy via Drag & Drop (Instead of with the Del Key)

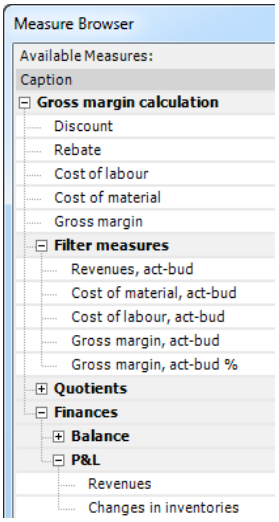
The *Measure browser* now offers more secure handing. To release a measure from a hierarchy, you now simply hold the *Alt* key, drag the measure to the left, and drop it in the same row in front of the measure’s name. This will release the measure from the hierarchy and it will appear again on the highest level in the *Measure browser*.

In previous versions, you had to press the *Del* key. If the measure was not assigned to a hierarchy, however, pressing the *Del* key would delete the measure – after a security prompt, of course, but the dual purpose of this function was still unnecessary. This has changed in *DeltaMiner* 5.5.4. The *Del* key only has one function – namely to delete measures. To edit a hierarchy, you now need to press the *Alt* key while dragging and dropping the measure.



You can define hierarchal relationships between measures – for example, to drill up and down in pivot tables – starting in *DeltaMiner* 5.3.6.

(4) Measure Browser: Nesting Measure Groups (Multi-Level)

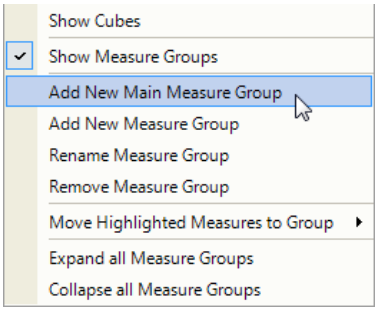


You can now organize groups of measures in hierarchies. A group can contain subgroups which, in turn, have others. This makes it easier to organize and select measures in analysis models with many measures.

You probably already know the concept of multilevel folders from cockpits and *Briefing books*. These measure hierarchies make working with *DeltaMiner* even more consistent than in the past.

To edit a group, simply open the *Measure browser* (*Model* menu) and select the *Display measure groups* option from the context menu or *I want to…* menu).

You can *Add new measure groups* in the context menu of measure groups:



- If you select *Add new main measure group, DeltaMiner* will generate a top-level group. Each analysis model has at least one main measure group. In the default setting, this group will contain all measures in the model.
- If you select *Add new measure group, DeltaMiner* will generate a subgroup in the one where you opened the context menu.

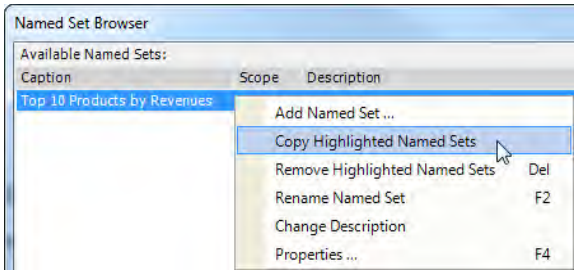
In past versions, there was only one level of groups. As a result, all former measure groups are now called main measure groups because they lie on the highest (previously, the only) level. You can use analysis files (i.e. .das or .dam files) containing multilevel measure groups in previous versions of *DeltaMiner*. In this case, however, they will be displayed as flat lists so that all subgroups appear on the top level.

(5) Apps: Adjustments for iOS 6 and Retina Displays

New *DeltaMiner* Apps are available for iPad and iPhone devices. Version 5.5.4 primarily includes adjustments for iPhone 5, the iOS 6 operating system, and high-resolution Retina displays. You can update these apps (i.e. *DeltaMiner ReaderApp*, *DeltaMiner TickerPortal*, *DeltaMiner Notifications*) as usual from the App Store.

(6) Named Set Browser: Copying Named Sets

Version 5.5.4 supports a faster way to create new named sets. Instead of defining one from scratch, you simply copy and edit the existing definition.



Copying a named set is very similar to copying members and user-defined measures. You simply select and *Copy*

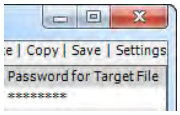
one or more in the *Named set browser* (*Model* menu) and choose the respective option from the context menu or *I want to…* menu. *DeltaMiner* will then duplicate the selected sets and display the copies directly below them. When you copy a named set, *DeltaMiner* immediately produces a duplicate – no separate "paste" is required. Named sets that originated as copies are completely independent from the originals. As a result, you can alter their properties any way you wish without affecting the original named set. Similarly, any changes you make to the originals have no effect on the copies.

You may only copy named sets that were created in *DeltaMiner*. Copying named sets originating from a database (e.g. with the *Scope* "Global") is not supported.

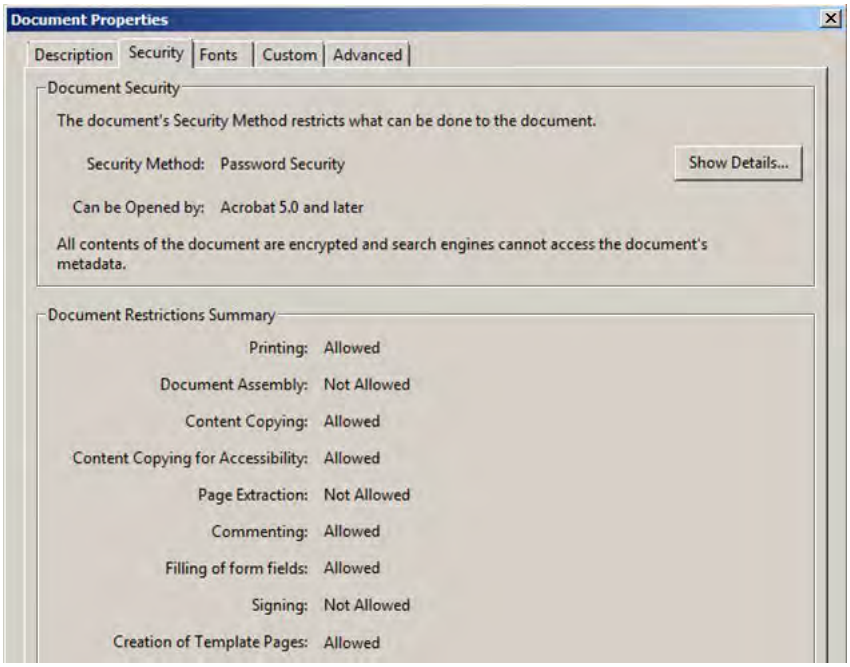
(7) ReportServer: Protecting Generated PDF Documents with a Password

ReportServer now has an option to encrypt and provide password protection for any generated PDF files. As a result, users can only open these PDF files if they have the correct password.

Using a new field in the job definition, you can generate a separate *Password for target file* for every job. This password applies to all PDF files generated in a given job and is saved in plain text (i.e. unencrypted) to the job definition database.



Currently, you can only apply password protection to documents exported in "pdf" format, which generates these files based on a special PDF template (see *DeltaMiner deltas!* 5.5.3, feature #3). Other report formats such as "pdf-doc", "pdf-word" are currently not supported.

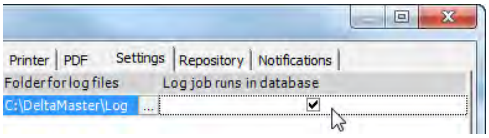


ReportServer uses RC4 encryption with a key length of 128 bits, which is supported in Acrobat Reader 5 and higher. This password is set as a "user password" (i.e. not an "owner password").

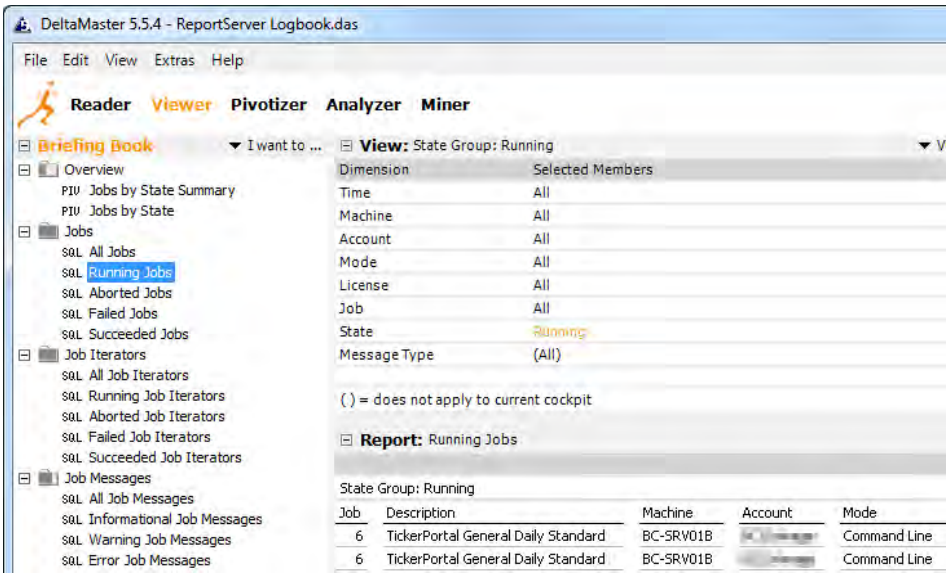
(8) ReportServer: Logging Job Execution in the Job Definition Database (Logbook)

If you want to observe and analyze the behavior of *ReportServer*, you can now save log data to a database or file. As a result, you can analyze executed jobs, finished iterations, abort causes, warnings, runtime, and much more with – you guessed it! – *DeltaMiner*.

To *Log job executions in the database*, simply activate the respective option in the *Settings* of *ReportServer* on the *Settings*



tab. *ReportServer* will then save this log data to the same database it uses for job definitions so that no separate configuration is required.

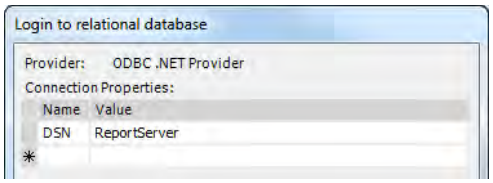


To help you analyze log data, *ReportServer* offers a predefined analysis session called ReportServer Logbook. The dimensions and measures in this model are easy to decipher. The “Machine” dimension shows the computer that runs *ReportServer* [e.g. the workstation where you configure and test jobs or a remote server that runs *ReportService* (see *DeltaMiner deltas!* 5.4.2, feature #27)]. The “Mode” dimension has three types: “Local GUI” (i.e. interactive start from the administration interface, run on a local PC), “Remote GUI” (i.e. interactive start from the administration interface, run on a remote *ReportService*), and “Command Line” [automatic start without a user interface (e.g. from a batch file, with a scheduler, or using SQL Server Agent)]. The following products can appear in “Dimension License”:

DM-RPS	DeltaMaster ReportServer DAS
DM-RPSC	DeltaMaster ReportServer DM2GO
DM-RPSO	DeltaMaster ReportServer Office
DM-RPSR	DeltaMaster ReportServer Apps
DM-RPST	DeltaMaster ReportServer TickerPortal
DM-RPSV	DeltaMaster ReportServer CSV

The “ReportServer Logbook.das” analysis session is based on a purely relational model (i.e. without OLAP cubes). As a result, you can even monitor current jobs in real time. By hitting the *F9* key, you can update the view as usual. Just like any other *DeltaMiner* session, you can use, edit, and extend it to fit your individual requirements. You only need a separate license for *DeltaMiner TableWizard* if you want to add new dimensions or measures. You could even process the logbook with *ReportServer* – similar to *Exception Reporting* – so that you receive an e-mail notification when certain test criteria have been.

When you open the “ReportServer Logbook.das” file for the first time, the *Login to relational database* dialog box will open. For the *DSN*, please enter the name of the same ODBC data source that you use in *ReportServer*. You can then enter additional



parameters such as the user name or password in the row marked with an asterisk.

Since the “ReportServer Logbook.das” is stored in the same ZIP file as the *ReportServer* program files, it is extracted into the *ReportServer* directory. Please move this file into a directory containing your application data so that you don’t overwrite the file (and any edits that you may make) during a future *ReportServer* update.

In order to log data in the database, the job definition database must be in Microsoft SQL Server. [Oracle or Access databases (i.e. “ReportServer.mdb”) are not supported.] The job definition database also requires additional tables and views. To configure the necessary structures, please run the “ReportServer (SQL Server).sql” script. As always, existing jobs will not be affected.

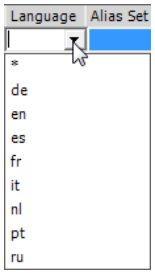
If you want to delete all previous logs from the database, you can run the saved procedure “sp_ClearLog”, which has also been created with the above SQL script.

In past versions, you could only save log data to files, which meant that *ReportServer* created a file each time it executed a job. *ReportServer* will still generate these files regardless if you save the log data to a database or not.

WebOption has supported logbooks for some time already. Please read *DeltaMiner deltas!* 5.4.1, feature #21 for more information.

(9) ReportServer: Specifying Language and/or Alias Set, and Iterating over Them

ReportServer now supports two new options for multilanguage applications. For each job, you can now define the language and alias set. Iterations are possible as well. A single job can export one and the same *Report source (Analysis session)* in various languages.

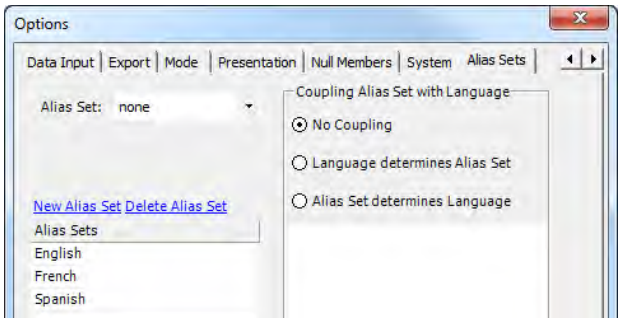


The job definition now contains two new fields for these options: *Language* and *Alias set*. You can either select the desired value from a list of suggested values or enter them manually (*F2*). Under *Language,* you can select from various *DeltaMiner* system languages, including “en” for English or “de” for German. The suggested values in the *Alias set* field are read from the *Report source (Analysis session)* of the respective job (e.g. “German” or “Spanish” depending on the alias sets in the analysis session).

You can make multiple selections in both fields. Simply enter multiple values separated by commas. The iteration starts when you execute a job. If you enter “en,de” (without the parentheses) for the *Language*, *ReportServer* will run the job in English and then in German. If you use an asterisk “*” the iteration will be executed over all languages and alias sets. *ReportServer* will skip invalid entries and simply proceed with the next member.

You can link the *Alias set* and *Language* in the *Options* of the analysis session (.das file). This also affects how *ReportServer* processes the job:

- If the *Alias set determines language* option is activated in the *Options, ReportServer* will ignore the *Language* field.
- If the *Language determines alias set* option is activated in the *Options, ReportServer* will ignore the *Alias set* field.



If no link (i.e. *No coupling*) is set in the analysis session and both fields are used in *ReportServer*, it will first iterate over languages (outer loop) and then over alias sets for each language.

When the job is executed, the new "**@language**" and "**@aliasset**" variables will return the valid language and alias set. *ReportServer* will search for these variables and replace them in the following fields: *Address*, *Export templates*, *E-mail subject*, *E-mail text*, *E-mail attachment,* and *Notification*.

If you want to export to the file system or send the results via FTP (*Distribution types*: "file" and "ftp"), these variables are especially important for the *Address*. To ensure that *ReportServer* generates a separate file for each language, the file names must be unique – which is simple with variables. If the *Address* is "C:\DeltaMaster\Export\Chair (@language).pdf" and the job is iterated over the *Languages* "de,en", *ReportServer* will generate two files: "C:\DeltaMaster\Export\Chair (de).pdf" and "C:\DeltaMaster\Export\Chair (en).pdf". You can also use variables in a directory name (e.g. "C:\DeltaMaster\ Export\@language\Chair.pdf" so that you can distribute the exports to different folders for different languages. If the directory does not exist, *ReportServer* will generate it.

Since *ReportServer* can also replace variables in the *Export template*, you can design separate templates containing constant headings, confidentiality notices, etc. in the respective languages.

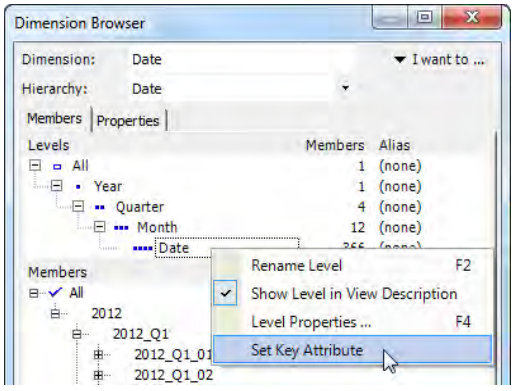
ReportServer iterates over languages and alias sets prior to the iteration in the *Report generator*, which means that the report generators will be executed for each language and each alias set.

More or less, both new options are a copy of the command line parameters "-language" and "-aliasset" from *DeltaMiner* to *ReportServer* (see *DeltaMiner deltas!* 5.5.1, feature #5).

In you wanted to export different languages and alias sets in previous versions of *ReportServer*, you had to create separate jobs for each language and each alias set – which, in turn, were both based on separate analysis sessions that only differed in the language and alias set. Since you can now vary the language and alias set when you run the job, using language-specific analysis sessions as sources has become obsolete.

(10) CubeWizard: Creating Parallel Hierarchies in Server Databases or Cube Files

If you use *DeltaMiner CubeWizard* to *Generate an OLAP database* (*Model* menu), it will include any parallel hierarchies that you have created in *TableWizard* (see feature #21) and transfer them to the cube. To ensure that it correctly calculates the aggregations for higher levels of the hierarchy, you should first set the *Key attribute* in the *TableWizard* (context menu of levels in the *Dimension browser*).



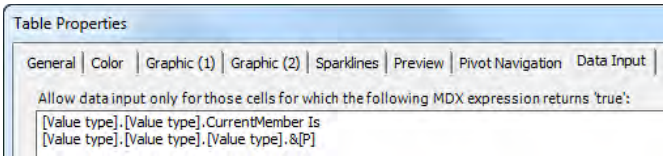
In Microsoft Analysis Services, the key attribute is a mandatory property of dimensions – each one must have exactly one key attribute. Generally, this is the primary key of the underlying dimension table and is the basis for building aggregates. The key attribute is the most detailed (granular) level of the dimension. In the example from feature #21 (quarters/months versus calendar weeks), the date is an optimal key attribute because both months and calendar weeks are derived from it. When you are working with parallel hierarchies, it makes sense to maintain the granularity down to the key attribute for each hierarchy.

(11) Pivot Table: Restricting Data Input to Cells That Meet Conditions Expressed in MDX

Now there is one less reason to use a *Flexreport*. Many times in a data input report, users should only be able to enter information (e.g. budget numbers) in some cells but not in others. In cases like these, you previously had to use a *Flexreport* and add conditions to specify if users could enter data on the individual cells or not. Starting in *DeltaMiner* 5.5.4, you can now define these types of conditions for pivot tables as well.

	Volume			
Products	Actual	Plan	ΔPlan	ΔPlan %
All products	8.223	8.039	184	2%
Luxury Division	1.432	1.389	43	3%
Arcade	738	716	22	3%
Precisio	521	505	16	3%
Discus	174	168	6	3%
Custom made	1.486	1.504	-18	-1%
Softpad	770	810	-40	-5%
DCW	716	694	22	3%
Standards	5.305	5.146	159	3%
Jackson	4.914	4.767	147	3%
Nova	391	379	12	3%

Therefore, if you only want to define which cells allow data input and to highlight these as such, you no longer need to use a *Flexreport* as an input template. You can now use a pivot table, which is much easier to maintain than a *Flexreport*.



You can enter a condition as an MDX expression in the Table properties on the Data entry tab. If the MDX expression returns the value "true" for a given cell, data entry is permitted. All other cells (i.e. where the expression returns the value "false") are locked. For the MDX expression, you could use "CurrentMember" to reference the member on the axis or "<viewX>" for the member in the View. The example above also uses an MDX expression to check if a cell has the value type "Plan" (i.e. "&[P]"):

```
[Value type].[Value type].CurrentMember Is
[Value type].[Value type].[Value type].&[P]
```

DeltaMiner will color the cells where data input is allowed so that users can quickly see where they can and cannot enter information. This color cannot be changed.

Flexreport cells that reference these types of pivot tables will neither include the cell coloring nor the conditional data entry. After all, the goal of adding conditional data entry in pivot tables is to eliminate the need for *Flexreports*.

If no condition is provided, *DeltaMiner* will allow data entry on all cells but will not color them. Otherwise, all existing reports would suddenly appear in a different color. If you want to allow data entry on all cells and to color these cells accordingly, simply enter "true" for the *MDX expression*. To enable data input for all cells without coloring them, simply leave this field empty.

If you create a new pivot table, *DeltaMiner* will enter "false" as the standard value, which means that all cells will initially be locked. If you want to allow data entry, you must explicitly enable it.

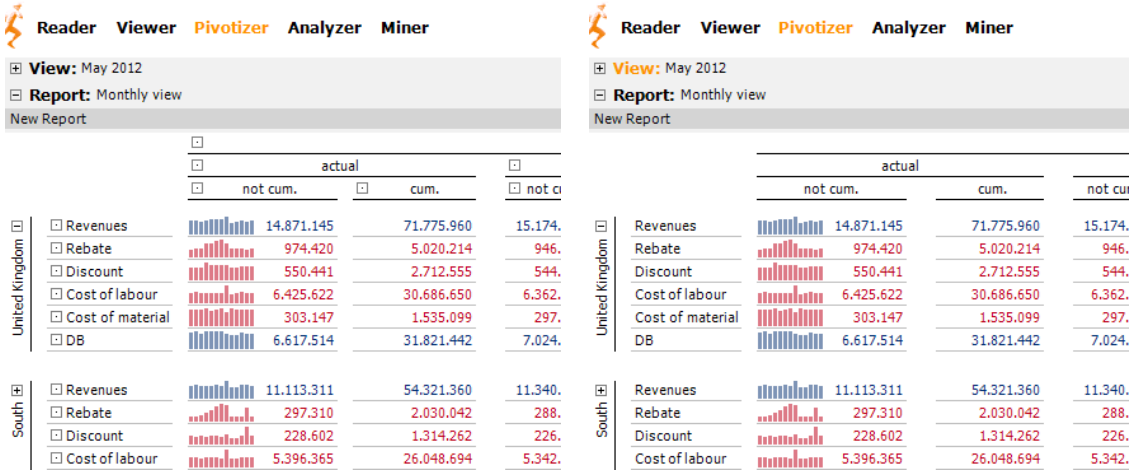
If *DeltaMiner* cannot evaluate the MDX condition (e.g. due to syntax errors), it will not allow users to enter data on any cell and, therefore, restrict data input for the entire report.

"Data input", in this case, refers to all imaginable ways of entering data. Users can directly (e.g. after hitting *F2*) enter numbers or change amounts (e.g. "10%+"), delete them with the *Del* key, paste them from a clipboard, or copy them using drag and drop.

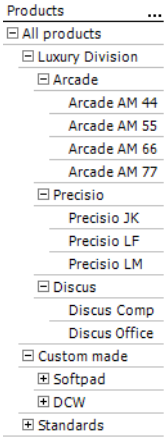
DeltaMiner only supports MDX conditions in combination with Microsoft Analysis Services, Infor BI OLAP, and IBM Cognos TM1. In addition, it will only display the *Data entry* tab in the *Table properties* if you *Enable planning functions* (*Options*, *Data entry* tab) and *Allow data entry* (*Report properties*, *Data entry* tab) in the current report. If one of these two options is not activated, *DeltaMiner* will ignore the MDX condition and data input will be restricted in all cells.

(12) Pivot Table: Drill Symbols Removed for Elements without Children

Pivot tables now look much cleaner on *Pivotizer*, *Analyzer*, and *Miner* levels because the box with the dot (⊡) is history as of *DeltaMiner* 5.5.4. Compare the screenshots below – the left one shows the previous view with the symbol in *Pivotizer* while the right one shows the new one without it.



DeltaMiner previously used the ⊡ symbol in pivot tables where users could interactively drill down, roll up, or perform similar operations. (This is always the case in *Pivotizer*, *Analyzer*, and *Miner* modes. In *Viewer*, this only applies if drill downs are explicitly enabled. In *Reader* mode, this functionality is not supported.) The ⊡ symbol stands for dimension members without children (e.g. base members, measures) and, therefore, no drill-down option.



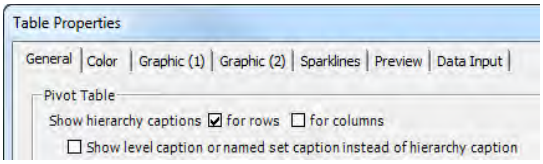
Starting in version 5.5.4, *DeltaMiner* will only display plus or minus signs. In addition to highlighting the position of a member in the hierarchy, these signs serve as controls. The symbol with the dot was not a control and, therefore, will no longer be displayed. This change automatically applies to all pivot tables.

Eliminating this symbol has improved both the overall appearance and legibility of tables. Designing reports with *User-defined column widths* is also easier without the symbol, which required additional space and shifted the layout. Now, the column headings in *Pivotizer*, *Analyzer*, and *Miner* look the identical to those in *Reader* and *Viewer*.

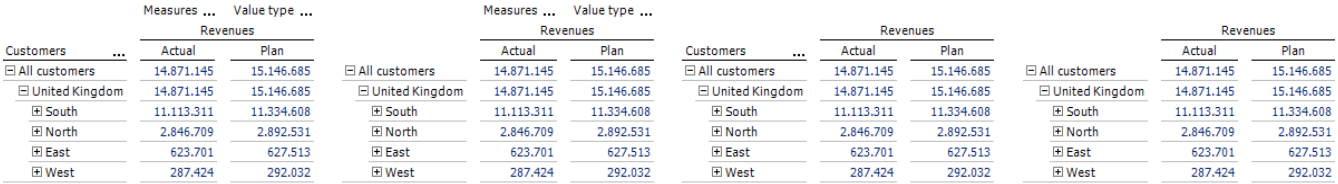
(13) Pivot Table: Hiding Hierarchy or Level Captions for the Row Axis and the Column Axis Separately

In pivot tables, you can now specify separately if *DeltaMiner* should display hierarchy or level captions for row and column axes. This option helps improve the legibility of tables by removing captions when it is clear what is being shown in the first place.

You can specify that *DeltaMiner* should *Show hierarchy captions* for rows or columns in the *Table properties* (context menu of pivot tables, *I want to menu*, or *F4* key) on the *General* tab.



The following screenshot illustrates the four possible options: both axes with hierarchy captions, only the column axis, only the row axis, and no hierarchy captions.



If you open a pivot table using this feature in older *DeltaMiner* versions, both axes will contain captions if at least one of the axes is labeled in *DeltaMiner* 5.5.4.

Previously, *DeltaMiner* always displayed or hid the headings of the row and column axis together. In certain situations, however, one axis might need a heading while the other one does not. Since customer numbers and material numbers often look similar, for example, it makes sense to specify what you are viewing in the heading. If you are working with measures such as “Revenues” or “EBIT”, however, you don’t need to label them as “KPIs” or "Measures".

(14) Pivot Table: Using the Wildcard Characters "?" and "*" in Member Property Filters (Microsoft Analysis Services only)

When you are filtering member property values, you can use the wildcards “?” and “*” for pattern matching. This feature additionally requires Microsoft Analysis Services and the Analysis Services Stored Procedures library (see below for more prerequisites and information).

DeltaMiner interprets these “?” and “*” wildcards the same way as MS DOS or Microsoft Access:

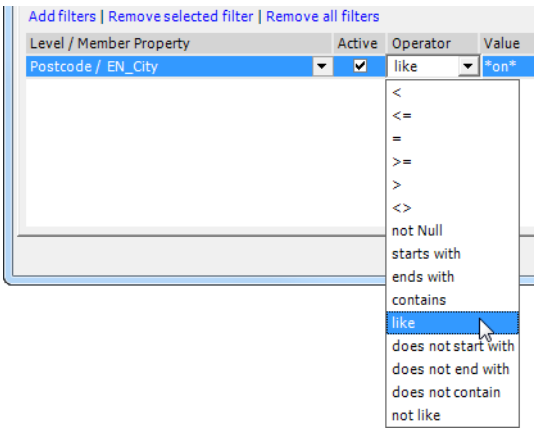
?	Stands for any single character
*	Stands for any combination of characters (including zero or a single character)

To escape (i.e. remove) the effect of a wildcard, simply place brackets around it: “[?]” or “[*]”. Since this filter is not case-sensitive, it doesn’t differentiate between capital and lowercase letters.

In the example on your right, we have filtered the customer dimension so that it only shows cities containing the letters “on” such as Darlington, Southampton, or London. You could also use wildcards to describe mnemonic keys (e.g. material numbers that begin with ‘90’ and end with ‘EN’: “90*EN”).

Customers ...	EN_City	Revenues
826029	Darlington	323.484
826100	Southampton	242.792
826104	Stroke on Trent	195.270
826087	Preston	113.681
826074	Newcastle upon Tyne	110.491
826079	London NW	46.419
826107	Taunton	41.257
826105	London SW	18.175
826099	Swindon	17.027
826116	London W	8.704
826093	London SE	7.011
826033	London E	6.526
826118	London WC	3.414
826034	London EC	921
826030	Doncaster	599
826010	Brighton	502

You can define member property filters in the *Axis definition* in the bottom part of the *Filter* tab. Pattern matching is possible with the operators “equals”, “starts with”, “ends with”, “contains” as well as their respective negations. In addition, you can also use two new operators: “like” and “not like”. If you select one of these operations and DeltaMiner identifies a “?” or “*” in the Value field, it will apply a filter with pattern matching (provided that the separate, mandatory ASSP assembly is installed).



Requirement:
Analysis Services Stored Procedures Project (ASSP)

DeltaMiner only supports wildcard searches in conjunction with Analysis Services 2005, 2008, 2008 R2, and 2012. (These searches are not supported in local cube files). It also requires “Analysis Services Stored Procedures Project” (ASSP), an additional set of sample stored procedures that extend the functionality of Microsoft Analysis Services 2005, 2008, 2008 R2, and 2012. This project is based on CodePlex, Microsoft’s open source platform. You can download these stored procedures with a Shared Source Permissive License (SS-PL), which has no license fees and no limitations for commercial usage.

Download:
http://asstoredprocedures.codeplex.com

Installation instructions for SQL Server Management Studio:
http://asstoredprocedures.codeplex.com/wikipage?title=Installation%20Instructions

When you fill in the *Register server assembly* dialog box, please enter "ASSP" for the *Assembly name* so that *DeltaMiner* can identify it. For *Permissions,* simply click on the *Safe* setting.

(A note for more technical users: The "ASSP.IsLike()" library function that *DeltaMiner* calls up actually expects the SQL wildcards – namely "_" and "%". We have found, however, that most end users are not familiar with these characters. In contrast, almost everyone has already worked with the MS DOS characters "?" and "*", and anyone who isn't thinking about an alternative syntax would probably try "?" and "*" first. For that reason, we selected the more common wildcards for *DeltaMiner*, which "translates" them internally and transfers them to the library function. In general, *DeltaMiner* reacts how a serious user would think it should and, therefore, uses "?" and "*".)

If *DeltaMiner* cannot locate the ASSP assembly, it will not interpret the question marks and asterisks as wildcards – in other words, it will include them verbatim in the filter expression (which normally wouldn't return any results). *DeltaMiner* will only offer the new "like" and "not like" operators if it has recognized the ASSP assembly. Previous *DeltaMiner* versions cannot display reports and cockpits using these operators. Users will see a syntax error instead.

You can also use wildcards to search for members in the *Dimension browser* and the *View* window as well as in the universal search function (see feature #20).

(15) Pivot Tables: Revamped Functionality of Trend Barometers

In addition to sparklines, *DeltaMiner* can also display a small arrow with a geometrically correct depiction of how strong the statistical trend is for the sparkline's values. In *DeltaMiner* 5.5.4, we have modified the true type font, which is used to display these arrows so that it is as clean and as accommodating as possible for computer screens.

Products ...	Volume	Revenues
Arcade AM 44	19.516	453.691
Arcade AM 55	3.675	181.105
Arcade AM 66	3.217	12.758
Precisio JK	25.939	129.587
Precisio LF	13.674	958.644
Softpad 217	8.904	871.772
Softpad 117	7.515	1.573.803
Softpad 208	4.330	179.883
DCW Steel	1.833	141.352
DCW Cow	1.565	10.917
DCW Plywood	32.921	7.781.342
Ergoplus Nova	16.730	135.929
Ergoplus Senso	1.864	56.706
Jackson 10	19.300	901.545
Jackson ZZ	7.850	980.043

The new font is called "Bissantz SparkFonts 5 Misc" and is saved in a file called "Bissantz SparkFonts 5 Misc.ttf". When you install *DeltaMiner* 5.5.4 using the "DeltaMaster.msi" installation package), it will automatically install this font as well. If you update *DeltaMiner* without this installation by extracting the files from the "DeltaMaster.zip" archive and copying them (XCOPY deployment, see *DeltaMiner deltas!* 5.4.2, feature #4), you must download the font separately:

http://www.bissantz.com/sparklines/download.asphttp://www.bissantz.de/wortgrafiken/download.asp%23sparkfonts

To install the fonts, copy the TTF file(s) into the Windows font folder ("%SystemRoot%\Fonts").

If *DeltaMiner* finds the new font, it will use it. If not, it will display the trend arrows in the old font ("Bissantz SparkFonts 4 – Misc").

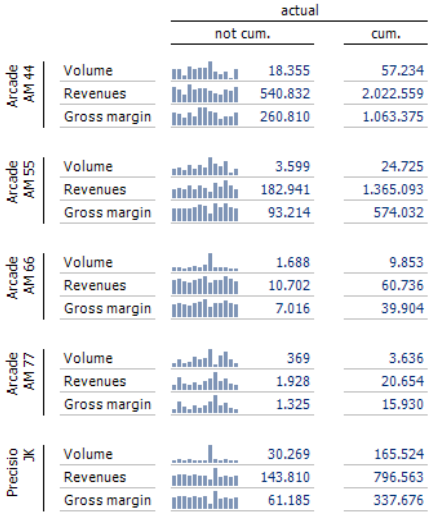
As in the past, you must install the new font on all computers that need to display trend arrows as characters. This applies to *DeltaMiner* analysis sessions (.das files), PDF exports as well as exports to Microsoft Word and PowerPoint if the charts and images are exported *as metafiles* (setting on the *Export* tab in the *Options* or *Report properties*).

If you cannot install this new font on all user PCs, you can just delete it on the computer(s) you use to create and distribute reports (i.e. using DeltaMiner or ReportServer). In this case, the programs will use the old font instead.

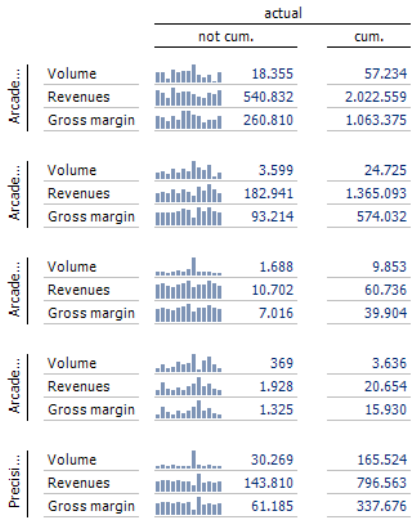
You should also install the new font when you update WebOption. Simply copy the file from the “Sparkfonts” folder on the Web service computer to the Windows font directory on the Web client computer.

(16) Pivot Table: Wrapping Vertical Labels

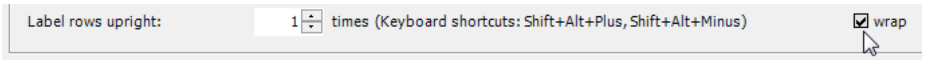
Since *DeltaMiner* 5.5.3, you have been able to label rows vertically (see *DeltaMiner deltas!* 5.5.3, feature #18) to better utilize the available space. Now, you can *Wrap* vertical labels as well so that *DeltaMiner* can simply break longer names instead of having to abbreviate them.



This is very useful in situations similar to the one illustrated on your right. *DeltaMiner* has abbreviated the vertically labeled product names because they are longer than the height of the cells. Unfortunately, however, it has omitted the part of the name that differentiates the members in the rows. If you mouse over the names, you can view them – but only separately.



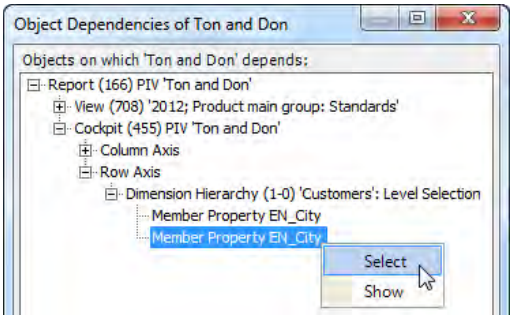
You can activate the word wrap function in the same place that you would specify the vertical label – namely in the *Table properties* (context menu of pivot tables, *I want to…* menu, or *F4* key) on the *General* tab.



(17) Object Dependencies: Including Member Properties of the Pivot Table

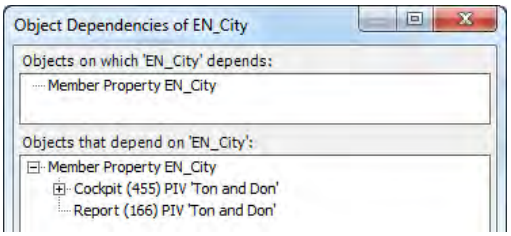
The *Object dependencies* dialog box now also lists the member properties. This object type was not included in past editions of *DeltaMiner*.

The screenshot on your right shows the *Report dependencies* of the sample report from feature #14. This report returns the values from the member property “EN_City” and searches them with a filter condition. As a result, the property appears twice in the list.



If you *Select* the property, *DeltaMiner* will use it as the new starting point for the presentation – just as it would with other objects.

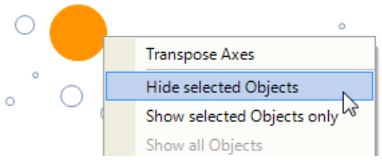
The upper part of the window now shows which other objects go into the member property – similar to a list of parts. In this example, however, there are none because member properties can't be broken down any further. The bottom part shows the objects in which the member property appears – similar to a usage list.



To learn more about how you can use *Object dependencies* to track the relationships among the components of a *DeltaMiner* application, please read *DeltaMiner deltas!* 5.5.1, feature #2.

(18) Portfolio Analysis: Saving Hidden Objects

In previous versions, *DeltaMiner* did not save hidden objects in *Portfolio analyses*. If you recalculated the report, you could immediately see all objects again. Starting in version 5.5.4, *DeltaMiner* will save all hidden objects with the report and not display them again when the report is recalculated.



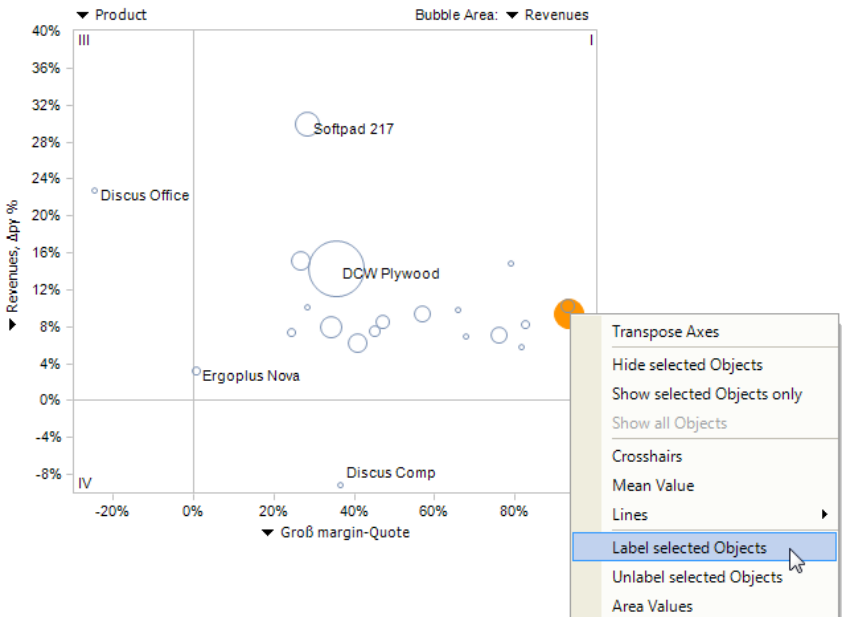
DeltaMiner will apply this feature regardless of how you hid the objects (e.g. select/hide individual objects or hide all except the selected objects). As in the past, you can *Show all objects* again – in all user modes from *Reader* to *Miner* – by clicking the respective option from the context menu or the *I want to…* menu. You can only save hidden objects, however, in user modes where you can create and save portfolio analyses (i.e. *Analyzer* and *Miner*).

If you change the view (e.g. to a different quarter), *DeltaMiner* will remove the selection of hidden objects and display all of them in the new view.

(19) Portfolio Analysis: Labeling Selected Objects Only

If you work with portfolio analyses, the few objects in the periphery are often more interesting than those crowding around the middle of the presentation. Accordingly, you might want to just label these select objects. Oftentimes, labeling the objects in the middle isn't worth the effort anyway because they are so close to each other that the labels would overlap due to lack of space. As a result, you can now label only select objects.

Starting in version 5.5.4, *DeltaMiner* has replaced the *Object descriptions* dialog box in the context menu and *I want to…* menu with two new ones to *Label* and *Unlabel selected objects*. *Area Values* will only be shown for labeled objects.



To select the objects, simply use drag and drop to draw a frame around the desired objects with your mouse or hold the *Ctrl* key while clicking on the individual objects. By holding the *Ctrl* key while clicking the objects, you can also deselect individual objects. If you click on a selected object without hitting the

Ctrl key, you will remove the selection for all objects. You can select and label (or unlabel) the objects as many times as you wish. In other words, you do not have to select all objects at once to determine the label. You can do it in multiple steps. These objects in the context menu will be deactivated as long as no objects are selected.

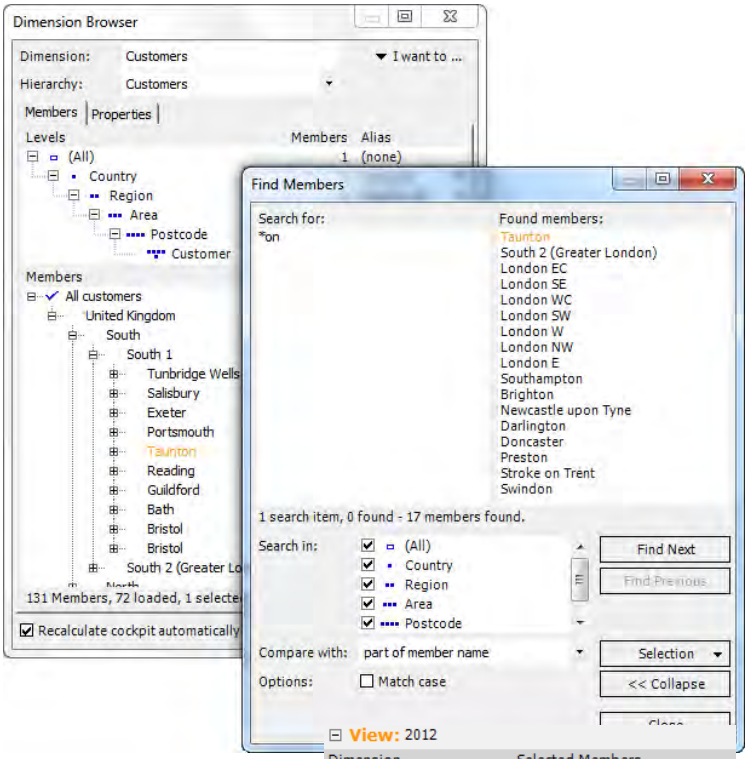
You can save which objects you wish to label within a report. Users can show or hide labels in all user modes from *Reader* to *Miner*. You can only save labeled objects, however, in user modes where you can create and save portfolio analyses (i.e. *Analyzer* and *Miner*).

If you change the view (e.g. to a different quarter), *DeltaMiner* will remove the selection of labeled objects so that no objects are labeled in the new view. If new objects are added following a database update, *DeltaMiner* will not automatically label these objects initially.

In previous versions, *DeltaMiner* would always display or hide the *Object descriptions* for all objects.

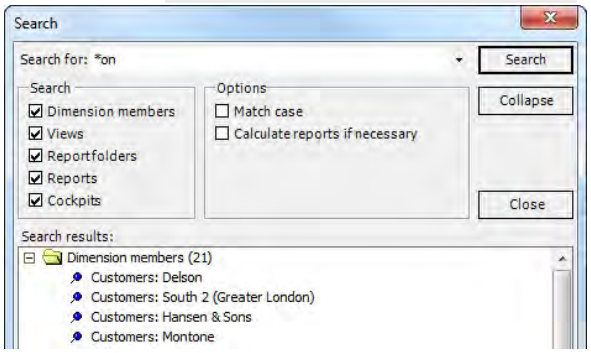
(20) Search: Using the Wildcard Characters "?" and "*" for Searching Dimension Members (Microsoft Analysis Services only)

You can now use pattern matching to search for member names. Similar to filtering member properties, this feature works with the wildcard characters "?" and "*" as described in feature #14.



- You can enter this wildcard in three places to search for members:
  You start a search in the *Dimension browser* (context menu, *I want to…* menu, or *Ctrl+F*), including multiple searches by lists.
  In the dialog box, you can specify how *DeltaMiner* should search for the pattern: as *part of member name* (i.e. anywhere in the name), as the *whole member name*, or at the *Start* (or *End) of the member name*.

- You directly enter member names in the *View* window (*F2* or *F3* key) when the *View* window is active or click on a member name in the *View* window while holding the *Shift* key). You can specify where *DeltaMiner* should search for the pattern in the options on the *General* tab. If you use wildcard characters, you might not have to change this setting in a few cases. If *DeltaMiner* should search for the member name at the start based on the settings and you enter a "*" as well, this is similar to a comparison with any part of the member name.
- You make a universal search (input field in the right part of the main menu bar, *Edit* menu, or *Ctrl+F*).



This dialog box always searches for the term anywhere in the member name, regardless of the settings in the options.

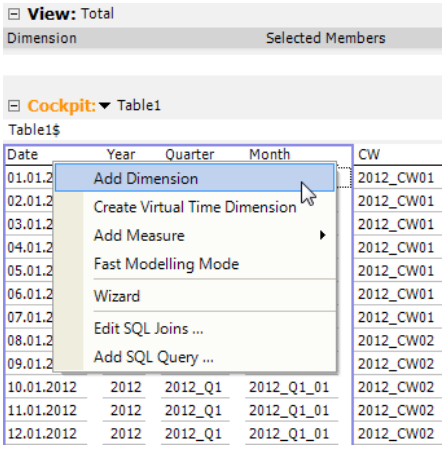
The prerequisites described in feature #14 – analysis model based on Analysis Services 2005, 2008, 2008 R2, or 2012 (no local cube files) and the installed ASSP assembly – apply here as well.

(21) TableWizard: Creating Parallel Hierarchies

You can use *DeltaMiner TableWizard* to set up multiple hierarchies in a dimension. You can create these parallel hierarchies in the context menu of column headings in the fact table. If you want to use a column for multiple hierarchies, you can access the respective functions in the context menu's expanded view (holding the *Alt* key while opening the context menu).

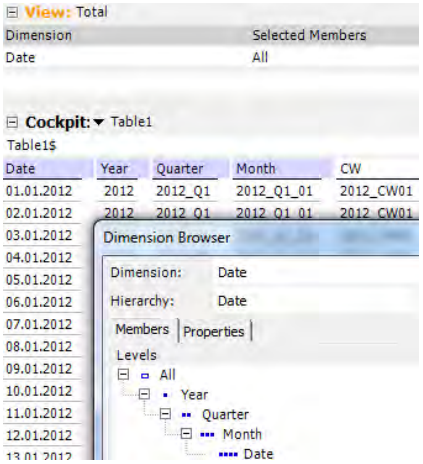
(a) Example: Periods by years/quarters/months or years/calendar weeks

One common example for using parallel hierarchies is the date. You may want to present the date by years, quarters, and months in one scenario and by years and calendar weeks for another. Users often work with parallel hierarchies in the time dimension to create these two different views of time. Now you can use the *TableWizard* to do that.



Let's say, for example, that you used *DeltaMiner TableWizard* to open an Excel spreadsheet that contains one column with the date and, based on that date, additional columns for the year, quarter, month, and calendar week. First, let's create the time dimension and then a single hierarchy.

You can use the necessary columns (date, year, quarter, and month) to build the dimension all at once by highlighting the column headings (multiple selections with the *Ctrl* key). To *Add [a] dimension*, you simply open the context menu of the column heading.

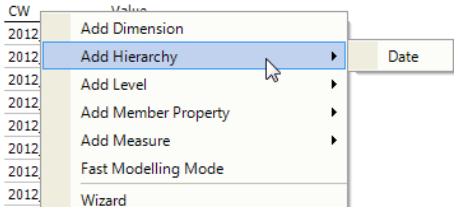


You can immediately see the result of this step in the *View* window and *Dimension browser*. *DeltaMiner* has created a dimension called "Date" and a hierarchy in it called "Date" as well. The fact table contains the columns that you selected for the hierarchy levels and highlights them in blue.

DeltaMiner supports the steps described up to this point in previous versions as well.

(b) Adding parallel hierarchies

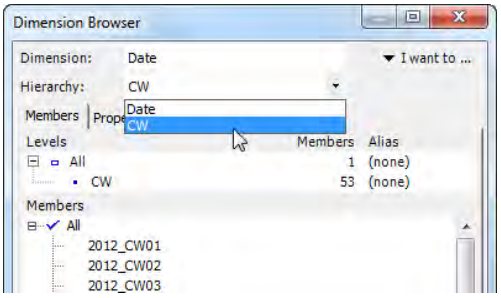
Starting in *DeltaMiner* 5.5.4, you can now use the *TableWizard* to add additional hierarchies to existing dimensions.



To *Add* the column CW (calendar week) as a parallel *Hierarchy*, simply open the respective function from the context menu of the "CW" column heading. In the submenu, you can select the dimension where you want to add the new hierarchy. Now select

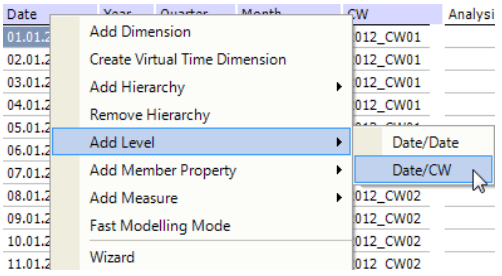
“Date”, the dimension that already contains the years, quarters, and months.

The *Dimension browser* shows that the dimension contains two hierarchies. Now, you would like the new one to contain years and individual days as levels as well.



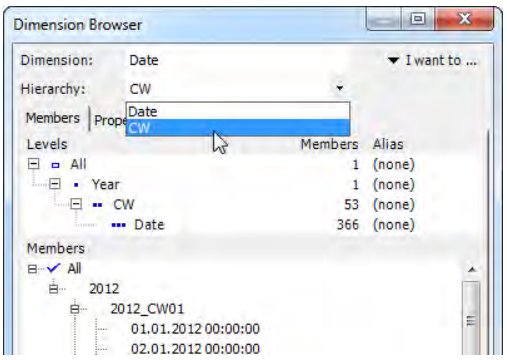
(c) Assigning columns to multiple hierarchies

Starting in *DeltaMiner* 5.5.4, the *TableWizard* can use a column from the fact table multiple times to create levels or member properties for multiple hierarchies.



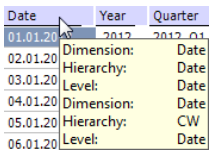
To add a new level (or member property) in a parallel hierarchy, hold the *Alt* key while opening the context menu in the respective column. In the submenu, you can select the hierarchy where *DeltaMiner* should *Add* the *level* (or the member property) from a list of all previously created hierarchies. The hierarchy names are summarized with the respective dimension names in the submenu.

Now you repeat the step again for the years by holding the *Alt* key while opening the context menu. (If you do not hold the *Alt* key, the simplified version of the context menu will appear in which you can only assign each column to one hierarchy – not several). You could have selected multiple columns (*Ctrl* key) to add multiple levels to the same hierarchy at once. We simply broke this down into two steps for didactic reasons.



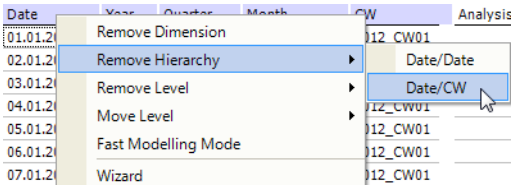
The time dimension now contains two parallel hierarchies – one broken down by years, quarters, and months and one by years and calendar weeks.

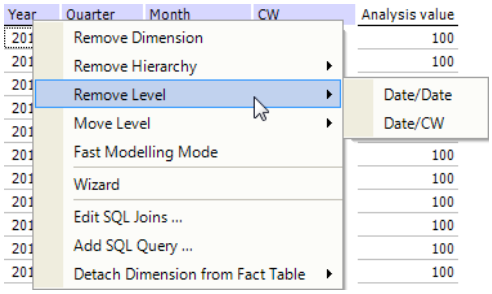
As in the past, a tooltip will appear if you mouse over a column heading in the fact table. Starting in version 5.5.4, this tooltip will now also display all parallel hierarchies that are based on the values in this column so that you can quickly see where that column is being used.



(d) Removing parallel hierarchies and levels

You can *Remove* a *hierarchy* by selecting the respective entry in the context menu of column headings. *DeltaMiner* will only display this option if this column is used in at least one dimension containing parallel hierarchies. If the column is used in multiple parallel hierarchies of a dimension, *DeltaMiner* will show a submenu where you can select which hierarchies you want to remove. If the column is only used in a single hierarchy, it will not display the submenu.





In the past, you could also remove levels from the context menu. What’s new is that if a level is used in multiple hierarchies, *DeltaMiner* will ask in which hierarchy you want to remove that level.

DeltaMiner will instantly remove hierarchies and levels without asking you to confirm this action.

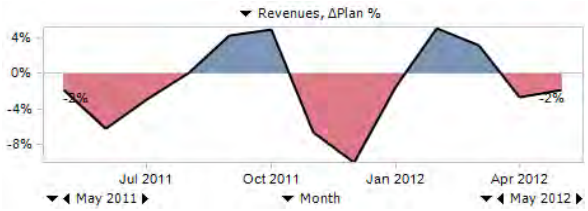
(e) Using parallel hierarchies

You can immediately use parallel hierarchies in relational models or export them to an OLAP database using *DeltaMiner CubeWizard* (see feature #10).

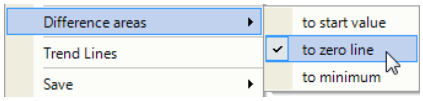
(22) Time Series Analysis: Showing Differences to Zero Line or Minimum as Area

In a *Time series analysis*, you have been able to display the difference to the series' start value as an area since *DeltaMiner* 5.5.3. Starting in *DeltaMiner* 5.5.4, you can now choose from two additional reference values to define the area you want to color: zero or the minimum of the series.

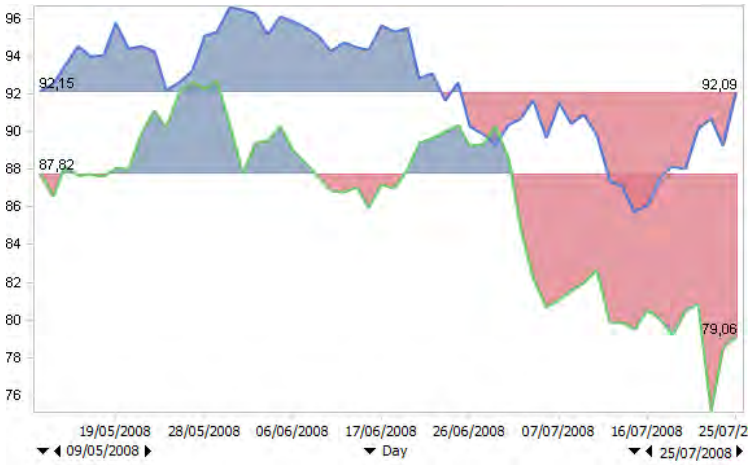
By using *Difference areas to zero line*, you can visualize positive and negative variances (e.g. plan-actual) as an area. *DeltaMiner* will color these areas red or blue depending on if they are greater or less than zero. As usual, *DeltaMiner* will assess the factor of the measures when choosing the color – revenue growth and cost reductions are blue while falling revenues and rising costs are red (i.e. Blue = good. Red = bad.). *DeltaMiner* will not show the option to color *Difference areas to zero line* if it cannot display the zero line due to the defined settings (e.g. *Scale from minimum to maximum* is selected and the data does not contain negative values).



As in the past, you can activate or deactivate the *Difference areas* by selecting the respective entry in the *I want to…* menu or in the context menu of the *Time series analysis*. This is possible on all user levels from *Reader* to *Miner*.

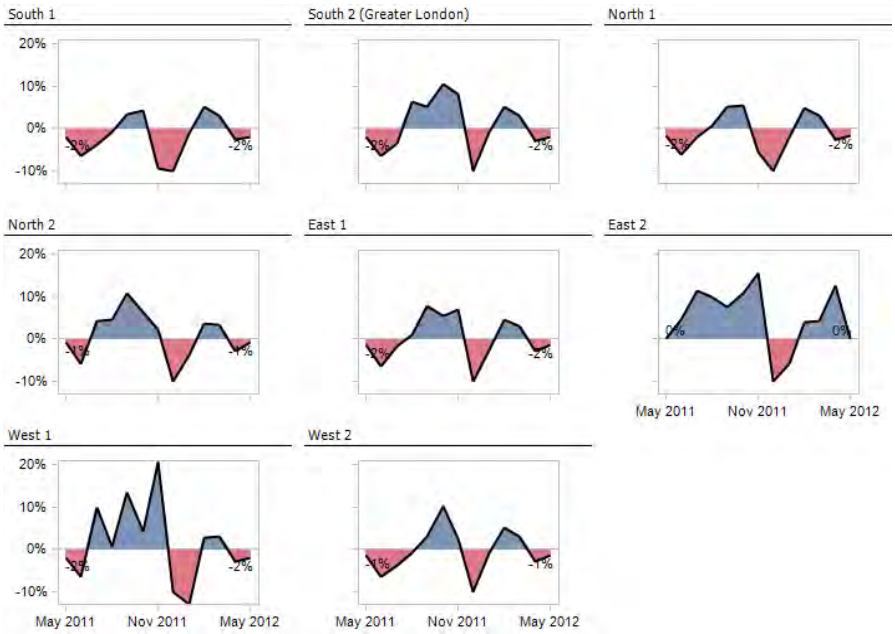


In all three options, you can now apply the difference areas to multiple series in a chart. Since some of the areas may overlap as a result, *DeltaMiner* will place these areas on top of each other transparently and color the overlapping areas in a more intensive shade, which you can analyze as well. If two red spaces are lying on top of each other, two things have gone wrong in this same time period, which means that the color will be a darker shade of red. In other words, since all of the values have the same length, *DeltaMiner* cannot optimally "add them up" by making then longer. Instead, it represents this addition by applying more intense colors.



In order to use all three visualization options (*Difference areas to start value, to zero line,* or *to minimum*), you must use a line chart. This area coloring is not supported for columns, curves, and steps.

Different-sized areas help readers understand when variances have occurred and on what scale. Although the human eye can't estimate and compare areas very well, it is capable of seeing if there is a lot (or a little) of blue as well as a little (or a lot) of red. That especially holds true when you iterate time series with difference areas in *Small Multiples* as you can see in the screenshot on the next page.



(23) Notes: Compatibility with Previous Versions and Installation

The following table shows if the new release contains any changes to the metadata schema of ReportServer and *WebOption* as well as the *WebOption* configuration files.

Component	Files	Changes since version 5.5.3
ReportServer	'ReportServer.mdb' 'ReportServer (SQL Server).sql' 'ReportServer (Oracle).sql'	Yes
Repository	'Repository.sql'	No
WebService	'DeltaMaster.Service.exe.config'	No
WebClient	'web.config'	No
GUI repository	'DeltaMaster.Repository.exe.config'	No

The metadata scheme of **ReportServer** has changed. Please update your job definition database by running the 'ReportServer (SQL Server).sql' or 'ReportServer (Oracle).sql' script. If you use the Access database 'ReportServer.mdb', *DeltaMiner* will automatically update it for you. As always, you should also update the 'ReportServer.exe' file as well as the respective DLLs so that they match the current *DeltaMiner* version. The ODBC connection string, which is specified in the job definition database, is located in the "ReportServer.exe.config" file. Please create a backup copy of this file before you install the current version of the *Report Server* files.

The **WebOption** components – *Repository GUI, WebClient,* and *WebService* – are available in version 5.5.4. An update, therefore, is recommended. The database schema for the repository has not changed in version 5.5.4. Before you update *WebOption*, please create backup copies of the configuration files (see table above),

any changed graphics in the “Image” folder (e.g. “Master_Top.png”) as well as the style sheet file (e.g. “DeltaMaster.css”).

Since the configuration files of *WebService*, *WebClient*, and *Repository GUI* have not changed from 5.5.3 to 5.5.4, you can reuse the older files without needing to make any changes. You can update the *WebService, WebClient, and Repository GUI* by copying the new files into the respective directories. Once again, please make backup copies of these files before doing so. A separate setup is not necessary.

You can update the **apps** for iPad and iPhone (*DeltaMaster ReaderApp*, *DeltaMaster TickerPortal*, and *DeltaMaster Notifications*) at the App Store.

25 DeltaMiner deltas! 5.5.5

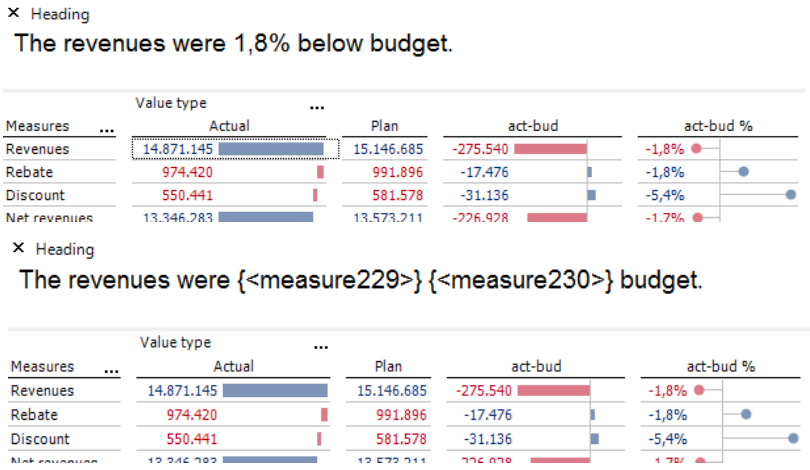
What's new in version 5.5.5? Find out in this overview!

(1) General: Displaying Measures of the Type "Text" in Headings 2
(2) Briefing Book: Activating a Start Folder for the Beginning of a Session 2
(3) ReportServer: Protecting Word, Excel, and PowerPoint Documents with a Password 3
(4) CubeWizard: Activating Writeback for Cubes Based on Relational Models 3
(5) CubeWizard: Keeping Sort Order of Members 4
(6) CubeWizard: Ignoring Unrelated Dimensions 5
(7) Export: Improved Functionality for Converting Combination Cockpits to Metafiles 5
(8) Export to Word/PowerPoint: Considering Row and Column Structure of a PivotTable When Scaling by Percentage 6
(9) HTML Export: Replacing Line Breaks in Tooltips with User-Defined Separator 6
(10) Cross Table Analysis: Creating Virtual Hierarchy from Cluster Analysis 7
(11) Pivot Table: Ordering Measures in the Axis Definition 8
(12) Pivot Table: Maintaining Individual Aliases for Members and Measures in the Axis Dimension 9
(13) Pivot Table: Maintaining Individual Aliases for Members and Measures in the Column/Row Editor 10
(14) Pivot Table: Displaying Member Properties as Tooltip 10
(15) Pivot Table: Merging Related Member Properties 11
(16) SQL Drill Through: Editing Displayed Column Caption and Maintaining Them in Alias Sets 12
(17) Location Analysis: Viewing Multiple Definitions of Coordinates 13
(18) Location Analysis: Drawing Connections between Locations (Network Analysis) 14
(19) TableWizard: Assigning a "Display Folder" to Hierarchies in Relational Models 16
(20) WebClient: New Implementation of Table Component 16
(21) Time Series Analysis: Automatically Sorting Legends by Final Value 17
(22) Cell Comments: Displaying Measures of the Type "Text" and Cell Comments Simultaneously 18
(23) Notes: Compatibility with Previous Versions and Installations 18

(1) General: Displaying Measures of the Type “Text” in Headings

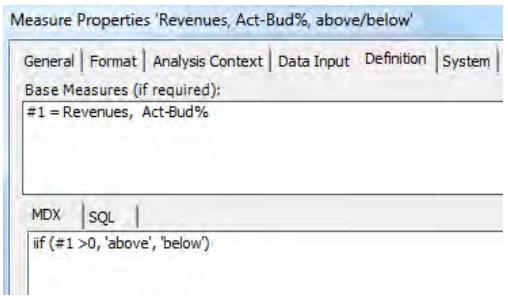
You can now use measures that return text in headings (previously: action titles). As a result, you can automatically generate headings that are value-dependent such as “The revenues were 1.8 percent below budget.” or “Material costs rose by 14 percent.”

In the example on your right, this function was used to enter the preposition “below” in the heading.



In the edit mode, you can see that this heading contains two variables, which are both placed in curly brackets as described in *DeltaMiner deltas!* 5.5.3, feature #4. The first variable “<measure229>” returns a numerical value while the second one “<measure230>” returns text – namely, the preposition that specifies if the respective value was “above” or “below” budget.

This text was generated by a *User-defined measure* which uses the operator “iif” to verify if the measure that it references is or is not greater than zero. You can also create more complex queries in the measure using the full capabilities of MDX. The numerical measure that is referenced in the heading (i.e. “<measure229>” – not shown here) is equivalent to the budget-actual variance as a percentage; its positive algebraic sign comes from the function “Abs()”.

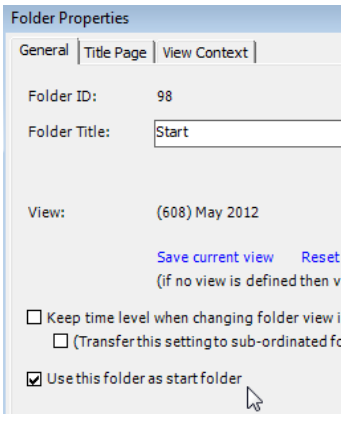


(2) Briefing Book: Activating a Start Folder for the Beginning of a Session

When a user starts a session or switches to presentation mode, *DeltaMiner* can now display a specific *Briefing Book* folder. Previously, this function was only available for reports (see *DeltaMiner deltas!* 5.4.4, feature #4); now you can also choose a folder as well.

In an analysis session, you either have a start report or start folder – but not both. When you select a folder as your start folder, *DeltaMiner* will automatically remove the start folder or report that was previously selected.

To select a folder as a start folder, open the *Folder Properties* (context menu in the *Briefing Book*) of the desired folder and activate the check box to *Use this folder as start folder*. This is possible in *Pivotizer*, *Analyzer,* and *Miner* mode.



DeltaMiner will automatically display the start folder when a user opens an analysis session from a DAS file, starts an application from the repository or WebOption, or switches to the *Slide Show* (*View* menu or *F5* key).

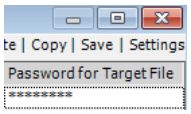
Using the new command line parameter “-**folder:**X”, you can also choose the start folder before you start the program. “X”, in this case, is the folder’s ID, which you can find in the *Folder properties* or by holding the *Alt* key while mousing over the folder. The folder that is specified in the command line “-folder:X” will override the setting in the analysis session.

You can also define a start report on the command line using the parameter

"report:X" (see *DeltaMiner deltas!* 5.3.2, feature #29). If both parameters are listed, "-report:X" will supersede "-folder:X".

How *DeltaMiner* displays the folders in *Reader* and *Viewer* mode still depends on the *Title page* settings as defined in the *Folder Properties*. Here, you can opt to display the *Folder Title,* an external file (e.g. a Web site, Office file, PDF, or image), or the report titles or headings of the reports in the folder (see *DeltaMiner deltas!* 5.4.1, feature #5). This combination has great potential for many types of applications. If a folder's title page shows the report titles or headings and is defined as the start folder, users will find themselves in the midst of an interactive table of contents right after they open the analysis session.

(3) ReportServer: Protecting Word, Excel, and PowerPoint Documents with a Password



When exporting Office files, *ReportServer* can now encrypt the documents it generates and protect them with a password. This also applies to PDF files that are based on generated Office documents. Afterwards, you can only open these Office or PDF files with the correct password.

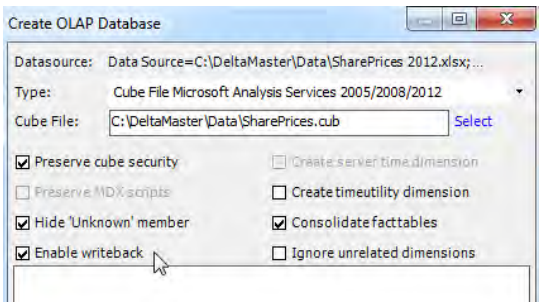
ReportServer has offered password protection functionality for directly generated PDF files since version 5.5.4 (see *DeltaMiner deltas!* 5.5.4, feature #7). As of version 5.5.5, this function is also supported in additional *Report formats*, specifically:

- Office files resulting from a Microsoft Office automation ("word", "excel", or "powerpoint" report formats)
- Office files that were generated as files without using Microsoft Office ("doc", "xls", or "ppt" report formats)
- PDF files created from Office files that were generated without using Microsoft Office ("pdf-doc", "pdf-xls", or "pdf-ppt" report formats)

There are, however, two limitations with PowerPoint. If you *automate* it (i.e. "powerpoint" format), you can only use a password in combination with PowerPoint 2003 or a newer version; older versions do not support password protection. If you *generate* PowerPoint files (i.e. "ppt" format), you can only use a password if the files were generated in Office Open XML format, in other words, Office 2007 or a newer version. In order for *ReportServer* to use this format, you need to select an *Export template* saved in ".pptx" format for the job (see *DeltaMiner deltas!* 5.4.9, feature #4).

As described in *DeltaMiner deltas!* 5.5.4, feature #7, you can use a separate password for the target file in each job by entering it in the respective field of the job definition. This password applies to all files generated through that job. These passwords are saved in the job definition database in clear text (i.e. non-encrypted).

Files with Office 97 to 2003 formats are encrypted using RC4 with a 40-bit key, which is relatively weak as far as security is concerned. It can prevent unauthorized parties from just opening the file but would not withstand a persistent attack. In contrast, files with Office Open XML format (DOCX, XLSX, or PPTX starting with Office 2007) are encrypted using AES with a 128-bit key. In combination with a good password, this method is considered to be adequately secure.



(4) CubeWizard: Activating Writeback for Cubes Based on Relational Models

Creating data input applications with *CubeWizard* is now more flexible than before:

- You can activate writeback capabilities for applications that are based on relational models. Previously, you could only use this functionality if you created the new cube from an existing one.

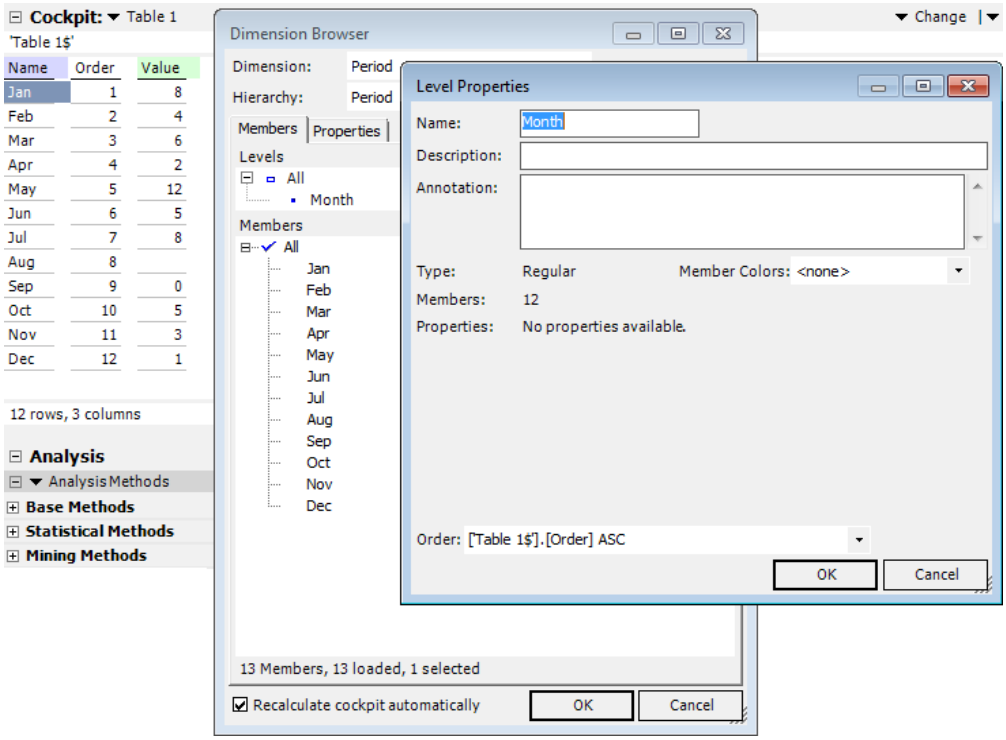
- You can also activate writeback capabilities for cubes that were “sliced” from an existing server-based cube.

When you generate a cube from an existing OLAP database, *CubeWizard* will apply the existing writeback configuration (if available) or activate the writeback functionality for all measure groups.

(5) CubeWizard: Keeping Sort Order of Members

As you already know, you can use *TableWizard* to define the order of dimension members. Let’s say, for example, that you want to sort the calendar months in chronological instead of alphabetical order. In the past, this was only possible in relational models. If you now *Create* [*an] OLAP database* (*Model* menu) from a relational model, however, you can keep that chronological order.

You can define the order of members in the *Level properties* (context menu of levels in the *Dimension Browser*). On the selection list in the bottom corner of the dialog box, you can now choose which column of the source table you want to use, as well as the direction (i.e. ascending or descending order). The default setting uses the same column that contains the dimension members. You can, however, select another column and sort the members based on it.



In the screenshot above, the “Period” dimension was built based on the entries in the column “Month”. As you can see, the members are listed in their natural order (i.e. from January to December) and not alphabetically due to a setting in the level properties. This setting determines that the members should be sorted by their respective values in the “Order” column and not by their names.

In relational models, you can enter the sort order behind the column name using the known SQL keywords: “ASC” for ascending (i.e. A to Z, small to large) and “DESC” for descending (Z to A, large to small). In OLAP databases, however, you can only sort in ascending order – in other words, “DESC” is ignored.

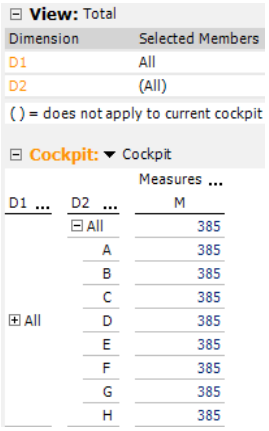
When you create an OLAP database, *CubeWizard* will add the order column as a hidden attribute in case it is not the same one as the member column.

(6) CubeWizard: Ignoring Unrelated Dimensions

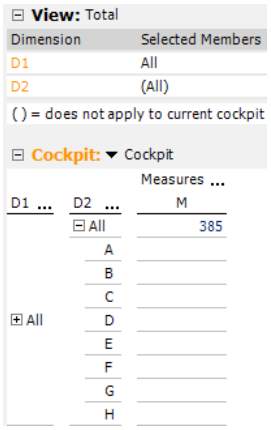
When you create an OLAP database (*Model* menu), you can specify if *DeltaMiner* should *Ignore unrelated dimensions*, which is equivalent to the "IgnoreUnrelatedDimensions" option that you may already know from Microsoft Business Intelligence Development Studio (BIDS).

This option affects data models containing measures that are only related to some but not all of the dimensions in the model. In a sales analysis application, for example, the "Travel expenses" measure could be related to the "Sales organization" dimension but not the "Product" dimension.

Let's use an abstract example. The dimension "D1" is related to the measure "M" while the dimension "D2" is not.



- If you activate (i.e. check) the option, *DeltaMiner* will ignore the unrelated dimension "D2" and calculate the query as if the dimension is not listed. As a result, it will return the same value (i.e. that of the remaining filters) for each member of "D2"



- If you deactivate (i.e. do not check) the option, *DeltaMiner* will include the unrelated dimension "D2" in the query. In the cases where "D2" and "M" intersect, *DeltaMiner* will return empty values for all dimension members except for the top one.

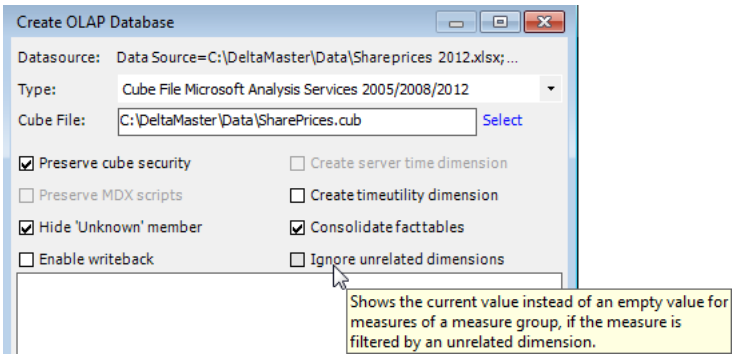
This option applies to the respective analysis session and is deactivated in the default setting.

Although we admit that Microsoft's name for this option is not optimal, we have used it so that you don't need to remember two different names for the same function.

(7) Export: Improved Functionality for Converting Combination Cockpits to Metafiles

Starting in version 5.5.5, *DeltaMiner* will use a proprietary algorithm for creating metafiles. This replaces the previous methods which were partially based on a Windows function and fixes potential display problems so that *DeltaMiner* can:

- Position members correctly
- Incorporate background areas
- Remove scroll bars for the respective member
- Place overlapping members in the correct order
- Minimize unwanted gray areas
- Avoid unwanted empty spaces in metafiles
- Include "docked" objects

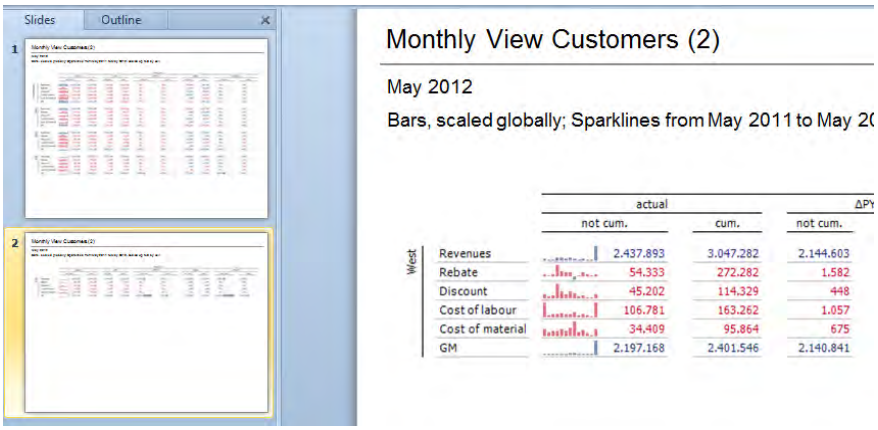


You can define if images are saved as bitmaps

or metafiles as a global setting under *Options* (*Extras* menu) and for specific reports in the *Report Properties* (context menu of reports), both on the *Export* tab. Since metafiles are based on vectors, they are highly suitable for printing because you can take advantage of the printer's full resolution.

(8) Export to Word/PowerPoint: Considering Row and Column Structure of a PivotTable When Scaling by Percentage

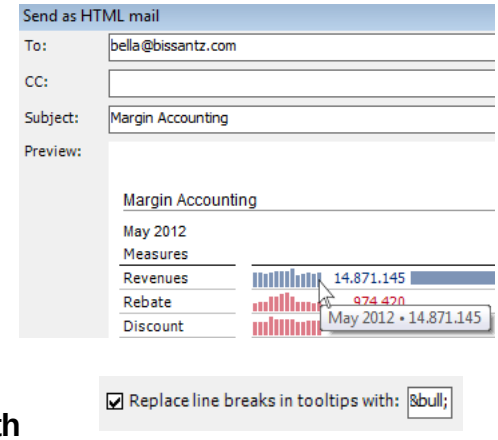
As of *DeltaMiner* 5.5.3, you can add additional gaps to accentuate the structure of pivot tables with nested axes (see *DeltaMiner deltas!* 5.5.3, feature #17). Now *DeltaMiner* offers a new option that attempts to keep these sections together in an export to Microsoft Word or PowerPoint so that the members next to each other and belonging together remain on the same page or slide.



The screenshot on your right shows a pivot table that was exported to PowerPoint from the *DeltaMiner* start wizard (see *DeltaMiner deltas!* 5.5.3, feature #24). In the slide preview on the left, you can see that a few rows on the second slide could have fit on the first one. If you now activate the *Consider row and column structure in pivot table* option, *DeltaMiner* will keep the entire gross margin analysis for the region "West" together.

You can activate these display options globally under *Options* (*Extras* menu) or for specific reports in the *Report Properties* (context menu of reports), both on the *Export* tab. This option is available for Word and PowerPoint provided that the *Percent scale* option is activated.

We have redesigned the dialog box to incorporate these settings in *DeltaMiner* 5.5.5. The names of the options are now clearer, and the pre-defined setting for limiting the number of columns and rows has been removed. The *Tables as Word table* section is equivalent to the previous *Tables as text* one. The *Fragmentation by rows* or *columns per page* section is equivalent to the previous *Rows/Columns per block* one, while the *Limit rows/columns* options are equivalent to those formerly listed under *Max. row/column count*. The previous limitations will remain valid for current *DeltaMiner* users. The row and column count is not limited, however, for new installations or new user profiles without *DeltaMiner* settings.



(9) HTML Export: Replacing Line Breaks in Tooltips with User-Defined Separator

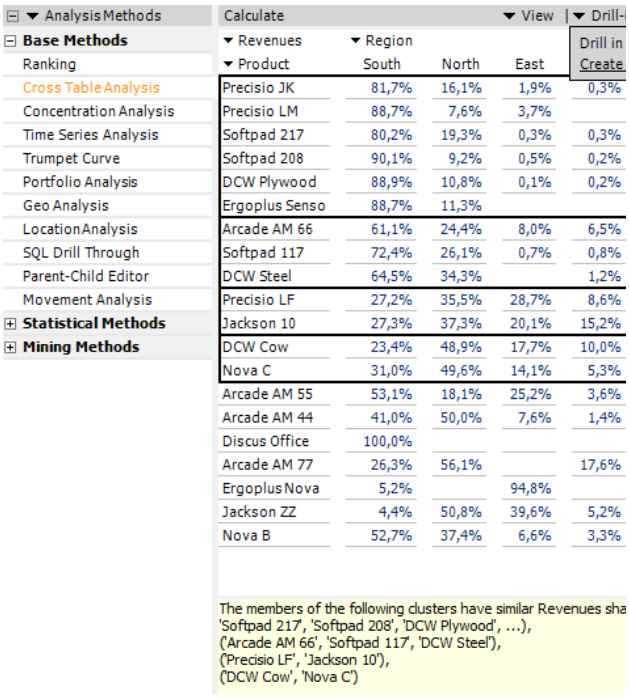
Some Web browsers and e-mail clients such as Lotus Notes cannot display line breaks in tooltips. Instead, they place them next to each other in a single line, which makes them difficult to read. To help combat this problem, *DeltaMiner* can *Replace line breaks in tooltips with* a user-defined symbol such as "–", "/", or HTML characters such as "• ".

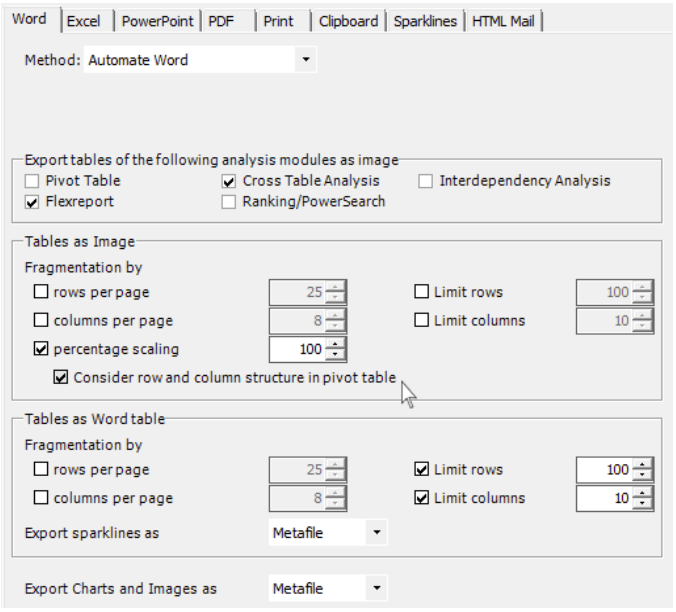
In the *Extras* menu under Options on the *Export/HTML mail* tab, you can define if you want to replace line breaks and which symbol(s) should be used instead. *DeltaMiner* will then enter the character string to the HTML code. If you want add a space before and after the delimiter, simply enter them in the field as well.

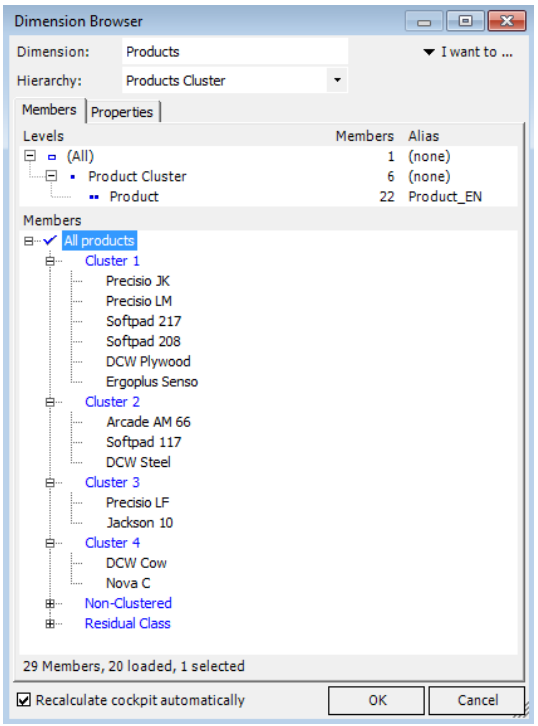
This setting, which is saved for each user in the Windows registry (“HKEY_CURRENT_ USER”), is valid for all analysis sessions that are used on that computer as well as in *ReportServer*.

(10) Cross Table Analysis: Creating Virtual Hierarchy from Cluster Analysis

When you generate groups as part of a *Cluster Analysis* in a *Cross Table Analysis*, you can now save them as a virtual hierarchy so that you can reuse them. This is another application of *DeltaMiner’s* Threaded Analysis Technology.







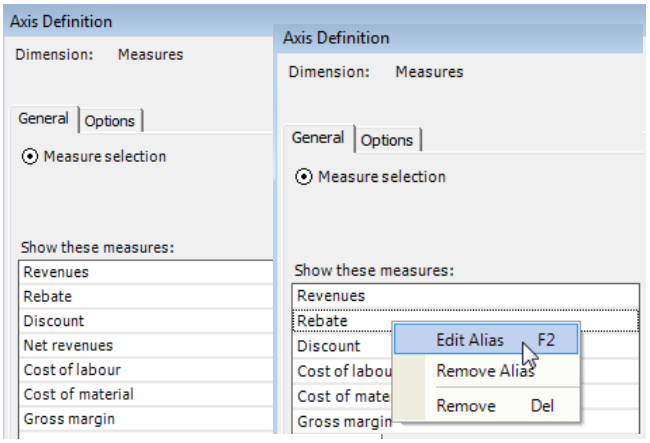
The screenshot above shows a *Cluster Analysis*. *DeltaMiner* places the similar members of the table next to each other and then places a border around these groups as you can see in the example above. In this example, *Colors* are activated as well to emphasize the similarity. Once *DeltaMiner* has calculated the analysis and identified the clusters, you can *Create [a] Virtual hierarchy* out of these groups (*Drill-in* menu).

DeltaMiner will turn each found, marked cluster into a virtual member of the new hierarchy. These virtual members are initially called “Cluster 1”, “Cluster 2”, etc. but you can rename them in the *Dimension Browser* (context menu or *F2* key). If certain members aren’t assigned to a cluster, *DeltaMiner* will place them in the virtual member “Non-clustered”. If necessary, *DeltaMiner* will also create an additional “Residual class” member that contains all members that are not displayed in the current view (e.g. because they are hidden as empty and/or 0 rows or columns, eliminated due to the measure filter, or were defined as excluded members). The definition of the hierarchy is static. The members that belong to a virtual member will be “counted”.

You can only create virtual hierarchies in a *Cross Table Analysis* in *Miner* mode. Although cluster analyses are also supported in pivot tables, you cannot create virtual hierarchies based on them. Virtual hierarchies are also not supported in relational models. The analysis model, therefore, must be based on an OLAP database. *DeltaMiner* will only activate the option to create a virtual hierarchy in the menu if it has already calculated the cluster analysis from the *Analysis* context menu (not through *AutoScan*).

If “All levels” is selected for the clustered axes, measures are clustered, or no clusters are found, you cannot create a virtual hierarchy.

Clustering is a type of *Analysis* that you can start from the context menu of *Cross Tables* (and *Pivot tables*). The method identifies rows or columns containing measures or percentages having a similar distribution pattern among the individual members and combines them into groups. When you start a *Clustering* from the context menu, you can select if you want to examine percentages or values by rows or columns.

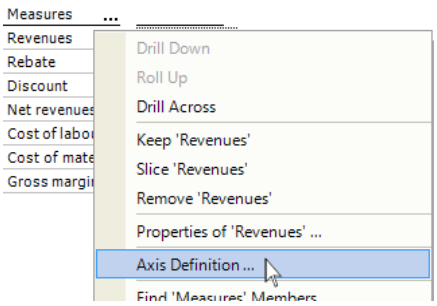


(11) Pivot Table: Ordering Measures in the Axis Definition

Version 5.5.5 contains a redesigned axis definition dialog box, which you can now use to sort and delete measures. This makes working with measures easier and simplifies the usability of pivot tables.

The dialog box now derives from the *Axis Definition* for dimensions (and not the *Measure Browser*). Here you can select the measures and administer them in the same way that you already do for the *Member selection* in the *Axis Definition* for dimensions:

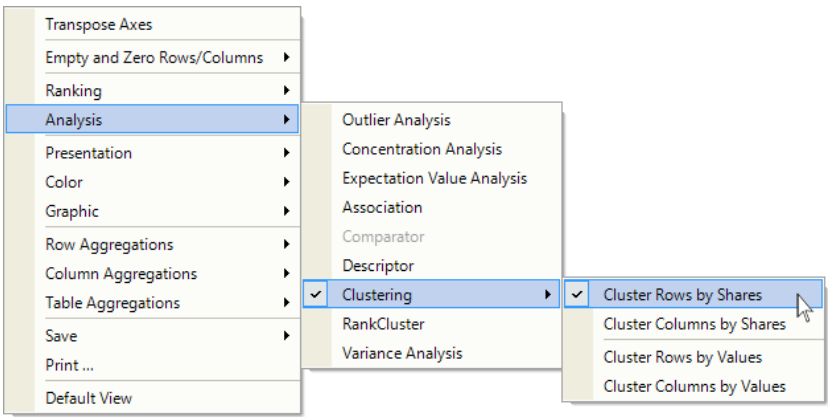
- To *Select* measures, simply click on the respective link. This will then open the *Measure Browser* where you can select one or more measures.
- Using drag and drop, you can change the order of the selected measures. By pressing the *Del* key or clicking the respective entry in the context menu, you can remove the selected measure from the selection. *DeltaMiner* will then remove the measure without asking you to confirm this action.



The *Options* have remained the same. On this tab, you can specify if *DeltaMiner* should hide null or zero cells, invert the hierarchy, or allow users in *Viewer* mode to drill down on hierarchal measures.

You can access the *Axis Definition* for measures the same way you have in the past using the *Select* link in the *Cockpit* or *Report definition* (*Change* menu in the *Cockpit* or *Report* window, context menu of the empty space around the table).

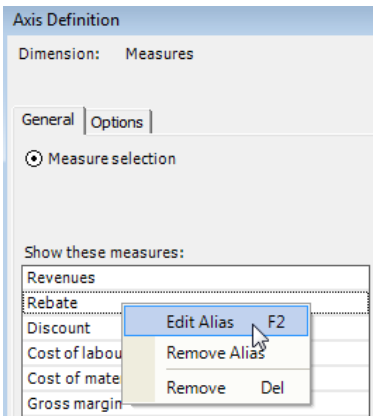
DeltaMiner previously used a separate dialog box for arranging measures. Since this is no longer necessary as of version 5.5.5, it has been removed.



You can *Edit [the] Alias* for specific

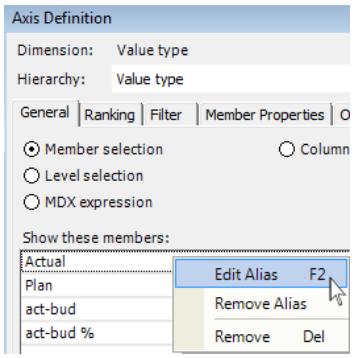
reports in the context menu of the measure in the *Axis Definition* or by hitting the *F2* key, see features #12 and #13.

(12) Pivot Table: Maintaining Individual Aliases for Members and Measures in the Axis Dimension



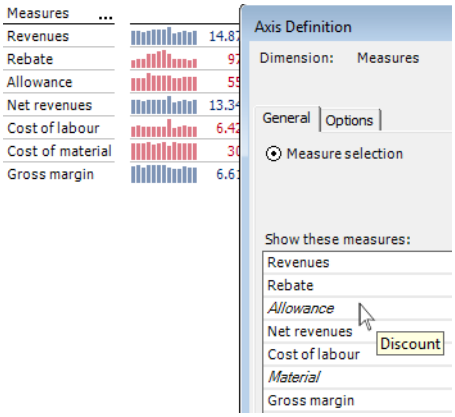
You can now use an alias to create individual captions for measures or members of a *Member selection* in a specific cockpit or report. This option offers more flexibility in how you label pivot tables and is very helpful when you are working with large captions. When a member has a very long name, this increases the width of the respective column in the pivot table as well. To save space, you can now shorten these names by using aliases in that pivot table. These aliases only apply to the cockpit or report where they were created.

To create or edit an alias, select the respective option from the context menu of the measures or members. Alternatively, you can also just hit the *F2* key. If you double click on the name, you can edit the alias directly. You can use MDX (e.g. "{cp}", "<viewX>") or double spaces in the alias. In the pivot table, *DeltaMiner* will replace the MDX expression with the respective members and double spaces with a line break (column axes only). If you enter an empty alias, *DeltaMiner* will remove it.



You can administer aliases in the *Member selection* or in the *Column/Row editor* (see feature #13) – but not in the *Level selection* or *MDX expressions*.

In the *Axis Definition*, aliases are listed in italic so that you can recognize them as such (see note on the bottom-right side next to the measure/member list). *DeltaMiner* will display the original name as a tooltip if you mouse over the entry. In the pivot table, aliases will appear without this formatting and without the tooltip. In the case of measures, *DeltaMiner* will display the *Description* from the *Measure properties* (if available) as a tooltip.



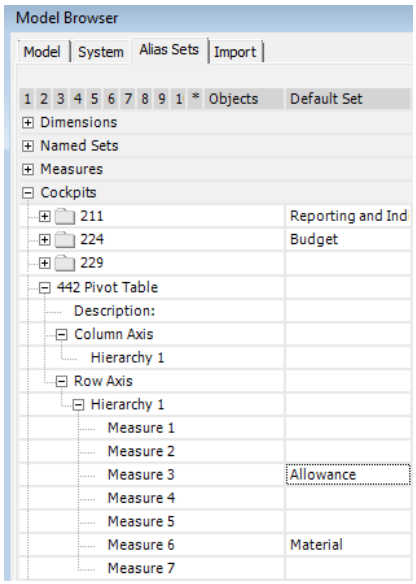
You can use these individual descriptions to create multilanguage applications. To edit these aliases, go to the *Model Browser* (*Model* menu) on the *Alias Sets* tab under the section for *Cockpits*.

The individual aliases supersede all other *DeltaMiner* functions (including notation rules) that affect the name that is displayed. The following rules of precedence apply to:

- Member descriptions:
  1. Alias in the axis definition or from the alias set (highest rank)
  2. Name according to the notation rules, provided that they are activated
  3. An alias that was defined by the user while modifying the member in the *Dimension Browser* (see *DeltaMiner deltas!* 5.5.1, feature#17) if available and not empty or as defined in the alias set
  4. Alias in the member properties (alias set), provided that aliases are activated, an alias is available, and is not empty

5. The member name according to the dimension, in other words, as listed in the database (lowest rank)

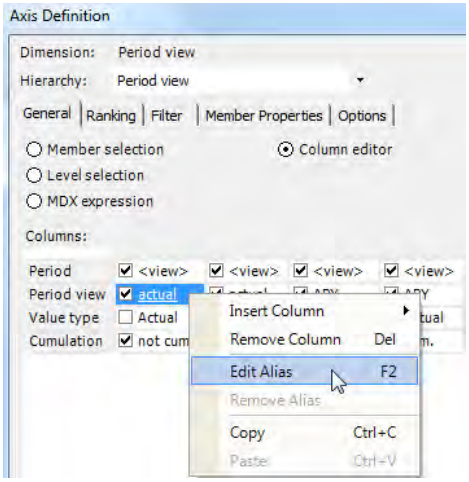
- Measure descriptions:
  1. Alias in the *Axis Definition* or according to the alias set (highest rank)
  2. Name according to the *notation* rules, provided that they are activated
  3. Measure name according to the *Measure Properties* or as listed in the alias set (lowest rank)



In the *View* menu, you can define if *DeltaMiner* should *Show Aliases* or not. If you deactivate this option, *DeltaMiner* will also ignore the individual aliases and display the original names of the members and measures.

Assigning aliases in cockpits and reports only affects what names are displayed in *DeltaMiner* and has no effect on the database. You can edit aliases in *Pivotizer*, *Analyzer*, and *Miner* mode. To display members in all cockpits and reports using the same aliases, you can edit the member in the *Dimension Browser* (see *DeltaMiner deltas!* 5.5.1, feature 17) or rename the measure in the *Measure Browser*.

(13) Pivot Table: Maintaining Individual Aliases for Members and Measures in the Column/Row Editor



You can also maintain individual aliases for the dimension members and measures in the column and row editor. This function works just like the aliases for the measure and member selection as described in feature #12.

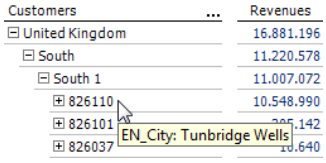
To *Edit [the] Alias*, open the context menu of the links in the preview area or simply hit the F2 key.

Generally, you only create an alias if a cell contains exactly one member or measure. You can, however, also specify multiple members or measures in the cells of the column or row editor (e.g. though an explicit count, variables such as "<view>", or an MDX expression that returns varying numbers of members). In these cases, the same alias applies to all of the members or measures that are specified in the cells, in other words, *DeltaMiner* will label multiple columns or rows with the same alias name. If you select them carefully, combining aliases can be a good solution. We recommend, however, to proceed with caution. In general, individual aliases are only suitable for cells with one member or one measure.

An alias is only valid in the cell in which it was defined. If the same member appears in multiple columns or rows of the report, you will need to create separate aliases for each column or row.

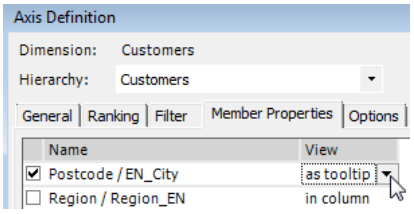
To learn more about how to select multiple members or measures and use MDX expressions, please read *DeltaMiner deltas!* 5.5.2, feature #14.

(14) Pivot Table: Displaying Member Properties as Tooltip



You can now display member properties as a tooltip instead of in a separate column or row of the table. This saves space without losing information in reports.

You can specify if *DeltaMiner* should display the member properties in a column/row or as a tooltip in the *Axis Definition* on the newly designed *Member Properties* tab.



When you mouse over a member, *DeltaMiner* will display the name of the member property and its respective value as a tooltip in all user modes from *Reader* to *Miner*. If you have selected multiple member properties to be displayed as a tooltip, *DeltaMiner* will display them in separate rows.

When you send reports as an HTML mail or export them to a HTML file with *ReportServer*, the tooltips will remain active. If you export them to Microsoft Office or as a PDF, these formats do not support tooltips and the member properties will not be included in the output.

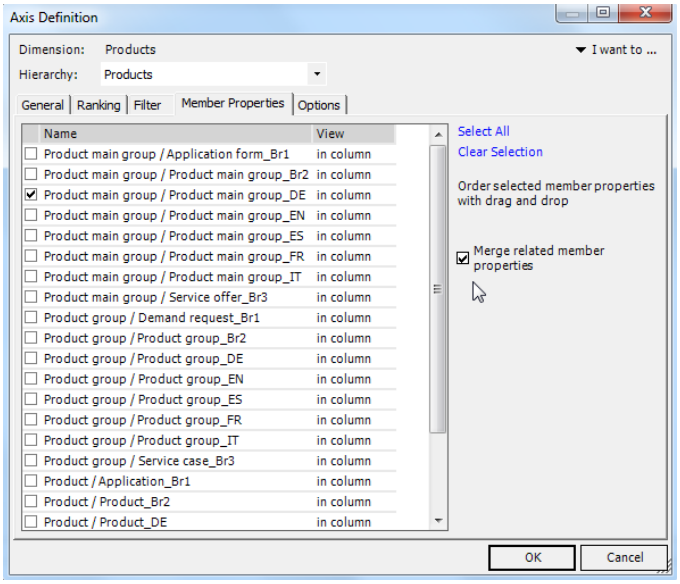
(15) Pivot Table: Merging Related Member Properties

DeltaMiner now offers enhanced options to display member properties for multiple hierarchy levels in pivot tables. In certain circumstances, you can merge related member properties and display them in a single column.

Products	Product main group_DE	Product group_DE	Product_DE	
All products				14.649.723
Luxury Division	Luxusmodelle			1.313.882
Custom made	Sondermodelle			11.888.776
Softpad		EF Drehstühle		3.970.076
Softpad 217			EF Drehst. Nova	1.213.452
Softpad 117			EF Drehst. Presa	1.769.420
Softpad 208			EF Drehst. Ergo	987.204
DCW		EF Besucherstühle		7.918.700
DCW Steel			EF Konferenz	193.453
DCW Cow			EF Besucherst. MO	9.814
DCW Plywood			EF Besucherst. MP	7.715.432
Standards	Standardmodelle			1.447.065

Previous versions of *DeltaMiner*, in contrast, required one column for each member property. Merging the member properties makes the table narrower and easier to read because the values are no longer distributed among several, partially filled columns.

This new function has been specially designed for Microsoft SQL Server Analysis Services. Here you need to define member properties for each hierarchy level separately (except for parent-child dimensions). This modeling concept has its pros but also its cons, for example, when you need the same property on every level (e.g. one name in multiple languages). To maintain products, product categories, and main product categories in multiple languages, you will need a respective member property on each of these levels. Since Microsoft Business Intelligence Development Studio also requires unique names for member properties on all levels, you have to define and name them for each level. As a result, the pivot tables in *DeltaMiner* often display multiple columns that are empty except for the rows containing members from the respective levels.



In the axis definition on the Member properties, you can now define if DeltaMiner should Combine related member properties.

DeltaMiner determines which member properties are related based on their names. If the name of the hierarchy level appears in the name of the member property, the level name will be “cut” from the name of the member property. Properties with the same abridged level name are considered to be related.

Take a look at the screenshot on your right, for example. On the level “Product main group”, you will see the member property “Product main group DE”. DeltaMiner has recognized that the name of the level appears in the name of the member properties and has shortened the name of the member property internally to “DE”. Underscores (“_”) and spaces at the beginning and end of the shortened name are automatically removed. On the “Product group” level, you will also find the member property “Product group DE”. Once again, DeltaMiner has recognized that the name of the level appears in the names of the member properties and shortens them internally; once again, that is “DE”. “Product” also contains the member property “Product DE”, which has also been shortened to “DE”. DeltaMiner views these three member properties as being related.

Products ...	DE	
⊟ All products		14.649.723
⊞ Luxury Division	Luxusmodelle	1.313.882
⊟ Custom made	Sondermodelle	11.888.776
⊞ Softpad	EF Drehstühle	3.970.076
⊟ DCW	EF Besucherstühle	7.918.700
DCW Steel	EF Konferenz	193.453
DCW Cow	EF Besucherst. MO	9.814
DCW Plywood	EF Besucherst. MP	7.715.432
⊞ Standards	Standardmodelle	1.447.065

The screenshot on your right shows how the same pivot table looks when you activate the new function. DeltaMiner displays the related member properties in a single column. Here, you can no longer tell that these member properties were defined on different levels.

Important: To merge member properties, only select one level of the desired property. *DeltaMiner* will automatically determine which member properties on the other levels are related. If you select “Product group DE” and “Product DE”, the pivot table will contain two merged columns containing identical content.

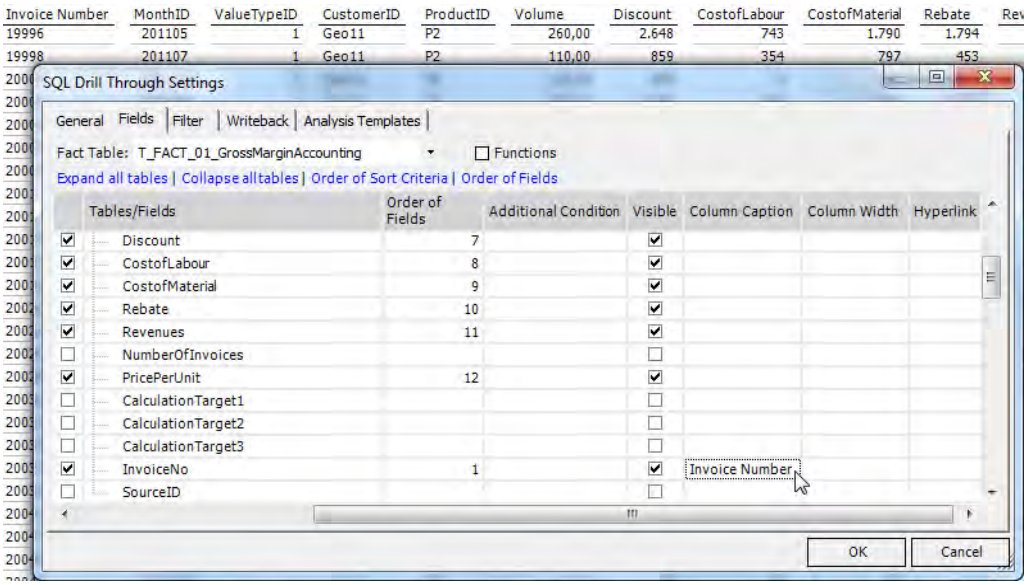
Products ...	DE	ES	
⊟ All products			14.649.723
⊞ Luxury Division	Luxusmodelle	Modelos de lujo	1.313.882
⊟ Custom made	Sondermodelle	Modelos especiales	11.888.776
⊞ Softpad	EF Drehstühle	Softpad	3.970.076
⊟ DCW	EF Besucherstühle	DCW	7.918.700
DCW Steel	EF Konferenz	DCW Steel	193.453
DCW Cow	EF Besucherst. MO	DCW Cow	9.814
DCW Plywood	EF Besucherst. MP	DCW Plywood	7.715.432
⊞ Standards	Standardmodelle	Modelos estandar	1.447.065

This merge function applies to all member properties that are displayed in the pivot table. If you add an additional property “Product ES“ with Spanish product names, *DeltaMiner* will also identify the related properties on other levels and display them together in a column called “ES”.

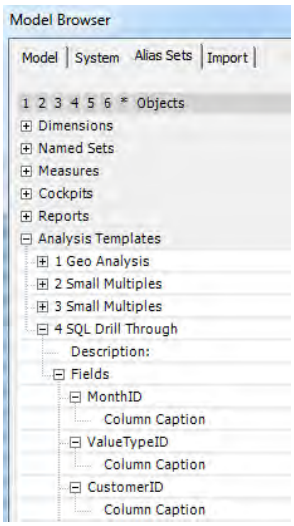
This function works in combination with Microsoft SQL Server Analysis Services (exception: parent-child dimensions), relational analysis models as well as Oracle OLAP in combination with the MDX provider from Simba. This method is unnecessary for parent-child relationships because here you can use the same member property names on multiple levels. In these cases, *DeltaMiner* automatically recognizes the related properties based on the names and displays them in a single column.

(16) SQL Drill Through: Editing Displayed Column Caption and Maintaining Them in Alias Sets

In the *Settings* of the *SQL Drill-Through*, you can now define a *Column Caption* that *DeltaMiner* will display in analyses or reports in place of the field name in the database. This is helpful when the names in the database are very long or technical and, therefore, not optimal for reporting. In these cases, you can now enter a *Column Caption* that is easier to read.



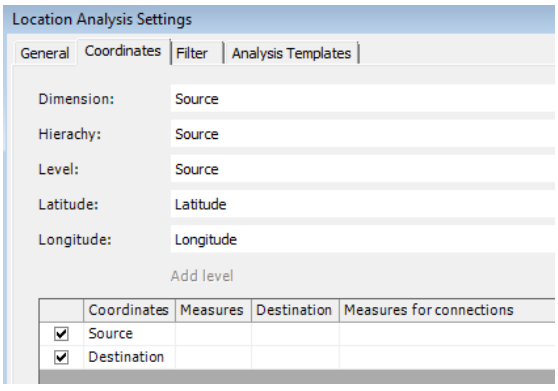
You can edit the *Column Caption* in the alias sets of multilanguage applications. In the *Model Browser* (*Model*), the *Column name* is listed on the *Alias Sets* tab in the *Analysis Templates* section of the respective *Field*.



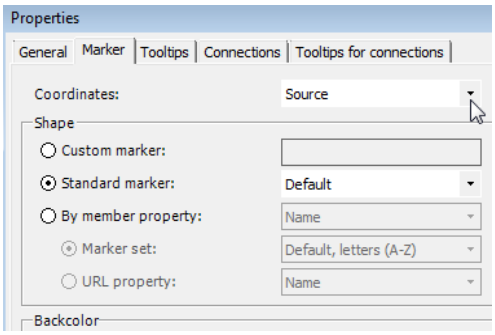
(17) Location Analysis: Viewing Multiple Definitions of Coordinates

Due to a few changes in the user interface, the *Location Analysis* is now easier and more flexible to use.

In the *Settings*, the former *Mapping* tab is now called *Coordinates*. Here you can define which member properties contain the coordinates to mark the locations (*Latitude* and *Longitude*). You could use each dimension, hierarchy, and level of the analysis – or even several at the same time. (The latitude and longitude that are modeled as member properties can be taken from multiple dimensions, hierarchies, and levels.) In the upper part of the tab, you can select the levels that you wish to use and the respective member properties. If you click on the link *Add level*, you can use them for the *Location Analysis*.



The bottom part of the tab lists the selected levels. In the past, you could also use multiple definitions of coordinates within a *Location Analysis,* but only one was visible. To delete an entry, simply click on the row to select it and hit the *Del* key. Using the check box in the first column, you can activate or deactivate the coordinate definitions for the current analysis or report. *DeltaMiner* draws markers for the members from all active levels. The name of the level is listed in the *Coordinates* column that contains the coordinates in its member properties. The *Destination* and *Measures for connections* are only relevant for drawing connections (see feature #18).



In the *Measures* column, you can select which measure *DeltaMiner* should display in a tooltip or HTML info window (*Properties*). Previously, this selection was on the *Member properties/Measures* tab, which has been removed as of version 5.5.5. You can now select the measures on the *Coordinates* tab as described above. Since you can use all of the available member properties in tooltips or HTML info windows, you no longer have to pre-select the member properties that can generally be displayed in them.

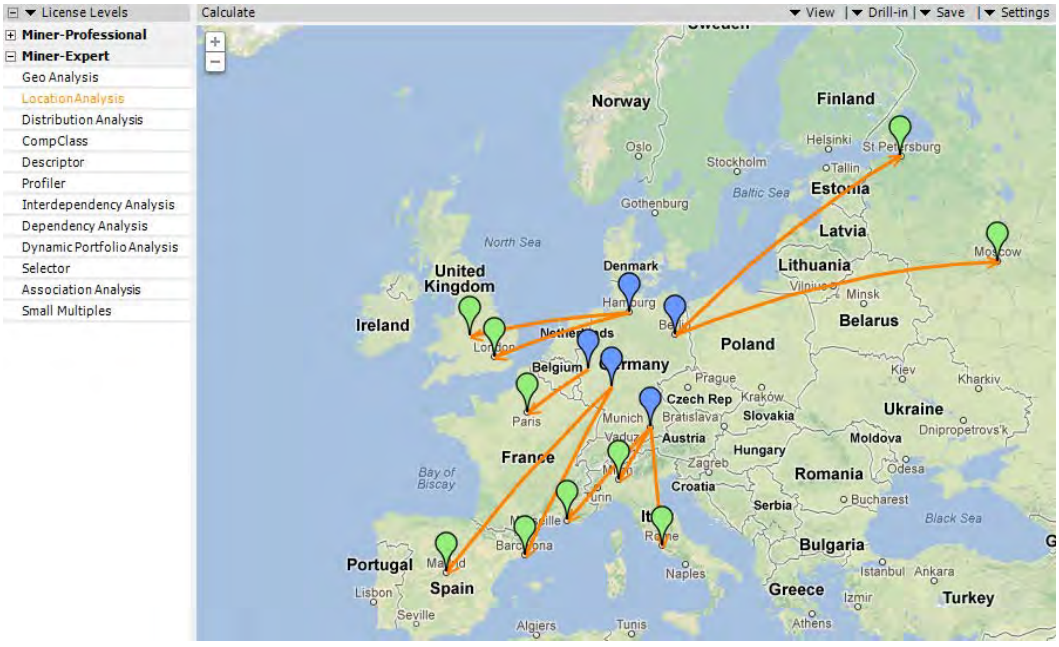
There are also a few changes in the *Properties* (context menu or *I want to…* menu). You can now define the settings on the *Marker* and *Tooltips* tabs for each separate definition of coordinates using the selection list on the top part of the respective tab. This list contains all levels defined in the settings. To see how you can use different marker sets to designate the start and end points of connections, see the example showing separate properties in feature #18.

These changes have no effect on existing reports.

In addition, the *Marker set* with numbers (*Marker* tab in the *Properties*) has also been corrected in version 5.5.5 so that it starts with 1 and not 0.

(18) Location Analysis: Drawing Connections between Locations (Network Analysis)

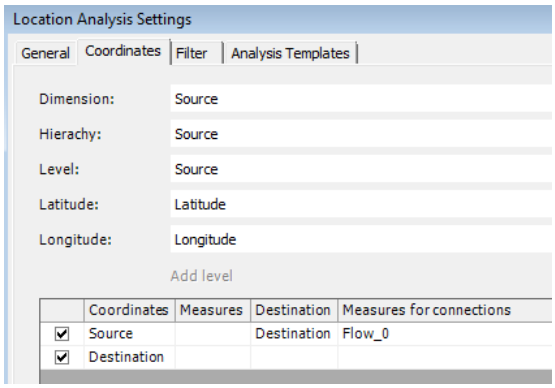
You can now draw connections between marked locations in a *Location Analysis.* This feature is especially interesting for logistics applications so that you can visualize and evaluate the flow of goods or hauling capacities as part of a network analysis.



There are two prerequisites for using connection lines:

- The start and end points of the connections must be located in different dimensions, hierarchies, or levels in your model.
- You must use at least one measure that quantifies the connection (e.g. quantities delivered, number of passengers, distance).

You can configure the connection lines in the *Settings* of the *Location Analysis*:

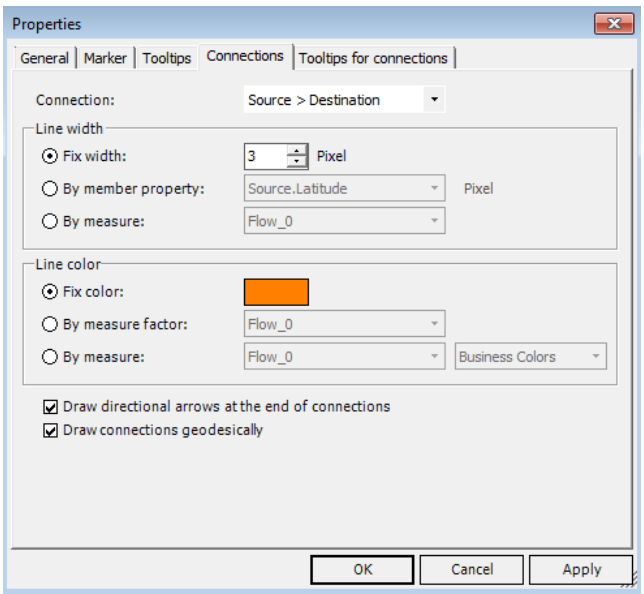


- Configure at least two levels (coordinate definitions) as described in feature #17. One (or more) must describe the coordinates of the start point and one (or more) must describe those of the end point.
- In the *Destination* column, select the level in which *DeltaMiner* should draw the connection to its members. The members of the level in which you select the destination will automatically become the starting point of the connections.
- In the Measures *for connections* column, select one or more measures that quantify the connection. *DeltaMiner* will only draw one line between two locations if at least one measure that is not equal to null is assigned to them. If you do not select a measure, *DeltaMiner* will not draw any connection lines.

In the screenshot above, two levels have been set up for the *Location Analysis*: the level “Source” and the level “Destination”, which are both respectively located in the hierarchy and dimension of the same name. Under *Destination*, “Destination” has been entered for the “Source”. You can define several connections by assigning one destination to multiple levels.

You can define the display options in the *Properties* of the *Location Analysis* on the *Connections* and *Tooltips for connections* tabs. *DeltaMiner* will only show these options if you have configured the connection lines on the *General* tab as described above (*Destination* and *Measures for connections*).

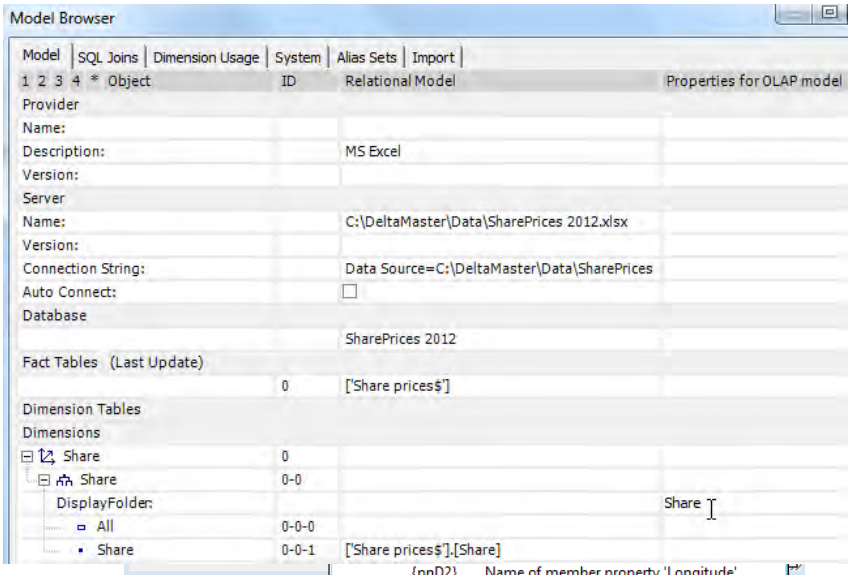
On the *Connections* tab, you can define how *DeltaMiner* should draw the lines. At the top of the dialog box, you can select any *Connection* that has been defined in the *Settings*. Now you can select which of the following options you want to use.



- Under Line width, you can either enter a Fix[ed] width (in pixels), or DeltaMiner can select the line based on the data, specifically By member property or By measure. If you select By member property, DeltaMiner will interpret its values as a specification in pixels. If you choose By measure, however, DeltaMiner will calculate how many pixels wide the line should be. The measure is understood as an economic value from the application (e.g. the freight, shipment, or sales volume). DeltaMiner then calculates how wide it should draw the line based on the range of all values and the measure for a specific connection.
- You can either select a specific line color or a one that is dynamically defined *By measure*

factor or *By measure*. If you base it on the measure factor, *DeltaMiner* will draw the lines in red or blue (alternatively, green) depending on the algebraic sign of the value and the *Factor* of the measure (*Measure Properties*). If you color them *By measure*, *DeltaMiner* will select the color after taking the range of all displayed values in consideration and assign the current value to a spectrum of *Business Colors*, *Grayscale,* or *Traffic Light Colors* similar to the cell coloring in pivot tables, the *Hyperbrowser*, or a *Geo Analysis*.

- You can also opt to *Draw directional arrows at the end of connections.* This connection is derived from the coordination definition that states which members are at the beginning and which ones are at the end.
- If you choose to *Draw connections geodesically*, the lines will be slightly curved to reflect the earth's curvature. Otherwise, *DeltaMiner* will draw them as straight lines.



On the *Tooltips for connections* tabs, you can also configure an *HTML Info Window*, a type of "speech bubble" that appears when a user mouses over a connection line. Info windows must be written in HTML similar to a *Location Analysis* without connections. If you click on the *Hint* link below the entry field, you can view a list of the available variables – the name and all properties of the respective member as well as the measures that have been preselected in the *Settings*.

The *Location Analysis* is available in *Miner Expert* mode. As usual, you can use the reports that you have created in *Miner Expert* mode on all other user levels. No additional license is necessary to draw the connections as part of a network analysis. If you wish to try the functionality of the *Location Analysis*, we would be happy to provide you with a test license.

(19) TableWizard: Assigning a "Display Folder" to Hierarchies in Relational Models

If you are working with relational models and open the *Model Browser* (*Model* menu) on the *Model* tab, there is a new column where you can define the *Properties for [the] OLAP model*.

In this column you can enter a "Display Folder" for hierarchies. If you add this property to a relational model (*TableWizard*), *DeltaMiner* will include it when you create an OLAP database (*Model* menu; *CubeWizard*).

The "Display Folder" is a property which you can use to define if *DeltaMiner* should merge parallel hierarchies or offer them as separate dimensions (see *DeltaMiner deltas!* 5.3.0, feature #16, *DeltaMiner deltas!* 5.3.1, feature #21, and *DeltaMiner deltas!* 5.3.4, feature #1).

(20) WebClient: New Implementation of Table Component

Back in version 5.5.4, we re-implemented the components for displaying tables in WebClient to make it faster. Some display options that were not included in that release are now available.

WebClient no longer supports Microsoft Internet Explorer 6 and 7 in version 5.5.4 and higher.

Internet Explorer 6 and 7, which were released in 2001 and 2006 respectively, are considered to be outdated. These browsers either lack or have problems supporting certain functions that are mandatory for supporting modern Web applications.

If *DeltaMiner* WebClient identifies one of these installations, it will not send any reports to the browser. Instead, it will generate a page notifying the user that this browser is not longer supported. Internet Explorer 6 and 7, therefore, will be fully excluded and no longer supported.

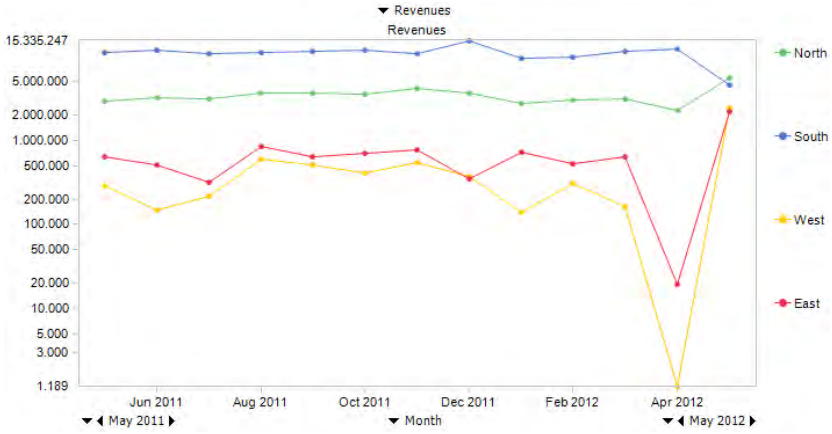
In order to use WebClient in version 5.5.4 or higher, you will need to use Microsoft Internet Explorer version 8 and higher or Mozilla Firefox version 12 and higher.

You can also use the latest versions of other modern browsers such as Google Chrome or Apple Safari. Since they are not part of our specification, however, we do not make any special changes for these browsers and do not test all functions with them. You can generally use *DeltaMiner* WebOption with Chrome or Safari, however, because they robustly support all common Web standards.

Due to this new implementation, *DeltaMiner* now supports the following presentation options when you open a report in a Web browser or Windows client:

- Creating user-defined column widths in pivot tables (see *DeltaMiner deltas!* 5.3.5, feature #12)
- Displaying the empty gap to the right of Flexreport cells (see *DeltaMiner deltas!* 5.5.1, feature #19)
- Grouping rows and columns of pivot tables with additional gaps (i.e. separation, see *DeltaMiner deltas!* 5.5.3, feature #17)
- Using vertical labels for row members in the pivot table (see *DeltaMiner deltas!* 5.5.3, feature #18)
- Permitting or restricting data input in pivot tables through MDX (see *DeltaMiner deltas!* 5.5.4, feature #11)
- Removing drill symbols for members without children in pivot tables (see *DeltaMiner deltas!* 5.5.4, feature #12)
- Displaying the improved trend barometers in pivot tables and Flexreports (see *DeltaMiner deltas!* 5.5.4, feature #15)
- Fixing row and column headers when scrolling in pivot tables and Flexreports

The pages in WebClient load so quickly due in part to the new way of transferring images. Instead of many smaller images, it combines them into one to minimize the number of queries to the Web server. In addition, the images are transferred “in line”, which means that they are coded as text and directly embedded into the HTML source code. Out of consideration for the older browsers, this was previously only available as an option that needed to be explicitly activated (see *DeltaMiner deltas!* 5.4.3, feature #21). This option is now activated in the default setting.



(21) Time Series Analysis: Automatically Sorting Legends by Final Value

Time series charts are now even easier to read. *DeltaMiner* automatically sorts the levels of the rows based on the last value of the series. If you change the time frame and the end values are in a different order, *DeltaMiner* will automatically rearrange the order of the labels so that they always appear sorted by the end

values. You can use this automatic sorting order regardless if the legends appear above, below, to the left, or to the right of the chart. It looks best, however, when it is displayed to the right of the chart so that the end values and labels are next to each other. The gaps between the labels will differ; the differences among the end values have no significance.

This legend display automatically applies to new and existing reports; no changes are necessary from your side.

(22) Cell Comments: Displaying Measures of the Type "Text" and Cell Comments Simultaneously

You can now simultaneously display measures that return text and cell comments in pivot tables and Flexreports. This was not possible in previous versions. As soon as the cell comments were activated, *DeltaMiner* would hide the texts from measures.

(23) Notes: Compatibility with Previous Versions and Installations

The following table shows if the new release contains any changes to the metadata schema of ReportServer and *WebOption* as well as the *WebOption* configuration files.

Component	Files	Changes since version 5.5.4
ReportServer	'ReportServer.mdb' 'ReportServer (SQL Server).sql' 'ReportServer (Oracle).sql'	No
Repository	'Repository.sql'	No
WebService	'DeltaMaster.Service.exe.config'	No
WebClient	'web.config'	No
GUI repository	'DeltaMaster.Repository.exe.config'	No

The metadata schema of **ReportServer** has not changed. As a result, you do not need to run the 'ReportServer (SQL Server).sql' or 'ReportServer (Oracle).sql' script. If you use the Access database 'ReportServer.mdb', *DeltaMiner* will automatically update it for you. As always, you should also update the 'ReportServer.exe' file as well as the respective DLLs so that they match the current *DeltaMiner* version. The ODBC connection string, which is specified in the job definition database, is located in the "ReportServer.exe.config" file. Please create a backup copy of this file before you install the current version of the *Report Server* files.

The **WebOption** components – *Repository GUI, WebClient,* and *WebService* – are available in version 5.5.5. Provided that you are not reliant on Microsoft Internet Explorer 6 or 7 (see feature #20), an update is recommended. The database schema for the repository has not changed in version 5.5.5. Before you update *WebOption*, please create backup copies of the configuration files (see table above), any changed graphics in the "Image" folder (e.g. "Master_Top.png") as well as the style sheet file (e.g. "DeltaMaster.css").

Since the configuration files of *WebService*, *WebClient*, and *Repository GUI* have not changed from 5.5.4 to 5.5.5, you can reuse the older files without needing to make any changes. You can update the *WebService, WebClient, and Repository GUI* by copying the new files into the respective directories. Once again, please make backup copies of these files before doing so. A separate setup is not necessary.

You can update the **apps** for iPad and iPhone (*DeltaMiner ReaderApp*, *DeltaMiner TickerPortal*, and *DeltaMiner Notifications*) at the App Store.

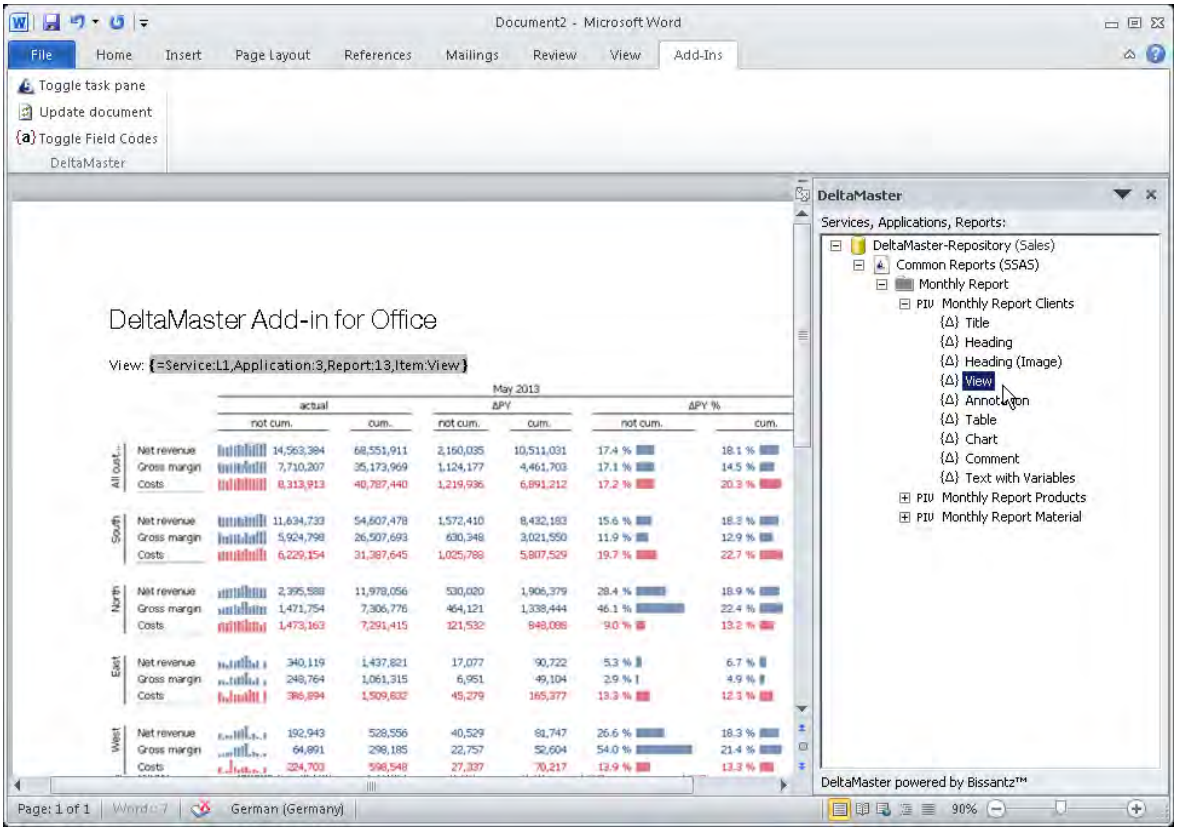
26 DeltaMiner deltas! 5.5.7

What's new in version 5.5.7? Find out in this overview!

(1) Add-In for Microsoft Office: Inserting Updatable DeltaMaster Objects into Office Documents 2
(2) General: Inserting Special Characters Using the Context Menu in Headings, Comments, and Aliases 8
(3) Analysis Templates: Displaying Dependencies Using the Settings Dialog 8
(4) Pivot Navigation: Editing or Releasing the Limit of the Number of Members 8
(5) Pivot Navigation: Specifying the Available Dimensions, Hierarchies, and Levels (Navigation Context) 9
(6) Pivot Navigation: Slicing (Transferring a Member to the View) in Miner Presentation Mode 9
(7) Pivot Table: Displaying Absolute Variances of Percentage Values as Percentage Points 10
(8) Pivot Table: Drawing Bars Centered 11
(9) Pivot Table: Displaying Descriptions of Elements as Tooltip 11
(10) Pivot Table: Displaying Picture if Member Property Contains Picture URL 12
(11) Pivot Table: Displaying Solve Order of Elements and Measures as Tooltip, Using the Alt Key 12
(12) Pivot Table: Displaying Values Upright, to Reduce Column Width 13
(13) Pivot Table: Copying a Time Series Chart from Semantic Zoom to the Clipboard or Other Programs Using Drag & Drop 13
(14) Pivot Table: Hiding Cell Comments in Selected Columns 14
(15) ReaderApp: Updating Briefing Books Made Easier 14
(16) ReaderApp: Scaling Reports to iPad Width 14
(17) ReaderApp: Generating Images for Reports in Retina Resolution 15
(18) ReaderApp: Tiling Reports to Support Large Reports 15
(19) Repository: Maintaining Rights for Own Roles 15
(20) Repository: Specifying the Repository to Be Accessed Using the Command Line Parameter "-repository" 15
(21) SAP BW/NetWeaver BI: Using Logon Load Balancing, and Logon via Message Server, SID, and Logon Group 16
(22) View Context: Defining the View in Relational Models Dynamically Using a Default Selection 16
(23) Start Wizard: Using the Start Wizard during a Session 18
(24) Start Wizard: Creating a Standard Report to Show the "Way to go" (for Time Series without a Seasonal Component) 18
(25) Start Wizard: Selecting Which Objects to Create 19
(26) Maintenance Dialog Box: Renaming Levels 20
(27) Update Notes 21

(1) Add-In for Microsoft Office: Inserting Updatable DeltaMiner Objects into Office Documents

A new additional product is available: With the *DeltaMiner Add-in for Office*, you can now embed dynamic data and reports from *DeltaMiner* applications into Word documents (and soon into PowerPoint presentations as well). Once this Add-in is installed, you can easily update the documents directly from Word (and later, presentations from PowerPoint) because the inserted objects stay linked to *DeltaMiner Repository* and the data source.



This Add-in stands out through the following features:

- You can use objects from different *DeltaMiner* applications in one and the same document. This means that you can also combine different data sources – for example, multiple SAP InfoProviders from different BW systems – in a single document.
- You can update embedded data and objects directly in Word.
- All components of *DeltaMiner* reports are available as separate objects. As a result, you can position report tables, headlines, and other components anywhere you wish in the document.
- The inserted items are saved as *Field Codes* in the Word document so that you can easily copy and modify them.
- Users without the Add-in can open and use the resulting Word documents. Only report editors need the Add-in.
- You can use and reuse existing *DeltaMiner* applications with the Add-in. No special templates are necessary.

- The Add-in utilizes the existing authorization concepts of the database and repository.
- Licenses are centrally managed in the repository. No local license keys are required.

This Add-in represents a new type of integration between *DeltaMiner* and Microsoft Office:

- The export functionality that has already been available for a while uses a “push” approach. *DeltaMiner* or *ReportServer* generates Office files and fills them with data. Afterwards, you can further process them in Word. The reports, items, and data in these files, however, are “frozen”. They are simply a snapshot from the time of the export and cannot be updated. If you want to incorporate the latest data and report formats, therefore, you will need to run the export again.
- The Add-in, however, allows you to enter wildcards for *DeltaMiner* objects into existing Office documents. These objects then “pull” the respective data, reports, or items from *DeltaMiner* applications. This approach separates the tasks of designing and editing the document from supplying the data. As a result, the *DeltaMiner* objects can be updated continually without changing the rest of the document.

Both methods have their advantages. A simple export will suffice in many cases, especially when the bulk of your reporting consists of *DeltaMiner* reports that can be distributed without further editing. *ReportServer* offers powerful automated export functions – for example, to support exception reporting, edit the scope of the briefing book, or enable batch processing (e.g. an iteration of all countries, product divisions, or cost center managers). If, on the other hand, you need to create a highly elaborated briefing book containing *DeltaMiner* objects, it makes sense to use the Add-in and simply enter the required *DeltaMiner* objects wherever needed.

One of the main advantages of the Add-in is that you can combine data from multiple *DeltaMiner* applications in one and the same Office document.

(1) Requirements

The Add-in requires:

- Word 2010 in the 32-bit version (x86),
- the .NET Framework 4.0 (Full Package) or higher
- *DeltaMiner Repository* version 5.5.7 or higher. This service can run on the same or a different computer.

All reports containing components that may be inserted into Word documents must be stored in an application in the repository. The Add-in cannot access analysis sessions (i.e. DAS files). Further installation requirements, which are outlined in a separate document, apply to *DeltaMiner Repository.* In particular, Microsoft SQL Server is required for the repository database. If you use the current version of the WebOption, you have already fulfilled this requirement. The Add-in and the WebOption can access the same repository.

You use the *DeltaMiner* Windows client to create and maintain applications and reports that are saved in the repository. *DeltaMiner* and the Add-in need not to be installed on the same computer. This can be useful, however, if you wish to make additions or corrections in reports while you are working on the Office documents.

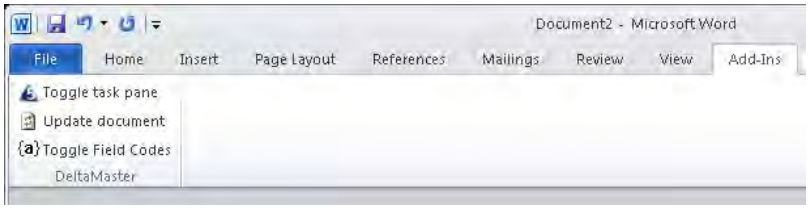
(2) Installation

Installing the Add-in is simple: Just run the installation package “DeltaMiner Add-In for Office.msi” as administrator. You will only need to answer two questions: 1.) where you want to save the program (e.g. “C:\DeltaMaster\DeltaMaster Add-In for Office”)

and 2.) if it should be set up for the current Windows user or all Windows users.

When you open Word for the first time following the installation, a confirmation prompt may appear in the Microsoft Office Customization Installer (picture shows German version). To *Install* the Add-in, simply click the respective button.

Following the installation, you simply select the *Add-ins* ribbon and you will see a new tab called *DeltaMiner*.

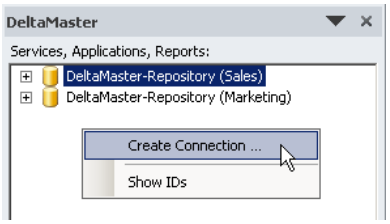


This tab has three options:

- *Toggle task pane*: On the right side of the window in Word, you can display the *task pane* for the Add-in. This is the central component for operating the Add-in. In this section, you can administer the connections to one or more *DeltaMiner* repositories and access reports or items to embed them into the Word document.
- *Update document*: This function will recalculate all of the items within the document.
- *Toggle Field Codes*: The embedded *DeltaMiner* objects (e.g. a table or report headline) are saved as Field Codes in the Word document. As a result, you can easily copy them or change their parameters.

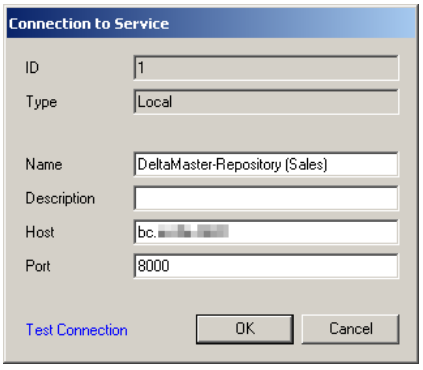
(3) Add and set up a connection to the DeltaMiner Repository

The reports and items that you can transfer to the document stem from *DeltaMiner* applications that are saved in a repository. Therefore, you first have to connect to each repository that you want to use.



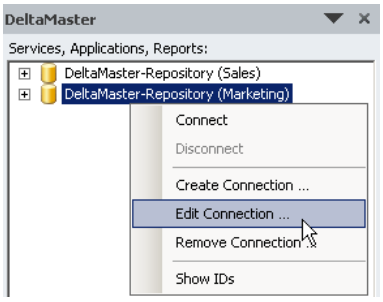
To add a connection, simply select the respective option from the context menu of the Add-in task pane. If no connection has been created to date, you can also add one by double clicking the entry *Add Connection*.

In the dialog box, please enter the *Name*, *Description*, *Host*, and *Port* to configure the connection. The name will be displayed in the task pane and you can view the description, host, and port as a tooltip when you mouse over a connection. Instead of technical details, therefore, you may want to use layman's terms for the description such as "DeltaMiner Repository (Sales)". For the host, please enter the name or the IP address of the computer hosting the repository. The *Port* must match the one that is configured there; the default setting is 8000.

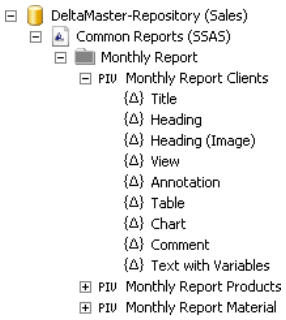


If you click the *Test connection* link in the bottom-left side of the window, the Add-in will check if the service is available. It will not check if applications are available for the current user, if the user has access rights for the database, etc.

If you open the context menu of a connection, you can *Edit* or *Remove* (i.e. delete) it following a security prompt. If a connection has been removed, you will not be able to update objects that refer to it. These objects, however, remain in the document. If you keep the objects and want to link them to another connection, simply edit the Field Code as described in section (f).



(4) Inserting objects from DeltaMiner applications into the document



You can view a list of added connections in the task pane; each connection is equivalent to one gateway for a repository. In order to access the applications and reports that are saved there, you simply *Connect* using the respective entry in the context menu. Several connections can be opened simultaneously and used in the same document.

Below the open connections, the Add-in displays the applications which are available for the user with the respective briefing book containing folders and reports – just as you already know from *DeltaMiner* or the WebOption.

The Add-in applies the permissions the current user has in the underlying relational and/or multidimensional database as well as the respective roles in the repository to determine which folders and reports it displays. Direct access to the cockpits is not possible because they are saved without a view and, therefore, the Add-in would not know which data to query.

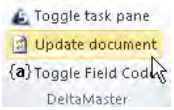
In contrast to the briefing book that you already know, these reports contain another level: the report items. These components are explained briefly in the following table. The “Item” column is relevant for the Field Codes [see section (f)].

“Item” in the Field Code	Description
Title	the report title as displayed in the briefing book
Heading	the report heading as text only (intended for PowerPoint; not available in Word)
HeadingRtf	the report heading in the same format as defined in *DeltaMiner*
HeadingImage	the image from the heading area (see *DeltaMiner deltas!* 5.5.4, feature #2)
View	the view description (set of the selected members)
Annotation	the annotations that are displayed below the report and generated by *DeltaMiner* (e.g. the scaling used for bars and sparklines or the number of rows and columns)
TableImage	the tabular view of the report; not available for reports of the type *Combination Cockpit*
ChartImage	the graphical view of the report; not available for reports of the type *Flexreport*, *SQL Drill Through*, and *Small Multiples*
Image	for reports that only have a view and cannot be switched between tables and graphics (*FlexReport*, *SQL Drill Through, Small Multiples, Combination Cockpit*)
Expertise	the interpretation aids that are generated in the pivot table by *AutoScan* as well as by certain analytic methods (*Cross Table Analysis*, *CompClass*, *Descriptor*, *Profiler, Interdependency Analysis*, *Association Analysis*)
Comment	the report comment as text only (intended for PowerPoint; not available in Word)
CommentRtf	the report comment in the same format as defined in *DeltaMiner*

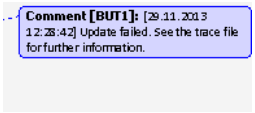
Text	any text in which also MDX statements and variables (“<viewX>”, “{cp}”, etc.) may be used and will be interpreted

With a double click, you can transfer an item into the document. This action will insert a Field Code into the document [see section (f)]. This field is similar to those that you use to enter the page number, print date, or storage location in a regular Word document.

(5) Update document



You can use the *Update document* command (*Add-ins* ribbon menu) to calculate the inserted functions and bring the *DeltaMiner* items up to date. This recalculates the referenced reports. If you select one or more fields, this update will only affect these fields. Otherwise, the entire document will be updated. This update does not account for other Field Codes (e.g. from Word or other Add-ins).



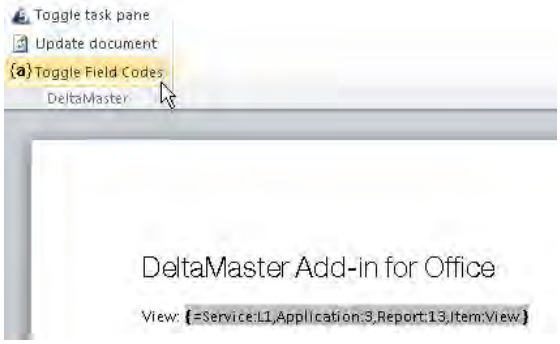
If the update was not successful (e.g. because the Service was not available), the Add-in will insert a message together with a comment in the document. If the function was already calculated once before and the results of this previous update are still available in the document, the Add-in will generate a comment with the message and simply display the previous result. Additional information regarding the causes is logged in the trace file. This file is saved in one of the following directories:

- The designated folder in the Windows Registry [saved as a “TracePath” in the key where the user settings are saved according to section (i)]
- The designated directory for trace files as set in *Options* of *DeltaMiner* (*Extras* menu) on the *Folder* tab
- The temporary Windows directory (“%TEMP%”)

The Add-in stores the connected sessions and opened reports in a cache until you either close the connection or Word. To reset the cache and access the latest reports and data in the database, simply close the connection in the task pane and restore it.

If you transfer an item (e.g. a comment) that is not defined in the referenced *DeltaMiner* report into the document, a syntax error will be displayed in the document.

(6) Syntax of the Field Codes



When the Field Codes are visible, you can edit them and their parameters.

The functions use a relatively simple syntax. The parameters are transferred as key-value pairs. For example:

{ =Service:L1,Application:3,Report:1,Item:View }

The key and value are separated by a colon; pairs are listed as strings separated by commas.

Four parameters are mandatory: “Service” (i.e. the connection), “Application”, “Report”, and “Item”. Simply enter the ID of the respective object for the connection, the application and the report. You can view these IDs

in the context menu of the task pane. The IDs of folders and reports are identical to those within the analysis session. The possible items are listed in section (d).

For “TableImage”, “ChartImage”, and “Image”, you can set optional parameters to define the format for transferring the image to the document. The standard is metafile, but you can also choose bitmap. For example:

{ =Service:L1,Application:3,Report:1,Item:TableImage,**Format:Bitmap** }

For “TableImage”, you can also set optional parameters so that only a section of the table is included. In this case, simply enter the desired row and column area. The count always starts with 1, as displayed in the pivot table and *FlexReport* when you display the *Cell Coordinates*. For example:

{ =Service:L1,Application:3,Report:1,Item:TableImage,**Rows:1-20,Columns:1-5** }

The “Text” item reacts differently than the other components. The text that the item returns isn’t determined from the referenced report, but rather by evaluating the variables and MDX statements that are entered as parameters. You still, however, will need a report as reference because evaluating statements such as “[Measures].[Revenues]” depends on the view. Directly after “Item:Text”, please enter a comma followed by the text in quotation marks. If the text itself contains quotation marks, please place a “\” in front of it as an escape character. MDX statements as well as the known *DeltaMiner* variables (e.g. “{cp}”, “<viewX>”, and “<measureX>”) are recognized and evaluated in the text provided that they are placed in curly brackets. For example:

{ =Service:L1,Application:3,Report:1,Item:Text,"Revenues with {<view1>} totaled {[Measures].
[Revenues]}."}

With this text item, you can flexibly insert values and descriptions from *DeltaMiner* applications into the Word document. In particular, you can enter the components into the body text.

Note: You must use the Add-in to enter the Field Codes into the Word document. If you try to enter a function as text, it will not be recognized as a function call.

(7) Working with images

Field Codes that refer to an element with the type “TableImage”, “ChartImage”, or “Image” will return an image. These images are transferred as metafiles, a format that is especially well suited for high print quality. If instead you opt to transfer the image as bitmaps, please enter the additional parameter “Format:Bitmap” as explained above.

After the initial update, you can set the size of the image using the standard method in Word. The selected scale is saved in the document (as a percentage of the original size of the respective image) and automatically applied to the updated image.

For the most important report types, the image export function has been optimized for the Add-in. These currently are the report types: *Pivot Table*, *Measure List/Chart*, *FlexReport*, *Combination Cockpit*, *Ranking*, *Cross Table Analysis*, *Concentration Analysis*, *Time Series Analysis*, *Trumpet Curve*, *Portfolio Analysis*, *Geo Analysis*, *Location Analysis*, *SQL Drill Through*, *Movement Analysis*, *Regression*, *PowerSearch*, and *Small Multiples*. Exports of the remaining report types work just as they do for HTML e-mails.

If you are working with report types containing several tables or charts, the tables/charts are arranged above or below each other and exported as one image. This currently applies to reports of the type *Ranking*, *Concentration Analysis*, *Location Analysis,* and *PowerSearch*. The export functions for the remaining report types containing several tables/charts are identical to those for HTML e-mails.

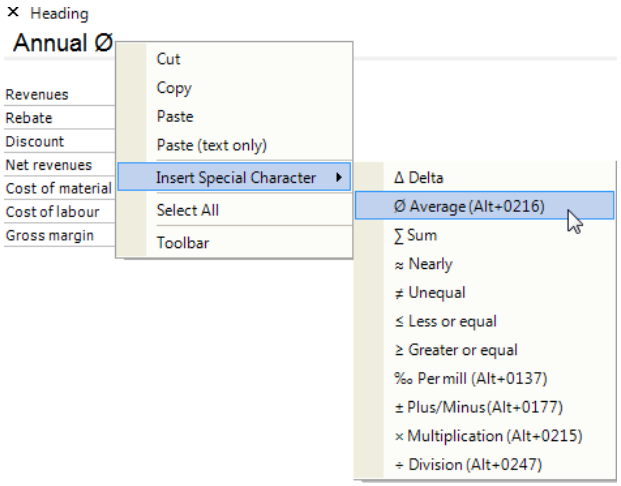
(8) Licensing

The Add-in requires a separate license (“DM-AIO”) that is hosted via the *Repository*. You will also need to install the licenses for the Add-in on the license server that the Repository Service uses. No license keys or the likes are required for clients that run the Add-in. If you wish to try the Add-in, we would be happy to provide you a license for testing purposes. Please contact your account manager for more information.

(9) Miscellaneous

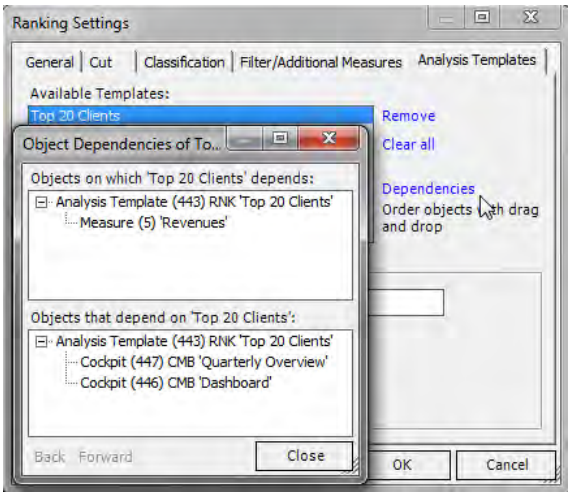
The Add-in settings are saved for each user in the Windows Registry (“HKCU\Software\Bissantz & Company\DeltaMaster Add-In for Office”). In addition, it is possible to create connections for all users on a certain computer that cannot be modified or deleted in the task pane (“HKLM\Software\ Bissantz & Company\DeltaMaster Add-In for Office”).

(2) General: Inserting Special Characters Using the Context Menu in Headings, Comments, and Aliases



In headings, comments, and individual aliases in pivot tables, you can now enter common special characters from the context menu. This is the same functionality that you already know from other areas of the application such as the *Editor for Calculated Members* and *Measure Properties* (see *DeltaMiner deltas!* 5.4.2, feature #8). The Unicode equivalent, which you can use to generate the symbol as a shortcut from your keyboard, is listed for some characters. Simply hold the *Alt* key while entering the four-digit code on your numerical keypad.

(3) Analysis Templates: Displaying Dependencies Using the Settings Dialog

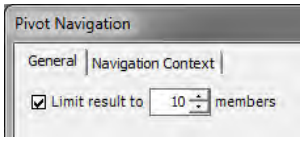


You can now display the *Object Dependencies* for analysis templates. This feature allows you to take a closer look at crosslinks: Which other objects are referenced in the analysis template, and which other objects use this analysis template?

Object Dependencies have already been offered in eight different parts in the. Up until now, however, this feature wasn’t available for analysis templates.

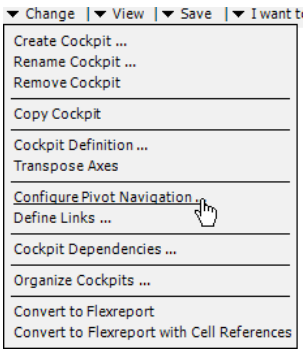
You can open this dialog box using the *Dependencies* link that is located in the *Settings* of every analytic method on the *Analysis Templates* tab.

(4) Pivot Navigation: Editing or Releasing the Limit of the Number of Members



In *DeltaMiner*, you can define a maximum number of members for the *Automatic (Pivot) Navigation*. This allows you to manage how many members at most should be displayed in the respective pivot table for each pivot navigation step. You can also release this limit so that *DeltaMiner* displays all members. Up until now, you could not release this limit or change the number of members for the automatic

(pivot) navigation. *DeltaMiner* always displayed the ten largest positive or negative members of a dimension.

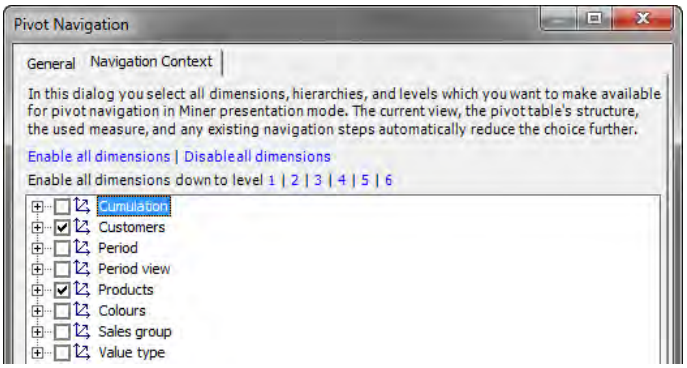


In the *User Defined (Pivot) Navigation*, you could already list a maximum number of members for the respective navigation step through the *Ranking* (e.g. “TopCount”). If a limit has been set in this new option, *DeltaMiner* will suggest this value on the *Ranking* tab.

This limit has no effect on predefined navigation steps and their modification in the *Navigation Definition* (*Edit Navigation* in the menu of the respective table cell).

You can *Configure* [the] *Pivot Navigation* in *Miner* mode. Simply *Change* the respective option in the *Change* menu of the *Cockpit* window and enter the desired value on the *General* tab.

(5) Pivot Navigation: Specifying the Available Dimensions, Hierarchies, and Levels (Navigation Context)



Clear reports and a clean user interface are extremely important in meetings and presentations. That’s why you can now set up the User Defined (Pivot) Navigation so that it only offers selected dimensions, hierarchies, and levels. We call this new configuration the *Navigation Context*, similar to the *View Context* of reports or the *Analysis Context*. You can edit this *Navigation Context* in *Miner* mode in the *Change* menu of the *Cockpit* window with the *Configure Pivot Navigation* option (see image in feature #4). On the *Navigation Context* tab, you can define the dimensions, hierarchies, and levels that should be available in the pivot navigation for meetings or presentations.

This *Navigation Context* applies to the pivot navigation in *Miner Presentation* mode, in other words, the presentation mode that you start in *Miner* mode (e.g. *View* menu or *F5* key/*Shift F5*). If presentation mode is not activated, all available dimensions, hierarchies, and levels will be displayed as before. If you start presentation mode in a user level other than *Miner*, the pivot navigation feature will not be supported.

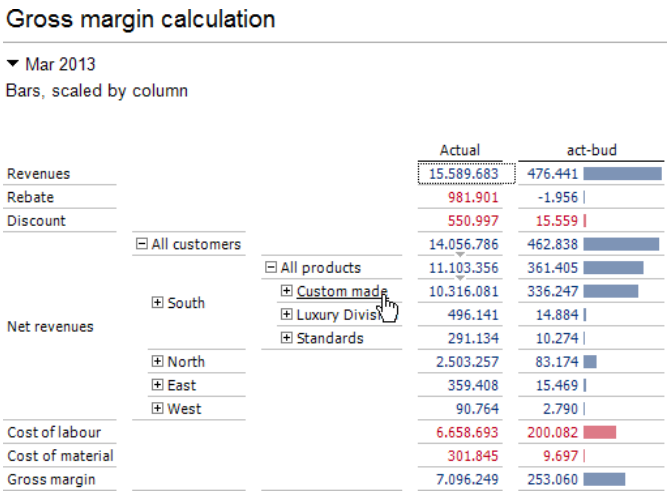
Changes in the *Navigation Context* only apply to the *Automatic* and *User Defined (Pivot) Navigations* and only affect newly run pivot navigation steps. They have no affect on predefined steps; the saved limit has priority. In the case of the *User Defined* (*Pivot) Navigation*, you cannot select deactivated levels before you run the navigation. However, if you *Edit* [a] *Navigation* that has already been run, deactivated levels will be available again.

Tip: If you frequently work with hierarchy menus aside from the pivot navigation (e.g. in a *Ranking*), *DeltaMiner* offers options to edit the user interface for the entire analysis session and, therefore, improve the usability.

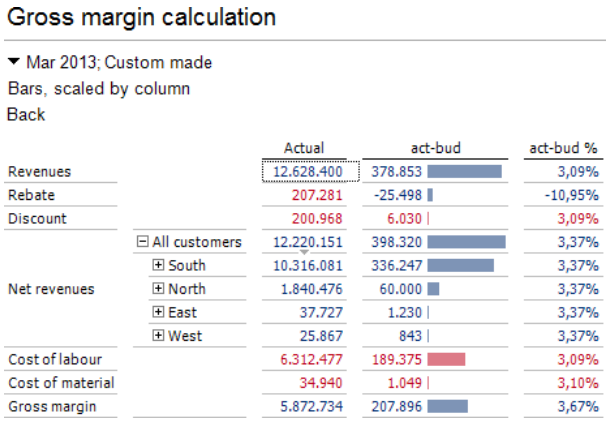
(6) Pivot Navigation: Slicing (Transferring a Member to the View) in Miner Presentation Mode

To help focus your presentation, you can also create a “slice”. This function transfers select members from the pivot navigation into the view so that they work like a new filter criterion in the report. *DeltaMaster* will then remove the hierarchy from where this member originates from the pivot table. This function is only available in *Miner Presentation* mode, in other words, the presentation mode that has been started from *Miner* mode (e.g. *View* menu or *F5* key/*Shift F5*).

In this mode, the names of the members that are placed in the table using the pivot navigation steps behave like links: If you mouse over the names, *DeltaMiner* will underline them. If you now click on them once, it will transfer that member to the view. *DeltaMiner* will then release any steps that were run to the right of (or below) the removed hierarchy.

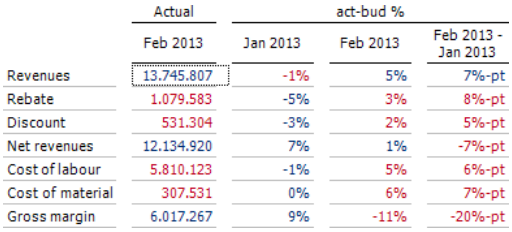


DeltaMiner will display the changed view in the upper part of the report. Here you will also see a *Back* link which you can use to return to the previously applied filter. In other words, *DeltaMiner* will remove the member from the view.



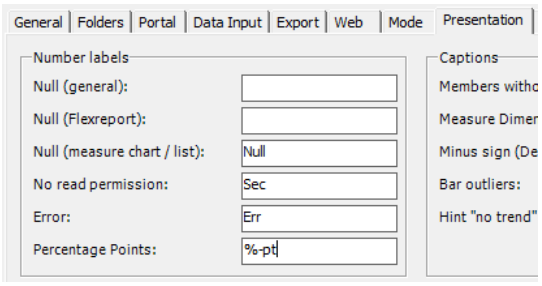
(7) Pivot Table: Displaying Absolute Variances of Percentage Values as Percentage Points

DeltaMiner automatically displays variances of percentage values as percentage points (e.g. “%-pt”) in pivot tables.



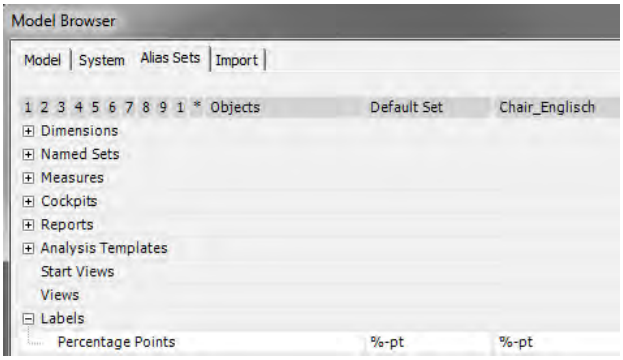
As you can see in the table shown here, the right column contains a time analysis member that calculates the absolute variance to the previous month. Since the parent member here is the relative budget-actual variance (“act-bud %”), both operators for the time analysis member are percentage values. *DeltaMiner* recognizes this and automatically displays the difference in percentage points in the right column. In other words, this format is not determined by a certain member or measure. *DeltaMiner* automatically selects it when it needs to calculate the absolute variance of percentage values.

You can define how you wish to label this variance under *Options* (*Extras* menu) on the *Presentation* tab. For percentage points, the default setting for the text field is “%-pt”.



The caption that is entered in this field determines what *DeltaMiner* displays:

- If the field stays empty, *DeltaMiner* will display the variance with no additional information (e.g. “3”in the above example for revenues).
- If you select “%”, *DeltaMiner* will display the variance as previously – in other words, as it was taken from the measure or member (e.g. “3%”).
- If the term begins with a percentage sign (e.g. “%-pt.”), *DeltaMiner* will attach it directly to the number with no empty space (e.g. “3%-pt.”).
- If you choose any other term, *DeltaMiner* will place it after the number, separated by a space (e.g. “3 percentage points”).



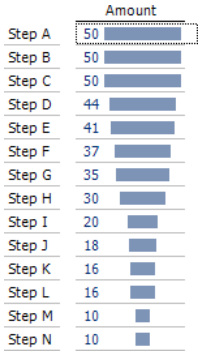
If you work with multilanguage applications, you can administer these *Captions* in the *Model Browser* (*Model* menu) on the *Alias Sets* tab.

This display in percentage points is intended for pivot tables only; it does not work in *FlexReports* or analytical methods. If you export the pivot tables to Microsoft Excel, *DeltaMiner* will still export the values as percentages as in the past.

Here is a tip regardless of the formatting: To ensure that the differences are calculated correctly, pay attention to the *Solve Order* of the calculated members (*Dimension Browser*, *Edit Members* in the context menu of the member). The calculation of absolute variances should have priority over the calculation of relative variances. In this case, absolute variances should be ranked higher in the solve order than relative variances.

In previous versions, *DeltaMiner* has already automatically adjusted the number format when two percentage values converge in pivot tables. For more information on how *DeltaMiner* deals with relative variances of percentage points (e.g. a relative change in market share), please read *DeltaMiner deltas!* 5.5.3, feature #13.

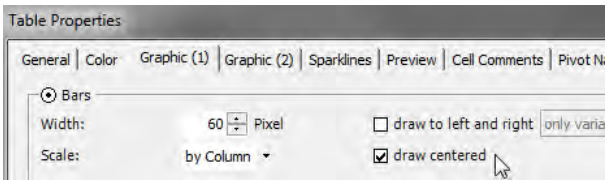
(8) Pivot Table: Drawing Bars Centered



You can now display the bars in pivot tables with center alignment. This presentation is intended for special scenarios such as production monitoring. When you use this format, the table rows describe a related series of members (e.g. the different phases of the manufacturing process). You can read them from top to bottom and interpret them as a chain.

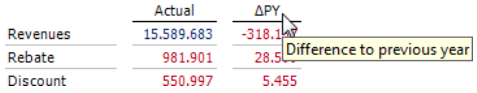
As a result, you can examine which quantities are currently in which stage of production. Figuratively speaking, these quantities flow through the process from top to bottom. The central alignment in this visualization makes it easy to recognize and compare the process flow – for example, to see if pile-ups occur prior to bottlenecks.

You can activate this *Draw centered* option in the *Table Properties* on the *Graphic (1)* tab.



The centered alignment is only intended for pivot tables. If you have a *FlexReport* that refers to cells with this formatting, *DeltaMiner* will not apply the center alignment to them. If you export the pivot table, it will keep the center alignment provided that you export it as an image.

(9) Pivot Table: Displaying Descriptions of Elements as Tooltip



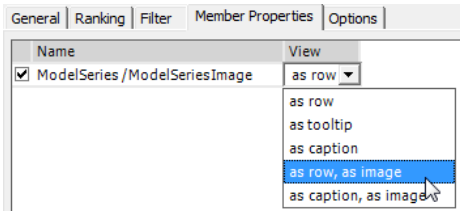
When you mouse over the name of a calculated member or time analysis member, you can now view its description as a tooltip. In past versions of *DeltaMiner*, you could already view descriptions of

measures and members that you edited using the context menu entry in the *Dimension Browser* – but not the descriptions of calculated members. This function allows you to write a short text about the member – for example, to explain an acronym or abbreviation.

(10) Pivot Table: Displaying Picture if Member Property Contains Picture URL

In order to make management information more emotional, you could add pictures of the things you report on in your reports – for example, photos of products if they are easy to identify and differentiate. To ensure that these types of reports keep their easy handling, dynamic structures, and analytic flexibility, we enhanced the pivot table in such a manner, that *DeltaMiner* can now display images (bitmaps) in the cells of pivot tables.

Prior to using this function, you will first need a bit of preparation in the data model. *DeltaMiner* reads the addresses (i.e. URLs) of the images from a member property. This member property, of course, must contain the respective addresses and be stored in the data model. The address lists the file names and folders of the image – either absolute or relative with respect to the folder of the analysis session (DAS file). The images can either be stored in a file system or on a Web server that delivers them using HTTP(S). If you want to distribute pivot tables with images using WebOption, this is the only recommendable option because Web servers and remote users generally have no access to addresses in a file system. Please enter the absolute or relative address with respect to the folder of the analysis session (DAS file). UNC paths are supported.



Once the data model and image repository have been set up, you can activate the image display in the *Axis Definition* of the pivot table on the *Member Properties* tab. Here you can activate the respective member property and define that it should be displayed *as [an] image*.

You can choose from two options:

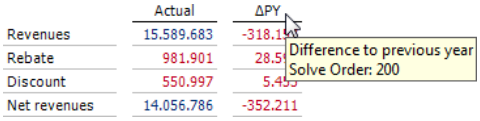
- *As row, as image*: *DeltaMiner* will display the images in an additional column of the pivot table.
- *As caption, as image:* The images will replace the caption. In other words, *DeltaMiner* displays them instead of the member names in the first column of this axis.

When displaying the images, *DeltaMiner* will automatically scale them so that they fit in the table. If necessary, it will reduce the size of the images proportionally but won't enlarge or crop them. These images will not change the row height of the pivot table. Instead, images adapt themselves to the available height. This also applies to the automatic row height, which is calculated as if there were no images. The column width, however, is a different story. If automatic column width has been activated, *DeltaMiner* will first compress the images to fit in the respective row height and then allocate as much space as needed for the width. If you use a user-defined column width, you may need to shrink the images further. If cells with the same content are connected on an axis in nested dimensions, *DeltaMiner* will adjust the image to fit the total combined space. If it cannot find an image, *DeltaMiner* will simply display the member property value as text.

Suitable image material is essential for a good presentation. We recommend, therefore, that you use images that have a white background and similar dimensions.

(11) Pivot Table: Displaying Solve Order of Elements and Measures as Tooltip, Using the Alt Key

DeltaMiner now displays the "solve order" of calculated members, time analysis members, and measures as a tooltip when you mouse over the name of the member or

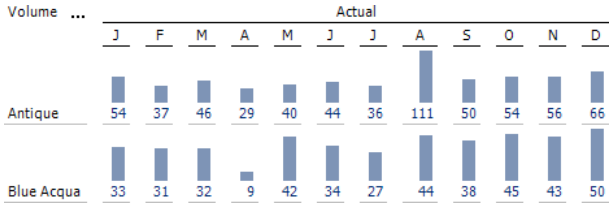


measure while holding the *Alt* key. This lets you quickly see which precedence each member or measure has in a calculation.

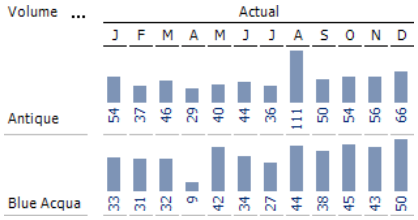
(12) Pivot Table: Displaying Values Upright, to Reduce Column Width

You can now display values upright in pivot tables. This presentation option can provide a better overview in certain situations, especially when you are working with columns.

The pivot table on your right shows the monthly sales figures for the colors “Classic” and “Aquamarine”. The selected columns provide a good way to show the development of the values over time. Nevertheless, it is hard for your eyes to recognize a pattern, because the gaps between the columns are too large – due to the space needed for the values horizontally.



This second pivot table has reduced the gaps by displaying the values in an upright position – and highlights the sales development much stronger than in the previous example. The values may be a bit harder to read, but they are still displayed completely. The columns draw the most attention so that you can compare patterns more easily. And whenever you need an exact number, you can read it without literally needing to move a finger. In short, this upright presentation offers a good way to combine the individual strengths of text and graphics in a concise manner.

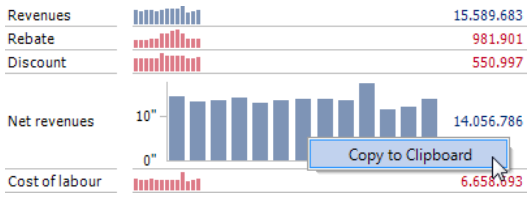


You can activate the option to *Show values upright* in the *Table Properties* on the *General* tab.

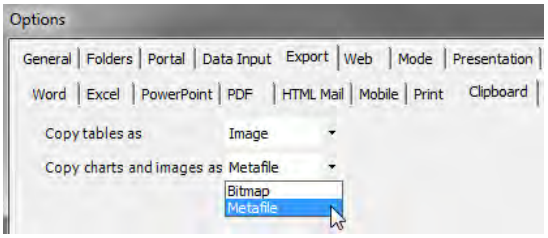
To make the gaps tighter, simply reduce the *Column Width (Data Columns)* to a low number. If you have selected a number that is too small, *DeltaMiner* will automatically adjust it to the smallest possible value. At the present time, you cannot display column headings vertically. They do, however affect the column width. If the column structure is constant (e.g. always January through December), you may wish to shorten the headings with specific aliases for that particular report (see *DeltaMiner deltas!* 5.5.5, feature #12 for more information). This works particularly well for calendar months without compromising their readability.

(13) Pivot Table: Copying a Time Series Chart from Semantic Zoom to the Clipboard or Other Programs Using Drag & Drop

If you have enlarged a sparkline using the Semantic Zoom, you can now use the *Copy to Clipboard* option so that you can reuse it, for example, in Microsoft Word or PowerPoint. Alternatively, you can directly drag and drop the visualization from *DeltaMiner* into the desired program. With this function, you can save a zoomed-in view of a sparkline in the middle of a presentation – without having to export the entire table. For a detailed description of the Semantic Zoom, please read *DeltaMiner deltas!* 5.4.9, feature #18.



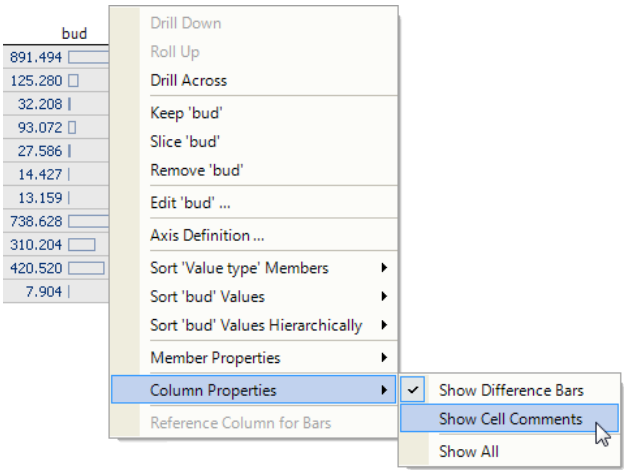
DeltaMiner will then save the graphic as a bitmap or metafile depending on the settings defined in the *Options* (*Extras* menu) on the *Export/Clipboard* tab.



(14) Pivot Table: Hiding Cell Comments in Selected Columns

You can now use a setting in the *Column Properties* to hide cell comments in specific columns, similar to graphical elements like bars or sparklines. When this option is activated, you will not be able to edit cell comments in that particular column.

You can access the *Column Properties* in the context menu of the column headings. If the cell comments are hidden, *DeltaMiner* will not display the red triangles and the tooltip containing the comment text. If the *Show text in cells* setting is activated in the *Table Properties* and cell comments should be hidden, *DeltaMiner* will display the commented numerical value in place of the text.



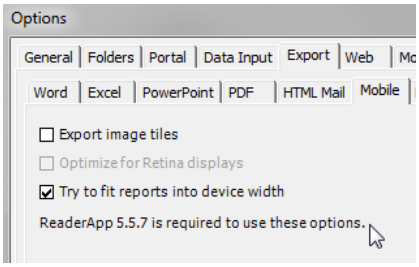
(15) ReaderApp: Updating Briefing Books Made Easier

The briefing books that you have downloaded from a Web server are now easier to update in the *ReaderApp*. When updates are available, you can simply download them directly by clicking on the briefing book symbol.

This affects briefing books that you have downloaded from a Web server using the option “from address” or “from server” (see *DeltaMiner deltas!* 5.4.9, feature #3). While starting the *ReaderApp* it automatically establishes a connection to the server and checks whether more current versions of the installed briefing book are available. If they are, the app will mark the icons of the respective briefing books with an eraser. If you want to update an individual briefing book, the fastest way to do so is to tap the symbol. Simply hold it for a few seconds to open the *Update* button and tap it. To update multiple briefing books at once, simply follow the same procedure as in the past. Go to the *Edit* menu, touch *Update*, select the briefing books that you wish to update, and tap *Update* again.

(16) ReaderApp: Scaling Reports to iPad Width

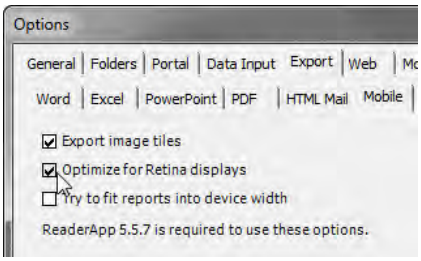
When you export mobile briefing books, you now let the *ReaderApp* to *Try to fit reports into device width*. The option makes all reports bigger or smaller to a certain degree to better utilize the space on the screen. If you are working with a report whose original size is not more than 25% smaller or not more than 20% larger of the screen width, *ReaderApp* can scale them to the width of the device. If the reports have any other size, the app will enlarge them to a maximum of 125% or reduce them to a minimum of 80%. The *ReaderApp* interprets these types of scaled sizes as a standard view (“1x”), and you can always return to this view when you are zooming.



Past versions of *ReaderApp* have also supported scaling functionality. When you open any report, the app will generally display it in its original size – even if the individual values are illegible. To view the new standard view, simply touch the magnifying glass icon at the bottom center of the device.

You can activate the scale in the *Options* of *DeltaMiner* (*Extras* menu) on the *Export* tab, there on the *Mobile* sub-tab. This option is deactivated in the default setting.

(17) ReaderApp: Generating Images for Reports in Retina Resolution



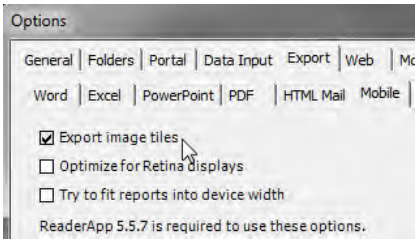
When you export mobile briefing books, you can now choose to *Optimize* the report presentation *for Retina displays*. In previous versions, *ReaderApp* increased the scale of the reports on such high-resolution screens, which actually made the reports a bit grainy. Through the optimization for Retina displays, the report images will be saved as tiles in a higher resolution to fully utilize the presentation capabilities that the screen offers. For older displays, *DeltaMiner* will display the tiles in the same resolutions used previously.

You can only activate the optimization when the *Export image tiles* option is activated. This feature is located in the *Options* of *DeltaMiner* (*Extras* menu) on the *Export* tab, there on the *Mobile* sub-tab.

When you save tiles in multiple resolutions, the files will be significantly larger. Nevertheless, this shouldn't cause any space issues since the storage capacity of iOS devices is typically large enough. If you feel that it now takes too long to download the briefing books, you can simply deactivate the option at any time.

The tiled export is not compatible with previous versions of *ReaderApp* and, therefore, is not activated in the default settings of *DeltaMiner*. The option is saved in the Windows Registry and, therefore, valid for all mobile exports.

(18) ReaderApp: Tiling Reports to Support Large Reports



When you generate mobile briefing books, *DeltaMiner* can now *Export image tiles*. This allows *ReaderApp* to display larger reports that it couldn't in the past due to memory limits in iOS in some cases. You can activate the tiles in *Options* of *DeltaMiner* (*Extras* menu) on the *Export* tab, there on the *Mobile* sub-tab. This option is saved in Windows Registry and, therefore, valid for all mobile exports.

You can only open mobile briefing books with tiled reports in *ReaderApp* version 5.5.7 or higher. If you try to open these DMMOBILE files in an older version, a dialog box will prompt you to update the app. Since this option is not compatible with previous versions, it is not activated in the default settings.

(19) Repository: Maintaining Rights for Own Roles

In the *Repository*, you can now edit roles of which you are a member. In the past, you could only administer rights for other roles. The change takes into account that the same people who administer *DeltaMiner* roles often work with *DeltaMiner* themselves and, accordingly, are a member of multiple roles such as "Admin" or "Sales".

The authorization concept in the repository ensures that users can neither "lock themselves out" nor obtain more permissions than they should have. *DeltaMiner* will not accept these types of changes in permissions and will notify the user through a dialog box.

You can only save changes to permissions in the repository when you *Open [the]* application *for exclusive write access* (*Open in Option Dialog* in the context menu of the application in the *Portal*).

(20) Repository: Specifying the Repository to Be Accessed Using the Command Line Parameter "-repository"

When multiple repositories are available, you can use the command line parameter "-repository" to designate which one should be used to open a certain application in *DeltaMiner*. This can be useful, e.g. to create a link on the Windows Desktop which you can use to open a certain application in a specific *DeltaMiner* repository with a double click. In previous versions, you could only open a repository application through a command line if there was only one repository (see *DeltaMiner deltas!* 5.5.0, feature #20).

The command line parameter “-repository” does not work on its own. You can only use it in combination with “-app”:

Client.exe -repository:N -app:X

The values [i.e. the name of the repository (“N“) and the ID of the application (“X”)] are attached with a colon with no space in between. In previous *DeltaMiner* versions, you could enter the application ID without a colon as well. Although this syntax is still supported, we recommend that you set the colon for the sake of consistency.

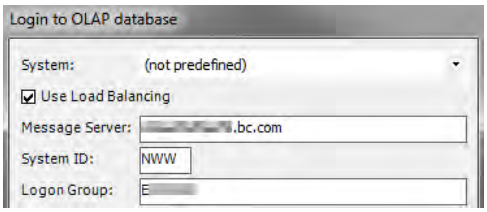
The names of the repositories are defined in the “Client.exe.config” file:

<endpoint address=" …" … **name="…">**

These entries also determine how the repositories will be displayed in the *Portal*. You also can find the ID of the desired application in *Portal* in the *ID* column of the *Applications in Repository*.

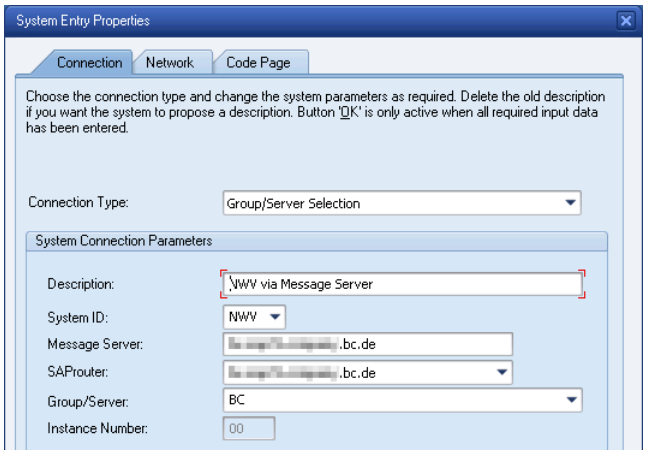
For a list of further command lines, please read *DeltaMiner deltas!* 5.5.0, feature #20. You can view all of the parameters in the command prompt if you enter “-?” or “-help” as a parameter (i.e. “Client.exe -?“ or “Client.exe –help”).

(21) SAP BW/NetWeaver BI: Using Logon Load Balancing, and Logon via Message Server, SID, and Logon Group



When you log on to an SAP system you can now activate the *Load Balancing* if required by your system. Simply activate the *Use Load Balancing* option in the database log-in dialog box and complete the fields for *Message Server*, *System ID,* and *Logon Group*.

You can find the information that you need in the *System Entry Properties* in SAP BW.



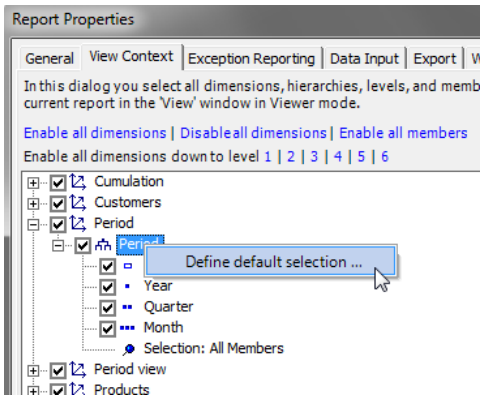
(22) View Context: Defining the View in Relational Models Dynamically Using a Default Selection

For reports and folders, you can now define a *Default Selection*, which automatically sets the view for the report or folder – e.g. the current month or current user – in *Viewer* mode. You can define the selection in MDX (for multidimensional models) or SQL (for relational models). *DeltaMiner* has already supported a *Default Selection* in MDX since version 5.4.9. Starting in version 5.5.7, a *Default Selection* is also supported in SQL.

The *Default Selection* makes it much easier for report consumers to use certain reports in Viewer mode. For example, you can access the system date and use it to preconfigure the current date or current month for a report. Report editors profit from this function as well. If you are able to dynamically define a generator member as a *Default Selection*, you may not need to run an iteration using the *Report Generator* in the

ReportServer in some cases. If a job generates, for example, user-specific briefing books in which a different user name should be preconfigured such as in a data entry or planning application, you could use the *Default Selection* to read out and select the registered user. In theory, you could also apply analytic criteria using MDX or SQL to create a *Default Selection* such as the 10 largest customers. These types of queries, however, belong into the report itself – and not into the view.

(a) Define a Default Selection



You can *Define* [a] *default selection* in the *Report Properties* or *Folder Properties* (context menu of report or folders in *Pivotizer*, *Analyzer*, or *Miner* modes) on the *View Context* tab in the context menu of hierarchies. Here you can *Define* [a] *default selection* in multiple dimensions. If multiple hierarchies have a *default selection* in a dimension, *DeltaMiner* will apply the selection of the hierarchy that is placed in the view.

To define the selection, you simply open the standard MDX editor or SQL editor in *DeltaMiner*.

- For MDX: The expression that you generate must return a member or set.
- For SQL: The SQL query must list the key column of the level that contains the desired member in the first result column. The SQL query will ignore any further result columns. You cannot query members on different levels.
- For both: If the query does not return any records, *DeltaMiner* will use the first member of the top level allowed (i.e. normally the “All” member) as the member for the view.

The following two examples describe how you can make a member selection that is dependent on the system environment:

- The following MDX expression reads the system date as a string and returns the member whose name matches the string in the time dimension. In order for this to work, the periods in the application need to be named so that the member names can be generated with the typical date formats.

```
StrToMember("[Periods].[Periods].[" + Format(now(), "MMM yyyy") + "]")
```

The respective query in SQL could then be (please include “SELECT” as well):

```
SELECT CAST(YEAR(GETDATE()) AS VARCHAR) +
RIGHT('00' + CAST(MONTH(GETDATE()) AS VARCHAR), 2) AS MonthId
```

- The following MDX expression reads the name of the current Windows user, cuts off the domain name, and returns the member whose name matches the string from a user dimension.

```
StrToMember("[User].[User].[" + Mid(UserName(), InStr(UserName(), "\") +1) + "]")
```

The respective query in SQL could then be (please include “SELECT” as well):

```
SELECT UserId FROM User WHERE User.WindowsUserName LIKE SYSTEM_USER
```

As soon as a *default selection* has been defined, *DeltaMiner* will display this after the name of the dimension. To remove the selection, simply open the editor and delete the expression.

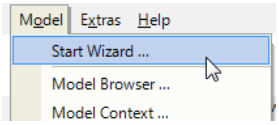
(b) Affects of the Default Selection in Viewer mode

The *Default Selection* only works in *Viewer* mode (similar to the view context in general) and only when the user opens the report or folder for the first time. At this time, *DeltaMiner* will calculate all of the expressions defined as a *Default Selection* and set up the view for the report or folder accordingly. The effect is as if you had switched the view yourself; afterwards, the reports and folders have the dynamically generated view. If you switch to another report and then back to the default selection or from *Viewer* to *Miner* and back to

Viewer, *DeltaMiner* will neither recalculate the defined expressions nor adapt the view again because this only happens the first time that a user opens the session.

In the case of a folder, the view setting affects the folders and reports within that folder – just as you already know from *Viewer*.

(23) Start Wizard: Using the Start Wizard during a Session



You can now open the *Start Wizard* during the current session. As a result, you can generate standard reports and other elements that you often use in *DeltaMiner* applications whenever you need them. This new function makes it easier to build new applications. Now you can simply connect to the data source, preview the data with *DeltaMiner*, and once you have familiarized yourself with the data, create standard objects in *DeltaMiner*.

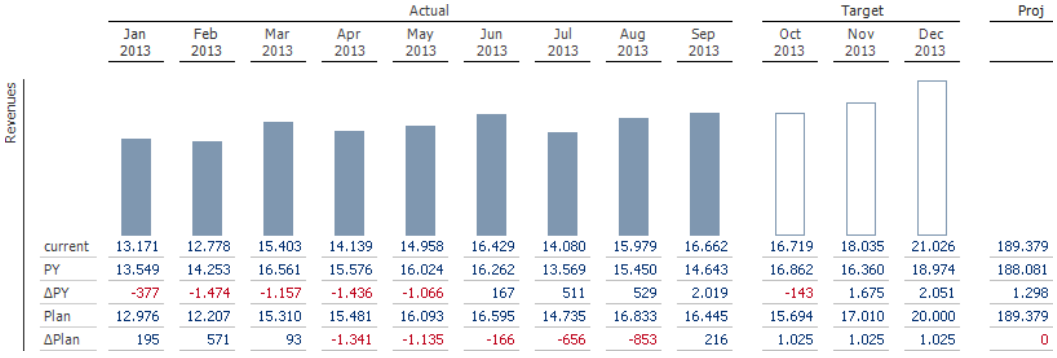
Before you create new objects, *DeltaMiner* will try to recognize if these objects are already available to avoid unnecessary duplication. This doesn't work, however, for reports. If you run the wizard multiple times, *DeltaMiner* will create new folders with standard reports every time. To prevent this from happening, you can now deactivate the option to create new reports (see feature #25) in the new *Options* for the *Start Wizard*.

When you open the start wizard from a current session, *DeltaMiner* will not apply a few custom settings. For example, the member properties will only be displayed as an alias if you have specifically activated this *Option*. It will also not move the standard dimensions (e.g. Period, Period View, Cumulation, Scenario) into a separate dimension group, change the BI factor of the measures, or activate the option that the description (and not the name) of calculated members should be displayed in the dimension browser.

As in past versions, you can only access the start wizard from *Miner Expert* mode and in combination with certain OLAP databases (i.e. Microsoft SQL Server Analysis Services, IBM Cognos TM1, and Infor BI OLAP). You can access the feature during the analysis session in the *Model* menu. Up until now, you could only access *Start Wizard* when you created a new analysis model. For more information, please read *DeltaMiner deltas!* 5.5.3, feature #24.

(24) Start Wizard: Creating a Standard Report to Show the "Way to go" (for Time Series without a Seasonal Component)

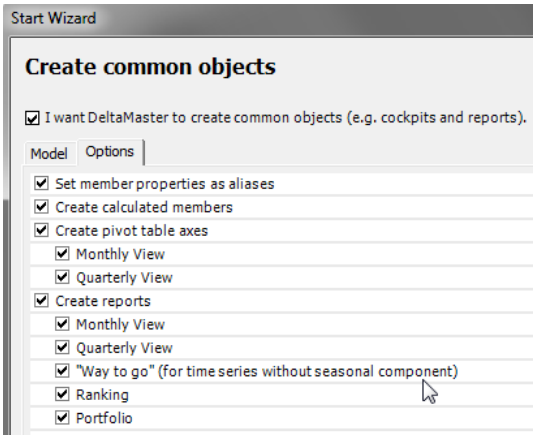
From the start wizard, you can now create a new standard report, which we call *"Way to go".*



	Jan 2013	Feb 2013	Mar 2013	Apr 2013	May 2013	Jun 2013	Jul 2013	Aug 2013	Sep 2013	Oct 2013	Nov 2013	Dec 2013	Proj
current	13.171	12.778	15.403	14.139	14.958	16.429	14.080	15.979	16.662	16.719	18.035	21.026	189.379
PY	13.549	14.253	16.561	15.576	16.024	16.262	13.569	15.450	14.643	16.862	16.360	18.974	188.081
ΔPY	-377	-1.474	-1.157	-1.436	-1.066	167	511	529	2.019	-143	1.675	2.051	1.298
Plan	12.976	12.207	15.310	15.481	16.093	16.595	14.735	16.833	16.445	15.694	17.010	20.000	189.379
ΔPlan	195	571	93	-1.341	-1.135	-166	-656	-853	216	1.025	1.025	1.025	0

This report calculates the target values for the remaining months of the year. These target values show how much work still needs to be done in order to achieve the annual targets – in short, the way to go. They are calculated from a so far accrued negative variance (cumulated plan-actual variance). This is broken down equally among the future months and added to the plan values. In the "Target" section, these additional amounts are listed in the bottom row (ΔPlan), the sum of the plan value and this additional amount is listed as the target value in the top row. If the cumulated variance is positive, the target equals the plan because no "catching up" is necessary.

DeltaMiner will automatically enter the explanation given in the paragraph above as a comment in the report to help the reader understand the context. The values of the last column “Forecast” display the sum of the actual and target values.



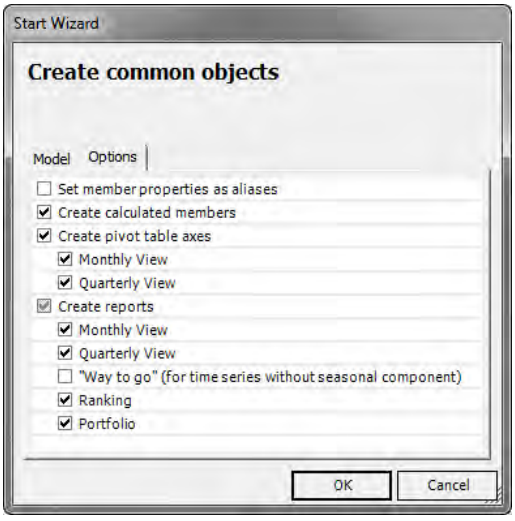
To create a “*Way to go*” report, simply activate the respective entry in the *Options* of the *Start Wizard* (see feature #25). You can now open this option, which is actually the last step in creating a new analysis model, during an active analysis session from the *Model* menu (see feature #23).

DeltaMiner generates this report as a pivot table, which uses revenues for the KPI (or the respective measure that is selected for revenues in the *Start Wizard* on the *Model* tab under the section *KPI*). On this tab, you can also define other parameters such as which members represent actuals, plan values, and variances. *DeltaMiner* will generate a calculated member in the Scenario dimension for the target values. This member explicitly references the month level in the time dimension; for other levels, this view isn’t appropriate. As a result, *DeltaMiner* generates the report with an edited view context so that you can only select months in *Viewer*.

The final table works like any other pivot table in *DeltaMiner*. That means, for example, you could select a measure, add a further dimension to the time axis, break down the target values using the pivot navigation, or drag and drop them into a specific analytic method.

Since *“Way to go”* reports distribute the accrued variance equally, they are designed for time series without a seasonal component. If, for example, your business regularly has a summer slump or strong holiday season, an equal distribution can lead to unrealistic targets for the individual periods. In industries or application scenarios with relatively steady business, however, the *“Way to go”* report is an instrument that can help steer future actions.

(25) Start Wizard: Selecting Which Objects to Create



You can now define which standard objects you want to create (or not) in the *Start Wizard.* This is very useful if you need to open the wizard several times to build a new *DeltaMiner* application step by step. You can also use this feature, for example, to build a *“Way to go”* report at a later point in time (see feature #24) without having to generate the existing monthly and quarterly views all over again.

The standard objects are now listed as *Options* on a separate tab.

- *Set member names as aliases*: In many data models, the member names are only a system-generated ID while the more self-explanatory descriptions (e.g. material numbers, product names) are listed as member properties. When you activate this option, *DeltaMiner* will select a member property for the hierarchy levels that have member properties and use it as an alias. To determine which member property it should use, *DeltaMiner* will search the properties’ names for specific text patterns that indicate a descriptive name. These patterns can be property names that are equivalent to level names, language acronyms such as “_DE” or “_EN”, or the auxiliary “DES” (i.e. for Description), which is the standard in *DeltaMiner Modeler*.

- *Create calculated members*: If you activate this option, *DeltaMiner* will generate some commonly needed calculated members – provided that they have not been defined to this point. These members include time analysis members (e.g. variance to the previous period, variance to the previous year), cumulation members in a separate “Cumulation” dimension, the period view, or variances in the “Scenario” dimension.
- *Create pivot table axes*: You have been able to save axes of pivot tables as named sets in *DeltaMiner* since version 5.5.6 (see *DeltaMiner deltas!* 5.5.6, feature #9). This makes them easy to reuse and administer centrally. With this option, you can define if the definition of the column axis should be saved as a named set in the *Monthly View* or the *Quarterly View*.
- *Create reports*: With this option, you can manage which standard reports *DeltaMiner* should create. You can choose from pivot tables with a *Monthly View* and a *Quarterly View*, a *Ranking,* and *Portfolio Analysis* – each in the *Main Dimensions* as defined on the *Model tab.* You can also select the new “*Way to go”* report, which is described in feature #24.

DeltaMiner automatically accounts for dependencies among the options – for example, the *Monthly View, Quarterly View,* and the *“Way to go”* are all based on calculated members. As a result, it will automatically select this option as well if you choose one of these reports.

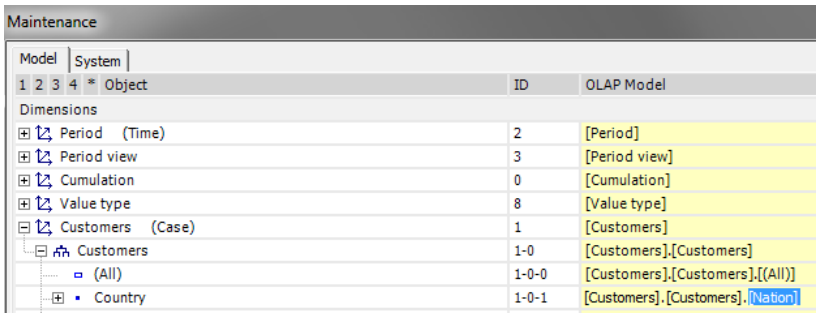
The start wizard always makes certain adjustments without offering an option in new as well as existing sessions. In this manner, it will create a notation rule for the plan member and remove a few standard members (e.g. actual, reference member of the period view, and cumulation) and hide all levels of the time dimension from the view description.

If *DeltaMiner* could not create any objects because not all of the requirements had been met, it will inform the user through a message in a dialog box.

(26) Maintenance Dialog Box: Renaming Levels

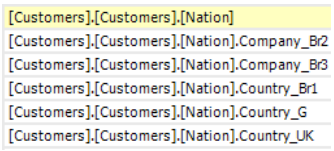
If you have changed the names of hierarchy levels in the data model, you can reuse the underlying analysis files (DAS, DAM) by giving them a new name in the maintenance dialog box. In previous versions, you could only change the names of dimensions and hierarchies in this dialog box (see *DeltaMiner deltas!* 5.5.1, feature #29 for more information).

The fields in the maintenance dialog box that you can modify are highlighted in yellow. If, for example, the name of the level “Country” has changed to “Nation” in the database, you can enter that new name in the respective field. Please enter all level names in brackets.



DeltaMiner will automatically update the names of member properties that depend on the changed level name as soon as you confirm the entry by pressing *Enter*. At this moment, this name change will immediately take effect in the analysis session as well.

In doing so, *DeltaMiner* combs through the entire analysis session searching for the respective level and replaces the old name with the new one – in axis definitions, named sets, calculated members, user-defined measures, and many other places that reference levels.



If you have made a change and close the maintenance dialog box by clicking *OK*, *DeltaMiner* will open the file selection dialog box which will prompt you to save the file. The changes will take effect once you have saved the file.

To *Open* an analysis file *in the Maintenance Dialog*, simply select the respective option from the context menu of the file in *Portal* or the *Maintenance* command from the *Model* menu. Any opened analysis files must be closed prior to doing so.

(27) Update Notes

The following table shows if the new release contains any changes to the metadata schema of ReportServer and *WebOption* as well as the *WebOption* configuration files.

Component	Files	Changes since version 5.5.6
ReportServer	„ReportServer.mdb“, „ReportServer (SQL Server).sql“, „ReportServer (Oracle).sql“	No
	„ReportServer.exe.config“	No
Repository	„Repository.sql“	Yes
GUI repository	‘DeltaMaster.Repository.exe.config’	No
WebService	‘DeltaMaster.Service.exe.config’	No
WebClient	‘web.config’	No

The metadata scheme of **ReportServer** has not changed. As a result, you do not need to run the ‘ReportServer (SQL Server).sql’ or ‘ReportServer (Oracle).sql’ script. You should, however, update the ‘ReportServer.exe’ file as well as the respective DLLs so that they match the current *DeltaMiner* version. The ODBC connection string, which is specified in the job definition database, is saved in the “ReportServer.exe.config” file. Please create a backup copy of this file before you install the current version of the *Report Server* files.

The **WebOption** components – *Repository GUI, WebClient,* and *WebService* – are available in version 5.5.7. An update is recommended. Please note that support for Microsoft Internet Explorer 6 and 7 has stopped in version 5.5.4. In addition, Microsoft .NET Framework 4.0 or higher has been required since version 5.5.6. Before you update *WebOption*, please create backup copies of the configuration files (see table above), any changed graphics in the “Image” folder (e.g. “Master_Top.png”) as well as the style sheet file (e.g. “DeltaMaster.css”). You can update the *WebService, WebClient, and Repository GUI* by copying the new files into the respective directories. A separate setup is not necessary.

27 DeltaMiner deltas! 5.5.8

What's new in version 5.5.8? Find out in this overview!

(1) Add-in for Microsoft Office: Specifying Filter Members in Field Codes 2
(2) Add-in for Microsoft Office: Using the Alt Key to Show Technical Information in a Tooltip 2
(3) Add-in for Microsoft Office: Specifying Cell References to Pivot Tables in Field Codes 2
(4) Measure Properties: Transferring the Formatting of Measures from Analysis Services 3
(5) ReportServer: Using Applications from Repository as a Report Source 3
(6) ReportServer: Using DM2GO ("DeltaMiner to go") Files as a Report Source 4
(7) ReportServer: Administering Multiple Repositories as the Source or Target of Jobs 5
(8) Help: Using Synonyms and Cross References for Keywords 5
(9) Help: Viewing a List of Recently Added or Updated Documents and Blog Postings 6
(10) HTML Export: Using Variable to Insert the Heading or the Report Title (If No Heading is Available) 7
(11) Microsoft Analysis Services: Providing a List of Suggested OLAP Servers via the Registry 7
(12) Model Synchronization: Leaving New Dimensions and Hierarchies Disabled in a Restricted View Context of Folders and Reports 7
(13) Pivot Navigation: Displaying Top, Bottom, and Remaining Members 8
(14) Pivot Table: Displaying Bars as Tally Sheets 9
(15) Pivot Table: New Ranking Option "TopCount/BottomCount" Including Remaining Members 10
(16) Planning: Using Planning Functions in Presentation Mode 11
(17) Planning: Disabling the Option to Change Dependent Measures 11
(18) Repository: Saving an Analysis Session from the Repository to the Repository with Ctrl+S 12
(19) Repository: Sorting Applications with Drag and Drop Functions 12
(20) Repository: Specifying the Host and Port of the Repository with the Command Prompt "-repository" 13
(21) SQL Drill Through: Define Default Values for New Data Records 13
(22) SQL Drill Through: Transferring Hyperlinks to HTML Emails 14
(23) SQL Drill Though: Switching the Sorting Option to Ascending, Descending, or Unsorted 15
(24) SQL Drill Through: Sorting, Renaming, Hiding, and Showing Columns Directly in the Table 15
(25) Update Notes 15

(1) Add-in for Microsoft Office: Specifying Filter Members in Field Codes

Updating *DeltaMaster* objects that have been inserted into a Word document using the *Add-in for Office* is now easier: You can use the new parameter “DimensionX” in the Field Code of the Add-in to define the view in a certain dimension (e.g. on the current period in the time dimension). Previously, you had to change the reports in the Repository because you could not set the view from the Word document.

The “X” in the parameter “DimensionX” stands for the dimension ID. You can view this ID in the *View* window of *DeltaMiner* if you hold the *Alt* key while you mouse over the dimension.

The parameter must be placed immediately following the term “Report”. You can specify one or more members as value, multiple members are separated by commas and used by either their unique names or simple member names. If the member name contains a comma, you must place this name in quotation marks. The parameter can be used several times to set the view in multiple dimensions, for example:

{ =Service:L1,Application:1,Report:1,**Dimension3:Arcade,Precisio**,Item:TableImage }
{ =Service:L1,Application:1,Report:1,**Dimension5:May 2013**,Item:TableImage }
{ =Service:L1,Application:1,Report:1,**Dimension5:May 2013,Dimension8:Plan**,Item:TableImage }
{= Service:L1,Application:1,Report:1,**Dimension5:[Period].[Period].[Year].&[2013]**,Item:TableImage }

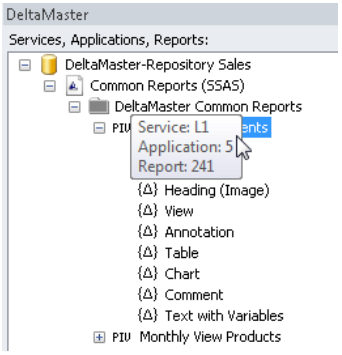
Changing the view in this manner will only affect how the results are calculated in the Add-in. Saved reports are not affected. The *View Context* that is defined for *Viewer* mode is irrelevant for the Add-in.

If you want to set the view using this function parameter, the Add-in and the Repository Service must both run version 5.5.8. Version 5.5.7 and previous versions will ignore any functions that use this parameter, and will neither show an error message nor a result.

The *Add-in for Office* is described in detail in *DeltaMiner deltas!* 5.5.7, feature #1. For more information about working with parameters, please read Section (f).

(2) Add-in for Microsoft Office: Using the Alt Key to Show Technical Information in a Tooltip

If you hold the *Alt* key and mouse over a node, you can display technical information as a tooltip in the task pane of the *Add-in*. This function is known in many *DeltaMiner* modules, where you can also use the *Alt* key to access further technical information. In the *Add-in*, you can view the IDs of the respective objects as a tooltip and use them to edit the parameters of Field Codes (see *DeltaMiner deltas!* 5.5.7, feature #1f). The IDs of the applications, folders, and reports are identical to those that are displayed in *DeltaMiner*.



(3) Add-in for Microsoft Office: Specifying Cell References to Pivot Tables in Field Codes

Starting in version 5.5.8, the *Add-in for Office* can access content of an individual cell (e.g. a revenue value) in pivot tables. With this function, it is possible to insert that value into the body text.

These cell references are an extension of the variables for the item “Text”. You can list the coordinates of the desired cells in curly brackets in row-column (RC) notation, similar to how you would use them in a *FlexReport* or *ReportServer*. “{R5C2}”, for example, refers to the cell in row 5, column 2. The numbering begins with 1, thereby making “{R1C1}” the cell in the upper-left part of the table. In *Miner* mode, you can easily obtain these coordinates by showing the *Cell Coordinates* (*I want to* menu in the *Cockpit* window or the context menu.) For example:

{ =Service:L1,Application:3,Report:1,Item:Text,"{<view1>} generated {R5C2} in revenues."}

This function will return a value, the name of a member or measure, or a member property. It cannot access other cells. In the case of row, column, and table aggregations, this function will return a question mark.

The Add-in and Repository Service must both run version 5.5.8 (or higher) if you want to use cell references in text. Version 5.5.7 and previous versions will ignore any functions that use this parameter and will neither display an error message nor a result.

The *Add-in for Office* is described in detail in *DeltaMiner deltas!* 5.5.7, feature #1. For more information about working with parameters, please read Section (f).

(4) Measure Properties: Transferring the Formatting of Measures from Analysis Services

In new analysis models, *DeltaMiner* now takes note of the format expressions of measures ("FORMAT_STRING" property) that are defined in Microsoft Analysis Services and transfers the respective number formatting. If the formatting has already been configured in Analysis Services, this feature allows you to set up analysis models more quickly.

When you synchronize the models, *DeltaMiner* will also transfer formats that have been changed in the database to existing analysis models provided that they haven't already been changed in *DeltaMiner*.

The format expressions of Analysis Services differ from those that are used in .NET Framework and *DeltaMiner*. The following table shows how these expressions are "translated".

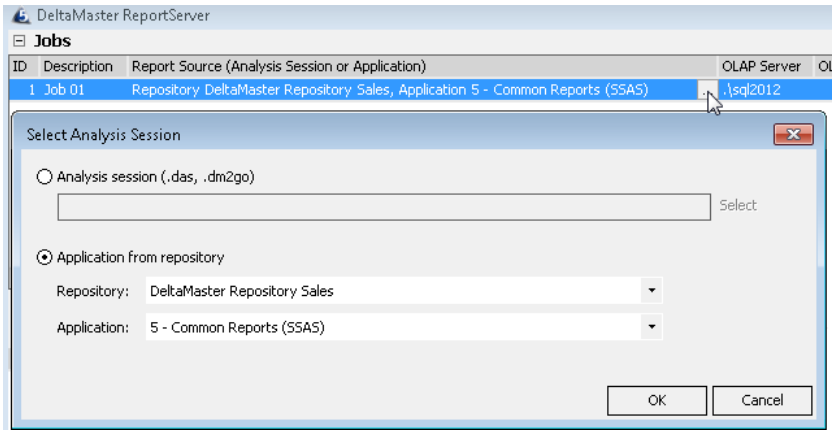
Analysis Services	DeltaMiner	Description
Standard # #,#	n0	Number without a decimal, Integer
.0 #,#.0	n1	Number with 1 decimal place
.00 Currency #,#.00	n2	Number with 2 decimal places
.000	n3	Number with 3 decimal places
#%	p0	Percentage without decimal places
.0%	p1	Percentage with 1 decimal place
.00% Percent	p2	Percentage with 2 decimal places
.000%	p3	Percentage with 3 decimal places

For the Analysis Services formats .0, .00, .000, etc. or .0%, .00% etc., the ending can also just be contained in the format expression. For example, "#,##0.00" will be translated to "n2".

(5) ReportServer: Using Applications from Repository as a Report Source

ReportServer can now use applications from a Repository as a *Report Source*. This lets you use all of the storage concepts in *DeltaMiner* as the source and target of *ReportServer* jobs: analysis sessions (DAS files) always, and now DM2GO files (see feature #6) and applications in the *Repository*. If you haven't yet moved

an analysis session to the Repository because you use it as a source for a *ReportServer* job, now there is no more reason not moving it.



If you want a *ReportServer* job to access a Repository, you will first need to configure it in the *Settings* of *ReportServer* as described in feature #7.

The *Report Source* field in the job definition has changed so that you can now select applications in the Repository. When you double click on this field or click on the button with the ellipsis (i.e. three dots), *ReportServer* will open a new dialog box where you can *Select* [the] *Analysis Session* – either an *Analysis Session* or an *Application from Repository*:

If the job should use an *Analysis Session* as a report source, *Select* the desired DAS or DM2GO file as usual with the help of the file selection dialog box. The job definition will then list the name of the analysis file as the *Report Source*. As in the past, you can edit it by hitting the *F2* key.

If the job should base on an *Application from* [a] *Repository*, select the desired *Repository* and *Application*. The *Repository* list shows all Repositories that have been added in the *Settings* (see feature #7). The *Application* list shows all of the applications that are visible for the current user in the selected Repository. The job definition will list the name or ID of the Repository as well as the ID and name of the application as the *Report Source*. The F2 key is locked in this case. If you want to edit the *Report Source* double click on the entry or click on the ellipsis button.

ReportServer uses the same permission concept for defining and running jobs as *DeltaMiner* (see *DeltaMiner deltas!* 5.4.9, feature #20). This, in turn, affects the user's editing possibilities.

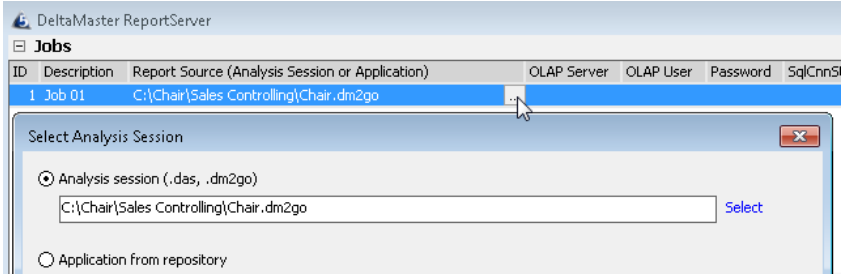
In order to access an application at all, the current user must at least have the Session Right *Display*. The user can then update and export the folders and reports for which he/she has *Display* rights. *ReportServer* will reset and recalculate all reports before exporting them.

To change the view of reports as a *Report Update* or *Report Generator*, the current user must at least have *Editing* rights.

To export an application as a *DeltaMiner* file (*Report format* "das", "das-offline", or "dm2go"), the current user must have special *Save as file* session rights (see *DeltaMiner deltas!* 5.5.6, feature #20).

A job can update and replace the current application by saving the source application with the same ID to the Repository. *ReportServer*, however, will check if the folder selection hasn't become smaller (e.g. through iterations) to prevent the unintentional loss of original parts of the application.

(6) ReportServer: Using DM2GO ("DeltaMiner to go") Files as a Report Source



ReportServer can access DM2GO ("DeltaMiner to go") files as a report source. As a result, you can now use all of the storage concepts in *DeltaMiner* as the source and target of *ReportServer* jobs: analysis sessions (DAS files) always and now DM2GO files and applications in the

Repository (see feature #5).

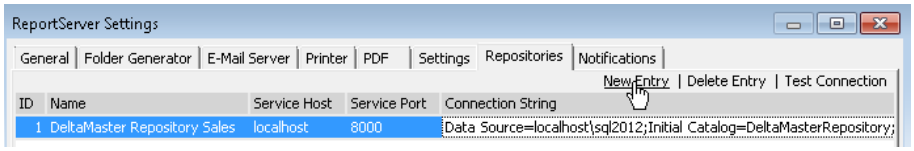
When you double click on the *Report Source* field or click on the ellipsis button, *DeltaMiner* will open a dialog box where you can *Select* [an] *Analysis Session*. Use the normal file selection dialog box.

When a job is based on a DM2GO file, the data source is always the local cube file which is contained in the DM2GO file. The fields *OLAP Server*, *OLAP User,* and *Password* are, therefore, irrelevant. The respective relational data model is not part of the DM2GO file and can be changed through the *SqlCnnStr* field.

(7) ReportServer: Administering Multiple Repositories as the Source or Target of Jobs

Starting with version 5.5.8, *ReportServer* can work with multiple Repositories – writing (as the output target of a job) as well as reading (as a report source, see feature #5). These Repositories can be entered in the *Settings* of *ReportServer* on the *Repositories* tab. You can use the links on the upper corner of the tab to create a *New Entry* or *Delete* [the selected] *Entry* (without any further confirmation).

The third link is called *Test connection*. You can use it to confirm if the service is available. This link does not check if there are applications available for the current user or if he has access rights to the database.



A Repository entry consists of five fields:

- The *ID* is a unique identifier that is automatically generated and cannot be changed.
- You can choose any *Name* you wish. This name will be displayed as the *Report Source* in the job definition as well as the respective selection dialog box.
- The *Service Host* is the name or the IP address of the server that provides the service.
- The *Service Port* is the port that is configured for the server as listed in the file “DeltaMaster. Service.exe.config”. The host and port are required for read access when a Repository is used as a report source. If the Repository is only used as the target of a job, you can leave the *Service Host* and *Service Port* fields blank.
- The *Connection String* is required for write access, in other words, the *Distribution Type* “repository” (for more information please read the documentation for *DeltaMiner WebOption*, Section 4.4). This is equivalent to the entry in the “DeltaMiner. Repository. exe.config” file. If a Repository is only used as a report source, a *Connection String* is not necessary.

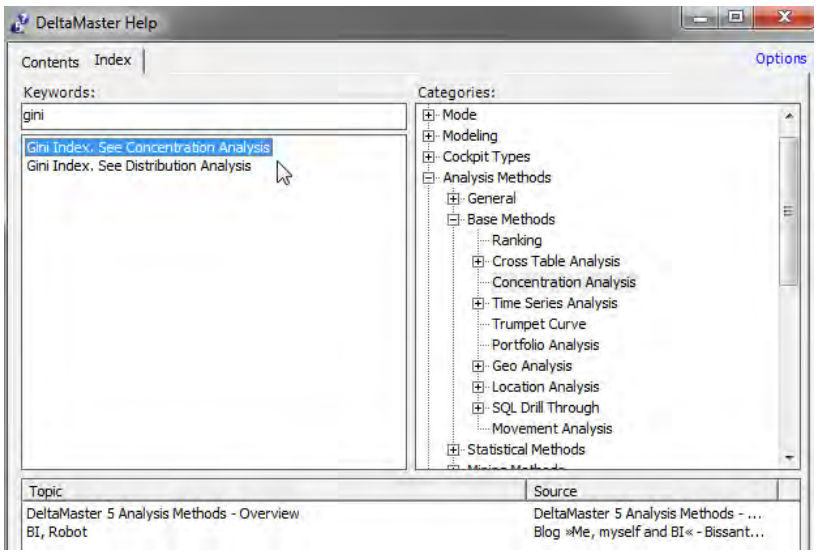
A Repository that was registered in previous versions will be automatically added to the Repository list. The *Service Host* and *Service Port* will remain empty for this Repository because these entries could not be configured in the past.

(8) Help: Using Synonyms and Cross References for Keywords

The *DeltaMiner Help* has become even more user-friendly: Many keywords are now tagged with synonyms and cross references that are linked to the appropriate categories and topics. If you search for the keyword “Word Graphics”, *Help* will display a cross reference to “Sparklines” and, from here, multifaceted sources which explain e.g. their advantages and how to use them.

The Help also contains cross references. The keyword “Cross Selling Analysis” will redirect you to “Association Analysis”, “BCG-Matrix” references to “Portfolio Analysis“, and “Tops/Flops” will direct you to “Ranking”. This way, you can quickly find the suitable analysis method in *DeltaMiner* based on the usage scenario.

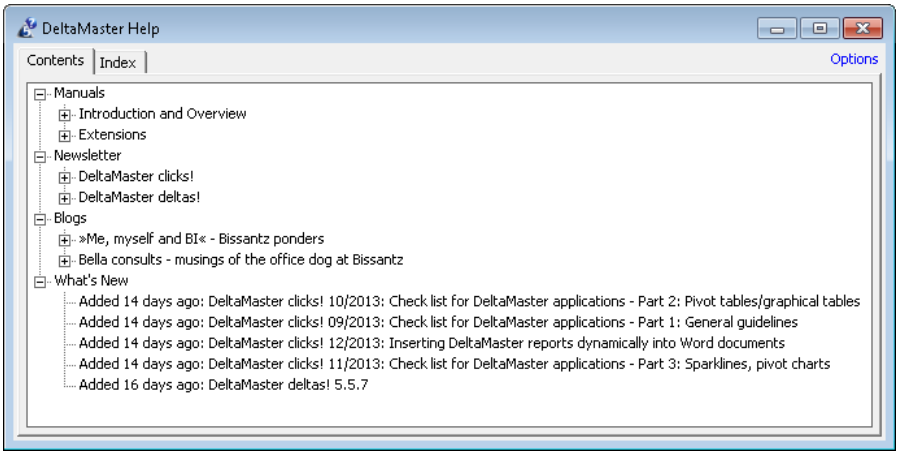
For specialized terms from the individual modules, *Help* now also contains cross references to the overriding topic. As a result “Coefficient of Variation” will direct you to “Distribution Analysis” where this coefficient is displayed as a spread measure. If you enter “gini”, you will be directed to “Concentration Analysis” or “Distribution Analysis” because both of these analytical methods calculate this index.



You can open the help function from the *Help* menu or with the *F1* key (see *DeltaMiner deltas!* 5.5.4, feature #1). The synonyms and cross references are integrated in the help file (“Help.xml”). This is compatible with previous versions of *Help* (i.e. no changes are necessary, but the entries containing synonyms and cross references will not be displayed in previous versions). In other words, you can use the files from the updated help function exactly as they are in previous *DeltaMiner* versions.

(9) Help: Viewing a List of Recently Added or Updated Documents and Blog Postings

In the *DeltaMiner Help,* you can now see at a glance which information has been recently added or updated. On the *Contents* tab in the *What’s New* section, you can view new and revised documents and blog postings sorted by the date when they have been published or updated.



The entries in this section are compiled from the publication or revision dates in the help file (i.e. “Help.xml”). If and when the documents have been downloaded is irrelevant. The information that a document has been added or updated means that it is now available in the *DeltaMiner Help* – and not that it has been downloaded or is available on your computer. The *What’s new* section shows new or modified entries within the past 30 days.

DeltaMiner Help is a dynamic system that is continually updated, for example, through new editions of *DeltaMiner deltas!* as well as new blog postings and documents on special topics. The *What’s New* section provides a further gateway to the information that is offered in the help function. Best of all, you can read it without having a specific task in mind – for example, to learn more about different topics, to expand your knowledge, or as food for thought.

(10) HTML Export: Using Variable to Insert the Heading or the Report Title (If No Heading is Available)

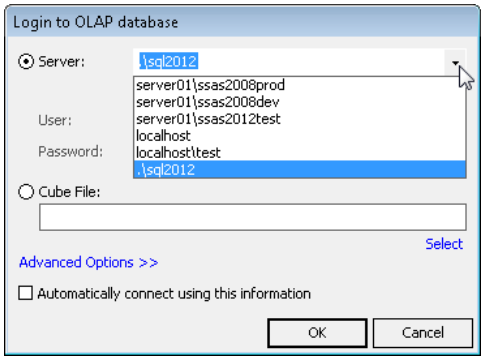
The HTML export of *DeltaMiner* can now better adapt to the report that it is exporting with the help of a new variable: "##report[action]title##". In place of this variable (to be used including the brackets), *DeltaMiner* will either insert the report's heading (previously known as Action Title) or title (if the report does not have a heading). This is helpful when only a few of the reports in a briefing book contain headings. In this case, the variable will return the heading (which is usually more specific than the report title) and, otherwise, the report title as it is displayed in the briefing book. In other words, the variable always returns text – not an empty field.

You can use this variable in templates files for the export as an HTML e-mail or document. Currently, this variable is not included in the standard "DeltaMaster.htm" template that comes with *DeltaMiner* and must be added explicitly. You can define which folder *DeltaMiner* should use for the *Export Template* in the *Options* (*Extras* menu) on the *Folder* tab. In *ReportServer,* you can set the *Export Template* individually for each job.

For more information about other variables in the export template, please read *DeltaMiner deltas!* 5.3.6, feature #12.

(11) Microsoft Analysis Services: Providing a List of Suggested OLAP Servers via the Registry

In the Windows Registry, you can define a list of frequently used servers for the Analysis Services login. The login dialog box will then offer these servers in a drop-down list so that users can select a server instead of having to enter its name. In addition to the suggestion list in the registry, *DeltaMiner* will display the server that was last saved in the analysis session and preselect it in the dialog box. As in the past, you can also type in the name of the desired server.



This new feature benefits users who work with different servers, for example, a development environment and production server.

You can define the servers that *DeltaMiner* suggests in the log-in dialog box for all users of a certain computer or the current user in the following keys, each in the entry "MicrosoftAnalysisServices":

HKEY_LOCAL_MACHINE\SOFTWARE\Bissantz & Company\DeltaMiner 5.0\OLAP Server
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Bissantz & Company\DeltaMiner 5.0\OLAP Server
HKEY_CURRENT_USER\SOFTWARE\Bissantz & Company\DeltaMiner 5.0\OLAP Server

The first key is valid when *DeltaMiner* and Windows are based on the same architecture (i.e. both with 32 bits or 64 bits). The second key is valid if the 32-bit version of *DeltaMiner* runs on a 64-bit version of Windows. The third key is valid for the current user – regardless of the underlying system architecture. These entries are offered in addition to those from the first or second key in the dialog box.

As the value for the entry "MicrosoftAnalysisServices", you will need to enter a string value with the addresses or names of the server (and eventually those of the instance) separated by a semicolon.

For example:

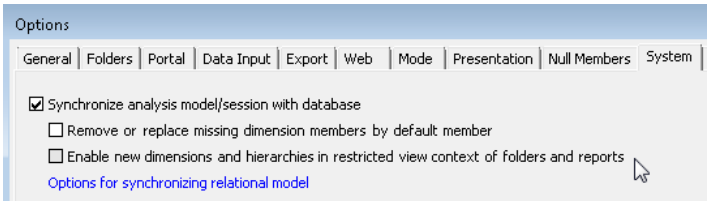
Server1\InstanceA;Server1\InstanceB;Server2\InstanceA;localhost;localhost\InstanceC

This suggestion list is only available for Microsoft Analysis Services. This feature is not supported for the relational database module of SQL Server or other database systems.

(12) Model Synchronization: Leaving New Dimensions and Hierarchies Disabled in a Restricted View Context of Folders and Reports

You can now manage how changes in the data model will affect the view context in *Viewer* mode.

In the *View Context* (tab in *Report Properties* or *Folder Properties*), you can define which dimensions and hierarchies users can see in *Viewer* mode. When you open an analysis session, *DeltaMiner* will synchronize the analysis model with the database. If new dimensions or hierarchies have been added to the database, you will be able to access them in *DeltaMiner*. In previous *DeltaMiner* versions these new dimensions and hierarchies were always activated in the view context. As a result, users would automatically see the new objects in *Viewer* mode – and you had to deactivate them in every folder or report if you didn't want *Viewer* users to see them.



Starting in version 5.5.8, you can manage the way that *DeltaMiner* synchronizes the model. In the *Options* (*Extras* menu) on the *System* tab, you can specify whether *DeltaMiner* should *Enable new dimensions and hierarchies in restricted view context of folders and reports*. This option is deactivated in the default setting, which means that *DeltaMiner* automatically excludes new dimensions and hierarchies from the view context. In other words, the default behavior has changed in comparison to previous versions. If you want to keep the previous behavior (i.e. automatically see new dimensions and hierarchies even in a restricted view context), activate this option.

This rule only affects reports and folders that already have a restricted view context. In reports and folders with no restrictions, *DeltaMiner* will always activate new dimensions and hierarchies in the view context so that they remain without restrictions.

This new option is very useful in planning applications. In these scenarios, most users only work in *Viewer* mode and the scope is usually clearly defined with only a few visible dimensions. With this new default behavior, planning contributors working in *Viewer* mode will not be able to see the changes in the data model until they are explicitly activated. In most cases, this option is simpler and safer than deactivating new dimensions and hierarchies in multiple places as you had to do in the past.

This option applies to the current analysis session (DAS file) or application.

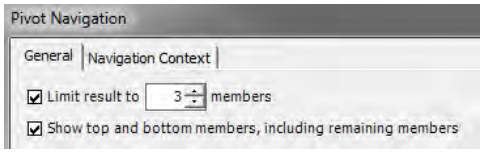
(13) Pivot Navigation: Displaying Top, Bottom, and Remaining Members

In the pivot navigation, you can sort your data in a new way that is very helpful for analyzing variances and changes. *DeltaMiner* can now search for and display the most important values regardless of their algebraic sign – in other words, the largest positive values ("top") and the strongest negative values ("bottom"). The software will then combine the remaining members with positive or negative values into residual members and display them as the "remaining top" or "remaining bottom".

Measures ...	Customers	Products	ΔPY
Revenues			2.018.894
Rebate			79.555
Discount			83.399
	⊟ All customers		1.855.940
		⊟ All products	1.882.698
		DCW Plywood	1.403.916
		Softpad 117	254.571
		Softpad 217	146.766
	⊞ Tunbridge Wells	(remaining top)	89.621
		(remaining bottom)	-2.597
		Arcade AM 66	-1.323
Net revenues		Precisio LM	-1.754
		Ergoplus Senso	-6.501
	⊞ Derby		209.730
	⊞ Brighton		126.134
	(remaining top)		306.708
	(remaining bottom)		-380.232
	⊞ Preston		-95.881
	⊞ Newcastle upon Tyne		-96.131
	⊞ York		-97.086
Cost of labour			31.359
Cost of material			319.086
Gross margin			1.505.494

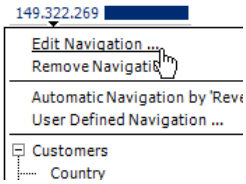
Aside from the pivot navigation, you can also access this logic in a *Ranking* as a new option in the *Axis Definition* (see feature #15 for more information). The following section will explain how to use this feature in the pivot navigation.

The easiest way to use this method is to set it as the standard for the pivot navigation. In *Miner* mode, you can activate this feature for the current cockpit and reports that are based on it by selecting



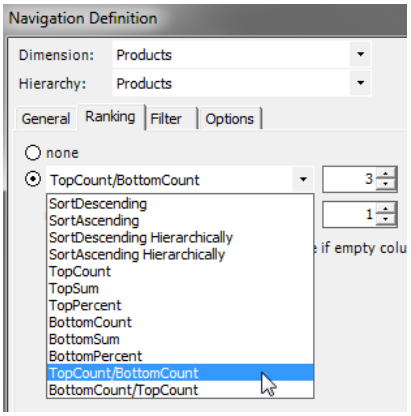
Configure Pivot Navigation (*Change* menu in the *Cockpit* window) and activating the option to *Show top and bottom members, including remaining members*. This selection is valid for the automatic navigation, as the default setting for the user-defined navigation, and for selecting the navigation hierarchy from the menu. Whenever you branch out into a further dimension by clicking on one of the small arrows below a value, *DeltaMiner* will calculate the top, bottom, and remaining members and then display them. If this option is deactivated, the pivot navigation will return only the top or the bottom members as it did in the past.

You can also activate this new function for executed navigation steps by clicking *Edit Navigation* (menu for the small arrow below a value in the pivot table).



In the *Navigation Definition*, you can select the criterion on the *Ranking* tab (see also feature #15).

The default navigation, which is a series of predefined navigation steps that you can run with a double click (see *DeltaMiner deltas!* 5.4.9, feature #15), is slightly different. If you use the option “TopCount/BottomCount” or “BottomCount/ TopCount”, *DeltaMiner* will automatically select the actual ranking based on the algebraic sign of the number in the respective cell. If you navigate a negative value when the saved option is “TopCount/BottomCount”, *DeltaMiner* will sort it using the criterion “BottomCount/TopCount” so that it displays the negative values that explain the situation immediately following the negative value to be explained.



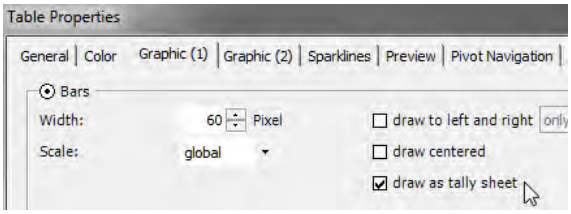
This function is only available for MDX OLAP models, for example, in combination with Microsoft Analysis Services or SAP BW, and is not backwards compatible. As a result, you should not use analysis sessions (DAS and DAM files) and applications that use this option in previous versions of *DeltaMiner*.

(14) Pivot Table: Displaying Bars as Tally Sheets

Products	Daily Volume
Arcade	10
Precisio	15
Softpad	3
DCW	7
Ergoplus	7
Jackson	10
Nova	4

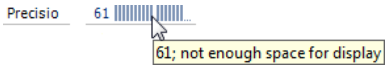
In pivot tables, a new graphical element is available: You can now visualize values as a tally sheet. With this almost playful-looking format, you can add an intuitively understandable, emotional note to serious data. Since this visualization appeals to a person’s innate understanding of sets, it creates a stronger impact and promotes greater comprehension as a whole: Your readers can count and register small quantities without even realizing it. These tally sheets are suitable for quantities within a certain range, especially when the individual objects have a high economic importance and can be identified separately.

DeltaMiner offers tally sheets as an option for visualizing bars. To use them, you must first activate *Bars* (context menu in the pivot table). In the *Table Properties* on the *Graphic (1)* tab, you can then specify that *DeltaMiner* should *Draw* [bars] *as tally sheets*. You can only use this tally sheet with a *global Scale* and cannot *draw* [it] *centered*. *DeltaMiner* will not draw a tally sheet for percentages and values that are formatted as a date, time, or time span.



DeltaMiner clusters the values by inserting a space after every 5 marks or, if the values are larger, after every 10 marks.

DeltaMiner will only draw the number of marks that fit in the defined *Width* for *Bars*. If this space isn’t sufficient, *DeltaMiner* will shorten the tally sheet and make note of this with an ellipsis. In addition, a tooltip will state that



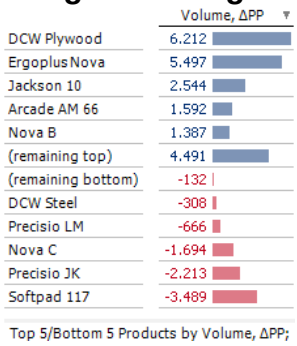
there is *not enough space for display.* If you want to show more marks and the numbers are still relatively small, you can increase the bar width. The marks and the gaps between them, however, have a fixed size.

You cannot consolidate objects or values into one column (e.g. “1 mark stands for 20 tons of material”). Although this presentation form factors in the scale in the *Measure Properties*, we recommend that you only use a 1:1 presentation so that one mark represents one real object. For more thoughts on this concept, please read the blog postings, “One figurine, one person” (http://blog.bissantz.com/persons-as-figurines) and “1 ship is 1 ship” (http://www.bella-consults.com/pictograms).

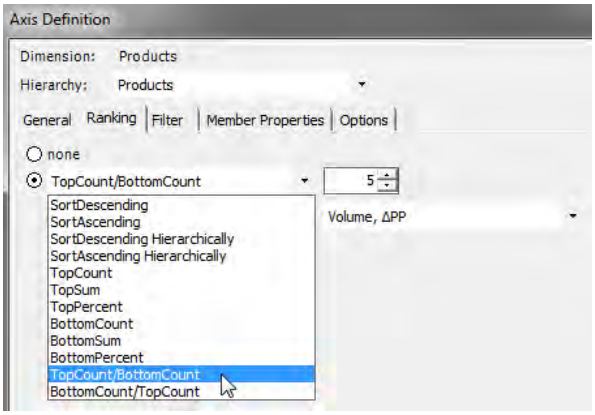
You can also use tally sheets in a *FlexReport* when you reference a pivot table cell in which they are activated. *DeltaMiner* will also include tally sheets in an export provided that they are exported as an image. In other words, you cannot export tally sheets to Microsoft Excel.

(15) Pivot Table: New Ranking Option “TopCount/BottomCount” Including Remaining Members

In pivot tables, you can now use a new ranking option which is very helpful for analyzing variances and changes. The “TopCount/BottomCount” option returns the most important contributions regardless of their algebraic sign – in other words, the largest positive contributions (“top”) and the strongest negative contributions (“bottom”). DeltaMiner automatically consolidates and displays the residual members as the “remaining top” and/or “remaining bottom”.



In the *Axis Definition* on the *Ranking* tab, you can set this new ranking option either in the order *TopCount/BottomCount* or *BottomCount/TopCount*. You can enter as parameter how many “top” and/or “bottom” members should be included.



This entry as well as the underlying data will determine how many members this query returns – in other words, how many rows or columns are in the axis:

If the axis contains only positive or only negative values, the query will return the designated number of members (or less if there are not that many). If there are more members than the designated number, *DeltaMiner* will consolidate the remaining members as described below. If you have chosen 5 as the number, therefore, *DeltaMiner* will return up to 6 members (i.e. 5 plus 1 remaining member).

- If the axis contains both positive and negative values, the query will return as many members with positive values and as many with negative values as listed (or fewer if there are not as many members with the respective algebraic sign.) If there are more members than the designated number, *DeltaMiner* will consolidate the remaining members with this algebraic sign as described below. If you have set the number to 5, therefore, *DeltaMiner* will return up to 12 members (the 5 top ones, 1 for the remaining top ones, the 5 bottom members, and 1 for the remaining bottom ones).
- *DeltaMiner* always displays remaining members at the end of the top count and at the beginning of the bottom count regardless of their values. In many cases, the value of these remaining members may be substantial and the “rest” may even be larger than the largest individual item. This especially holds true for dimensions with large amounts of members. If you limit the pivot table to the 10 most important material numbers and *DeltaMiner* consolidates several thousand other material numbers into one remaining member, for example, the combined sum may be much larger than the top placements.

Behind the scenes, *DeltaMiner* treats remainder members as calculated members that, however, are only defined in the respective pivot table and cannot be used otherwise. As a result, you will not see them in the *Dimension Browser* and cannot rename or edit them. You can neither drill down on a remainder member nor dissolve it to display the members that comprise it. The pivot navigation is also not supported in the data cells of remainder members. Since you cannot use remainder members in filter members as well, you cannot drag and drop them into an analytic method. This approach focuses on the top and bottom count anyway – and not the remainder members.

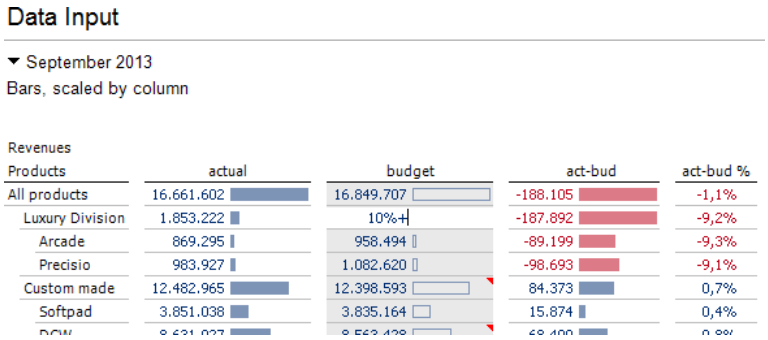
DeltaMiner will always display the name of these remainder members in the interface language. If you switch *DeltaMiner* to German, for example, it will display the terms “(Rest Obere)” and “(Rest Untere)” instead of “(remaining top)” and “(remaining bottom)”. *DeltaMiner* can also find these terms if you use the search function of pivot tables (see *DeltaMiner deltas!* 5.5.1, feature #24) or the universal search.

This function is only available for MDX OLAP models, for example, in combination with Microsoft Analysis Services or SAP BW. As a result, *DeltaMiner* will not offer it as an option in the *Axis Definition* in analysis sessions that are based on other databases. This function is also not backwards compatible. As a result, you should not use analysis sessions (DAS and DAM files) and applications that use this option in previous versions of *DeltaMiner*.

DeltaMiner has already offered similar functionality in *Navigation* and *Waterfall Analysis*. These analyses can also examine variances in both directions and automatically combine the residual members for small causing or compensating objects as they are called in these methods. With this new *Ranking* option, you can now access this same concept in pivot tables, which are the most important format for standard reporting.

In feature #13 it is described how this approach is integrated in the pivot navigation.

(16) Planning: Using Planning Functions in Presentation Mode

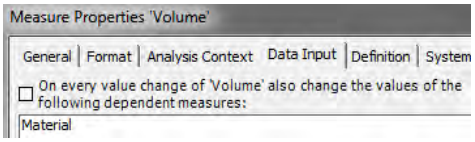


You can now use the planning functionality in *Viewer* mode – for example, inputting data or editing cell comments – in presentation mode as well. This new feature accounts for the fact that multiple users often discuss and enter their budget data while sitting together in front of a computer screen or projector – an ideal environment for using presentation mode.

You can start presentation mode from the *View* menu (*Slide Show*) or by hitting the *F5* key or *Shift+F5* (for the current report).

From here, you can activate the data input mode in the presentation mode as usual by double clicking on the desired cell or hitting the *F2* key after you have highlighted a cell. If you use the presentation mode in *Viewer* with a *Miner* license, you can only activate the data input mode using the *F2* key because the double click is reserved for executing predefined steps of the pivot navigation.

(17) Planning: Disabling the Option to Change Dependent Measures



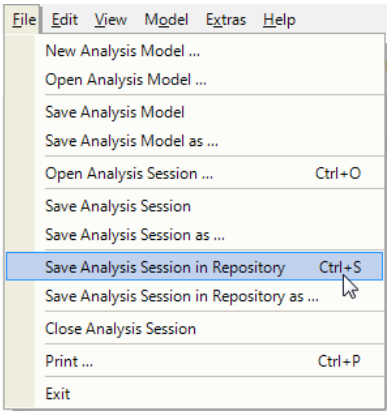
In planning applications, you can specify in the *Measure Properties* on the *Data Input* tab the so-called forwarding changes. When some values change, this function causes *DeltaMiner* to change further dependent members as well. Now you can deactivate this option with the new check box without losing the definitions. This check box activates or deactivates all forwarding changes of the respective measure at once.

This option is very useful when you are searching for errors. If *DeltaMiner* passes on the changed value to multiple measures and you get an unexpected final result, it helps when you can temporarily deactivate this option so that you can take a closer look at the results in between.

(18) Repository: Saving an Analysis Session from the Repository to the Repository with Ctrl+S

Thanks to a few small changes, saving applications in the Repository is now easier and safer than in the past.

The *File* menu now contains two entries to save data to the Repository, which are similar to saving analysis session files*:*



- When you choose *Save Analysis Session in Repository, DeltaMiner* will write back the application to the Repository using the same parameters you used the last time that you saved it. *DeltaMiner* will display a message in the status menu but no dialog box.
- *Save Analysis Session in Repository as…* means that *DeltaMiner* will (again) prompt for the parameters (e.g. the *Connection Properties* and the options for saving the application for which clients) in a dialog box.

Please note that you can only save an application to the Repository if you have opened it by *options dialog* and *for exclusive write access* (see *DeltaMiner deltas!* 5.5.6, feature #19). Otherwise, *DeltaMiner* can neither save the application in the Repository nor display the menu entries. This is also the case if the user does not have change permission.

If you save your work using the shortcut *Ctrl+S*, *DeltaMiner* will take into account how you have opened or last saved the current session.

- If you have last saved the session as an application in the Repository, *Ctrl+S* will make *DeltaMiner* save it in the Repository again using the same parameters as the last time and without displaying the respective dialog box.
- If you have last saved the session as an analysis file, *Ctrl+S* will prompt *DeltaMiner* to save it again in the same file.
- If you have not saved the session since you have opened it, *DeltaMiner* will attempt to save the session as you had opened it – in other words, an application from the Repository as the same application in the Repository or an analysis session back in its file. *DeltaMiner* will only display a dialog box if it is unclear where it should save the target file. This can occur if you have opened an application from the Repository and have permission to save it as a file but not to change the application. In this case, *DeltaMiner* will not offer the options to save to the Repository and if you hit *Ctrl+S*, it will open the file selection dialog box.

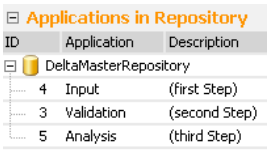
The same rules apply if you answer “Yes” to the security prompt that asks if you want to save the unsaved changes at the end of a session.

When you exit an application that is stored in the Repository, *DeltaMiner* will also display the security prompt asking if you want to save the changes if you have only changed the permissions but have not yet saved them.

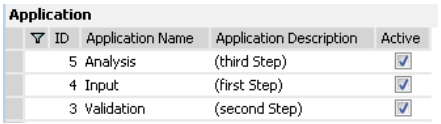
(19) Repository: Sorting Applications with Drag and Drop Functions

You can now individually sort the applications in the Repository with the Repository GUI. All *DeltaMiner* products that access the Repository will then display the applications in this order: the Windows program *DeltaMiner* (“Client.exe”), the *WebClient*, the *Add-in for Office*, and *DeltaMiner Gate* installations. Previously, the individual products always displayed the applications based on the order of their IDs.

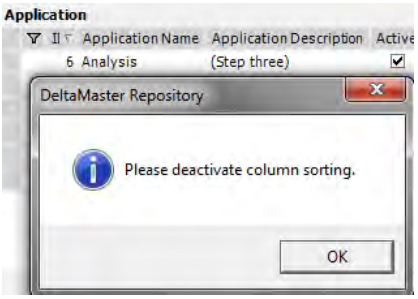
When the applications are well sorted, users can find and open them more easily. For example, you could move the most important applications to the top of the list or create a sequence in which they should be processed as in the example on your right. If you wish, you can also sort the application names in alphabetical order.



You can specify the order in the *Repository GUI* in the *Application* window by dragging and dropping the applications to the desired position.



If the applications are already displayed in a certain order in the *Repository GUI* and you see a small arrow in the column header, you must first deactivate the column sorting by clicking on the column header until this arrow disappears. This behavior is new as well. In past versions, you could only sort a column in ascending or descending order and could not deactivate the sort order. If you try to move an application while the column sorting is activated, *DeltaMiner* will inform you that you must deactivate it. In this respect, this way of sorting the applications is similar to a custom sorting order in the *Measure Browser* where you can only activate this option if the dialog box is not sorted by columns.



The individual sort order which you define using drag and drop is saved in the Repository database separately from the column sorting in the *Repository GUI*. As a result, if you click on the column header to switch the column order again, this will not change the saved order.

In order to use this feature, both *Repository GUI* and the *Repository* database must run version 5.5.8 (or higher). To update the database, run the “Repository.sql” script that is provided as a component of *WebOption* and *RepositoryService*.

(20) Repository: Specifying the Host and Port of the Repository with the Command Prompt “-repository”

You can now use the command prompt “-repository:X” to specify the host and port of the Repository, for example:

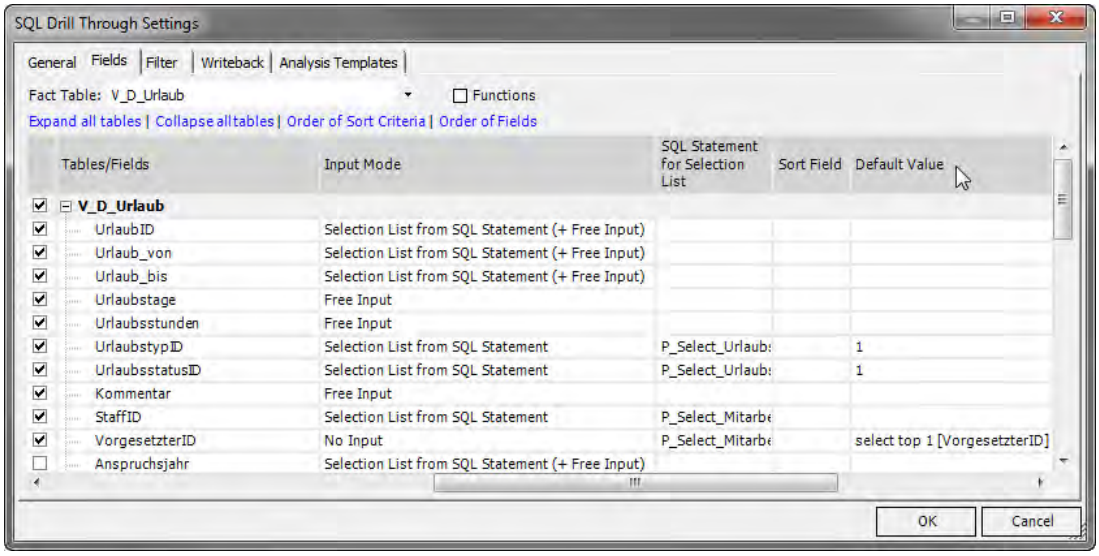
Client.exe **-repository:**serverdm02:8000 -app:9

This parameter was introduced in version 5.5.7 (see *DeltaMiner deltas!* 5.5.7, feature #20). In version 5.5.7, you had to enter the name of the Repository as it was defined in the “Client.exe. config” file for the value. This is still possible. Now, you can opt instead to enter the host and port directly on the command line without needing an entry in the configuration file. The format is: “<Host>:<Port>” (without quotes) – in other words, the name or IP address of the server, a colon, and then the number of the port. Most installations use 8000 as the standard port. As in the past, you can only use “-repository” in combination with “-app”.

If your installation uses Kerberos for authentication, please note that the connection uses “DeltaMaster/<Host>” as the “Service Principal Name”.

(21) SQL Drill Through: Define Default Values for New Data Records

You can now enter data more easily in an *SQL Drill Through* by defining Default Values for new data records. *DeltaMiner* will then suggest these Default Values whenever you add a new data record.



In the *Settings*, you can create a *Default Value* as either a constant or SQL query. Please note the following rules:

- Enter constants for fields of the data type “String” in single quotation marks (e.g. ‘euros’).
- Use a period when entering constant numerical values with decimals spaces (e.g. 1.95583) so that you can work with these numbers in international systems.
- You can use the constants “Now” and “Today” as Default Values for fields with the type “DateTime”, each without quotation marks. “Now” returns the current date including the current time while “Today” returns the date without the time.
- You can use the constants “true” and “false” (without quotation marks) as default values for fields of the type “Boolean”.

DeltaMiner will view all other values in the *Default Value* field as SQL queries and transfer them to be run in the database. These queries could either be stored procedures or queries with “SELECT”. The query must return exactly one data record whose first field is used as a Default Value. If the query returns no value or more than one, the Default Value will remain empty.

The “<viewX>” variable is supported within the SQL query. Here, “X” stands for the dimension ID, which will be displayed if you hold the *Alt* key and mouse over a dimension in the *View* window. *DeltaMiner* will then replace “<viewX>” with the view in the respective dimension, in other words, the selected member (or members) in the dimension.

If the *Default Value* field remains empty in the *Settings*, *DeltaMiner* will suggest a value based on the current view just as it did previously. *DeltaMiner* will suggest the member that is currently selected in the View provided that it does not have any subordinate members.

If you are working with multilanguage applications, you can administer the *Default Value* in alias sets. You can access the *Default Value* in the *Model Browser* (*Model* menu) on the *Alias Sets* tab under the respective *Report* in the *Fields* structure.

(22) SQL Drill Through: Transferring Hyperlinks to HTML Emails

DeltaMiner users have been able to define hyperlinks in an *SQL Drill Through* since version 5.3.2 (see *DeltaMiner deltas!* 5.3.2, feature #30). Now, these links will be automatically included when you export an

SQL Drill Through to HTML e-mails or documents so that you can open the respective link target from the e-mail or the exported document.

(23) SQL Drill Though: Switching the Sorting Option to Ascending, Descending, or Unsorted

If you have sorted an *SQL Drill Through* report by clicking on the column header, you can now switch back to the original order on a column header. When you click once on the column header, *DeltaMiner* will now switch among ascending, descending, and unsorted order. With the new “unsorted” option, you can display the data records in the order that is defined in the *Settings*.

As in the past, you can only click on the column headers to sort the data when the number of data records is not limited (option under *Settings* on the *General* tab) or fewer data records have been returned than the maximum number allowed.

(24) SQL Drill Through: Sorting, Renaming, Hiding, and Showing Columns Directly in the Table

Designing *SQL Drill Through* reports is now much easier because you can perform many different tasks directly in the results table instead of having to use the *Settings*. As in previous versions, you will need a valid license for *Miner* mode if you want to create or change *SQL Drill Through* reports.

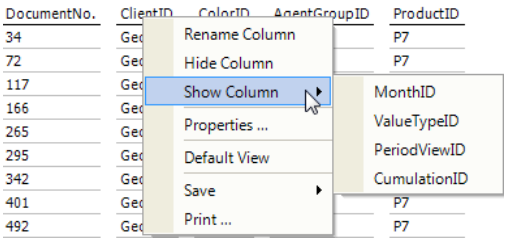
You can now drag and drop columns to place them in the desired order – similar to moving measures in a pivot table. To move a column, drag the column header and drop it into another column. *DeltaMiner* will then insert the column in this location.

You can also *Rename* [the] *column* in the context menu of the column header. If you enter an empty space as the new name, *DeltaMiner* will display the column again with its original name. You can administer the column name in multiple languages as well (see *DeltaMiner deltas!* 5.5.5, feature #16).

You can also access the *Hide Column* option from the context menu of the column header. This column, however, still remains in the database query and, for example, can be used for hyperlinks (see *DeltaMiner deltas!* 5.3.2, feature #30). In the customer’s name, for example, you could add a hyperlink that contains the customer number as a parameter without having to display that number as a separate column in the report.

DeltaMiner lists all hidden columns in the context menu of the column header under *Show column*. Select a column to display it again.

DeltaMiner will automatically update each of these steps in the *Settings*. In other words, these editing options have the same effect as a change in the *Settings*. Editing them directly in the table, however, is usually simpler and faster.



(25) Update Notes

The following table shows if the new release contains any changes to the metadata schema of the *ReportServer* and the *Repository* database as well as in the configuration files compared to the previous version.

Component	Files	Changes since version 5.5.7
ReportServer	„ReportServer.mdb“, „ReportServer (SQL Server).sql“, „ReportServer (Oracle).sql“	Yes

	„ReportServer.exe.config“	No
Repository	„Repository.sql“	Yes
Repository GUI	“DeltaMaster.Repository.exe.config”	No
WebService	“DeltaMaster.Service.exe.config”	No
WebClient	“web.config”	No

You don’t always have to update all components of a *DeltaMiner* installation at the same time. In the new **DeltaMiner compatibility matrix**, we now document the version dependencies of front-end components (e.g. *DeltaMiner*, *ReportServer*, *Add-in for Office*) to services and databases. This matrix has been available in *DeltaMiner Help* since the 5.5.8 release and will be updated with each subsequent one. The matrix shows which components you need to update for the release upgrade, if you can continue to use previous versions, and, if so, with which limitations.

The metadata scheme of **ReportServer** has changed. As a result, you should run the “ReportServer (SQL Server).sql” or “ReportServer (Oracle).sql” script to update your job definition database. If you use the Access database “ReportServer.mdb”, *DeltaMiner* will update it automatically. You should, however, update the “ReportServer.exe” file as well as the respective DLLs so that they match the current *DeltaMiner* version. The ODBC connection string, which is specified in the job definition database, is saved in the “ReportServer.exe.config” file. Please create a backup copy of this file before you install the current version of the *ReportServer* files.

The **WebOption** components – *Repository GUI, WebClient,* and *WebService* – are available in version 5.5.8. Please note that support for Microsoft Internet Explorer 6 and 7 has stopped in version 5.5.4. In addition, Microsoft .NET Framework 4.0 or higher has been required since version 5.5.6. Before you update *WebOption*, please create backup copies of the configuration files (see table above), any changed graphics in the “Image” folder (e.g. “Master_Top.png”) as well as the style sheet file (e.g. “DeltaMaster.css”). You can update the *WebService, WebClient, and Repository GUI* by copying the new files into the respective directories. A separate setup is not necessary. If you want to update the Repository, you need to run the script “Repository.sql” on the existing Repository database.

You can update the **apps** for iPad and iPhone (*DeltaMiner ReaderApp*, *DeltaMiner TickerPortal*, and *DeltaMiner Notifications*) at the App Store.

28 DeltaMiner deltas! 5.6.0

What's new in version 5.6.0? Find out in this overview!

(1) General: Specifying Which Databases to Use Through the Command Line Parameters "olapserver", "olapdatabase", and "sqlcnnstr" 2
(2) Infor BI OLAP: Establishing Multiple Database Connections to Run Queries in Parallel 2
(3) Planning: Optionally Write-back to Relational Databases Instead of Cubes 3
(4) Measure Properties: Transferring the Formatting of Measures from Analysis Services 3
(5) ReportServer: Using Applications from Repository as a Report Source 4
(6) ReportServer: Using DM2GO ("DeltaMiner to go") Files as a Report Source 5
(7) ReportServer: Administering Multiple Repositories as the Source or Target of Jobs 5
(8) Help: Using Synonyms and Cross References for Keywords 6
(9) Help: Viewing a List of Recently Added or Updated Documents and Blog Postings 6
(10) HTML Export: Using Variable to Insert the Heading or the Report Title (If No Heading is Available) 7
(11) Microsoft Analysis Services: Providing a List of Suggested OLAP Servers via the Registry 7
(12) Model Synchronization: Leaving New Dimensions and Hierarchies Disabled in a Restricted View Context of Folders and Reports 8
(13) Pivot Navigation: Displaying Top, Bottom, and Remaining Members 9
(14) Pivot Table: Displaying Bars as Tally Sheets 10
(15) Pivot Table: New Ranking Option "TopCount/BottomCount" Including Remaining Members 10
(16) Planning: Using Planning Functions in Presentation Mode 12
(17) Planning: Disabling the Option to Change Dependent Measures 12
(18) Repository: Saving an Analysis Session from the Repository to the Repository with Ctrl+S 12
(19) Repository: Sorting Applications with Drag and Drop Functions 13
(20) Repository: Specifying the Host and Port of the Repository with the Command Prompt "-repository" 14
(21) SQL Drill Through: Define Default Values for New Data Records 14
(22) SQL Drill Through: Transferring Hyperlinks to HTML Emails 15
(23) SQL Drill Though: Switching the Sorting Option to Ascending, Descending, or Unsorted 15
(24) SQL Drill Through: Sorting, Renaming, Hiding, and Showing Columns Directly in the Table 15
(25) Update Notes 16

(1) General: Specifying Which Databases to Use Through the Command Line Parameters “olapserver”, “olapdatabase”, and “sqlcnnstr”

Using three new command line parameters, you can define which OLAP server, OLAP database, and/or relational database DeltaMiner should use to open an analysis session or application. This feature is helpful when you want to connect to a different system (e.g. development environment, test system) than you would normally use. Command line parameters are often used to open shortcuts which, for example, you can access from an icon on your desktop.

The new command line parameters are:

- olapserver:<server>

  “<server>“ stands for either the network name/address of the OLAP server or the path and file name of a local cube file.

- olapdatabase:<database>

  “<database>“ stands for the name of the desired OLAP database.

- sqlcnnstr:″<cnnstr>″

  “<cnnstr>“ is short for connection string to the relational database. Always enclose this string in quotation marks.

It only makes sense to use these parameters in combination with the statement of an analysis file or application. The settings in the command prompt will override the saved settings. When you save an analysis file or application, DeltaMiner will keep the parameters that are transferred on the command prompt; in other words, the analysis file or application will change. You can use these three parameters together or separately. If you only enter individual parameters, DeltaMiner will apply the settings that are defined in the analysis session or application to the remaining ones.

When you start DeltaMiner, it will automatically open the listed analysis session or application. If the automatic login is activated in the analysis session or application and has been successful, DeltaMiner will bypass the login dialog boxes for the OLAP and relational database. If the automatic login is not activated or an error occurs during the login, DeltaMiner will display the respective login dialog box.

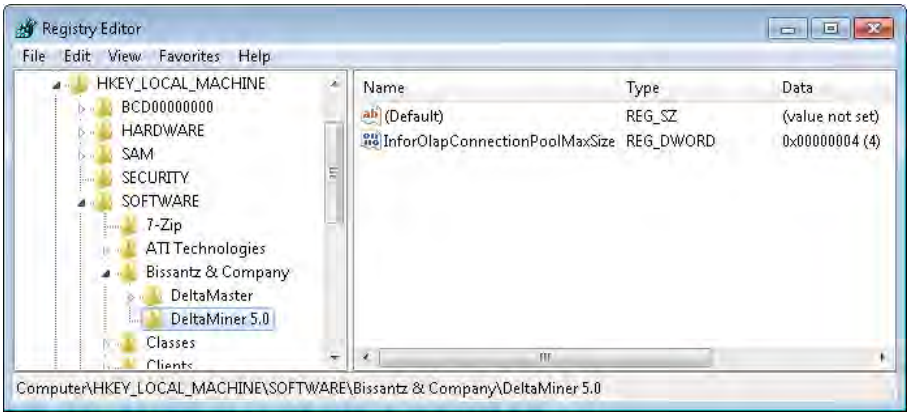
(2) Infor BI OLAP: Establishing Multiple Database Connections to Run Queries in Parallel

DeltaMiner can create multiple connections to Infor BI OLAP servers simultaneously in order to send and have processed MDX queries parallel. This accelerates the calculation of multiple report types including Small Multiples, PowerSearch, Comparator, and Combination Cockpits. The more queries the server receives and processes at the same time, the faster the calculation will be.

In the default setting, DeltaMiner can create up to two connections simultaneously. You can, however, change the maximum number of parallel connections by creating a new value for the following keys in the Windows Registry:

- HKEY_LOCAL_MACHINE\Software\Bissantz & Company\DeltaMiner 5.0
  for all users of a computer that runs either 32-bit versions or 64-bit versions of both DeltaMiner and Windows
- HKEY_LOCAL_MACHINE\Software\Wow6432Node\Bissantz & Company\DeltaMiner 5.0
  for all users of a computer that runs a 32-bit version of DeltaMiner on a 64-bit version of Windows
- HKEY_CURRENT_USER\Software\Bissantz & Company\DeltaMiner 5.0
  for the current user of a computer

This value is called “InforOlapConnectionPoolMaxSize” and has the type “DWORD (32 bit) Value”.



The number of parallel connections is also limited on the server side. You cannot exceed this limit from the client side – even you have entered a larger number of connections. Once the server's limit has been reached, higher values on the client side will not make the query speed any faster.

(3) Planning: Optionally Write-back to Relational Databases Instead of Cubes

In planning applications based on Microsoft Analysis Services, you can implement a custom method for writing back data input. In this case, DeltaMiner will pass the entered values to a stored proce¬dure of a relational database (i.e. instead of Analysis Services) which, in turn, writes back the data. You can use this option to include individual requirements on how the entered data is processed or to support simultaneous write access for a large number of users. On the other hand, many of the automatic functions from Analysis Services, e.g. automatic allocations of values ("splashing"), are not available and, therefore, require a custom implementation. If you need any operators for entering values (e.g. "+", "-", "*", "%+", "%-", "!"), you will have to program them in the database as well.

This new write-back method, therefore, only works with databases that have been specifically prepared for this option. It provides a new interface which you can use to implement customized planning rules – yet only for specific models or applications and not as part of the standard functionality of DeltaMiner. If you wish to learn more about this interface, please contact your account manager for more information.

(4) Measure Properties: Transferring the Formatting of Measures from Analysis Services

In new analysis models, *DeltaMiner* now takes note of the format expressions of measures ("FORMAT_STRING" property) that are defined in Microsoft Analysis Services and transfers the respective number formatting. If the formatting has already been configured in Analysis Services, this feature allows you to set up analysis models more quickly.

When you synchronize the models, *DeltaMiner* will also transfer formats that have been changed in the database to existing analysis models provided that they haven't already been changed in *DeltaMiner*.

The format expressions of Analysis Services differ from those that are used in .NET Framework and *DeltaMiner*. The following table shows how these expressions are "translated".

Analysis Services	DeltaMiner	Description
Standard # #,#	n0	Number without a decimal, Integer
.0 #,#.0	n1	Number with 1 decimal place

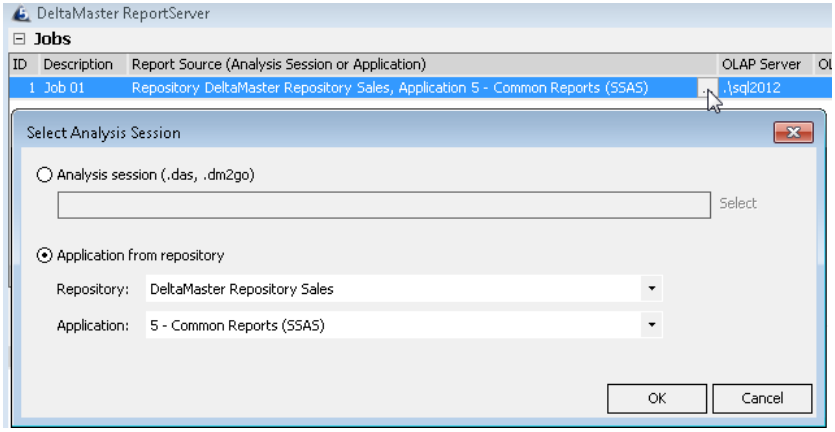
Analysis Services	DeltaMiner	Description
.00 Currency #,#.00	n2	Number with 2 decimal places
.000	n3	Number with 3 decimal places
#%	p0	Percentage without decimal places
.0%	p1	Percentage with 1 decimal place
.00% Percent	p2	Percentage with 2 decimal places
.000%	p3	Percentage with 3 decimal places

For the Analysis Services formats .0, .00, .000, etc. or .0%, .00% etc., the ending can also just be contained in the format expression. For example, “#,##0.00” will be translated to “n2”.

(5) ReportServer: Using Applications from Repository as a Report Source

ReportServer can now use applications from a Repository as a *Report Source*. This lets you use all of the storage concepts in *DeltaMiner* as the source and target of *ReportServer* jobs: analysis sessions (DAS files) always, and now DM2GO files (see feature #6) and applications in the *Repository*. If you haven’t yet moved an analysis session to the Repository because you use it as a source for a *ReportServer* job, now there is no more reason not moving it.

If you want a *ReportServer* job to access a Repository, you will first need to configure it in the *Settings* of *ReportServer* as described in feature #7.



The *Report Source* field in the job definition has changed so that you can now select applications in the Repository. When you double click on this field or click on the button with the ellipsis (i.e. three dots), *ReportServer* will open a new dialog box where you can *Select* [the] *Analysis Session* – either an *Analysis Session* or an *Application from Repository*:

If the job should use an *Analysis Session* as a report source, *Select* the desired DAS or DM2GO file as usual with the help of the file selection dialog box. The job definition will then list the name of the analysis file as the *Report Source*. As in the past, you can edit it by hitting the *F2* key.

If the job should base on an *Application from* [a] *Repository*, select the desired *Repository* and *Application*. The *Repository* list shows all Repositories that have been added in the *Settings* (see feature #7). The *Application* list shows all of the applications that are visible for the current user in the selected Repository. The job definition will list the name or ID of the Repository as well as the ID and name of the application as the *Report Source*. The F2 key is locked in this case. If you want to edit the *Report Source* double click on the entry or click on the ellipsis button.

ReportServer uses the same permission concept for defining and running jobs as *DeltaMiner* (see *DeltaMiner deltas!* 5.4.9, feature #20). This, in turn, affects the user's editing possibilities.

In order to access an application at all, the current user must at least have the Session Right *Display*. The user can then update and export the folders and reports for which he/she has *Display* rights. *ReportServer* will reset and recalculate all reports before exporting them.

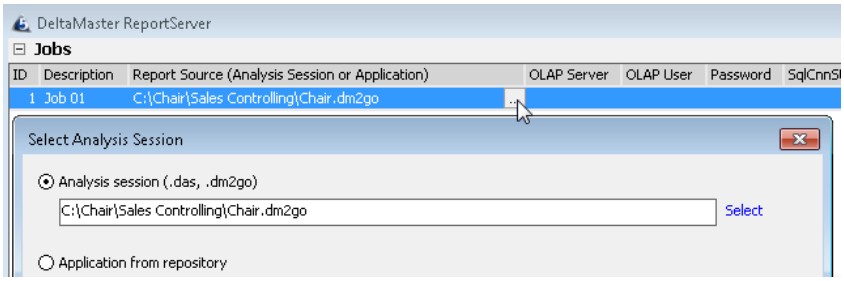
To change the view of reports as a *Report Update* or *Report Generator*, the current user must at least have *Editing* rights.

To export an application as a *DeltaMiner* file (*Report format* "das", "das-offline", or "dm2go"), the current user must have special *Save as file* session rights (see *DeltaMiner deltas!* 5.5.6, feature #20).

A job can update and replace the current application by saving the source application with the same ID to the Repository. *ReportServer*, however, will check if the folder selection hasn't become smaller (e.g. through iterations) to prevent the unintentional loss of original parts of the application.

(6) ReportServer: Using DM2GO ("DeltaMiner to go") Files as a Report Source

ReportServer can access DM2GO ("DeltaMiner to go") files as a report source. As a result, you can now use all of the storage concepts in *DeltaMiner* as the source and target of *ReportServer* jobs: analysis sessions (DAS files) always and now DM2GO files and applications in the *Repository* (see feature #5).



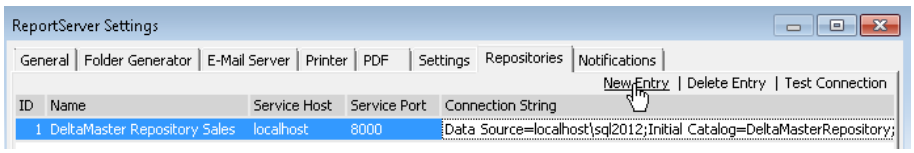
When you double click on the *Report Source* field or click on the ellipsis button, *DeltaMiner* will open a dialog box where you can *Select* [an] *Analysis Session*. Use the normal file selection dialog box.

When a job is based on a DM2GO file, the data source is always the local cube file which is contained in the DM2GO file. The fields *OLAP Server*, *OLAP User,* and *Password* are, therefore, irrelevant. The respective relational data model is not part of the DM2GO file and can be changed through the *SqlCnnStr* field.

(7) ReportServer: Administering Multiple Repositories as the Source or Target of Jobs

Starting with version 5.5.8, *ReportServer* can work with multiple Repositories – writing (as the output target of a job) as well as reading (as a report source, see feature #5). These Repositories can be entered in the *Settings* of *ReportServer* on the *Repositories* tab. You can use the links on the upper corner of the tab to create a *New Entry* or *Delete* [the selected] *Entry* (without any further confirmation).

The third link is called *Test connection*. You can use it to confirm if the service is available. This link does not check if there are applications available for the current user or if he has access rights to the database.



A Repository entry consists of five fields:

- The *ID* is a unique identifier that is automatically generated and cannot be changed.
- You can choose any *Name* you wish. This name will be displayed as the *Report Source* in the job definition as well as the respective selection dialog box.
- The *Service Host* is the name or the IP address of the server that provides the service.

- The *Service Port* is the port that is configured for the server as listed in the file “DeltaMaster. Service.exe.config”. The host and port are required for read access when a Repository is used as a report source. If the Repository is only used as the target of a job, you can leave the *Service Host* and *Service Port* fields blank.
- The *Connection String* is required for write access, in other words, the *Distribution Type* “repository” (for more information please read the documentation for *DeltaMiner WebOption*, Section 4.4). This is equivalent to the entry in the “DeltaMiner. Repository. exe.config” file. If a Repository is only used as a report source, a *Connection String* is not necessary.

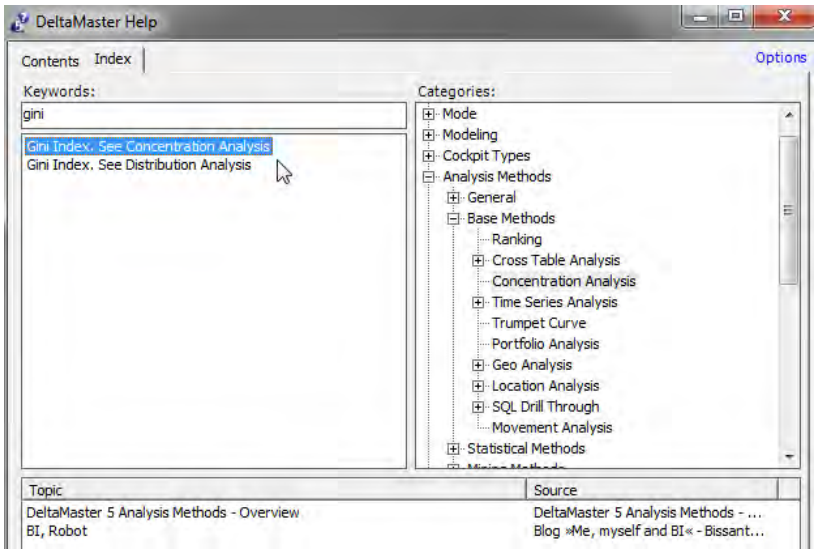
A Repository that was registered in previous versions will be automatically added to the Repository list. The *Service Host* and *Service Port* will remain empty for this Repository because these entries could not be configured in the past.

(8) Help: Using Synonyms and Cross References for Keywords

The *DeltaMiner Help* has become even more user-friendly: Many keywords are now tagged with synonyms and cross references that are linked to the appropriate categories and topics. If you search for the keyword “Word Graphics”, *Help* will display a cross reference to “Sparklines” and, from here, multifaceted sources which explain e.g. their advantages and how to use them.

The Help also contains cross references. The keyword “Cross Selling Analysis” will redirect you to “Association Analysis”, “BCG-Matrix” references to “Portfolio Analysis“, and “Tops/Flops” will direct you to “Ranking”. This way, you can quickly find the suitable analysis method in *DeltaMiner* based on the usage scenario.

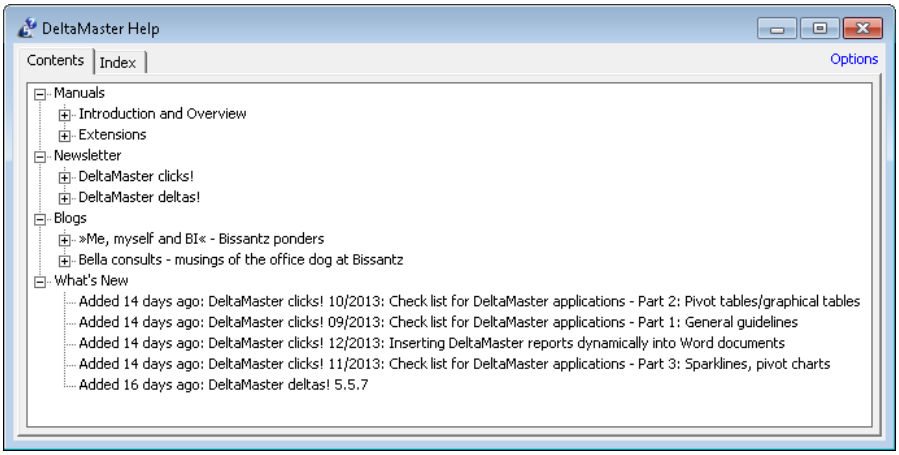
For specialized terms from the individual modules, *Help* now also contains cross references to the overriding topic. As a result “Coefficient of Variation” will direct you to “Distribution Analysis” where this coefficient is displayed as a spread measure. If you enter “gini”, you will be directed to “Concentration Analysis” or “Distribution Analysis” because both of these analytical methods calculate this index.



You can open the help function from the *Help* menu or with the *F1* key (see *DeltaMiner deltas!* 5.5.4, feature #1). The synonyms and cross references are integrated in the help file (“Help.xml”). This is compatible with previous versions of *Help* (i.e. no changes are necessary, but the entries containing synonyms and cross references will not be displayed in previous versions). In other words, you can use the files from the updated help function exactly as they are in previous *DeltaMiner* versions.

(9) Help: Viewing a List of Recently Added or Updated Documents and Blog Postings

In the *DeltaMiner Help,* you can now see at a glance which information has been recently added or updated. On the *Contents* tab in the *What’s New* section, you can view new and revised documents and blog postings sorted by the date when they have been published or updated.



The entries in this section are compiled from the publication or revision dates in the help file (i.e. “Help.xml”). If and when the documents have been downloaded is irrelevant. The information that a document has been added or updated means that it is now available in the *DeltaMiner Help* – and not that it has been downloaded or is available on your computer. The *What’s new* section shows new or modified entries within the past 30 days.

DeltaMiner Help is a dynamic system that is continually updated, for example, through new editions of *DeltaMiner deltas!* as well as new blog postings and documents on special topics. The *What’s New* section provides a further gateway to the information that is offered in the help function. Best of all, you can read it without having a specific task in mind – for example, to learn more about different topics, to expand your knowledge, or as food for thought.

(10) HTML Export: Using Variable to Insert the Heading or the Report Title (If No Heading is Available)

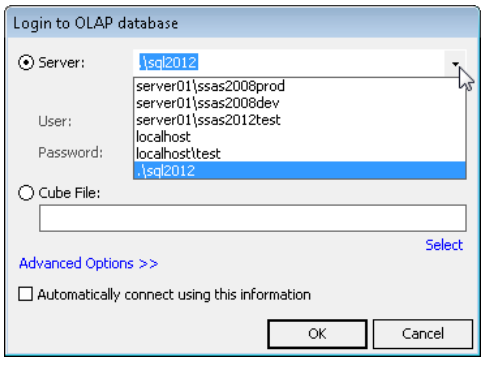
The HTML export of *DeltaMiner* can now better adapt to the report that it is exporting with the help of a new variable: “##report[action]title##”. In place of this variable (to be used including the brackets), *DeltaMiner* will either insert the report’s heading (previously known as Action Title) or title (if the report does not have a heading). This is helpful when only a few of the reports in a briefing book contain headings. In this case, the variable will return the heading (which is usually more specific than the report title) and, otherwise, the report title as it is displayed in the briefing book. In other words, the variable always returns text – not an empty field.

You can use this variable in templates files for the export as an HTML e-mail or document. Currently, this variable is not included in the standard “DeltaMaster.htm” template that comes with *DeltaMiner* and must be added explicitly. You can define which folder *DeltaMiner* should use for the *Export Template* in the *Options* (*Extras* menu) on the *Folder* tab. In *ReportServer,* you can set the *Export Template* individually for each job.

For more information about other variables in the export template, please read *DeltaMiner deltas!* 5.3.6, feature #12.

(11) Microsoft Analysis Services: Providing a List of Suggested OLAP Servers via the Registry

In the Windows Registry, you can define a list of frequently used servers for the Analysis Services login. The login dialog box will then offer these servers in a drop-down list so that users can select a server instead of having to enter its name. In addition to the suggestion list in the registry, *DeltaMiner* will display the server that was last saved in the analysis session and preselect it in the dialog



box. As in the past, you can also type in the name of the desired server.

This new feature benefits users who work with different servers, for example, a development environment and production server.

You can define the servers that *DeltaMiner* suggests in the log-in dialog box for all users of a certain computer or the current user in the following keys, each in the entry “MicrosoftAnalysisServices”:

HKEY_LOCAL_MACHINE\SOFTWARE\Bissantz & Company\DeltaMiner 5.0\OLAP Server
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Bissantz & Company\DeltaMiner 5.0\OLAP Server
HKEY_CURRENT_USER\SOFTWARE\Bissantz & Company\DeltaMiner 5.0\OLAP Server

The first key is valid when *DeltaMiner* and Windows are based on the same architecture (i.e. both with 32 bits or 64 bits). The second key is valid if the 32-bit version of *DeltaMiner* runs on a 64-bit version of Windows. The third key is valid for the current user – regardless of the underlying system architecture. These entries are offered in addition to those from the first or second key in the dialog box.

As the value for the entry “MicrosoftAnalysisServices”, you will need to enter a string value with the addresses or names of the server (and eventually those of the instance) separated by a semicolon.

For example:

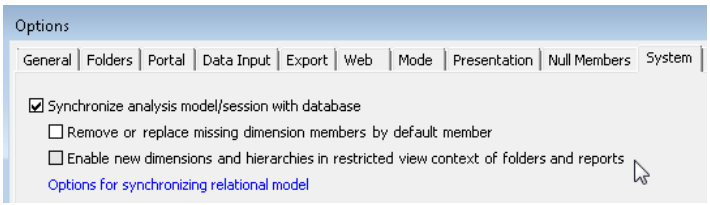
Server1\InstanceA**;**Server1\InstanceB**;**Server2\InstanceA**;**localhost**;**localhost\InstanceC

This suggestion list is only available for Microsoft Analysis Services. This feature is not supported for the relational database module of SQL Server or other database systems.

(12) Model Synchronization: Leaving New Dimensions and Hierarchies Disabled in a Restricted View Context of Folders and Reports

You can now manage how changes in the data model will affect the view context in *Viewer* mode.

In the *View Context* (tab in *Report Properties* or *Folder Properties*), you can define which dimensions and hierarchies users can see in *Viewer* mode. When you open an analysis session, *DeltaMiner* will synchronize the analysis model with the database. If new dimensions or hierarchies have been added to the database, you will be able to access them in *DeltaMiner*. In previous *DeltaMiner* versions these new dimensions and hierarchies were always activated in the view context. As a result, users would automatically see the new objects in *Viewer* mode – and you had to deactivate them in every folder or report if you didn’t want *Viewer* users to see them.



Starting in version 5.5.8, you can manage the way that *DeltaMiner* synchronizes the model. In the *Options* (*Extras* menu) on the *System* tab, you can specify whether *DeltaMiner* should *Enable new dimensions and hierarchies in restricted view context of folders and reports*. This option is deactivated in the default setting, which means that *DeltaMiner* automatically excludes new dimensions and hierarchies from the view context. In other words, the default behavior has changed in comparison to previous versions. If you want to keep the previous behavior (i.e. automatically see new dimensions and hierarchies even in a restricted view context), activate this option.

This rule only affects reports and folders that already have a restricted view context. In reports and folders with no restrictions, *DeltaMiner* will always activate new dimensions and hierarchies in the view context so that they remain without restrictions.

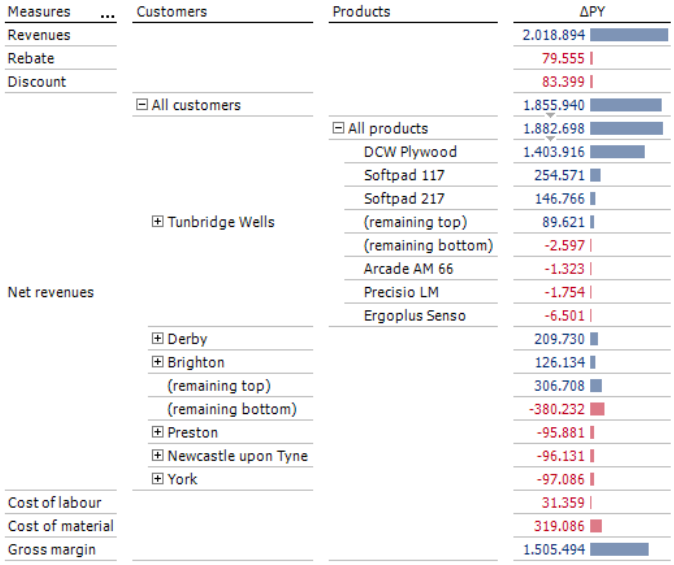
This new option is very useful in planning applications. In these scenarios, most users only work in *Viewer* mode and the scope is usually clearly defined with only a few visible dimensions. With this new default behavior, planning contributors working in *Viewer* mode will not be able to see the changes in the data model

until they are explicitly activated. In most cases, this option is simpler and safer than deactivating new dimensions and hierarchies in multiple places as you had to do in the past.

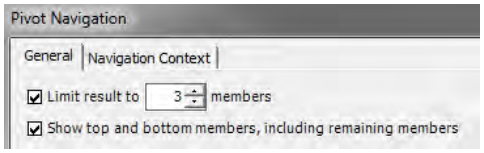
This option applies to the current analysis session (DAS file) or application.

(13) Pivot Navigation: Displaying Top, Bottom, and Remaining Members

In the pivot navigation, you can sort your data in a new way that is very helpful for analyzing variances and changes. *DeltaMiner* can now search for and display the most important values regardless of their algebraic sign – in other words, the largest positive values ("top") and the strongest negative values ("bottom"). The software will then combine the remaining members with positive or negative values into residual members and display them as the "remaining top" or "remaining bottom".

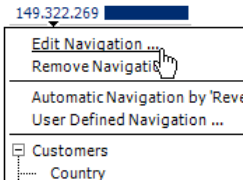


Aside from the pivot navigation, you can also access this logic in a *Ranking* as a new option in the *Axis Definition* (see feature #15 for more information). The following section will explain how to use this feature in the pivot navigation.



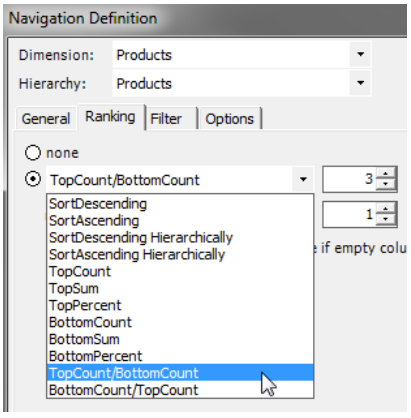
The easiest way to use this method is to set it as the standard for the pivot navigation. In *Miner* mode, you can activate this feature for the current cockpit and reports that are based on it by selecting *Configure Pivot Navigation* (*Change* menu in the *Cockpit* window) and activating the option to *Show top and bottom members, including remaining members*. This selection is valid for the automatic navigation, as the default setting for the user-defined navigation, and for selecting the navigation hierarchy from the menu. Whenever you branch out into a further dimension by clicking on one of the small arrows below a value, *DeltaMiner* will calculate the top, bottom, and remaining members and then display them. If this option is deactivated, the pivot navigation will return only the top or the bottom members as it did in the past.

You can also activate this new function for executed navigation steps by clicking *Edit Navigation* (menu for the small arrow below a value in the pivot table).



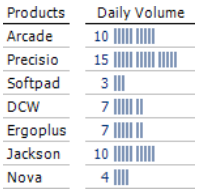
In the *Navigation Definition*, you can select the criterion on the *Ranking* tab (see also feature #15).

The default navigation, which is a series of predefined navigation steps that you can run with a double click (see *DeltaMiner deltas!* 5.4.9, feature #15), is slightly different. If you use the option "TopCount/BottomCount" or "BottomCount/ TopCount", *DeltaMiner* will automatically select the actual ranking based on the algebraic sign of the number in the respective cell. If you navigate a negative value when the saved option is "TopCount/BottomCount", *DeltaMiner* will sort it using the criterion "BottomCount/TopCount" so that it displays the negative values that explain the situation immediately following the negative value to be explained.

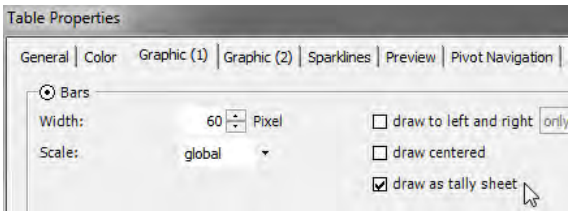


This function is only available for MDX OLAP models, for example, in combination with Microsoft Analysis Services or SAP BW, and is not backwards compatible. As a result, you should not use analysis sessions (DAS and DAM files) and applications that use this option in previous versions of *DeltaMiner*.

(14) Pivot Table: Displaying Bars as Tally Sheets



In pivot tables, a new graphical element is available: You can now visualize values as a tally sheet. With this almost playful-looking format, you can add an intuitively understandable, emotional note to serious data. Since this visualization appeals to a person's innate understanding of sets, it creates a stronger impact and promotes greater comprehension as a whole: Your readers can count and register small quantities without even realizing it. These tally sheets are suitable for quantities within a certain range, especially when the individual objects have a high economic importance and can be identified separately.



DeltaMiner offers tally sheets as an option for visualizing bars. To use them, you must first activate *Bars* (context menu in the pivot table). In the *Table Properties* on the *Graphic (1)* tab, you can then specify that *DeltaMiner* should *Draw* [bars] *as tally sheets*. You can only use this tally sheet with a *global Scale* and cannot *draw* [it] *centered*. *DeltaMiner* will not draw a tally sheet for percentages and values that are formatted as a date, time, or time span.

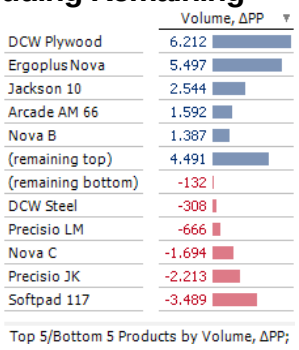
DeltaMiner clusters the values by inserting a space after every 5 marks or, if the values are larger, after every 10 marks.

DeltaMiner will only draw the number of marks that fit in the defined *Width* for *Bars*. If this space isn't sufficient, *DeltaMiner* will shorten the tally sheet and make note of this with an ellipsis. In addition, a tooltip will state that there is *not enough space for display.* If you want to show more marks and the numbers are still relatively small, you can increase the bar width. The marks and the gaps between them, however, have a fixed size.

You cannot consolidate objects or values into one column (e.g. "1 mark stands for 20 tons of material"). Although this presentation form factors in the scale in the *Measure Properties*, we recommend that you only use a 1:1 presentation so that one mark represents one real object. For more thoughts on this concept, please read the blog postings, "One figurine, one person" (http://blog.bissantz.com/persons-as-figurines) and "1 ship is 1 ship" (http://www.bella-consults.com/pictograms).

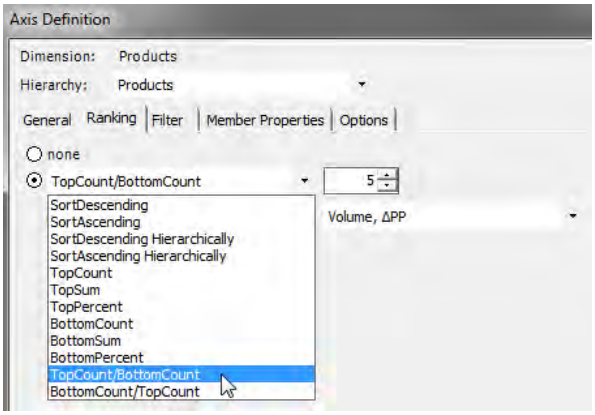
You can also use tally sheets in a *FlexReport* when you reference a pivot table cell in which they are activated. *DeltaMiner* will also include tally sheets in an export provided that they are exported as an image. In other words, you cannot export tally sheets to Microsoft Excel.

(15) Pivot Table: New Ranking Option "TopCount/BottomCount" Including Remaining Members



In pivot tables, you can now use a new ranking option which is very helpful for analyzing variances and changes. The "TopCount/BottomCount" option returns the most important contributions regardless of their algebraic sign – in other words, the largest positive contributions ("top") and the strongest negative contributions ("bottom"). DeltaMiner automatically consolidates and displays the residual members as the "remaining top" and/or "remaining bottom".

In the *Axis Definition* on the *Ranking* tab, you can set this new ranking option either in the order *TopCount/BottomCount* or *BottomCount/TopCount*. You can enter as parameter how many “top” and/or “bottom” members should be included.



This entry as well as the underlying data will determine how many members this query returns – in other words, how many rows or columns are in the axis:

If the axis contains only positive or only negative values, the query will return the designated number of members (or less if there are not that many). If there are more members than the designated number, *DeltaMiner* will consolidate the remaining members as described below. If you have chosen 5 as the number, therefore, *DeltaMiner* will return up to 6 members (i.e. 5 plus 1 remaining member).

- If the axis contains both positive and negative values, the query will return as many members with positive values and as many with negative values as listed (or fewer if there are not as many members with the respective algebraic sign.) If there are more members than the designated number, *DeltaMiner* will consolidate the remaining members with this algebraic sign as described below. If you have set the number to 5, therefore, *DeltaMiner* will return up to 12 members (the 5 top ones, 1 for the remaining top ones, the 5 bottom members, and 1 for the remaining bottom ones).
- *DeltaMiner* always displays remaining members at the end of the top count and at the beginning of the bottom count regardless of their values. In many cases, the value of these remaining members may be substantial and the “rest” may even be larger than the largest individual item. This especially holds true for dimensions with large amounts of members. If you limit the pivot table to the 10 most important material numbers and *DeltaMiner* consolidates several thousand other material numbers into one remaining member, for example, the combined sum may be much larger than the top placements.

Behind the scenes, *DeltaMiner* treats remainder members as calculated members that, however, are only defined in the respective pivot table and cannot be used otherwise. As a result, you will not see them in the *Dimension Browser* and cannot rename or edit them. You can neither drill down on a remainder member nor dissolve it to display the members that comprise it. The pivot navigation is also not supported in the data cells of remainder members. Since you cannot use remainder members in filter members as well, you cannot drag and drop them into an analytic method. This approach focuses on the top and bottom count anyway – and not the remainder members.

DeltaMiner will always display the name of these remainder members in the interface language. If you switch *DeltaMiner* to German, for example, it will display the terms “(Rest Obere)” and “(Rest Untere)” instead of “(remaining top)” and “(remaining bottom)”. *DeltaMiner* can also find these terms if you use the search function of pivot tables (see *DeltaMiner deltas!* 5.5.1, feature #24) or the universal search.

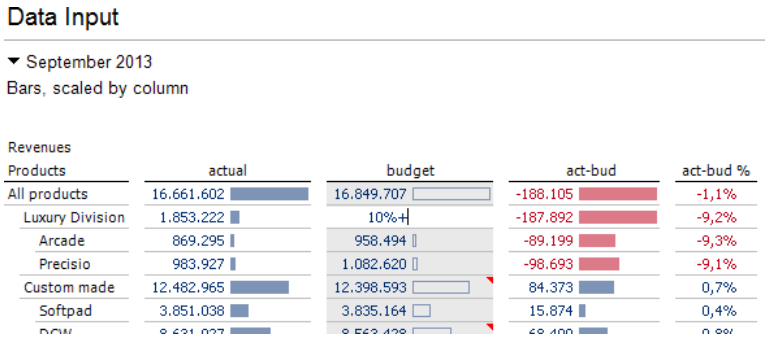
This function is only available for MDX OLAP models, for example, in combination with Microsoft Analysis Services or SAP BW. As a result, *DeltaMiner* will not offer it as an option in the *Axis Definition* in analysis sessions that are based on other databases. This function is also not backwards compatible. As a result, you should not use analysis sessions (DAS and DAM files) and applications that use this option in previous versions of *DeltaMiner*.

DeltaMiner has already offered similar functionality in *Navigation* and *Waterfall Analysis*. These analyses can also examine variances in both directions and automatically combine the residual members for small causing or compensating objects as they are called in these methods. With this new *Ranking* option, you can now access this same concept in pivot tables, which are the most important format for standard reporting.

In feature #13 it is described how this approach is integrated in the pivot navigation.

(16) Planning: Using Planning Functions in Presentation Mode

You can now use the planning functionality in *Viewer* mode – for example, inputting data or editing cell comments – in presentation mode as well. This new feature accounts for the fact that multiple users often discuss and enter their budget data while sitting together in front of a computer screen or projector – an ideal environment for using presentation mode.

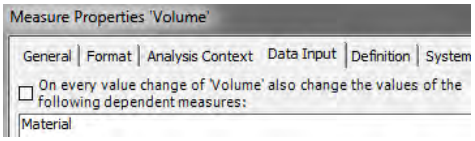


You can start presentation mode from the *View* menu (*Slide Show*) or by hitting the *F5* key or *Shift+F5* (for the current report).

From here, you can activate the data input mode in the presentation mode as usual by double clicking on the desired cell or hitting the *F2* key after you have highlighted a cell. If you use the presentation mode in *Viewer* with a *Miner* license, you can only activate the data input mode using the *F2* key because the double click is reserved for executing predefined steps of the pivot navigation.

(17) Planning: Disabling the Option to Change Dependent Measures

In planning applications, you can specify in the *Measure Properties* on the *Data Input* tab the so-called forwarding changes. When some values change, this function causes *DeltaMiner* to change further dependent members as well. Now you can deactivate this option with the new check box without losing the definitions. This check box activates or deactivates all forwarding changes of the respective measure at once.



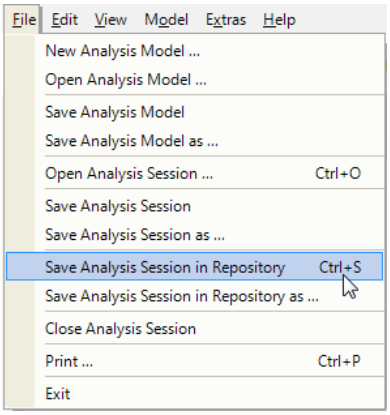
This option is very useful when you are searching for errors. If *DeltaMiner* passes on the changed value to multiple measures and you get an unexpected final result, it helps when you can temporarily deactivate this option so that you can take a closer look at the results in between.

(18) Repository: Saving an Analysis Session from the Repository to the Repository with Ctrl+S

Thanks to a few small changes, saving applications in the Repository is now easier and safer than in the past.

The *File* menu now contains two entries to save data to the Repository, which are similar to saving analysis session files*:*

- When you choose *Save Analysis Session in Repository, DeltaMiner* will write back the application to the Repository using the same parameters you used the last time that you saved it. *DeltaMiner* will display a message in the status menu but no dialog box.
- *Save Analysis Session in Repository as…* means that *DeltaMiner* will (again) prompt for the parameters (e.g. the *Connection Properties* and the options for saving the application for which clients) in a dialog box.



Please note that you can only save an application to the Repository if you have opened it by *options dialog* and *for exclusive write access* (see *DeltaMiner deltas!* 5.5.6, feature #19). Otherwise, *DeltaMiner* can neither save the application in the Repository nor display the menu entries. This is also the case if the user does not have change permission.

If you save your work using the shortcut *Ctrl+S*, *DeltaMiner* will take into account how you have opened or last saved the current session.

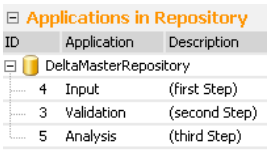
- If you have last saved the session as an application in the Repository, *Ctrl+S* will make *DeltaMiner* save it in the Repository again using the same parameters as the last time and without displaying the respective dialog box.
- If you have last saved the session as an analysis file, *Ctrl+S* will prompt *DeltaMiner* to save it again in the same file.
- If you have not saved the session since you have opened it, *DeltaMiner* will attempt to save the session as you had opened it – in other words, an application from the Repository as the same application in the Repository or an analysis session back in its file. *DeltaMiner* will only display a dialog box if it is unclear where it should save the target file. This can occur if you have opened an application from the Repository and have permission to save it as a file but not to change the application. In this case, *DeltaMiner* will not offer the options to save to the Repository and if you hit *Ctrl+S*, it will open the file selection dialog box.

The same rules apply if you answer "Yes" to the security prompt that asks if you want to save the unsaved changes at the end of a session.

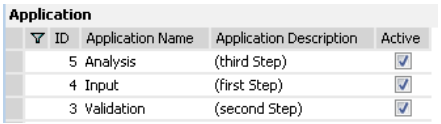
When you exit an application that is stored in the Repository, *DeltaMiner* will also display the security prompt asking if you want to save the changes if you have only changed the permissions but have not yet saved them.

(19) Repository: Sorting Applications with Drag and Drop Functions

You can now individually sort the applications in the Repository with the Repository GUI. All *DeltaMiner* products that access the Repository will then display the applications in this order: the Windows program *DeltaMiner* ("Client.exe"), the *WebClient*, the *Add-in for Office*, and *DeltaMiner Gate* installations. Previously, the individual products always displayed the applications based on the order of their IDs.

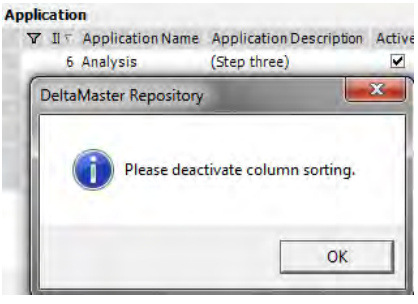


When the applications are well sorted, users can find and open them more easily. For example, you could move the most important applications to the top of the list or create a sequence in which they should be processed as in the example on your right. If you wish, you can also sort the application names in alphabetical order.



You can specify the order in the *Repository GUI* in the *Application* window by dragging and dropping the applications to the desired position.

If the applications are already displayed in a certain order in the *Repository GUI* and you see a small arrow in the column header, you must first deactivate the column sorting by clicking on the column header until this arrow disappears. This behavior is new as well. In past versions, you could only sort a column in ascending or descending order and could not deactivate the sort order. If you try to move an application while the column sorting is activated, *DeltaMiner* will inform you that you must deactivate it. In this respect, this way of sorting the applications is similar to a custom sorting order in the *Measure Browser* where you can only activate this option if the dialog box is not sorted by columns.



The individual sort order which you define using drag and drop is saved in the Repository database separately from the column sorting in the *Repository GUI*. As a result, if you click on the column header to switch the column order again, this will not change the saved order.

In order to use this feature, both *Repository GUI* and the *Repository* database must run version 5.5.8 (or higher). To update the database, run the “Repository.sql” script that is provided as a component of *WebOption* and *RepositoryService*.

(20) Repository: Specifying the Host and Port of the Repository with the Command Prompt “-repository”

You can now use the command prompt “-repository:X” to specify the host and port of the Repository, for example:

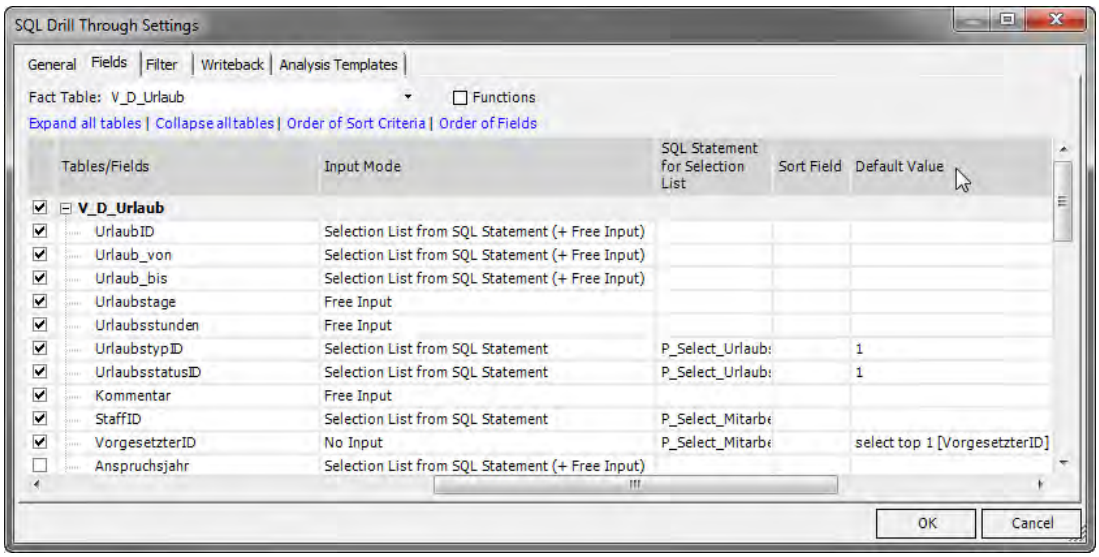
Client.exe **-repository:**serverdm02:8000 -app:9

This parameter was introduced in version 5.5.7 (see *DeltaMiner deltas!* 5.5.7, feature #20). In version 5.5.7, you had to enter the name of the Repository as it was defined in the “Client.exe. config” file for the value. This is still possible. Now, you can opt instead to enter the host and port directly on the command line without needing an entry in the configuration file. The format is: “<Host>:<Port>” (without quotes) – in other words, the name or IP address of the server, a colon, and then the number of the port. Most installations use 8000 as the standard port. As in the past, you can only use “-repository” in combination with “-app”.

If your installation uses Kerberos for authentication, please note that the connection uses “DeltaMaster/<Host>” as the “Service Principal Name”.

(21) SQL Drill Through: Define Default Values for New Data Records

You can now enter data more easily in an *SQL Drill Through* by defining Default Values for new data records. *DeltaMiner* will then suggest these Default Values whenever you add a new data record.



In the *Settings*, you can create a *Default Value* as either a constant or SQL query. Please note the following rules:

- Enter constants for fields of the data type “String” in single quotation marks (e.g. ‘euros’).
- Use a period when entering constant numerical values with decimals spaces (e.g. 1.95583) so that you can work with these numbers in international systems.
- You can use the constants “Now” and “Today” as Default Values for fields with the type “DateTime”, each without quotation marks. “Now” returns the current date including the current time while “Today” returns the date without the time.

- You can use the constants “true” and “false” (without quotation marks) as default values for fields of the type “Boolean”.

DeltaMiner will view all other values in the *Default Value* field as SQL queries and transfer them to be run in the database. These queries could either be stored procedures or queries with “SELECT”. The query must return exactly one data record whose first field is used as a Default Value. If the query returns no value or more than one, the Default Value will remain empty.

The “<viewX>” variable is supported within the SQL query. Here, “X” stands for the dimension ID, which will be displayed if you hold the *Alt* key and mouse over a dimension in the *View* window. *DeltaMiner* will then replace “<viewX>” with the view in the respective dimension, in other words, the selected member (or members) in the dimension.

If the *Default Value* field remains empty in the *Settings*, *DeltaMiner* will suggest a value based on the current view just as it did previously. *DeltaMiner* will suggest the member that is currently selected in the View provided that it does not have any subordinate members.

If you are working with multilanguage applications, you can administer the *Default Value* in alias sets. You can access the *Default Value* in the *Model Browser* (*Model* menu) on the *Alias Sets* tab under the respective *Report* in the *Fields* structure.

(22) SQL Drill Through: Transferring Hyperlinks to HTML Emails

DeltaMiner users have been able to define hyperlinks in an *SQL Drill Through* since version 5.3.2 (see *DeltaMiner deltas!* 5.3.2, feature #30). Now, these links will be automatically included when you export an *SQL Drill Through* to HTML e-mails or documents so that you can open the respective link target from the e-mail or the exported document.

(23) SQL Drill Though: Switching the Sorting Option to Ascending, Descending, or Unsorted

If you have sorted an *SQL Drill Through* report by clicking on the column header, you can now switch back to the original order on a column header. When you click once on the column header, *DeltaMiner* will now switch among ascending, descending, and unsorted order. With the new “unsorted” option, you can display the data records in the order that is defined in the *Settings*.

As in the past, you can only click on the column headers to sort the data when the number of data records is not limited (option under *Settings* on the *General* tab) or fewer data records have been returned than the maximum number allowed.

(24) SQL Drill Through: Sorting, Renaming, Hiding, and Showing Columns Directly in the Table

Designing *SQL Drill Through* reports is now much easier because you can perform many different tasks directly in the results table instead of having to use the *Settings*. As in previous versions, you will need a valid license for *Miner* mode if you want to create or change *SQL Drill Through* reports.

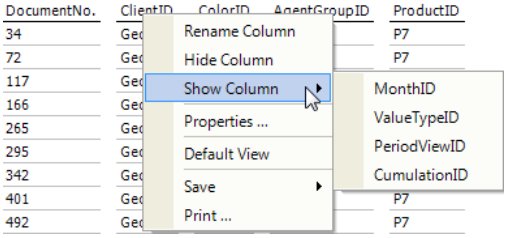
You can now drag and drop columns to place them in the desired order – similar to moving measures in a pivot table. To move a column, drag the column header and drop it into another column. *DeltaMiner* will then insert the column in this location.

You can also *Rename* [the] *column* in the context menu of the column header. If you enter an empty space as the new name, *DeltaMiner* will display the column again with its original name. You can administer the column name in multiple languages as well (see *DeltaMiner deltas!* 5.5.5, feature #16).

You can also access the *Hide Column* option from the context menu of the column header. This column, however, still remains in the database query and, for example, can be used for hyperlinks (see *DeltaMiner*

deltas! 5.3.2, feature #30). In the customer's name, for example, you could add a hyperlink that contains the customer number as a parameter without having to display that number as a separate column in the report.

DeltaMiner lists all hidden columns in the context menu of the column header under *Show column*. Select a column to display it again.



DeltaMiner will automatically update each of these steps in the *Settings*. In other words, these editing options have the same effect as a change in the *Settings*. Editing them directly in the table, however, is usually simpler and faster.

(25) Update Notes

The following table shows if the new release contains any changes to the metadata schema of the *ReportServer* and the *Repository* database as well as in the configuration files compared to the previous version.

Component	Files	Changes since version 5.5.7
ReportServer	„ReportServer.mdb“, „ReportServer (SQL Server).sql“, „ReportServer (Oracle).sql“	Yes
	„ReportServer.exe.config“	No
Repository	„Repository.sql“	Yes
Repository GUI	“DeltaMaster.Repository.exe.config”	No
WebService	“DeltaMaster.Service.exe.config”	No
WebClient	“web.config”	No

You don't always have to update all components of a *DeltaMiner* installation at the same time. In the new **DeltaMiner compatibility matrix**, we now document the version dependencies of front-end components (e.g. *DeltaMiner*, *ReportServer*, *Add-in for Office*) to services and databases. This matrix has been available in *DeltaMiner Help* since the 5.5.8 release and will be updated with each subsequent one. The matrix shows which components you need to update for the release upgrade, if you can continue to use previous versions, and, if so, with which limitations.

The metadata scheme of **ReportServer** has changed. As a result, you should run the “ReportServer (SQL Server).sql” or “ReportServer (Oracle).sql” script to update your job definition database. If you use the Access database “ReportServer.mdb”, *DeltaMiner* will update it automatically. You should, however, update the “ReportServer.exe” file as well as the respective DLLs so that they match the current *DeltaMiner* version. The ODBC connection string, which is specified in the job definition database, is saved in the “ReportServer.exe.config” file. Please create a backup copy of this file before you install the current version of the *ReportServer* files.

The **WebOption** components – *Repository GUI, WebClient,* and *WebService* – are available in version 5.5.8. Please note that support for Microsoft Internet Explorer 6 and 7 has stopped in version 5.5.4. In addition, Microsoft .NET Framework 4.0 or higher has been required since version 5.5.6. Before you update

WebOption, please create backup copies of the configuration files (see table above), any changed graphics in the “Image” folder (e.g. “Master_Top.png”) as well as the style sheet file (e.g. “DeltaMaster.css”). You can update the *WebService, WebClient, and Repository GUI* by copying the new files into the respective directories. A separate setup is not necessary. If you want to update the Repository, you need to run the script “Repository.sql” on the existing Repository database.

You can update the **apps** for iPad and iPhone (*DeltaMiner ReaderApp*, *DeltaMiner TickerPortal*, and *DeltaMiner Notifications*) at the App Store.

29 DeltaMiner deltas! 5.6.1

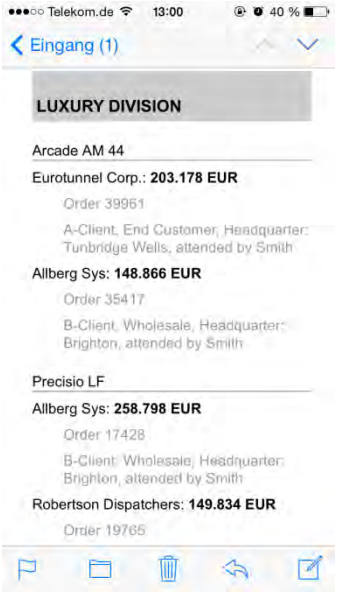
What's new in version 5.6.1? Find out in this overview!

(1) HTML Export: Outputting Data Records from SQL Drill Through as Text Optionally (Instead of an Image)2
(2) Pivot Table: Configuring Report Weather (for DeltaMiner Navigator).....6
(3) Repository: Synchronizing Analysis Files with a Master Application in the Repository 9
(4) Setup for WebOption.....11
(5) Update Notes 15

(1) HTML Export: Outputting Data Records from SQL Drill Through as Text Optionally (Instead of an Image)

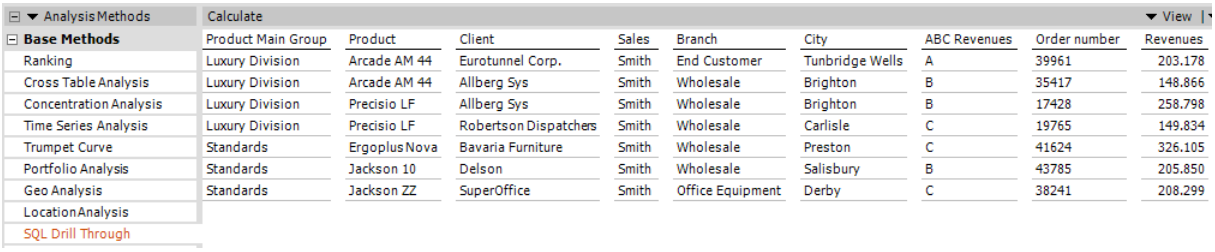
Exporting reports from *SQL Drill Through* is much more flexible because you can now output the data records as text. Using HTML and CSS, you can format it any way you wish to optimize the output for individual devices – from smartphones to large-screen monitors. For example, you can use this new feature to automatically send incoming orders, customer service queries, or event logs of technical systems as an email to a user's smartphone once or even several times a day. Unlike an export as an image, *DeltaMiner* can output fields underneath each other (instead of next to each other in a row). Since each system typically sets row breaks itself to optimally utilize the available screen space, the text export feature is also suitable for longer texts (e.g. conversation notes from a CRM system or trouble reports in customer service).

The text output is based on report-specific templates that are separately composed, formatted, and saved for each *SQL Drill Through* report. You can use these templates to create different report views for different devices. Report-specific templates are a brand-new feature in *DeltaMiner*; in all other export functions the same template is used for all reports of an analysis session or application.

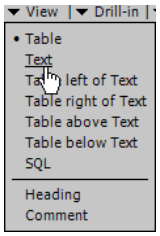


Let's take a look at an example of an operational report from our "Chair" reference application. The product management team wants to receive a clear, daily overview of incoming orders via smartphone. This email should contain the order number (i.e. in case someone has a question for order management) as well as basic information about the customer who is placing the order. The screenshot on your right shows a sample report in the email app of an iPhone. Instead of zooming, you scroll through the report with your thumb. The iPhone automatically adds breaks to longer texts wherever necessary.

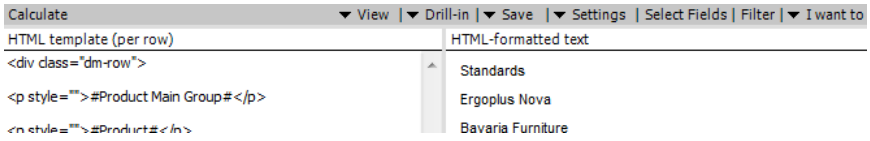
The information in the screenshot above comes from a report that was exported from *SQL Drill Through* to an HTML email. The screenshot below shows the same report in the familiar tabular view.



(a) Text view and HTML formatting

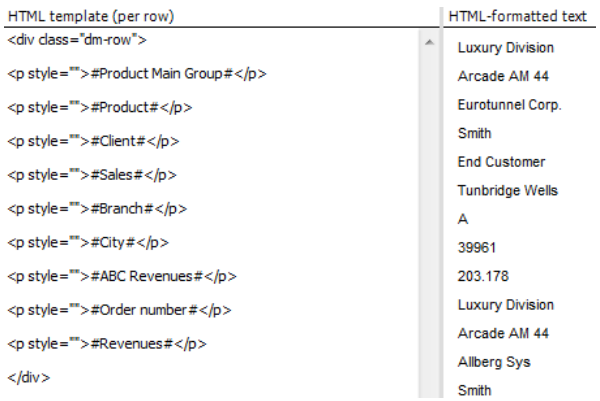


To display the table of an *SQL Drill Through* as text, you must switch the *View* to the new option *Text*. This option is available in *Miner* mode – and other modes as well provided that the report was saved with a text view in *Miner* mode. You can also opt to display the table and text simultaneously, in which case the table would appear *above*, *below*, to the *left,* or to the *right* of the text just as in the Chart views of other analytic methods. This can be very usefully especially during the editing stage.



In *Miner* mode, *DeltaMiner* will display two windows. On the left

side, you have a data-entry field to edit the *HTML template (per row)*. On the right, you see the result: *HTML-formatted text*. In *Reader*, *Viewer*, *Pivotizer*, *Analyzer,* and the presentation mode of *Miner*, you only see one window containing the *HTML-formatted text*.



The first time that you activate the text view, *DeltaMiner* will automatically create a *Template*, which is a simple HTML framework for displaying a data record (one row from the report in a tabular view). In this framework, all the fields selected in the *Settings* on the *Fields* tab are referenced with variables. These variables enclose the field name between hash signs (e.g. "#Revenues#"). You can either use the original name or the alias defined as the *Column Caption* in the *Settings*.

You can change and edit the framework that *DeltaMiner* generates any way you please. The suggested framework has the following setup: Each field is output in its own paragraph ("<p>"). To simplify the formatting, all paragraphs have been assigned a "style" attribute. Initially, this is empty – and can stay that way if desired. In this case, the paragraph will be displayed in line with the default settings in the template file "DeltaMaster.htm" (see section b) or the email client or browser. If you wish to format the paragraph, the suggested "style" attribute will save you some typing. All paragraphs that belong to a row of a tabular view are kept together in a block (" "), which belongs to the "dm-row" class. Only the field references are required for the output; how they are embedded in HTML and CSS code has no effect on the output operation. Only two special output options (i.e. grouping data records with same field values, see section c; highlighting changes in *Exception Reporting*, see section e) are dependent on a specific code in the *HTML template*.

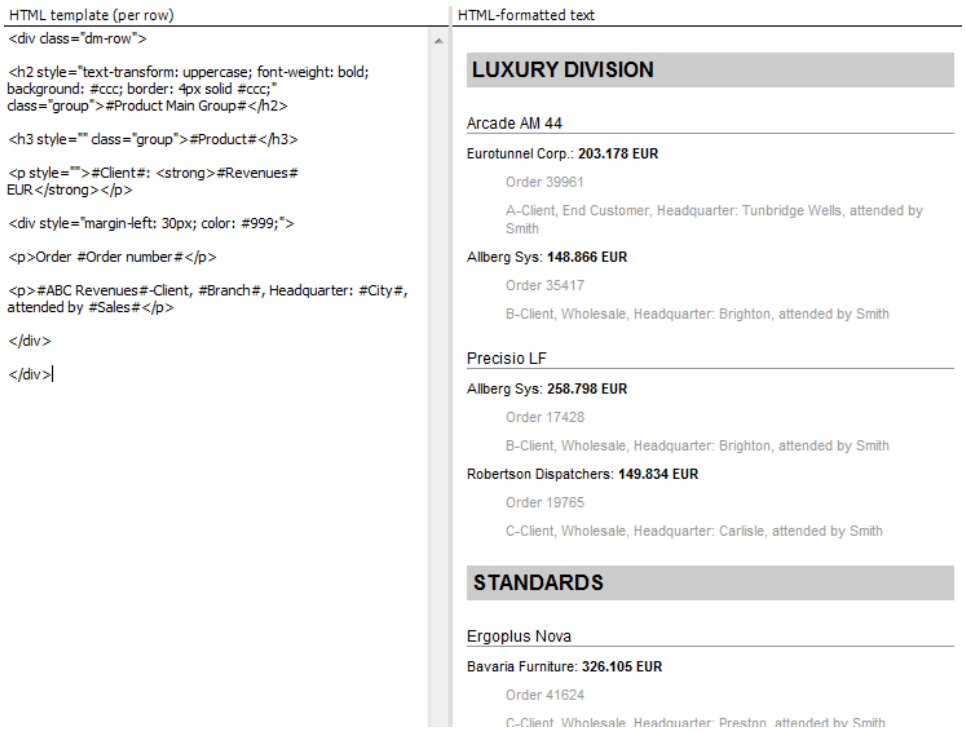
When you make any changes to the *HTML template* in the left window, *DeltaMiner* will automatically apply them to the *HTML-formatted text* in the right one without running the database query again. To ensure that the window can quickly react to changes in the *HTML template*, *DeltaMiner* limits the display in the right window to 100 data records (i.e. rows from the report in a tabular view) when you are editing the *HTML template* in *Miner* mode. If you are performing an export or displaying this window in read-only mode (i.e. *Reader*, *Viewer*, *Pivotizer*, *Analyzer*, *Miner* presentation), it will process all data records from the result table.

In order to create the "result", i.e. *HTML-formatted tex*t, *DeltaMiner* processes the rows of the tabular view, one after the other. For each row, it replaces the variables in the code of the *HTML template* with the respective field values. Special characters or XML characters such as "<" and ">" are not converted. *DeltaMiner* arranges the individual HTML blocks next to each other and inserts them in the "DeltaMaster.htm" template (see section b).

DeltaMiner attempts to replace field references in all fields selected in the *Settings* including those that are not marked as being *visible*. The text view, therefore, may contain more fields per data record than the result table does. If it cannot replace a field reference (e.g. because it is misspelled), *DeltaMiner* will treat it as normal text and display it as such (i.e. without an error message). Unresolved references are displayed with hash signs ("#") in the output and, therefore, are easy to recognize. If you later select additional fields in the *Settings* or remove select fields, you must edit the *HTML template* accordingly and either enter or delete the variables in the *HTML template*. (These changes are not updated automatically.) If you wish to build the framework again from scratch so that it reflects the current *Settings*, delete the entire text in the HTML template window and *calculate* the report again.

DeltaMiner saves the *HTML template* for each report as well as a component of analysis templates.

Let's go back to our example at the beginning. Many changes were made to the framework that *DeltaMiner* originally suggested. On the right, you can view the formatted output, which would look exactly or similar to this on a tablet, smartphone, etc.



The main product group is now designated as a second-level heading ("<h2>") with a colored background. It also serves as a group and is displayed only once (see section c) due to the sorting in the *Settings* and the class assignment "group". The products are also treated as a heading and a group attribute ("<h3>", "class="group"""). The other fields were arranged in two paragraphs.

When creating designs with HTML and CSS, you must keep in mind that people will view the results in many different types of smartphone apps and email clients including desktop programs (e.g. Microsoft Outlook, IBM Notes, Mozilla Thunderbird, and Apple Mail), webmail systems such as Gmail, and various internal company systems. These clients are typically less powerful than modern browsers and provide only partial support of HTML and CSS specifications. As a result, the display on different devices can differ from that in *DeltaMiner*.

(b) Requirement: new variable in the template file "DeltaMaster.htm"

In order to output HTML-formatted text, *DeltaMiner* uses the same "DeltaMaster.htm" file that it uses as a template for all other HTML exports. It will search for this file in the folder that is entered in the *Options* (*Extras* menu) on the *Folders* tab for *Export templates* (e.g. "C:\Program Files\DeltaMaster 5.6.1\Templates").

Before *DeltaMiner* can export the HTML-formatted text, this file must contain a new variable called "##reportcontenttext##". The "DeltaMaster.htm" file that is included in the *DeltaMiner* 5.6.1 installation already contains this variable. If you wish to use the same template file that you used in the past, for example, because it has been already customized for a specific application, you must manually add the variable, for instance like this:

##reportcontenttext##

DeltaMiner will only replace this variable when it exports HTML-formatted text, a format that is currently only available for *SQL Drill Through*. In all other export formats (and, therefore, report types), it will replace this variable with an empty text. During a text export, on the other hand, the variables for images (e.g. "##reportimage##") will remain empty.

DeltaMiner also uses this template file for its own internal display so that you can immediately preview the effects of the defined CSS rules in *DeltaMiner*.

The new template file also contains two CSS selectors that refer to the classes "dm-row" and "dm-row-delta":

```
div.dm-row { margin-bottom: 8px; }
div.dm-row-delta { margin-bottom: 8px; color: #ff9400; }
```

These two classes are important for highlighting changes in *Exception Reporting* with *ReportServer*, (see section e).

You can define separate export templates file for each job in *ReportServer*. If you wish to use individual templates and output HTML-formatted text, you must insert the variable "##reportcontenttext##" into each template file.

(c) Grouping data records

If a field value repeats itself in several data records, you can simplify the visualization by creating a group for this field. In this case, *DeltaMiner* will only display the repeated value once as a heading for all of the subsequent data records. When this field value changes in comparison to the previous data record, *DeltaMiner* will display the value again. In order for this feature to work, the *Order* function must be activated for the respective field in the *Settings* of *SQL Drill Through*. This ensures that data records with the same field values follow each other in succession.

When grouping the output, *DeltaMiner* observes the content of HTML tags that belong to the class "group" and checks if this text changes from one data record to another. If it doesn't, it will not output the tag and the text that it contains. In other words if you want to define the field for grouping the output, assign the class "group" to the HTML tag where it is used:

```
<h2 class="group">#Product Main Group#</h2>
```

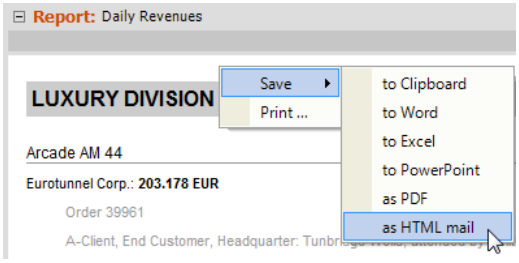
The class name "group" is a type of "reserved word" that *DeltaMiner* interprets as marker of HTML elements that should be only output once for grouping purposes. No CSS rules are defined in the template "DeltaMaster.htm" for this class although it is possible. These rules would then affect all *SQL Drill Through* reports.

Grouping is possible for multiple fields. For example, you could group customer orders by product main groups and for each product main group by product.

```
<h2 class="group">#Product Main Group#</h2>
<h3 class="group">#Product#</h3>
<p>Customer #Customer#, Order #Order number#: #Revenues#</p>
```

In order to support multiple groupings, the *Order* in the *Settings* must be identical with the order of the variables in the *HTML template*.

(d) Export formatted text



You can export the report in text form as an *HTML mail* by selecting the respective option in the context menu or the *Save* menu. This option is supported in all user modes from *Reader* to *Miner*. If the report is displayed as *Text* or as a table with text (*View* menu), *DeltaMiner* will export it as text. In the *View* as *Table*, *DeltaMiner* will export the table as an image. The *View* is saved in the report.

The new text view with HTML formatting is primarily intended for HTML emails. Limitations do apply to other export formats. *DeltaMiner* will:

transfer the HTML code excluding the components contained in the template “DeltaMaster.htm” (i.e. the resolved variable “##reportcontenttext##”) to clipboard for all data records

not export reports in text view to Microsoft Word and PowerPoint

export reports as tables to Microsoft Excel and as a PDF regardless in which view they were saved

WebClient currently does not support the text view with HTML formatting. It displays the reports in a tabular view regardless in which view they have been saved.

The *Add-in for Microsoft Office* currently does not support the text view and can only insert *SQL Drill Through* reports as an image in documents and presentations.

The *DeltaMaster ReaderApp* does not support the text view on iPad/iPhone devices.

The information in this section also applies to automatic processing with *ReportServer*. If you wish to save *SQL Drill Through* reports as formatted HTML files or send them as formatted emails, save the report in the *Text* view and select the job definition “html” as the *Report Format*. The export template file, of course, must include the changes described in section b.

(e) Highlighting changes in exception reporting

Another “reserved word” is the class name “dm-row”. This class is relevant when *ReportServer* processes a report through *Exception Reporting* and this is configured to recognize that the *Report content contains changes compared with last run* and to highlight these changes (*Report Properties*, *Exception Reporting* tab, see *DeltaMiner deltas!* 5.4.9, feature #8).

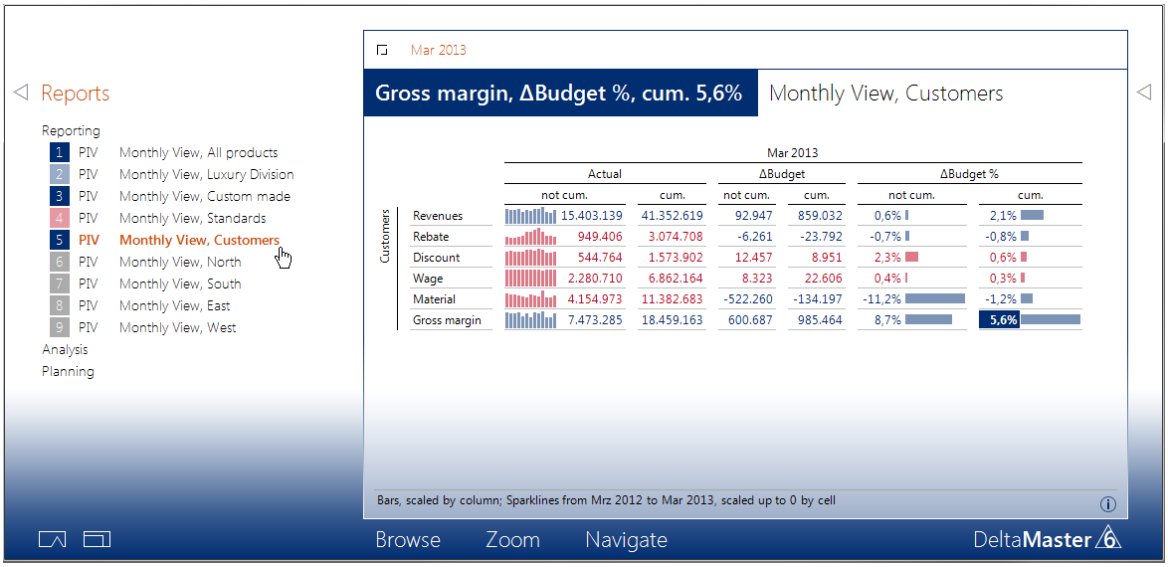
If *DeltaMiner* or *ReportServer* identifies a change in a data record (i.e. a row from the report in a tabular view) since the last run, it will replace the class name “dm-row” with “dm-row-delta” in the HTML text for this data record. As a result, the changed data records can have a different format and, therefore, stand out from the unchanged ones. The template file “DeltaMaster.htm” that is included with this installation already contains simple rules for the classes “dm-row” and “dm-row-delta” (see section b). The font of the highlighted record will change to orange. You can, of course, edit these CSS rules to meet your own requirements. When it comes to using mark-ups, we recommend that less is more. It makes sense to highlight changes, but you don’t want to outshine the other data records in the process.

(f) Displaying images

When the output is text, *DeltaMiner* will not check if a field contains the URL of an image. The option described in *DeltaMiner deltas!* 5.5.2, feature #18, is ignored. To display images, use the tag “<img src="…">” and enter the image path (including variables) in the *HTML template*.

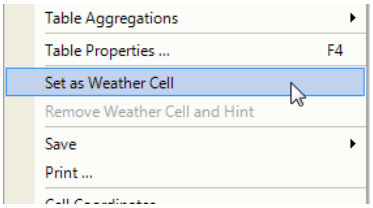
(2) Pivot Table: Configuring Report Weather (for DeltaMiner Navigator)

DeltaMiner 5.6.1 contains a special function for supporting *DeltaMiner Navigator*, the first module of the new, sixth generation of *DeltaMiner*. The most striking new feature in *DeltaMiner* 6.0 is what we call *Report Weather* for pivot tables. *Report Weather* is a concept that signalizes what issues have top priority by highlighting very positive or negative results in reports with colored markups. Just as the sky reveals the weather conditions, the *Report Weather* shows the conditions within your company – clear, intuitively, and at a glance. These signals use the same, tried-and-tested color rules in *DeltaMiner*: Blue means good while red means bad.



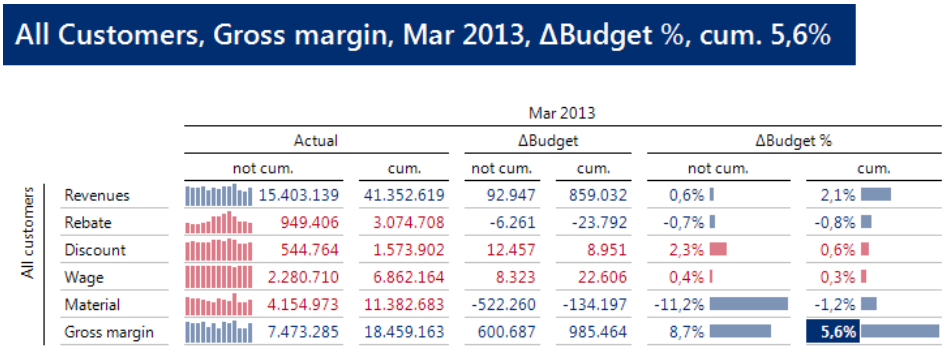
DeltaMiner Navigator displays the *Report Weather* in four different places: the background of the *DeltaMiner* window, the report list (left), the “weather hint” (left, next to the pivot table’s heading) as well as in the “weather cell” that determines the color. In the screenshot, this is the bottom-right cell with the value 5.6 percent.

In order to activate the *Report Weather* in a pivot table, you must designate the weather cell. Starting in *DeltaMiner 6*, you will be able to do this in an editing module. At the present time, you still need *DeltaMiner* 5.6.1.

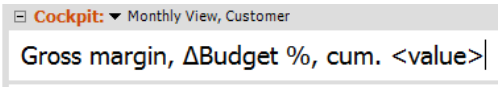


You can *set the Weather Cell* in the context menu of a cell in *Pivotizer*, *Analyzer*, and *Miner* modes. Each report can contain a maximum of one weather cell. If you designate a cell as a weather cell, therefore, *DeltaMiner* will automatically remove the previously designated cell without a separate user prompt. To deactivate the report weather for a report, *remove the Weather Cell and Hint* using the context menu option.

Once you have defined the weather cell, *DeltaMiner* will calculate the report weather, highlight the value in the cell by coloring the background, and display (or update) the weather hint in the upper-left corner of the report. This result in *DeltaMiner* 5.6.1 looks similar to *DeltaMiner Navigator* 6.0, but the background of the application window and the briefing book are not changed.



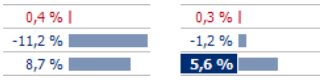
Starting in version 5.6.1, *DeltaMiner* will display the weather hint in a separate cell above the report (or heading if the report contains one). In *DeltaMiner Navigator* 6.0, the weather hint and heading or report title will share a row together.



DeltaMiner will make a suggestion for the weather hint that consists of the name of the measure, the name of the dimension members from the *Axis Definitions,* and the actual value. You can edit this text by clicking on the respective area. *DeltaMiner* will then switch to a data entry mode, similar to the one used for headings. The new variable "<value>", which stands for the value of the weather cell, should be placed at the very end of the weather hint since the value of the weather hint in *DeltaMiner Navigator* is also used elsewhere.

You can also include MDX variables such as "{cp}" and "<viewX>". If you are working with nested dimensions, we recommend shortening the suggestion so that the label is clear but still accurate when the user changes the view in *Navigator*. Listing the measure, the comparison type (e.g. "ΔPY %" or "ΔBudget"), and the cumulations usually suffices in most cases.

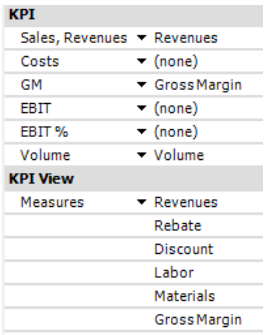
You cannot format or hide the weather hint (unless you deactivate the report weather), and it will not be displayed in presentation mode. The weather hint is also not available outside of the *DeltaMiner* application. This means that *DeltaMiner* will not include it in exports, and *DeltaMiner Add-in for Office* does not support it either as an independent report component or a part of other components.



You can also not hide the weather cell markup (unless you deactivate the report weather). This, too, will not be displayed in presentation mode. You can, however, view it outside of the *DeltaMiner* application provided that the report was exported as an image. This means that when you export to Microsoft Word and PowerPoint, to PDF files, or as an HTML mail, this value will be highlighted with a colored background. This also applies to tables that are embedded with *DeltaMiner Add-in for Office* or displayed in the *DeltaMiner ReaderApp* on an iPad/iPhone. This markup, however, is not displayed in WebClient.

If you do not have a corresponding hint, it doesn't make sense to highlight the weather cell. Therefore, we recommend that you only use this configuration option in *DeltaMiner* 5.6.1 as it was intended: to prepare your reports so they can be displayed in *DeltaMiner Navigator*.

DeltaMiner identifies the weather cell based on its measure and the contributing dimension members – not through its coordinates. The report weather, therefore, is relatively robust when it comes to handling structural changes in the pivot table. It will not change whether you drill down to extend the table, roll up to shorten it, or enter or remove dimensions. Even when you can no longer see the weather cell (e.g. due to changes in the *View* or *Filter* in the *Axis Definition*), the defined cell is still valid. In these cases, *DeltaMiner* will not display the report weather (i.e. neither in version 5.6.1 nor 6.0) due to the rule: **no signal without an explanation**. If you cannot see the weather cell that determines the coloring in the report, *DeltaMiner* will not display the report weather because you cannot explain how this coloring came to be. This function, however, does not affect the designated weather cell. As soon as *DeltaMiner* displays the weather cell again (e.g. due to further changes in the *View* or *Axis Definition*), the report weather will reappear as well.



The *Start Wizard* (*Model* menu in *Pivotizer*, *Analyzer*, and *Miner* modes) as of *DeltaMiner* 5.6.1 will automatically set the weather cell in *Monthly View* reports provided that defined *Gross Margin* or *EBIT* appears in the *KPIs* of the *KPI View* (*Model* tab). The weather cells are those in which:

Gross Margin or EBIT is set as a measure (when both are contained in the *KPIs*, EBIT has priority).

Percent cumulative budget variance is set ("ΔBudget %, cum.") as a method for comparison.

The "All" member is set in the respective *Main Dimension.*

DeltaMiner automatically shortens the weather hint by removing the current period and *Main Dimension* from the text. You can further edit or remove the weather cell and hint from the generated reports as described above.

The report weather in *DeltaMiner 5* is calculated with the same function and uses the same color palette as in *DeltaMiner* 6. As a result, you can already get a good idea in *DeltaMiner* 5 of what is to come in the future. The complete effect – including the emotional influence of the shining blue or ominous red sky – will be revealed in *DeltaMiner* 6 only.

(3) Repository: Synchronizing Analysis Files with a Master Application in the Repository

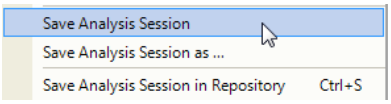
Saving applications from the repository as an analysis file (DAS) has been supported since version 5.5.6 (see *DeltaMiner deltas!* 5.5.6, feature #20). Now *DeltaMiner* offers the capability to automatically synchronize files with the master application in the repository. This way, users can save individual reports to a separate file and routinely transfer the reports that have been published or changed in the central repository. To enable this feature, you must specify that the application should “subscribe” to the master when you save the application as an analysis file.

(a) Update from the master application to the analysis file

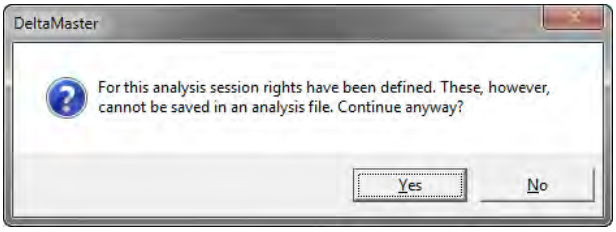
The synchronization of the master applications and analysis files is one-sided. The reports, cockpits, measures, etc. in the master application serve as the template and the “copies” are saved to the analysis file. These copies will be restored to the original state with each synchronization. If reports or other objects that come from the repository were changed in the file, *DeltaMiner* will overwrite these changes without prior confirmation. The application in the repository does not change during the synchronization.

(b) Creating an analysis file with a subscription

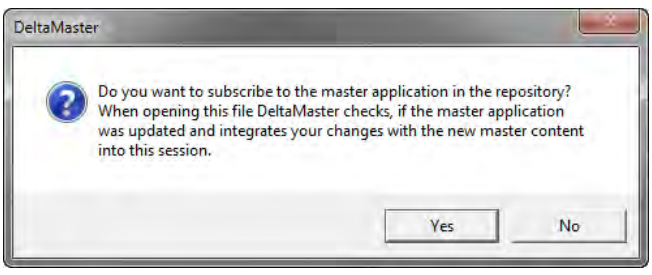
Open an application from the repository in *DeltaMiner* 5.6.1 and *Save* it as an *Analysis session* (*File* menu). This option is only activated when you have permission to *Save as a file* (see *DeltaMiner deltas!* 5.5.6, feature #20). In most cases, only application owners or administrators have this permission.



When you save an application to a file, any session right that you have defined in the repository will be lost. This means that the analysis file will show all report folders and reports for all users including those that users previously could not see due to their roles. *DeltaMiner* will explicitly inform you of this effect and when you save a file.



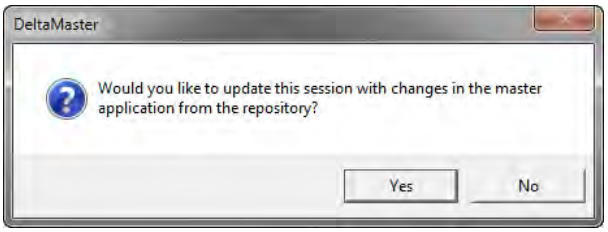
Once you have confirmed, *DeltaMiner* will prompt if you wish to set up a subscription for this file – in other words, if you want to link the file to the master application in the repository so that it can be updated at a later time. If so, it will then insert additional information such as the date and connection data of the master application to the analysis file. This is how *DeltaMiner* recognizes when a subscription has been activated.



And that is all you need to do. *DeltaMiner* will now create an analysis file with the activated subscription. You can provide it to the respective users.

(c) Opening an analysis file with a subscription and initializing the synchronization

You can open an analysis file with a subscription just as you would any other analysis file (e.g. from the portal, the *File* menu, or by double clicking on the file symbol). The only noticeable difference to normal analysis files is that *DeltaMiner* will ask if you wish to synchronize the file whenever you open it. If you do, *DeltaMiner* will update it (see section d below).



Following the synchronization, you can work with the analysis file as usual. The subscription remains active. Each time you open the file, *DeltaMiner* will ask if you want to synchronize it.

If the synchronized result is different than what you expected, you can restore the state of the analysis file prior to the synchronization in one of two ways:

- During the synchronization process, DeltaMiner creates a backup file in the same directory as the analysis file. This backup file is equivalent to the status prior to the synchronization. To locate the backup in the file system, look for the respective file name followed by the current date.
- When you synchronize a file, DeltaMiner will not automatically save the result. As long as you haven't saved the analysis session, the analysis file will still have the previous state. You can "preserve" it by selecting *Close analysis session* (*File* menu) without saving it.

When you save the analysis file, *DeltaMiner* will again inform you that permissions are defined that will not be saved (see section b). This is due the fact that the session permissions from the master application flow once again into the current session during the synchronization. If you can assume that these permissions were taken into account when the subscription was set up and the file was saved to the repository, you can confirm this prompt.

(d) Synchronizing by merging files – no synchronization of deletions

Technically speaking, the synchronization has the same behavior as if you merged two report sources. *DeltaMiner* loads reports and other *DeltaMiner* objects from the master application in the repository, on the one hand, and from the analysis file on the other. Since the master application has priority (see section a), the objects that exist both in the file and repository will be set to the state in the repository. The method stipulates that objects that were deleted in the master application will not be automatically deleted in the analysis file as well; their copies remain intact.

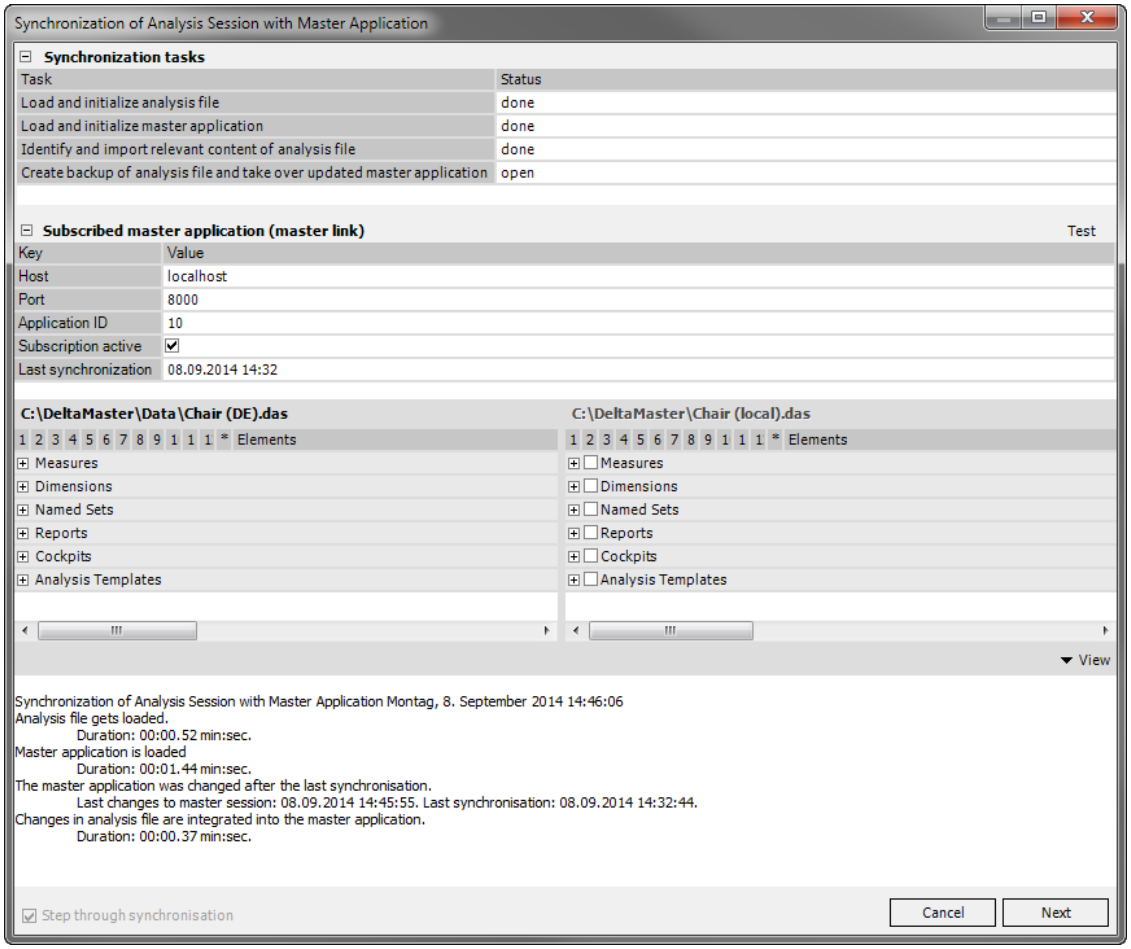
DeltaMiner synchronizes the files using the same established method that it uses to import models. It "recognizes" objects through an internal ID that is not displayed anywhere in the program. As a result, the synchronization does not depend on the object's name or other visible identifiers (e.g. the *Report ID* in the *Report Properties*).

(e) Additional control dialog box

DeltaMiner offers an additional dialog box where power users can control the subscription and synchronization in detail (see screenshot below). This dialog box shows the *Synchronization tasks*, the *Subscribed master application,* and all objects that it should transfer. The bottom section contains a detailed log of the synchronization process. To open this dialog box, press and hold the *Shift* key before confirming the synchronization prompt.

DeltaMiner will change the *Status* of each step to *done* if the synchronization has been successful. The detailed synchronization process is also displayed in the log below. This log is saved as a file ("Import.log"), which you can view outside of the dialog box. It is saved in the same directory as other log files and can be opened with the *Diagnosis* function (*Help* menu, *Ctrl+D* shortcut).

You can also change the connection data of the subscribed application or the application itself in the *Host*, *Port*, and *Application ID* fields under the section *Subscribed master application*. You can activate or deactivate the synchronization using the *Subscription Active* check box.



(f) Additional information and requirements

During a synchronization, *DeltaMiner* transfers reports, cockpits, measures, calculated members, and named sets from the master application.

You can only subscribe to applications from the repository if they were saved there using *DeltaMiner* 5.6.0 or higher. *DeltaMiner* will only offer the synchronization option when you open an analysis file that was saved with *DeltaMiner* 5.6.1 or higher.

(4) Setup for WebOption

You can now use a setup program (MSI package) to install *WebOption*. This makes installing and updating *WebOption* much easier than before. The setup will prompt you to enter information that *WebOption* requires such as the connection string to the repository database or the service host of the *WebClient*. As in the past, you will need to install or update the repository database without a setup (see section f).

(a) Requirement: Internet Information Services (IIS) 7 or higher

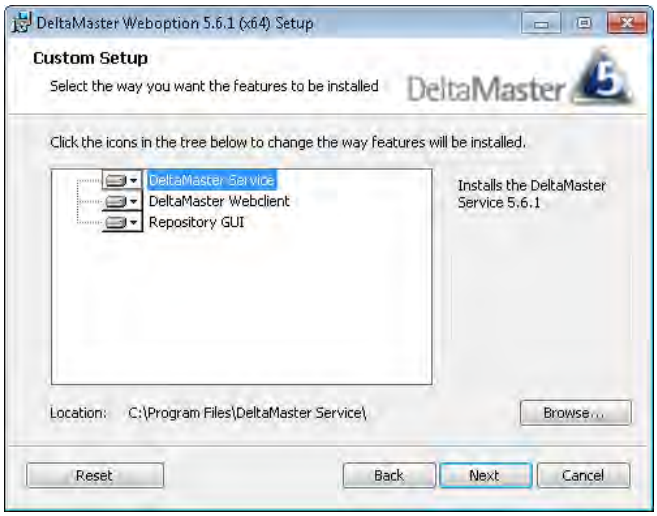
The setup program can only install *WebOption* on Windows server systems in version 2008 or higher and on Windows client systems in Windows 7 or higher. Before you run the setup program, you must first install the Web server (IIS).

On Windows server systems, you will need to add the server role “Web Server (IIS)”. Here you do not need to add additional features and role services. The setup program can install any other components that *WebClient* needs on its own.

On Windows client systems, you will need to install the Web server by activating the Windows function “Internet Information Services”. In this case, however, the setup program cannot add the components that *WebClient* needs on its own. These must be configured manually as described in section 3.6 of “DeltaMaster WebOption - Installation and Setup”.

(b) Defining the scope and location of the installation

In the setup program, you can select which components you wish to install: *DeltaMaster Service*, *DeltaMaster WebClient*, and/or *Repository GUI*. When you click on one of the hard drive symbols, *DeltaMiner* will offer three options. The top two options affect the installation of the components while the bottom option (*Entire feature will be unavailable*) will not install the respective component. If the setup program finds the program file of *Repository GUI* in the directory of *DeltaMiner* (version 5.5.3 and up), it will automatically deactivate this option to avoid redundant copies of *Repository GUI* (as a plug-in and stand-alone application). If several versions of *DeltaMiner* are installed on the computer, the setup program will check the directory of the installation with the highest version number.

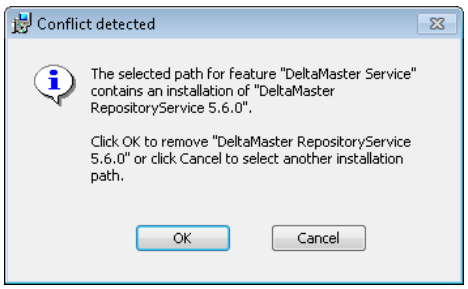


The setup will install *DeltaMaster Service*, *DeltaMaster WebClient,* and *Repository GUI* in separate directories. The target directory for the components selected above in the tree structure is displayed in the bottom of the window under *Location*. You can change this directory by clicking *Browse*.

Please note that the suggested directories are not necessarily the same ones that were used in the previous installation. If you want to update the installation, please explicitly select the directories of the version you have used to date by highlighting the name of the component in the dialog box and choosing the directory of the previous version below.

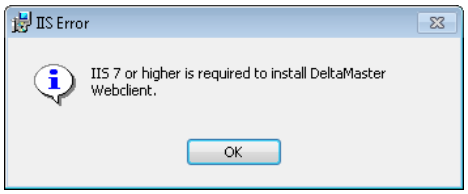
If you install the programs in the directories of the previous installations, the setup program will recognize the existing configuration files of *DeltaMaster Service* und *Repository GUI* and transfer the repository configurations to Windows Registry (see *DeltaMiner deltas* 5.6.0, feature #8). If you select directories other than those of the previous versions, different versions of the components will exist following the installation.

(c) Verifications of the setup program

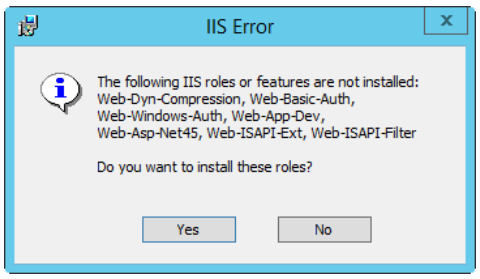


In the next step, the setup program will check the installation requirements:

If *DeltaMaster Service*, *WebClient*, and/or *Repository GUI* is already installed in the listed directory, *DeltaMaster* will inform you that these versions will be removed as part of the installation. Click *OK* to confirm that they will be removed. If you select *Cancel*, you will return to the path selection of the *Custom Setup*.

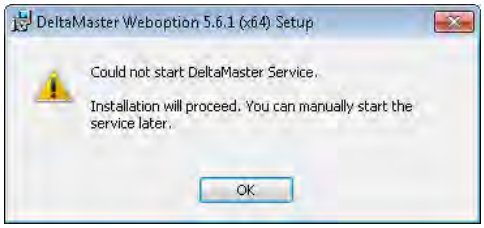


If no suitable Web server (IIS, version 7 and higher) is installed, the setup will cancel the installation of *WebClient* because this is a required component. Following a restart of the setup program, you can install the other components by deactivating the installation of *WebClient*.



If a suitable Web server is found, its features and role services will be controlled on Windows server systems. If any roles and features that *WebClient* needs are missing, the setup program will offer to install them. If these are missing on Windows client systems, the setup will not notify you and continue the installation anyway. If you cannot open *WebClient* after the installation, please check the installed features.

(d) Settings for the DeltaMaster Service



The setup program will recognize the previous *DeltaMaster Service* if it uses the default name “DeltaMaster Service”. Similar to the *Repository GUI,* it then transfers an existing repository configuration from the configuration file “DeltaMaster.Service.exe.config” to Windows Registry.

After that, the setup program uninstalls the old service, installs the new one, and starts it. If the service cannot start, the setup will prompt a message but then complete the installation process. In this case, it makes sense to check the entries in the configuration file following the installation and manually start the service as an administrator using the control panel or “_start.bat” file.

If you wish to run *DeltaMaster Service* 5.6.1 alongside previous versions, select another target directory in the *Custom setup*. During the installation, the setup program will then copy the existing repository configuration with the name “DeltaMaster Service“ from the configuration file of the current version to Windows Registry and use it for the new *DeltaMaster Service* as well. This configuration, which automatically starts following the installation, is named “DeltaMaster Service 5.6.1” and available in the services of the Control Panel.

If no service is installed on the computer and the setup program cannot find a service with the standard name, the installation will prompt for the most important settings with the *Service Setup*:

License Host: Network name or address of the license server (Sentinel RMS). The setup will suggest the license server which is configured for

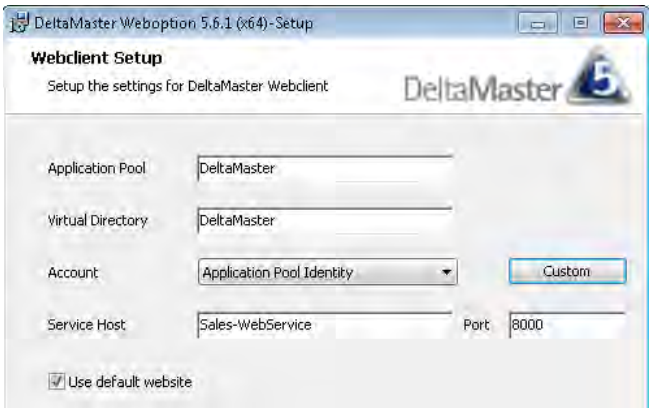
DeltaMiner provided that it finds the respective entry in Windows Registry.

Service Port: The port where the service should be available (default setting: 8000).

Database: Connection string to the repository (see “DeltaMaster WebOption - Installation and Setup”, section 3.4).

Account: User account for running the service. The selection list offers all authentication types including local service, local system, network service, and custom. If you chose a custom authentication, you will need to enter the user name and password in a separate dialog box.

(e) Settings for WebClient



In the next step, you will need to edit the settings with the *WebClient Setup*.

Application pool: Name of the IIS application pool where *WebClient* should run (e.g. “DeltaMaster”). If a pool with the entered name already exists, setup will use it. Otherwise, it will automatically create that pool.

Virtual Directory: Name of the virtual directory that is opened through *WebClient*. This directory is contained in the address that the end users open in the browser (e.g. “http://hostname/DeltaMaster”. If a directory with the entered name already exists, setup will use it. Otherwise, it will automatically create that directory. You can enter this name in uppercase or lowercase letters.

Account: The user *Account* for running the *Application Pool*. The selection list offers all authentication types: application pool identity, local service, local system, network service, and custom. If you chose a custom authentication, you must click on the *Custom* button to the right of this field and enter the *User name* and *Password*.

Service Host: Network name or address of the computer running the *DeltaMaster Service*. If a *WebClient* is already installed on the computer, the setup program will read this from the configuration file “web.config”.

Port: Port where the service is available (default setting: 8000).

Use standard website: This option ensures that *WebClient* is configured in the IIS standard website. If you deactivate this option, you can enter the name of another IIS website that already exists. Setup will not automatically generate a site if it does not exist.

These instructions along with those *DeltaMaster Service* as described in the section above generally suffice to update *WebOption*.

(f) Adding and updating the repository database

New *WebOption* installations require an additional step: creating the repository database first. The setup program can currently not run this step due to the permission concepts that are typically used: Making changes to databases often requires additional permissions that go beyond administrative permissions for the local computer. During the installation, the setup copies the SQL script used to add and update the “Repository.sql” database to the “Database” subdirectory. In the case of an initial installation, however, you must create the database before you run the SQL script and then make a few manual changes. For more information, please read “DeltaMaster WebOption - Installation and Setup”, section 3.3. These instructions and the SQL script are both included in the ZIP archive of *WebOption*. The installation guide also contains detailed explanations of the individual settings.

(g) Additional information

The setup program is available in 32-bit and 64-bit versions. Unless you access databases that require a 32-bit driver, we recommend that you install the 64-bit version.

“Tweaking” the settings of the Web server is not performed by the setup program. You may make further modifications on your own, for example to trace and cookie settings, permissions, SSL encryption, or compression.

DeltaMaster Service and *Repository GUI* have had their own setup program (“DeltaMaster RepositoryService.msi”) since *DeltaMiner* 5.6.0. This setup is designed for users that work with *DeltaMaster RepositoryService* without *WebClient*. Users who work with both *DeltaMaster RepositoryService* and *WebOption* only need to run the setup program for *WebOption*. For more information about the “DeltaMaster RepositoryService” setup program, please read *DeltaMiner deltas!* 5.6.0, feature #8.

(5) Update Notes

The following table shows if any changes have been made to the metadata schema of *ReportServer* and *Repository* database as well as the configuration files since the previous version.

Component	Files	Changes since version 5.6.0
ReportServer	“ReportServer.mdb”, “ReportServer (SQL Server).sql”, “ReportServer (Oracle).sql”	No
	“ReportServer.exe.config”	No
Repository	“Repository.sql”	Yes
GUI repository	“DeltaMaster.Repository.exe.config”	No
WebService	“DeltaMaster.Service.exe.config”	No
WebClient	“web.config”	No

Please note that you do not always have to update all components of a *DeltaMiner* installation at the same time. In the ***DeltaMiner* compatibility matrix**, we document the version dependencies of front-end components (e.g. *DeltaMaster*, *ReportServer*, *Add-in for Office*) to services and databases. This matrix, which has been available in *DeltaMiner Help* since the 5.5.8 release, is updated for each subsequent one. The matrix shows which components you need to update for the release upgrade, if you can continue to use previous versions, and, if so, with which limitations.

The metadata schema of **ReportServer** has not changed. As a result, you do not need to run the “ReportServer (SQL Server).sql” or “ReportServer (Oracle).sql” script. You should, however, update the “ReportServer.exe” file as well as the respective DLLs so that they match the current *DeltaMiner* version. The ODBC connection string, which specifies the job definition database, is saved in the “ReportServer.exe.config” file. Please create a backup copy of this file before you install the current version of the *ReportServer* files. You can now also install ReportServer through the setup program.

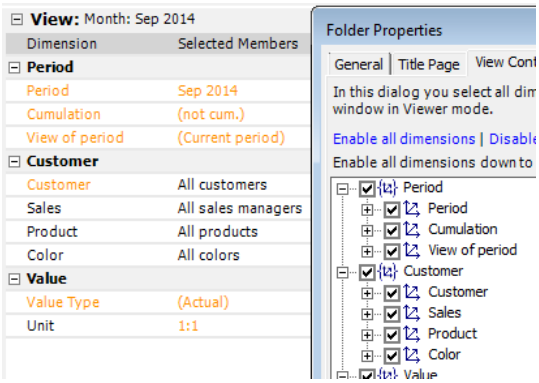
The **WebOption** components – *Repository GUI, WebClient,* and *WebService* – are also available in version 5.6.1. Before you update *WebOption*, please create backup copies of the configuration files (see table above), any changed graphics in the “Image” folder (e.g. “Master_Top.png”) as well as the style sheet file (e.g. “DeltaMaster.css”). You can update the *WebService, WebClient, and Repository GUI* using the new setup program or by copying the new files from the ZIP archive into the respective directories. You can update the repository by running “Repository.sql” script on the existing repository database.

30 DeltaMiner deltas! 5.6.2

What's new in version 5.6.2? Find out in this overview!

(1) General: Displaying Dimension Groups in Model Context, Analysis Context, and View Context, and Displaying Dimensions Ordered 2
(2) General: Selecting Folders Using Extended Dialog Box 2
(3) Measure Browser: Searching for Measure by ID 2
(4) Briefing Book: Configuring KPI Tiles (for Deltaminer Navigator) 3
(5) CubeWizard: Creating Cumulation Dimension 4
(6) Start Wizard: Creating Monthly Reports with Previous Year Comparisons Only (without Actual/Budget) 4
(7) Update Notes 4

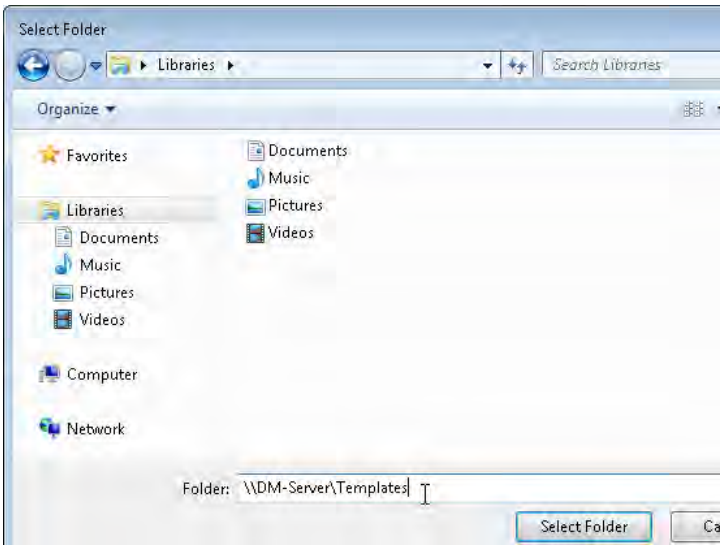
(1) General: Displaying Dimension Groups in Model Context, Analysis Context, and View Context, and Displaying Dimensions Ordered



Dimension groups provide orientation within the analysis model and show a neat modelling. They help users find their whereabouts faster in the *Dimension List* in the *View* window. If the option to display dimension groups is activated in the *View* window, *Deltaminer* will display them in all dialog boxes for editing contexts:

- Model Context (Model menu)
- View Context in the Report and Folder Properties
- Analysis Context in the Measure Properties
- *Analysis Context* of analytic methods that span multiple dimensions (e.g. *PowerSearch*)
- Analysis Context for the Hyperbrowser
- *Navigation Context* in the configuration of the *Pivot Navigation* (*Change* menu in the *Cockpit* window)

Deltaminer displays dimension groups and the dimension order the same way as in the *View* window. When you add new, rename, delete, or change the order of dimensions within the groups, you will automatically see these modifications in the dialog boxes listed above.

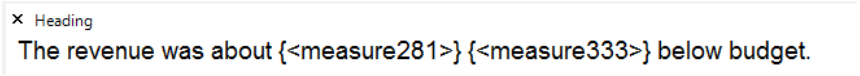


(2) General: Selecting Folders Using Extended Dialog Box

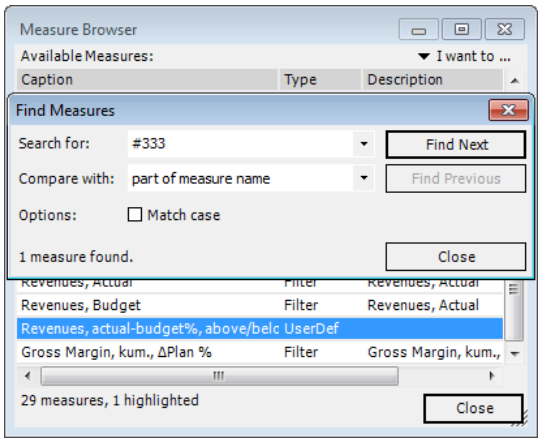
You can now select folders more easily using a new dialog box in the *Options* (*Extras* menu). You can set folders, for example, on the *Portal* tab for portal folders or on the *Folder* tab.

With the new dialog, you can enter paths to a hard drive or UNC paths directly or using copy and paste.

(3) Measure Browser: Searching for Measure by ID



You can now search for a measure by its ID. This is helpful when you only know the ID itself, for example, from the notation “<measureX>” in an MDX reference. These references appear in headings and in the report weather. Report editors also use them in report titles and text cells of FlexReports.



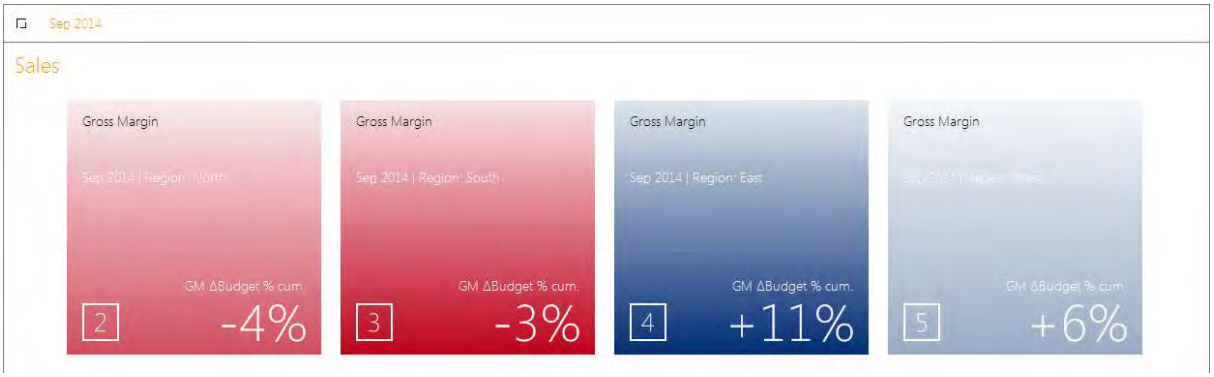
You can open the search dialog box in the *Measure Browser* (*Model* menu) through the *I want to* menu or by hitting *Ctrl+F* on your keyboard. To *Search for* the measure, first enter the number sign (“#”) followed by the ID of that measure.

If *Deltaminer* finds the matching measure, it will display a message in the bottom-left corner of the dialog box and select the found measure in the *Measure Browser*. If *Deltaminer* does not find a matching ID, it will display a message as well.

Since each measure ID is a unique number, no further search options are necessary. The option to *Compare with* the beginning, end, or part of a measure name is irrelevant as well. *Deltaminer* will always search for the entire ID when you enter a "#" sign before the number.

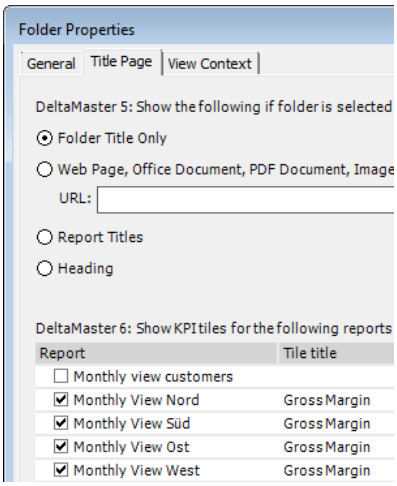
(4) Briefing Book: Configuring KPI Tiles (for Deltaminer Navigator)

Deltaminer Navigator supports a new option for displaying folders in the report list: You can now display key performance indicators (KPIs) as tiles on the title page – similar to how they are in a dashboard. This sends an unmistakable signal to report consumers so that they know where to focus their attention before even opening a single report.



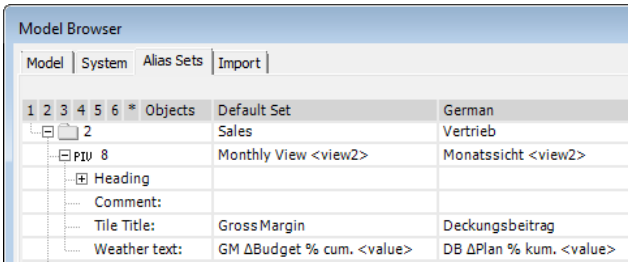
Each KPI tile represents a report from the folder. For pivot tables, *Deltaminer* displays the report or tile title, the filter settings (view) of the report, the weather hint, the number of the report (as stated in the report list), and the value of the weather cell. The tile has the same color as the report weather. Clicking on the tile, you will jump to the corresponding report and can investigate the value in detail. If the belonging report is not a pivot table, or the report weather has not been configured, or the report has not been calculated, *Deltaminer* will display that tile in gray and without a value.

In order to display the KPI tiles in *Deltaminer Navigator*, you must explicitly set this configuration for the respective application in *Deltaminer* 5.6.2. Under the *Folder Properties* (context menu of the folder) on the *Title Page* tab, you can specify from which reports *Deltaminer* should read out and display the weather cells as tiles.



Please ensure that you do not select reports that do not show the report weather (e.g. pivot tables that were not prepared to display them, FlexReports, and reports from analytic methods) to be displayed as tiles. When a report does not show the report weather, the tile cannot send a signal. This tile, therefore, will remain gray and contain no value.

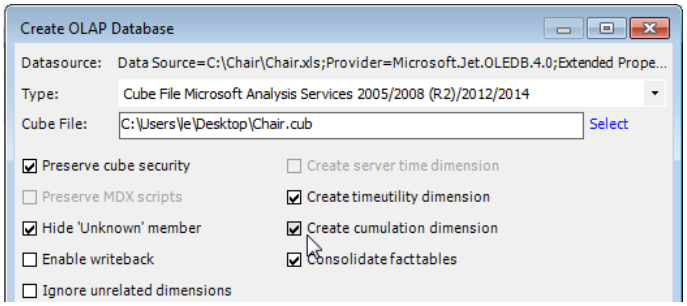
You can also assign a *Tile Title* to each KPI tile. *Deltaminer* will then display this title in place of the report name in the tile. As you already know from headings or the weather hint, you can also enter special characters from the context menu or use MDX variables.



These KPI tiles will only be displayed in *Deltaminer Navigator*. *Folder Titles, Web Pages, Report Titles,* and *Headings* will not be shown here. As a result, the *Title Page* tab is divided into two sections. On the top, you can define what *Deltaminer* 5 should display as the title page (as in the past) while the settings for the KPI tiles in *Deltaminer* 6 are contained below.

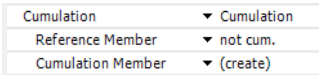
If you wish to offer the tile title in several languages, you can administer the respective names in the *Model Browser* (*Model* menu) on the *Alias Sets* tab in the report section.

(5) CubeWizard: Creating Cumulation Dimension



When you use *Deltaminer CubeWizard* to *create* an *OLAP database* (*Model* menu), you can now add a utility dimension for the cumulation ("year to date") without having to add a field in the fact table.

This change further improves the alignment between *CubeWizard* and *Start Wizard*. To generate the standard report "Monthly View", the *Start Wizard* needs the utility dimensions "View of period" and "Cumulation". *CubeWizard* can now create both of them without changing the underlying database.

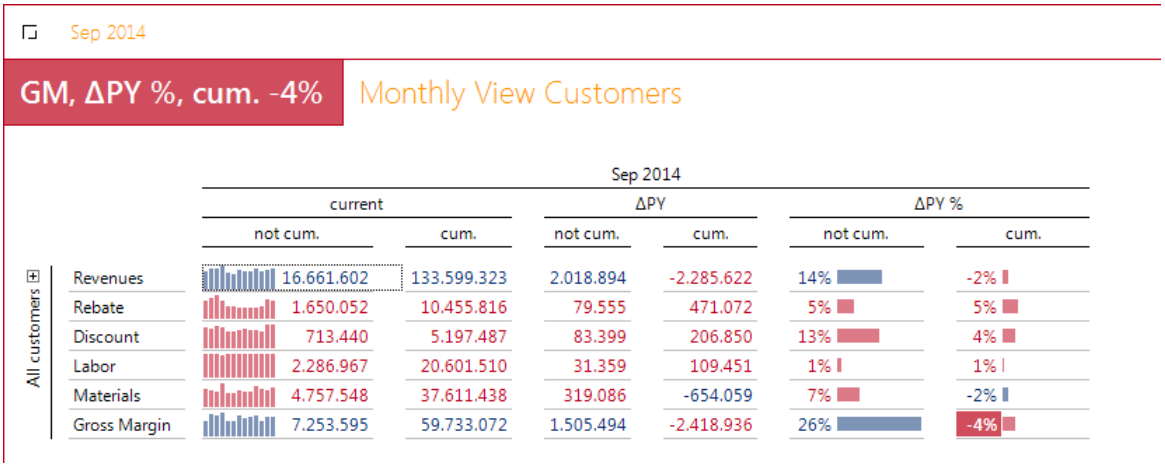


When setting the parameters for the dimension "Cumulation", *Start Wizard* automatically recognizes the cumulation dimension created by *CubeWizard*. The reference member "not cum." (i.e. not cumulated) is already defined. If you select the option "(create)" in *Start Wizard*, the cumulation member "cum." (i.e. cumulated) will be added.

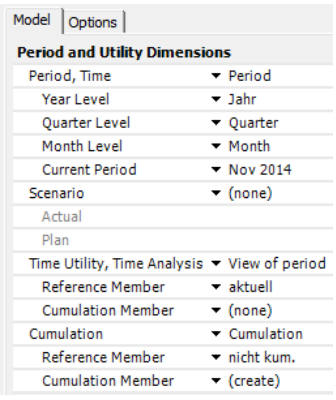
The cumulation dimension is a best practice for adding up values along the time axis.

(6) Start Wizard: Creating Monthly Reports with Previous Year Comparisons Only (without Actual/Budget)

Start Wizard can create the standard report "Monthly View" even if no scenarios (e.g. Budget, Actual) are available or no scenario dimension was defined during the parameterization. In this case, it will automatically generate reports that only contain time comparisons.



In order to create the standard report "Monthly View" with comparisons to the previous year, you must define the dimensions "Time Utility" and "Cumulation" when setting the parameters in the *Start Wizard*. If you use *Deltaminer CubeWizard* to *create* an *OLAP database,* it can add these dimensions without changing the underlying data model (see feature #5).



(7) Update Notes

The following table shows if any changes have been made to the metadata schema of *ReportServer* and *Repository* database as well as the configuration files since the previous version.

Component	Files	Changes since version 5.6.1
ReportServer	“ReportServer.mdb”, “ReportServer (SQL Server).sql”, “ReportServer (Oracle).sql”	No
	“ReportServer.exe.config”	No
Repository	“Repository.sql”	Yes
Repository GUI	“DeltaMaster.Repository.exe.config”	No
Service	“DeltaMaster.Service.exe.config”	No
WebClient	“web.config”	No

Please note that you do not always have to update all components of a *Deltaminer* installation at the same time. In the **Deltaminer Compatibility Matrix**, we document the version dependencies of front-end components (e.g. *Deltaminer*, *ReportServer*, *Add-in for Office*) to services and databases. This matrix, which has been available in *Deltaminer Help* since the 5.5.8 release, is updated for each subsequent one. The matrix shows which components you need to update for the release upgrade, if you can continue to use previous versions, and, if so, with which limitations.

The metadata schema of **ReportServer** has not changed. As a result, you do not need to run the “ReportServer (SQL Server).sql” or “ReportServer (Oracle).sql” script. You should, however, update the “ReportServer.exe” file as well as the respective DLLs so that they match the current *Deltaminer* version. The ODBC connection string, which specifies the job definition database, is saved in the “ReportServer.exe.config” file. Please create a backup copy of this file before you install the current version of the *ReportServer* files. You can now also install ReportServer through the setup program.

The **RepositoryService** and the components of the **WebOption** – *Service, WebClient,* and *Repository GUI* – are also available in version 5.6.2. Before you update *RepositoryService* or *WebOption*, please create backup copies of the configuration files (see table above). The *WebClient* has a new layout which does not show user-defined logos. The image file “Master_Top.png” is not used anymore. You can update the *Service, WebClient, and Repository GUI* using the setup program or by copying the new files from the ZIP archive into the respective directories. You can update the repository by running “Repository.sql” script on the existing repository database.

31 DeltaMiner deltas! 5.6.3

What's new in version 5.6.3? Find out in this overview!

(1) Add-in for Microsoft Office: Available for 64-bit Versions of Office 2
(2) ReportServer: Optionally Loading Report Source Only on Demand for Faster Editing 2
(3) Modeling: Creating Time Analysis Members in Time Dimension 3
(4) Pivot Navigation: Allowing Pivot Navigation on the Column Axis Only Optionally 3
(5) Pivot Table: Displaying Links 4
(6) Planning: Displaying Input Cells in Pivot Tables Optionally as Checkbox 6
(7) Start Wizard: Creating Monthly Reports without Period View and Cumulation Dimension 7
(8) Update Notes 8

(1) Add-in for Microsoft Office: Available for 64-bit Versions of Office

DeltaMiner Add-in for Office is now compatible with the 64-bit versions of Microsoft Word and PowerPoint. A separate setup program is available for this architecture.

Hence, *DeltaMiner Add-in for Office* supports the following programs and versions:

- Microsoft Word 2010, 32 bit (x86)
- Microsoft Word 2010, 64 bit (x64)
- Microsoft Word 2013, 32 bit (x86)
- Microsoft Word 2013, 64 bit (x64)
- Microsoft PowerPoint 2010, 32 bit (x86)
- Microsoft PowerPoint 2010, 64 bit (x64)
- Microsoft PowerPoint 2013, 32 bit (x86)
- Microsoft PowerPoint 2013, 64 bit (x64)

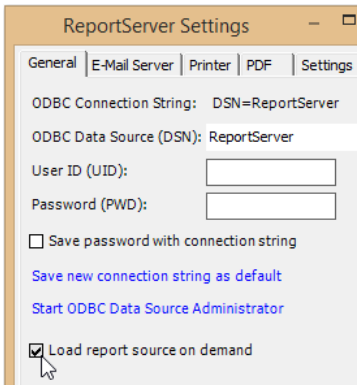
You will need to choose a 32-bit or 64-bit version of the setup program based on the architecture of Microsoft Office. The architecture of the *RepositoryService* which is accessed by the Add-in is irrelevant.

You can use *DeltaMiner Add-in for Office* to embed data and reports from *DeltaMiner* applications into Word documents and PowerPoint presentations. These embedded objects are dynamic. In other words, once you install the add-in, they will stay linked to *DeltaMiner Repository* and the data source so that you can easily update the documents and presentations from Word or PowerPoint. For more information on *DeltaMiner Add-in for Office*, please read *DeltaMaster clicks!* 12/2013.

(2) ReportServer: Optionally Loading Report Source Only on Demand for Faster Editing

Editing jobs in *ReportServer* is now faster and more comfortable when you activate the new option to open and load the *Report Source* of a job on demand. This saves time when you only want to edit job settings that do not require detailed information from the analysis session or application.

The parameters that are displayed in the *Jobs* section of the *ReportServer* window (e.g. *Report Format*, *Distribution Type,* or *E-Mail Body*) affect the job processing. You can edit these parameters without having information from the analysis session or application. The *Settings for the Job* (e.g. *Report Update, Report Folders, Report Generator*, and *Report Recipients*), in contrast, refer to the *Report Source* (e.g. dimensions, report folders, or other components of the analysis session or application). In order to display these settings and allow you to edit them, *DeltaMiner* must first load the analysis session or application – and that can take some time. In the past, *DeltaMiner* always loaded the report source when you selected a job. Now it is possible to load the report source only when necessary.



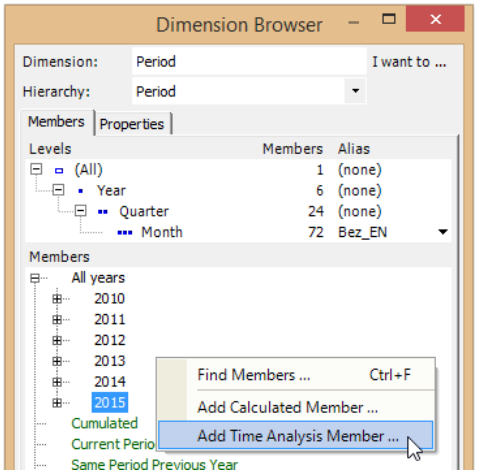
If you want the *ReportServer* to *load the report source on demand*, you have to activate the option in the *Settings* of *ReportServer* on the *General* tab. The option, which is valid for all jobs that you edit on a computer, is saved for the current user in Windows Registry („HKEY_CURRENT_USER“) – not in the job definition database of *ReportServer*.

If this option is activated, *DeltaMiner* will display at the upper-right corner of the *Settings for the Job* an additional link which you use to *load a report source and edit the Job settings*.

As long as the report source has not yet been opened, *ReportServer* will only display IDs in the sections *Report Update*, *Report Folders*, *Report Generator*, and *Report Recipient*. Once the analysis session or application is open, the names will appear and you can make changes. In order to use the *Briefing Book*

Generator, the report source must also be loaded. Once it is loaded, the respective tab will be displayed in the *Settings* of *ReportServer*.

(3) Modeling: Creating Time Analysis Members in Time Dimension



You can now create time analysis members in the time dimension. This allows you to define time-based comparisons (e.g. previous period, previous year, or absolute/relative variance to the previous year) even if the data model does not have a separate time analysis dimension (e.g. “Period View”, “Time Utility”).

In *Pivotizer*, *Analyzer*, or *Miner* mode, you can *add time analysis member* in the *Dimension Browser* of the time dimension, using either the context menu or the *I want to* menu. This menu entry was available but had no function for the time dimension in previous versions of *DeltaMiner*.

You can use time analysis members in the time dimension, for example, in the *Axis Definition* of reports (see feature #7) or as filter values. They do, however, have two limitations:

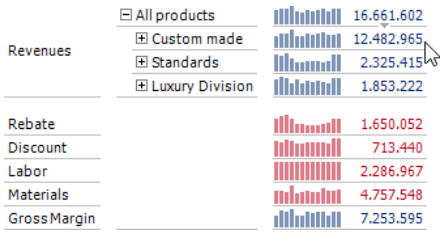
- You cannot select time analysis members that were created in the time dimension from the *View* window and you cannot use them in *Navigator* to filter a report. Otherwise, the time comparisons would have no reference period. In *Viewer* mode and in *Navigator, DeltaMiner* will not offer these members in the *Dimension* or *Filter Browser* to avoid potential errors in handling. In user modes where you can create and edit time analysis members, you can select them from the *View* but the filtered reports will not display any values.
- The second limitation affects links. If a pivot table contains time analysis members from the time dimension (mostly in the column axis), you cannot use the column members as a filter in the links of this table.

You can use time analysis members from the time dimension in *WebClient* and the *Add-in for Office* provided that they access a *RepositoryService* in version 5.6.3 or higher. Previous versions of *DeltaMiner* cannot process these members and will display no values for them.

We generally recommend making provisions in the data model for a separate time analysis dimension. In cases where this is not possible, the time dimension offers an alternative. Here you can add the time analysis members that you need and use them in reports and analyses. You cannot, however, use them as filters on report level. For more information about time analysis members, please read *DeltaMaster clicks!* 08/2007.

(4) Pivot Navigation: Allowing Pivot Navigation on the Column Axis Only Optionally

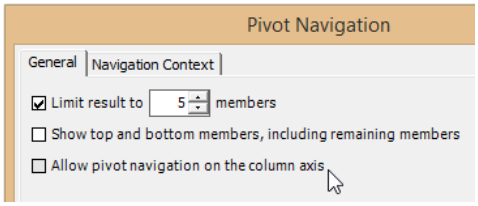
The pivot navigation now offers smoother, simpler handling. In the default setting, you can now only use this function on the row axis – not the column axis. Accordingly, you will only see the little black arrow showing the hierarchy menu at the bottom of data cells (and not on the right of them) in the default setting.



With each step of the pivot navigation, *DeltaMiner* breaks down the value of a data cell to the members of a dimension that is additionally displayed (e.g. variances in revenues by product groups). It can display these additional members below the starting value (i.e. on the row axis) or to the right of it (i.e. on the column axis). In most cases, you would probably run the pivot navigation below in the row column to branch off into products, customers, regions, sales channels, or other structural attributes – and, most times, you would arrange them below and not next to each other. In comparison, there are relatively few situations where you would run the pivot navigation to the right (i.e. in the column axis). One example would be breaking down yearly values to quarters or months.

Starting in *DeltaMiner* 5.6.3, you can only run the pivot navigation in the column axis if this option has been explicitly activated. This simplifies the overall handling. In most reports, the user can only navigate in one direction – downwards, which is the most logical one for the data in question. The overall appearance of the pivot navigation is calmer as well. During a presentation, for example, the black arrow and hierarchy menu will no longer appear when you mouse over a report or individual values. Working with links is more comfortable as well when the pivot navigation no longer appears in the right part of the cell (see feature #5).

To specify where you want to *allow pivot navigation on the column axis*, you need to *configure the Pivot Navigation* (*Change* menu in *Miner* mode) and activate the respective option on the *General* tab. This option affects the current pivot table in all user modes including *Miner*. This option is deactivated in the default setting. This change in the standard handling of *DeltaMiner* has no effect on previous versions of *DeltaMiner*.



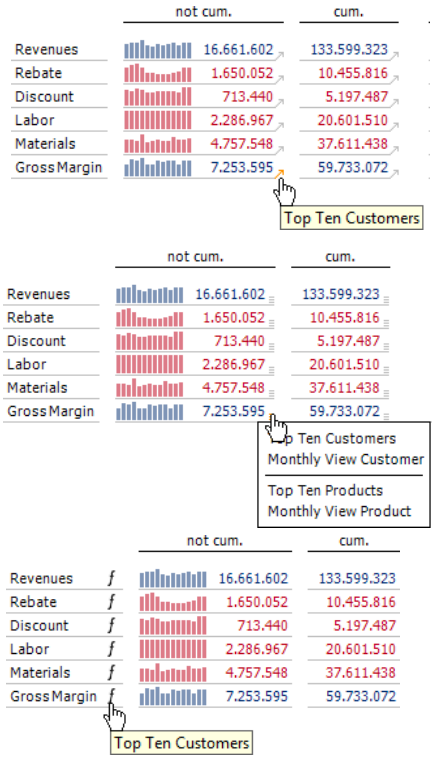
(5) Pivot Table: Displaying Links

DeltaMiner now indicates links in pivot tables directly in the report. This way, users in *Viewer* mode can immediately see that they can open additional reports, cockpits, analysis templates, and external targets directly from the report. The link indicators are designed so that they do not shift the reader's attention from the numbers. They can still easily read the report content – both as an overview and in detail. Since past editions of *DeltaMiner* only offered links in the context menu, users had to first click their mouse to know if any links were available.

a) Visualization options

DeltaMiner uses symbols in the data cells and row headers of pivot tables to indicate and provide access to links. Three different symbols are available:

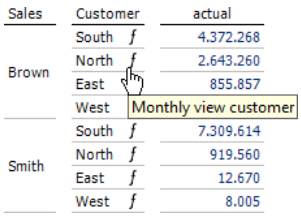
- A gray, diagonal arrow designates that a data cell or a row header has exactly one link. Click on the arrow to follow that link.
- A menu symbol with three horizontal lines (as you know from smartphones) designates a data cell or row header with multiple links. The menu will open when you mouse over it. Click on an entry to follow that link.
- In place of the arrow, *DeltaMiner* can also display a function symbol ("*f*"). This resembles the mathematical symbol that describes dependencies of variables ("f(x) = …"). This symbol can give the link a special meaning, for example, when it refers to a functional report where the respective value serves as a starting variable for further calculations. The function symbol, like the arrow, stands for a single link. Click on the symbol to follow that link.



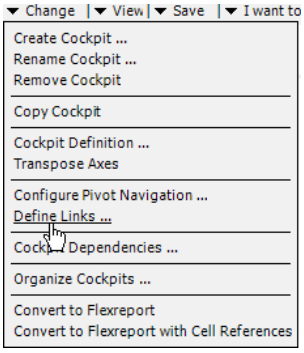
DeltaMiner will automatically choose the arrow or menu symbol. In doing so, it will also take into consideration the *Conditions* and rules *for which objects* the link should be valid. If exactly one link is valid after evaluating these criteria for a data cell or row header, *DeltaMiner* will present it as an arrow. If there are several links, *DeltaMiner* will combine them in a menu and display the menu symbol. In cases where multiple function symbols are available for the same data cell (or row header) or it should display a function symbol as well as an arrow or menu entries, *DeltaMiner* will not display the function symbol and automatically display all links in a menu. This ensures that a data cell or row header only ever displays one link indicator – if necessary, by combining multiple links under the menu symbol.

You can define in advance whether these symbols should appear in data cells or row headers. Please read the following section for more information.

If multiple dimensions are nested on the row axis, *DeltaMiner* will only display links in the first row header from inside. It will still include all row members if they are to be used as a filter on the link target. In the screenshot on your right, two members (i.e. “Sales: Brown” and “Customer: North”) will be used as filters, and not just the one that you see next to the link indicator.



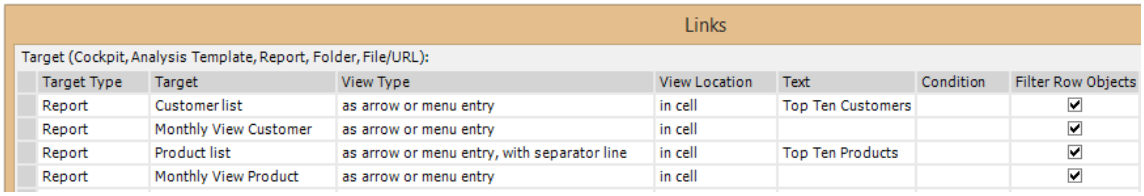
DeltaMiner will remove the link indicators during an export so that they do not appear for example in HTML emails, PDF files, or Word documents where they would have no function.

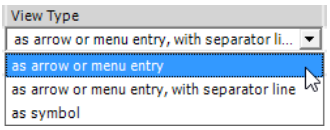


b) Configuring

You can specify where and how *DeltaMiner* should display links in a pivot table in *Miner* mode by selecting *Define Links* (*Change* menu in the *Cockpit* window).

In the new column *View Type*, you can define how *DeltaMiner* should display each link in the pivot table:

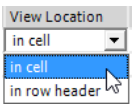




- *As arrow or menu entry,* depending on whether one or several links should be displayed
- *As arrow or menu entry, with separator line* if the menu should show a separator line before this item to group the items
- *As symbol,* which means the function symbol “f“

You should not mix the function symbol with arrows and menus in the same table. The display option *with separator line* is equivalent to the field *new group* in previous *DeltaMiner* versions which has been removed. *DeltaMiner* will not display a separator line in front of the first menu entry.

In the second new column *View Location,* you can define where *DeltaMiner* should display the reference for each link: either *in* (data) *cell* or *in row header*.



Links in row headers are new in *DeltaMiner* 5.6.3. This variation allows you to *filter* the target report based on the *Row Objects*. The option to filter based on the *Column Objects* will be automatically deactivated. In previous versions of *DeltaMiner*, the links originated from a data cell and not from the row header.

If you enter a *Text* to a link, *DeltaMiner* will display it as a tooltip for arrows and function symbols or as a caption in menus. The former *Caption* field is now called *Text* and the effect has been extended to tooltips. If the *Text* field is empty, *DeltaMiner* will not display a tooltip and show the original names from the *Target* field in the menus.

For more information on links in pivot tables, please read *DeltaMaster deltas!* 5.5.1, feature #20.

c) Compatibility

Starting in version 5.6.3, *DeltaMiner* has removed links from the context menu of the pivot table and will display them directly in the report of *Viewer* mode. Links that were created with previous versions of *DeltaMiner* will be automatically displayed as an arrow or menu.

While calculating the report, *DeltaMiner* will determine if the data cells and row headers have links and, if so, which ones. If the reports were calculated with previous versions and saved including the pre-calculated values, you will only see the link indicators after you have refreshed the report (e.g. by hitting the *F9* key) in *DeltaMaster* 5.6.3.

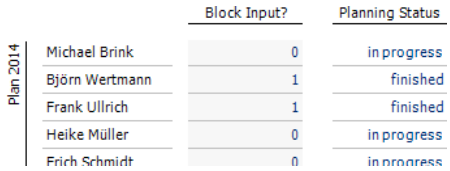
Links that were created in version 5.6.3 will work in older versions of *DeltaMiner*. They will be displayed in the context menu of the report – if applicable, with separator lines between the menu entries. There is, however, a limitation when it comes to saving: If you save an analysis session or application that contains links from 5.6.3 with a previous version of *DeltaMiner*, you will lose some settings (e.g. definitions for row headers that are only available as of *DeltaMiner* 5.6.3.)

The *WebClient* will display link references starting in version 5.6.3.

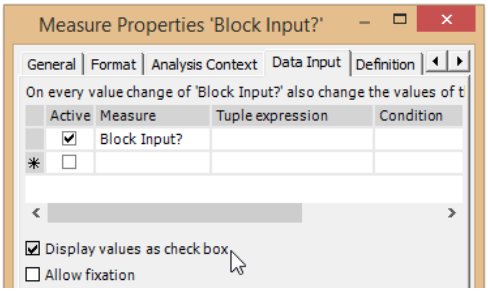
If you use FlexReports that reference pivot tables with links, the links will be offered in the context menu as in the past. The display and handling, therefore, remain unchanged.

(6) Planning: Displaying Input Cells in Pivot Tables Optionally as Checkbox

You can now display and edit binary values as a checkbox in planning reports. This allows you to change the value or state using a mouse click, the space bar, or *Enter* key. *DeltaMiner* will then write the value “1” to the database for activated cells and the value “0” for non-activated cells.

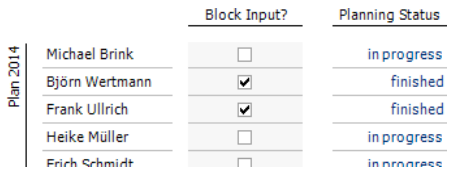


To *display values as check boxes*, you need to activate this option in the *Properties* of the respective measure on the *Data Entry* tab. This applies to the entire analysis session or application including reports or table cells where no data entry is permitted.

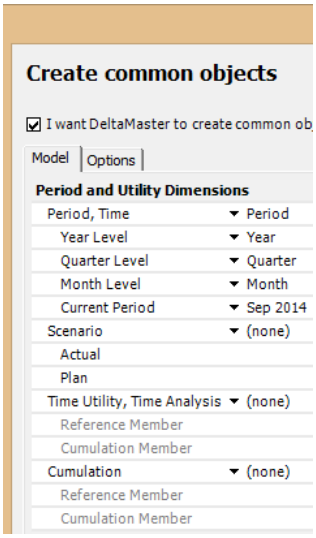


Binary values are primarily used to enter conditions, such as activated/deactivated or locked/approved. *DeltaMiner* previously used numerical values – for example, “0” for locked and “1” (or any other number that does not equal 0) for approved.

In *WebClient*, you can also display and enter values as a checkbox. Previous versions of *DeltaMiner* will only display numerical values as in the past.



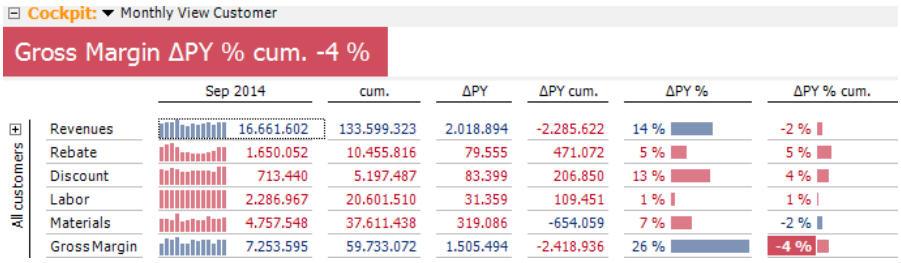
(7) Start Wizard: Creating Monthly Reports without Period View and Cumulation Dimension



The *Start Wizard* can now generate the standard report "Monthly View" even if the analysis model does not contain dimensions for the period view, cumulation, or value type and if no dimensions have been assigned to them in the *Start Wizard.*

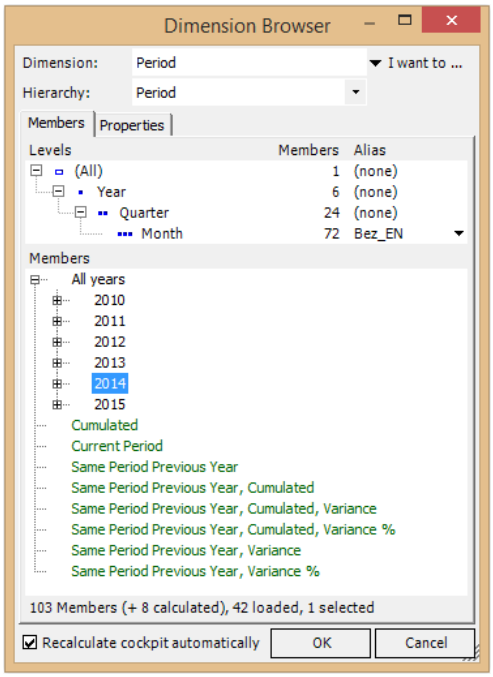
In this case, the automatically generated reports will only contain time comparisons.

The *Start Wizard* will generate the time comparisons as time analysis members in the time dimension as described in feature #3. The same usage conditions and references to compatibility also apply to the time analysis members that the *Start Wizard* generates in the time dimension.



When using the time dimension, the *Start Wizard* will generate the standard report "Monthly View" independently from the conditions in the data model. Eight calculated members are required for time comparisons:

- Current period
- Current period, cumulated
- Period in the previous year
- Period in the previous year, cumulated
- Absolute variance to the period in the previous year
- Absolute variance to the period in the previous year, cumulated
- Relative variance to the period in the previous year
- Relative variance to the period in the previous year, cumulated



The *Start Wizard* will create these members in specialized utility dimensions if they are available in the database. If not, it will use the time dimension:

- If dimensions for value types, period view, and cumulation are available, *Start Wizard* will generate the standard report "Monthly View" with comparisons of values from the previous year and budget values (see *DeltaMiner deltas!* 5.5.3, feature #24) and use all three utility dimensions.
- If dimensions are available for the period view and cumulation, *Start Wizard* will generate the standard report "Monthly View" with comparisons to the previous year (see *DeltaMiner deltas!* 5.6.2, feature #6) and use both utility dimensions.

- If only one dimension is available for the period view, *Start Wizard* will generate the standard report "Monthly View" with comparisons to the previous year and generate all time analysis members (i.e. including cumulation) in the period view dimension.
- If only one dimension is available for the cumulation, *Start Wizard* will create the standard report "Monthly View" with comparisons to the previous year. It will then create the cumulation member in the cumulation dimension and all other time analysis members in the time dimension.
- Even if no utility dimension is available, *Start Wizard* will generate the standard report "Monthly View" with comparisons to the previous year. In this case, it will create all time analysis members in the time dimension.

(8) Update Notes

The following table shows if any changes have been made to the metadata schema of *ReportServer* and *Repository* database as well as the configuration files since the previous version.

Component	Files	Changes since version 5.6.2
ReportServer	"ReportServer.mdb", "ReportServer (SQL Server).sql", "ReportServer (Oracle).sql"	No
	"ReportServer.exe.config"	No
Repository	"Repository.sql"	No
Repository GUI	"DeltaMaster.Repository.exe.config"	No
WebService	"DeltaMaster.Service.exe.config"	No
WebClient	"web.config"	No

Please note that you do not always have to update all components of a *DeltaMiner* installation at the same time. In the **DeltaMiner Compatibility Matrix**, we document the version dependencies of front-end components (e.g. *DeltaMiner*, *ReportServer*, *Add-in for Office*) to services and databases. This matrix, which has been available in *DeltaMiner Help* since the 5.5.8 release, is updated for each subsequent one. The matrix shows which components you need to update for the release upgrade, if you can continue to use previous versions, and, if so, with which limitations.

The metadata schema of **ReportServer** has not changed. As a result, you do not need to run the "ReportServer (SQL Server).sql" or "ReportServer (Oracle).sql" script. You must update the "ReportServer.exe" file as well as the respective DLLs so that they match the current *DeltaMiner* version. The ODBC connection string, which specifies the job definition database, is saved in the "ReportServer.exe.config" file. Please create a backup copy of this file before you install the current version of the *ReportServer* files. You can also install ReportServer through the setup program.

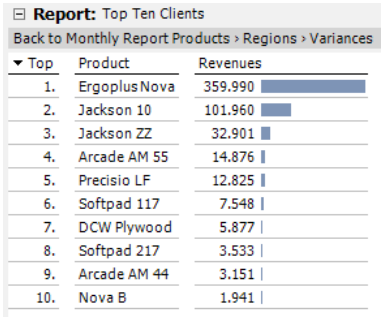
RepositoryService and the **WebOption** components – *Service, WebClient,* and *Repository GUI* – are also available in version 5.6.3. Before you update *RepositoryService* or *WebOption*, please create backup copies of the configuration files (see table above). *WebClient* has a new layout that no longer supports user-defined logos. The image file "Master_Top.png" is no longer used. You can update *Service, WebClient, and Repository GUI* using the setup program or by copying the new files from the ZIP archive into the respective directories. Since the database schema for Repository has not changed in version 5.6.3, you do not need to run the "Repository.sql" script on the existing repository database.

32 DeltaMiner deltas! 5.6.4

What's new in version 5.6.4? Find out in this overview!

(1) General: Displaying Multilevel Return Path for Links 2
(2) Briefing Book: Maintaining Aliases for KPI Names and Filters of KPI Tiles 2
(3) Location Analysis: Defining Maximum Default Zoom Level for Centering Map over Marker 3
(4) Start Wizard: Available for Oracle Essbase 3
(5) Cell Comments: Using Dimension Context for Cell Comment Tables 4
(6) Update Notes 5

(1) General: Displaying Multilevel Return Path for Links



Top	Product	Revenues
1.	Ergoplus Nova	359.990
2.	Jackson 10	101.960
3.	Jackson ZZ	32.901
4.	Arcade AM 55	14.876
5.	Precisio LF	12.825
6.	Softpad 117	7.548
7.	DCW Plywood	5.877
8.	Softpad 217	3.533
9.	Arcade AM 44	3.151
10.	Nova B	1.941

Working with linked reports is now even easier: If you follow several links in succession, *DeltaMaster* will automatically offer a multilevel return path. With this so-called bread-crumb navigation, you can directly jump back to a certain report that you opened previously. In past versions, you could only return to the immediately preceding report.

DeltaMaster will automatically display the multilevel return path for links from pivot tables, Flex Reports, and Combination Cockpits. No separate activation or configuration is necessary. The return path is shown in the upper-left corner of the report. With each new link you open, *DeltaMaster* will extend the path to the right and separate the entries with an arrow.

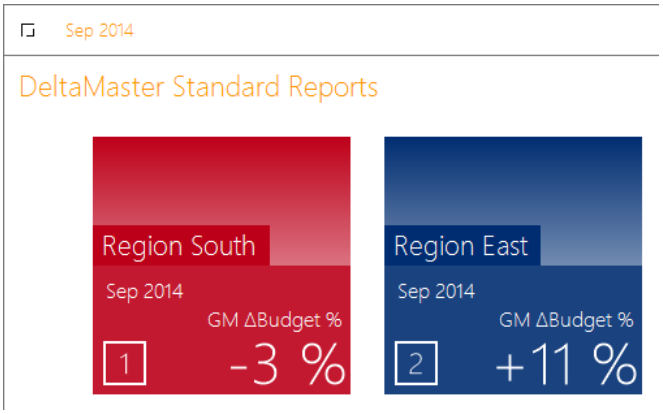
In the case of multilevel links in pivot tables, *DeltaMaster* will only create the return path when the *Return Link* option is enabled in the link definition. As soon as you open a link where this option has been deactivated, *DeltaMaster* will reset and hide the previous return path in its entirety.

Although the number of links in the return path is not limited, the space on your screen is. It, therefore, makes sense to keep the names of the reports or links short. Once the path reaches the right corner of the report window, *DeltaMaster* will cut it off so you cannot see the following links. For links from pivot tables, you can enter an alternative name in the definition table (*Change* menu) in the *Text* column. *DeltaMaster* will then display this name in the return path as well.

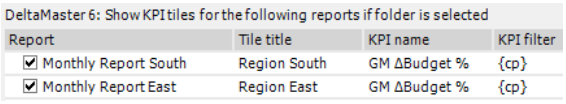
Both *WebClient* and *DeltaMaster Navigator* only support a single return link at the present time.

For more information about links, please read *DeltaMaster clicks!* 03/2015.

(2) Briefing Book: Maintaining Aliases for KPI Names and Filters of KPI Tiles

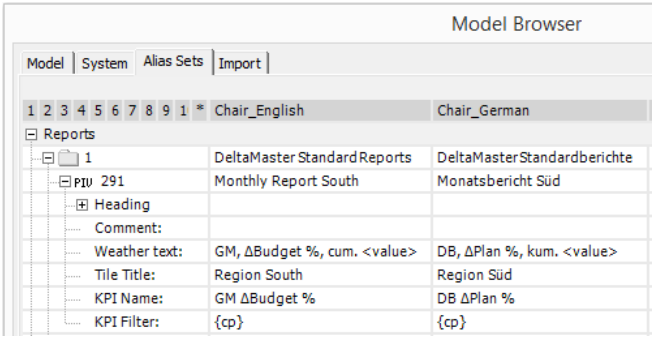


Using two new options, you can now tweak the captions of KPI tiles that are displayed on the title page of folders in *DeltaMaster Navigator*. You can edit the display name of the KPI (e.g. “GM ΔBudget %”) and report view (e.g. “Sep 2014”) in the tile regardless of its standard name in the pivot table. This helps ensure that the tiles are clear and easy to read – even when they contain complex KPI definitions or filter settings. If desired, you can also administer these aliases simultaneously in multiple languages.



Report	Tile title	KPI name	KPI filter
☑ Monthly Report South	Region South	GM ΔBudget %	{cp}
☑ Monthly Report East	Region East	GM ΔBudget %	{cp}

To configure the display settings for KPI tiles, open the *Folder Properties* (context menu of folders in the *Briefing Book*) on the *Title Page* tab. Here you can enter the *KPI Name* and *KPI Filter* for each report (so far, the *Tile Title* could be already edited individually).



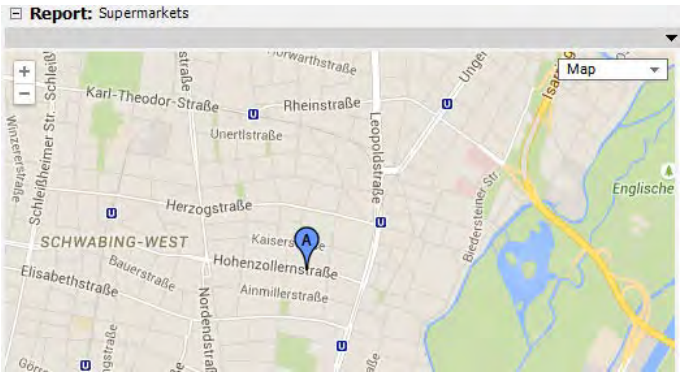
If no *Tile Title* is entered, *DeltaMaster* will display the name of the report on the KPI tile. If no *KPI name* is entered, *DeltaMaster* will display the so-called Weather Hint on the tile. If no *KPI filter* is entered, it will show the view description of the report on the tile. You can also enter special characters from the context menu or familiar MDX variables (e.g. “{cp}” for the current period) so that the title caption is automatically updated when the report is saved with

another view.

If you want to maintain *Tile Titles*, *KPI Names*, and *KPI Filters* in several languages, you can enter the respective alias for the reports in the *Model Browser* (*Model* menu) on the *Alias Sets* tab.

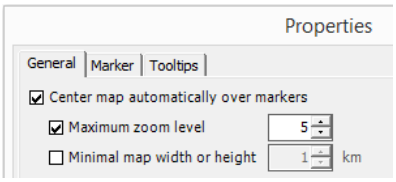
KPI tiles for folder title pages are only displayed in *DeltaMaster Navigator* (see *DeltaMaster deltas!* 5.6.2, feature #4). You can edit them in *Pivotizer*, *Analyzer*, or *Miner* mode. Starting with *DeltaMaster* 6.0.1 *Navigator*, KPI tiles have the same appearance as those in the *Dashboard* (previously known as *Portal*).

(3) Location Analysis: Defining Maximum Default Zoom Level for Centering Map over Marker



In a *Location Analysis*, you can now define the maximum default zoom level when you open or refresh a report. *DeltaMaster* will then display the map accordingly instead of zooming in as close as possible. This restriction also applies when you double click on a marker, which transfers the respective object to the *View* and changes the centering.

The automatic centering displays all available markers so that you do not have to move the selection. When the new option is not activated, *DeltaMaster* will zoom into the section as close as possible so that all markers still fit in the map displayed. If you are working with individual markers, you can explore the area around the object very well – especially with the satellite or 45-degree view. However, in scenarios where the geographic context plays an important role, you can now define that *DeltaMaster* should not automatically zoom too closely.



To *center a map automatically over markers*, open the *properties* of the *Location Analysis* (*I want to* or context menu). Afterwards, you can select one of the additional options:

- *Maximum zoom level*: This will set a limit on the automatic zoom. The higher the value is, the more detailed the selection will be on the object (e.g. “0” displays a map of the world while “21” shows just a few houses).
- *Minimum map width or height*: This will set the minimum visible radius (in kilometers).

If the centering option is deactivated, *DeltaMaster* will not change the map section when you refresh it. The restricted zoom level and map width or height apply to the automatic centering of the marker but not the manual centering options, for example, in the context menu of a *Location Analysis*. These options have no effect in older versions of *DeltaMaster*. You can edit this limit in *Viewer* mode or higher.

Location Analysis literally puts Business Intelligence on the map. This module, which integrates Google Maps into *DeltaMaster*, displays the addresses of branch stores, offices, clients, suppliers, etc. in the electronic maps or satellite images of Google. *Location Analysis* is extremely helpful when you want to examine the distribution or concentration of different markers. For more information on *Location Analysis*, please read *DeltaMaster clicks!* 06/2011.

(4) Start Wizard: Available for Oracle Essbase

You can now use the *Start Wizard* to generate standard reports and their related objects (e.g. calculated members) in analysis models and sessions that are based on Oracle Essbase. As a result, the *Start Wizard* is now available for five different OLAP databases: Microsoft SQL Server Analysis Services, IBM Cognos TM1, Infor BI OLAP, SAP BW/Netweaver BI, and now Oracle Essbase.

You can open *Start Wizard* immediately when you create a new analysis model (once you have connected to the database through the ADOMD.NET/XMLA interface and have selected the cube) or during an analysis session (*Model* menu).

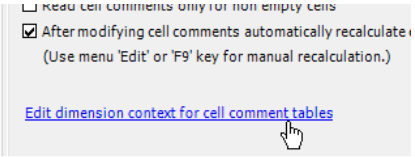
(5) Cell Comments: Using Dimension Context for Cell Comment Tables

In planning applications, you can now opt to administer cell comments for certain attributes only (and not all of them, as in the past). This is very helpful when you are working with dimensions that have additional attribute hierarchies (e.g. for filter and navigation purposes) that should not affect the comment function. For this type of scenario, *DeltaMaster* now offers a *Dimension context for cell comments* that defines which dimensions and hierarchies should be included when comments are written or retrieved or the cell comment table is generated. In addition, the leaner context can also save some disc space.

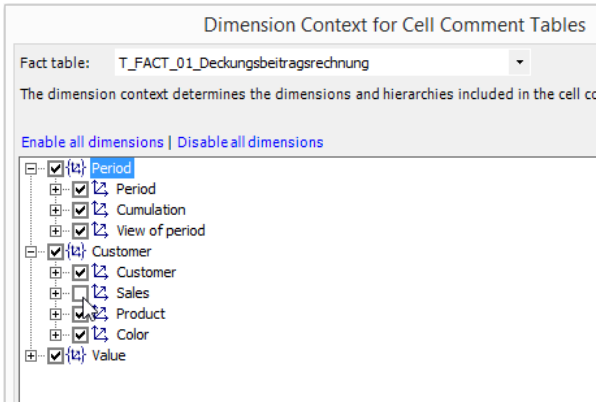
Let's say, for example, that you want to plan the number of units sold for various materials. To characterize these materials, you use various attributes (i.e. member properties) such as the material status (e.g. "new", "serial", "discontinued") and the demand category (e.g. "A", "B", "C"). Using these attributes, you can filter the material data and display one type of material or another. Since you will not differentiate each planned amount by the material status or demand category, you do not need to offer comments for these attributes.

To handle these types of "navigation attributes", you can create additional hierarchies from member properties in *DeltaMaster*. You can use these hierarchies as a separate dimension and, therefore, as a filter. Without any special precautions, *DeltaMaster* will include all filters that apply to a plan value, whenever you save cell comments. In other words, a comment that was added for one material in an unfiltered view would be invisible as soon as you switch to "new" products because the comment was assigned to the status "all" and not "new". The new cell comment context fixes this issue because you can now define that cell comments should not be assigned to navigation attributes.

You can edit the dimension context for cell comment tables in the Options (Extras menu) on the Cell Comments tab by clicking the respective link.

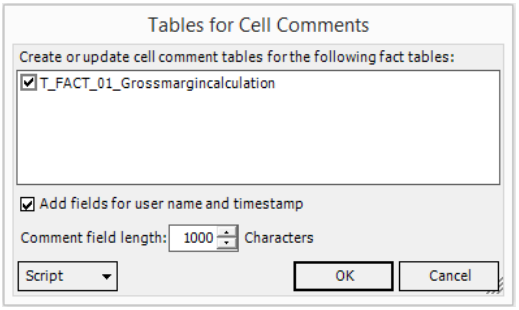


To define the *Dimension Context* for each fact table activate or deactivate the respective dimensions, hierarchies and levels as known from the *View Context* of reports or the *Measure Context*.



Whenever comments are written into or retrieved from the cell comment table, *DeltaMaster* will only include the activated hierarchies.

DeltaMaster also uses the cell comment context for configuring cell comment tables in Microsoft SQL Server. The functions to execute or generate the required SQL commands are located in the *Model Browser* (*Model* menu in *Miner* mode) on the *System* tab. When you create a cell comment table, you can generate it from the start exactly as you need it for the previously defined cell comment context. If cell comment tables already exist and there are any changes, you should ask a database administrator to edit them manually. *DeltaMaster* will not do this automatically. To include any additional hierarchies, you can either delete the entire table including all comments and create a new one with *DeltaMaster* (or the script generated by *DeltaMaster*) or you only delete individual columns and update the table with *DeltaMaster* (or the generated script) to take any eventually added hierarchies into account.



The structures of cell comment tables should match those in pivot tables and Flex Reports where users enter their plan values and cell comments. Please take this into consideration – especially when several *DeltaMaster* applications access the same cell comment tables.

(6) Update Notes

The following table shows if any changes have been made to the metadata schema of *ReportServer* and *Repository* database as well as the configuration files since the previous version.

Component	File	Changes since version 5.6.3
ReportServer	„ReportServer.mdb“, „ReportServer (SQL Server).sql“, „ReportServer (Oracle).sql“	No
	„ReportServer.exe.config“	No
Repository	„Repository.sql“	Yes
Repository GUI	„DeltaMaster.Repository.exe.config“	No
Service	„DeltaMaster.Service.exe.config“	No
WebClient	„web.config“	No

Please note that you do not always have to update all components of a *DeltaMaster* installation with each new version. In the **DeltaMaster compatibility matrix**, we document the version dependencies of front-end components (e.g. *DeltaMaster*, *ReportServer*, *Add-in for Office*) to services and databases. This matrix, which has been available in *DeltaMaster* Help since the 5.5.8 release, is updated for each subsequent one. The matrix shows which components you need to update for the release upgrade, if you can continue to use previous versions, and, if so, with which limitations.

The metadata schema of **ReportServer** has not changed. As a result, you do not need to run the “ReportServer (SQL Server).sql” or “ReportServer (Oracle).sql” script. You must update the “ReportServer.exe” file as well as the respective DLLs so that they match the current *DeltaMaster* version. The ODBC connection string, which specifies the job definition database, is saved in the “ReportServer.exe.config” file. Please create a backup copy of this file before you install the current version of the ReportServer files. You can also install ReportServer through the setup program.

RepositoryService and the **WebOption** components – *Service*, *WebClient*, and *Repository GUI* – are also available in version 5.6.4. Before you update *RepositoryService* or *WebOption*, please create backup copies of the configuration files (see table above). You can update *Service*, *WebClient*, and *Repository GUI* using the new setup program or by copying the new files from the ZIP archive into the respective directories. Since the database schema for Repository has changed in version 5.6.4, you should run the “Repository.sql” script on the existing repository database.