E-mailing User Guide

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Pathway 3.09 (Thick Client Version)

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E-MAILING USER GUIDE

Overview

A new Pathway application, E-mailing, has been included in Release 3.05. It provides a facility for other Pathway applications to send e-mail messages based on custom templates. The templates allow message subjects, plain text bodies and, optionally, HTML bodies to be specified. Each of these fields can include placeholders that allow Pathway data to be dynamically included in messages at the time of sending.

The new application is currently only linked to Word Processing, for use in the electronic delivery of documents, but it will be linked to other applications in future releases.

Note: Messages with HTML content must be sent via SMTP rather than the pre-existing method; that is, an e-mail client such as Microsoft Outlook. Conversely, the Pathway thick client doesn't attempt to send a message via SMTP unless it contains HTML content. Some configuration steps may have to be taken in order to allow message sending via SMTP. Please refer to the Release Notes Special Instructions 3.05 document for further information.

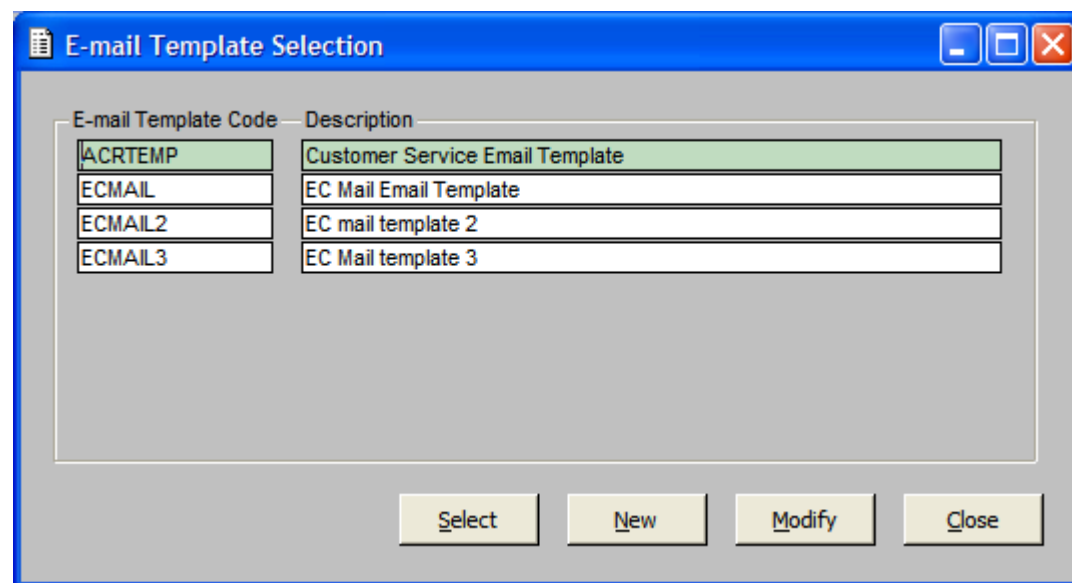**Note:** Portions of this documentation assume familiarity with HTML coding.

E-mailing Parameters

E-mail Template Maintenance

E-mail Template Selection form

The E-mail Template Selection form displays when more than one template exists. It allows selection of a template to associate with a merge type.

New templates may be created via this form and existing ones may be maintained.

The Select button returns the current template occurrence's code value to the Merge Type Maintenance form.

The New button invokes the E-mail Template Maintenance form in Add mode.

The Modify button passes the current template occurrence's details to the E-mail Template Maintenance form, which opens in Edit mode.

Only details for e-mail templates relating to the Word Processing application and filter combination of the calling Merge Type Maintenance form are displayed. For instance, where the 'owning' merge type belongs to a Licensing Class, only e-mail templates that also relate to that Licensing Class are displayed.

E-mail Template Maintenance form

This form is currently only accessible via the Merge Type Maintenance form (please refer to the Word Processing section in this document for more information). It provides access to custom e-mail template details that define the appearance and content of messages based on the template.

Note: With regard to HTML-based messages, the E-mail Template Maintenance form is not intended as a design tool for HTML content, but simply to facilitate the sending of separately designed HTML content that may incorporate Pathway data.

It now (as of Release 3.06) allows particular sender details to be specified for template-based messages sent via SMTP. (It is not possible to override the "From" address on a message sent via a MAPI e-mail client such as Microsoft Outlook.)

E-mail Template Maintenance form showing new sender details fields.

The form fields are utilized as follows:

E-mail Template Code
A unique alphanumeric value of up to ten characters identifying the template, e.g. 'SCTN7'. For e-mail templates associated with a merge type, this code only has to be unique for the combination of Word Processing application and filter value. For instance, for e-mail templates associated with Licensing merge types, the E-mail Template Code only has to be unique within a Licensing class. An error is displayed on 'OK' if a duplicate E-mail Template Code value is specified for the same Word Processing Application and filter value combination.

Letters typed into the field are automatically converted to uppercase.

Description
A brief description of the template of up to fifty characters, e.g. 'Section 7 Statement'. Letters are in the same case entered via the keyboard.

Subject
The e-mail subject text to use in messages based on the template. The text can include 'merge' fields for incorporating Pathway data in messages at the time of sending, as detailed later.

> **Note:** Notwithstanding the content of the Subject text in an e-mail template, details identifying the relevant Pathway environment will still be included in the subject of messages based on the template if the new facility to allow this has been activated. Please refer to the Core Functionality section in this document for further information.

The Subject field can accommodate an ample number of characters for an e-mail subject, with letters allowed in mixed case. (The actual length limit is 998 characters.)

From
This drop-down field identifies the source of the sender name and address to be associated with all messages based on the template and sent via SMTP. The possible values are:

- *Administrator* – The sender name and address are taken from the mail server administrator "E-mail Display Name" and "E-mail Address" field values in the System Administration → System Parameters → Mail and Fax Server Maintenance menu option, accessible from the smart client.
- *Other* – The sender name and address are taken from the "E-mail Display Name" and "E-mail Address" field values against the e-mail template.
- *User* – The sender name and address are taken from the user record of the user initiating the process that sends the message (e.g. Electronic Document Delivery).

E-mail Display Name
A "human-friendly" name that identifies the message sender, e.g. *Jane Smith*. This field is only available when the "From" field is *Other*.

E-mail Address
The message sender's address in SMTP format, e.g. *jane.smith@council.gov.au*. This field is only available when the "From" field is *Other*.

Always Try SMTP
Specifies that the E-mailing module should always attempt to send messages based on the template via SMTP rather than MAPI. This allows a particular "From" address to be specified on plain text messages. Otherwise, messages are only sent via SMTP if an "HTML Body" value is provided. If sending the message via SMTP fails for some reason, an attempt is still made to send it via a MAPI client, e.g. Outlook. However, in this case, the "From" address will always be that of the user logged on to the MAPI client.

> **Note:** If "SMTP Account Id" and "SMTP Account Password" values are specified in the Mail Server Details section in Mail and Fax Server Maintenance – for example, if internal anonymous SMTP access is not allowed – it may be necessary for the nominated SMTP account to be given special privileges to send messages with different "From" addresses. The means of doing this is mail server-specific, and beyond the scope of this documentation.

Message
The plain body text to use in messages based on the template. As with the subject field, this can include 'merge' fields for incorporating Pathway data in messages at the time of sending.

The Message field can accommodate an ample number of characters for an e-mail message body, with letters allowed in mixed case. (The message length is effectively unlimited.)

When the right-click menu is displayed while the Subject or Message field has focus, a list of available merge fields is displayed, which matches the list of available extract fields for the associated merge type.

When the right-click menu is displayed with a list of merge fields, typing a letter on the keyboard positions the list of menu options at that letter.

Selecting a merge field right-click menu option inserts the text: **{{ MERGEFIELD:** *<fieldname>* **}}** in the field with focus, where *<fieldname>* is the name of the selected merge field, e.g. Doc_Addressee_SalCon. The merge field code replaces any selected text in the field with focus, and just inserts the text at the insertion point when there is no selection.

HTML Body
HTML code defining a 'rich text' body to use in messages based on the template. The text can include the previously mentioned 'merge' fields, and also 'image' fields for incorporating embedded images, as detailed later.

The HTML Body field can accommodate an ample number of characters for an HTML e-mail message body, with letters allowed in mixed case. (The message length is effectively unlimited.)

When the right-click menu is displayed while the Subject or Message field has focus, a list of available merge fields is displayed, which matches the list of available extract fields for the associated merge type.

When the right-click menu is displayed with a list of merge fields, typing a letter on the keyboard positions the list of menu options at that letter.

Selecting a merge field right-click menu option inserts the text: **{{ MERGEFIELD:** *<fieldname>* **}}** in the field with focus, where *<fieldname>* is the name of the selected merge field, e.g. Doc_Addressee_SalCon. The merge field code replaces any selected text in the field with focus, and just inserts the text at the insertion point when there is no selection.

When the right-click menu is displayed while the HTML Body field has focus, there is an "Insert image…" option, followed by a separator line, followed by the list of available merge fields as for the Subject or Message fields.

Selecting the "Insert image…" option displays the Open dialog (allowing selection of an image file to encode and insert). The allowed file extensions are JPG, JPEG, GIF, PNG, BMP and "*" (i.e. all files).

Selecting a file from the Open dialog displayed via the "Insert image…" right-click menu option inserts the text: **{{ IMAGE:** *<base64data>* **}}** in the HTML Body field, where *<base64data>* is the file data in Base64 encoding. The 'Insert Image' option should be inserted with the cursor between the quotation marks within the <img src="   " > html command e.g.

```
<img src="... " >
```

Preview Button
Selecting this button will invoke the default web browser to provide an indication of the appearance of HTML messages based on the template, as shown in the following figure.

HTML e-mail template contents previewed in Internet Explorer 8.

Note that there are different considerations to take into account when composing HTML e-mails than when composing web pages, and the variety of e-mail clients available makes it inevitable that there will be minor differences between clients in the way a message is displayed. The Preview function should therefore only be used to gain a general impression of the appearance of HTML messages based on the given template.

See further details on Merge fields and Image Fields.

Merge Fields

A merge field is a kind of placeholder that specifies where Pathway data should be inserted into a message subject or body at the time of sending. Its boundaries are delimited by a combination of double left and right curly brackets. Within those boundaries, the field type ('MERGEFIELD') is specified, followed by a colon and the field name, as in the following figure.

Example of a merge field in the subject text of an e-mail template.

A merge field code may be typed manually into the relevant e-mail template field, or it may be inserted automatically by right-clicking on the form and selecting from a list of available fields. In the latter case, the merge field code is inserted at the current insertion point, replacing any selected text in the process. The fields available vary depending on the context. For e-mail templates associated with a merge type, the available merge fields correspond directly with the merge type's available extract fields. When the list of available fields displayed after right-clicking is long, it is possible to quickly position within the list by typing the first character of the desired field name.

Example of available merge fields on right-click menu of E-mail Template Maintenance form.

When a message based on the template is sent, everything between and including the double left and right curly brackets is replaced by the Pathway data corresponding to the named field. When the field lies within an HTML message body, any special characters within the Pathway data are converted into their equivalent HTML character entities. For instance, a less-than sign (<) would be converted to the entity <. Also, carriage returns in Pathway data are converted to <br> tags to provide a HTML line break.

> **Note:** Incorrectly specified merge fields (i.e., those with invalid field code syntax) are ignored, and simply considered part of the message text. Merge fields with an unknown field name return a value of "*** Unknown field: *field_name* ***". If for some reason it is necessary to insert a double left curly bracket combination in message text without having it considered a field boundary marker, a triple left curly bracket combination can be used, i.e. **{{{**. It will be converted to a double left curly bracket combination in the final message text.

Image Fields

Image fields allow HTML messages to include embedded images, rather than references to images on a web server or the like. They only apply in the HTML Body text of an e-mail template, and are intended to replace the URL against the *src* attribute of an *img* tag. As with merge fields, they are delimited by a combination of double left and right curly brackets, between which are the field type ('IMAGE') followed by a colon and the image data. The image data must be encoded in a MIME Base64 representation, which is a way of encoding binary data so that it is made up only of printable characters. As such, the best way of inserting an image in the HTML Body text is to select the "Insert image…" right-click menu option.
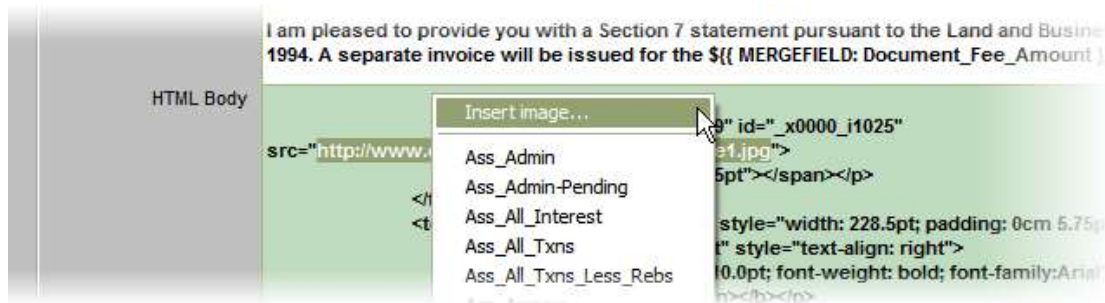
"Insert image…" right-click menu option on E-mail Template Maintenance form.

The File Open dialog box is displayed, allowing an image file to be chosen. The supported image types are JPEG, Graphics Interchange Format (GIF), Portable Network Graphics (PNG), and Bitmap (BMP).

Once an image file has been selected, its contents are automatically encoded in Base64 and included within an image field at the current insertion point, replacing any selected text in the process.

Example of image field automatically inserted using "Insert image…" right-click menu option.

When a message based on a template with an image field is sent, the image data is reconstituted, and the image included as an inline attachment with an automatically generated content identifier. Everything between and including the double left and right curly brackets of the image field is replaced by a URL pointing to the attachment, e.g. *cid:0e726b30-e45b-11de-8a39-0800200c9a66*.

Note: As at Release 3.05, the Preview function in E-mail Template Maintenance cannot display embedded images. It is anticipated that this capability will be introduced in a later release.

E-mail Processing

HTML E-mail Processing

HTML E-mail Processing Setup

The new Pathway E-mailing application facilitates sending template-based messages, potentially in HTML format, that incorporate Pathway data. To send HTML messages, Pathway must use the Microsoft .NET Framework runtime to communicate with an SMTP-enabled mail server. This may require some extra configuration, especially for sites not already running the Pathway smart client.

Note: As at Release 3.05, Pathway E-mailing message templates can only be associated with Word Processing merge types. The templates are used to generate messages to accompany documents sent electronically in PDF format from a background job queue. Within thick client sessions such as a job queue processor, Pathway will only attempt to send messages via SMTP if they are in HTML format. Therefore, if no E-mailing message templates contain an HTML Body text value, the PDF background job queue will always send messages in the pre-existing manner; that is, by way of an e-mail client such as Microsoft Outlook. In such cases, the configuration steps in this document would not be required. For more information on the Pathway E-mailing application, please refer to the Release Notes Enhancements and New Functionality 3.05 document.

Mail and Fax Server Maintenance

For e-mailing via SMTP, mail server details must be specified within the Mail and Fax Server Maintenance option on the System Administration >> System Parameters menu. This option is only available from a smart client session. The following values can be specified:

Description
> A free-form description of the mail server to be used for SMTP transactions. This field is mandatory.

Active
> Indicates whether or not Pathway e-mail messages should be sent from the mail server. Can be used to suspend transmission of Pathway messages via SMTP if deemed necessary.

E-mail Display Name
> A name that identifies the message sender in the case that a user initiating an e-mail has no address specified. An example is "Pathway Administrator".

E-mail Address
> An e-mail address for the message sender in the case that a user initiating an e-mail has no address specified. The address does not have to refer to an actual "mailbox", but needs to be in the "name@domain" format of internet addresses. An example is "pathway@council.gov.au".

SMTP Host Name/IP Address
> The name or IP address of the host for mail transactions, e.g. "smtp.council.gov.au" or "192.168.255.1".

SMTP Port Number
> The port number used for SMTP transactions. Defaults to 25 if not supplied.

Enable SSL For SMTP

>Indicates whether Secure Sockets Layer communication with the SMTP server should be enabled. This will only encrypt communications between the sending machine and the mail server, and so should not generally be required unless the mail server is on a public network.

SMTP Account Id

>The name of a user account that has access to the mail host, e.g. "john.smith". Many SMTP servers are configured to require authentication when sending messages to prevent anonymous relaying.

SMTP Account Password

>The password for the account specified in "SMTP Account Id".

Example mail server details within Mail and Fax Server Maintenance.

E-mail Address Conversion

To further configure Pathway to send e-mails via SMTP, it will be necessary to convert users' e-mail addresses to the "name@domain" format of internet addresses. In many cases they will already be in this format, but currently e-mail addresses are often stored as "display names", or internal addresses, e.g. "John Smith". The E-mail Address Conversion option on the System Administration >> System Parameters menu in the smart client facilitates conversion of user e-mail addresses to internet format. It performs simple transformations on user names to achieve this.

>**Note:** For the purposes of the conversion, a user's first name is considered to be just the first word in the user name, and the last name to be all other words without intervening spaces. So, for the user name "Vincent van Gogh", the conversion would treat "Vincent" as the first name and "vanGogh" as the last.

The following search options dictate which user records will be included in the conversion:

Users With Existing SMTP Addresses

>If checked, users with addresses that are already in the "name@domain" format will still be included in the conversion. This might be useful if an organisation was making simple changes to its address format, or changing domain names. Otherwise, such users will be excluded from the conversion.

Users Missing Addresses

If checked, users without any e-mail address at all will be included in the conversion, and have their address field populated. Otherwise, such users will be excluded from the conversion.

The following processing options can be specified:

Name Separator

This is the character that will be used to separate a user's first and last names to form the "name" part of an internet address. Commonly, a period or underscore character is used. For example, the user name "John Smith" might result in an e-mail address of "John_Smith@council.gov.au" if an underscore character was used as a separator. This option field may be left blank, in which case there will be no separator character between first and last names.

No. of First Name Characters

Indicates the number of characters from the start of the first name that should be included in the "name" part of the e-mail address. For example, the user name "John Smith" might result in an e-mail address of "J.Smith@council.gov.au" if *No of First Name Characters* was set to 1. If left blank, all first name characters will be included in the name part.

No. of Last Name Characters

Indicates the number of characters from the start of the last name that should be included in the "name" part of the e-mail address. If left blank, all last name characters will be included in the name part.

Domain

The site's e-mail address domain, e.g. "council.gov.au". This field is mandatory.

Example parameters within E-mail Address Conversion Control.

Upon completion, the conversion process will send the submitting user a summary message.

Installation of the .NET Framework Runtime

To send messages via SMTP, Pathway requires access to the Microsoft .NET Framework runtime version 2.0 or later. The Microsoft .NET Framework version 2.0 (x86) redistributable package, or the installer for a later version of the .NET Framework, should be used to set up

the .NET runtime on the PDF background job queue machine if the new Pathway E-mailing module is to be used to send messages in HTML format.

As of this writing, the various installer packages can be accessed from the Microsoft Download Center, which is at the following address:

http://www.microsoft.com/downloads/en/default.aspx

Electronic Document Delivery

> **Note:** The PDF background job queue must be running in the relevant environment to enable electronic document delivery. The queue must be started on a PC with Adobe Distiller, Microsoft Word, Microsoft Outlook, and the .NET Framework runtime installed. Outlook should be running.

There are a few extra points worth noting about the process of sending messages based on templates.

When a template includes text in both the Message and HTML Body fields, e-mails based on the template will be sent as MIME multipart/alternative messages. Such messages include both a plain text section and an HTML section, which are essentially meant to represent the same content. Old e-mail clients incapable of processing HTML will only display the plain text version, and newer clients will tend to display the HTML version, or possibly give the user the choice of which one to display.

> **Note:** Within Microsoft Office Outlook 2003 and 2007, when the **Read all standard mail in plain text** option is set, the HTML part of a multipart/alternative message is converted into plain text, rather than the plain text part of the message being displayed.

If an HTML message based on a template can't be sent via SMTP (because, for instance, the .NET Framework runtime is not installed on the machine running the PDF background job queue), the HTML part of the message is ignored, and the plain text part of the message is sent by the pre-existing method; that is, via an e-mail client such as Outlook. An error message appears in the batch queue's log file for each such failure.

Merge fields in an e-mail template's Subject text are correctly replaced (from opening double left curly bracket to closing double right curly bracket) with Pathway data in messages based on the template, whether the field is at the far left, far right, or somewhere in the middle of the Subject text.

Merge fields in an e-mail template's Message (plain body) text are correctly replaced with Pathway data in messages based on the template, no matter where the field appears within the Message text.

Merge fields in an e-mail template's HTML Body text are correctly replaced with Pathway data in messages based on the template.

When Pathway data is replacing a merge field in an e-mail template's HTML Body text, special characters are converted to the equivalent HTML character entities. For example, a less-than sign is converted to **<** (as evidenced by the correct appearance of less-than signs in HTML messages based on the template).

When Pathway data is replacing a merge field in an e-mail template's HTML Body text, carriage returns in Pathway data are converted to **
** tags, providing an HTML line break. This is evidenced by the correct appearance of, for instance, multi-line address fields in HTML messages based on the template.

Merge fields representing CWP metadata, such as *Doc_Addressee_SalCon*, are correctly replaced with Pathway data in messages based on templates containing such merge fields.

Incorrectly specified merge fields (i.e., those with invalid field code syntax) are ignored, and simply considered part of the message text.

Merge fields with an unknown field name return a value of "*** Unknown field: field_name ***".

Triple left curly bracket combinations are converted to double left curly bracket combinations in the final message text.

Image fields representing JPEG images in e-mail templates are correctly substituted within messages.

Image fields representing Graphics Interchange Format (GIF) images in e-mail templates are correctly substituted within messages.

Image fields representing Portable Network Graphics (PNG) images in e-mail templates are correctly substituted within messages.

Image fields representing Bitmap (BMP) images in e-mail templates are correctly substituted within messages.

Setting off the Active flag against the mail server details in Mail and Fax Server Maintenance prevents messages from being sent in HTML format via SMTP, and causes them to be sent in plain text via MAPI (through communication with the Outlook client, as per the pre-existing functionality).

When an e-mail addressee for a HTML message has just a "display name" as an e-mail address, e.g. "Jane Smith", sending the message via SMTP fails with an "invalid address" message in the PDF background queue's log. The text part of the message is sent via MAPI instead.

When the *Include Environment name in Subject for e-mail notifications* option has been checked on in System Administration >> System Parameter Maintenance, messages based on e-mail templates correctly incorporate the environment name.

E-mail history logging is still carried out where required for messages sent via SMTP, but at this stage only the plain text part of the message body is saved.

Please note that there is no attempt to validate HTML code resulting from the substitution of data for merge and image fields. It is passed to the SMTP server "as is".

Finally, there is a difference between the "From" e-mail address used for messages sent via SMTP and that for messages sent via an e-mail client such as Outlook. Messages sent via SMTP use the address of the Pathway user initiating the message (for instance, the user finalising a document to be sent electronically) as the "From" address, whereas messages sent via an e-mail client use the address of the user logged on to the client as the "From" address (which, in the case of the PDF background job queue machine, will probably not be the same as the user initiating the message).

When a new certificate request is lodged via **ePathway**, the request lodgement confirmation is sent via email. If the certificate has been set up to auto-generate and send, it is also sent if the PDF background job queue is running.