Engage Designer

User Guide

Variable Printing and Web-to-Print Design

Includes Mapsoft Server Technology

Contents

Overview of Engage

Welcome

Engage is a variable printing system that can be used to generate personalised print jobs.

Engage Designer (described in this manual) is a component of this printing system. It is a plug-in to Acrobat v8, v9 and vX, which enables you to create your own dynamic templates by creating and defining the properties of variable printing fields within a PDF document. These fields can contain text or graphics. These special variable printing fields are then populated with specific text and graphics prior to printing. You can also perform 3D manipulations and distortions on the text and graphics.

Engage Designer can run on a client machine under either the Windows or the Mac operating system.

The Engage system comes in two different 'flavours', which determine how PDF files containing these special variable printing fields are submitted for print:

- **Engage Web-to-Print**. A web-based print system consisting of a number of tools to enable you to create, submit and manage print jobs online via your usual Web Browser. Full details are given in the ***Engage User Guide***.
- **Engage Variable Data Printing** A Windows-based 'standalone' system enabling you to offer simple and sophisticated personalisation services from straight forward name and address document mergers through to complete text, image and colour document changes to suit each individual recipient. It enables you to interface with a database containing the data needed for populating variable data fields within your print job. Full details are given in the ***Engage Variable Data Printing User Guide***.

The Engage Designer plug-in can be used with both these Engage systems: the plug-in's functionality is virtually identical under the two variants of the Engage system. The files output by the Engage Designer plug-in can be used as input to either Engage variant, regardless of the operating system under which they were created. For example, you can use files created using the Engage Designer plug-in under the Mac operating system as input to the standalone Engage VDP product under Windows.

The Engage Designer plug-in can run in either Advanced or Standard mode. Users wishing to work in Advanced mode must be authorised by the Engage System Administrator to do so.

We recommend that only users with strong programming skills use the plug-in in Advanced mode: especially its Advanced JavaScript functionality.

About This Manual

This manual documents the Engage Designer plug-in and gives details on how to create variable printing fields within PDF documents, and define their properties. Most of the information given in this manual applies equally using the Engage Designer plug-in under either Engage Web-to-Print or Engage VDP: wherever there are differences between the two systems, these are clearly identified.

This manual is designed to be used in conjunction with the specific documentation for the Engage system variant you have purchased, that is, the web-based printing system or the standalone Engage VDP system. Details on submitting the files output by the Engage Designer plug-in for printing can be found in the documentation supplied with your particular version of the Engage system.

This manual assumes you have a working knowledge of your computer, its operating system and of Adobe Acrobat.

The screensnaps shown throughout this manual are for the Windows version of the Engage Designer plug-in. However, the plug-in's functionality on the Mac is almost identical. Where there are differences between the two environments these are clearly identified. In addition, any references throughout the manual to specific keys (such as **Shift** or **Alt**) are also for the Windows environment: these are mapped to standard keys on the Mac. There are also some differences for the property controls for some property types between the two environments

The following notational conventions are used throughout this manual:

- Cross-references to other sections or manuals appear in ***Bold Italics***.
- Any variable items from where you have to choose a particular option appear in *italics*. *Italics* are also used for emphasis.
- Names of buttons and fields appear in **bold**: for example, select **OK**.
- Features that are available only when using the standalone Engage VDP product are blue for ease of identification.
- Features that are available only when using the Engage Designer plug-in in Advanced mode shaded pink for ease of identification.

System Requirements

The Engage Designer plug-in runs under either the Windows or Mac operating system. Generally the system requirements for this plug-in are the same as for the version of Acrobat that you are using, but as an approximate guide the minimum hardware and software requirements to run the Engage Designer plug-in are:

- Pentium processor-based personal computer.
- Microsoft Windows XP Service Pack 2, Microsoft Windows Vista, or Mac System OS X V10.4.8 or later
- 1GB of RAM
- Acrobat Version 8, 9 or X.
- 500 MB - 1 GB of free disk space.

Refer to the Acrobat documentation for the specific minimum requirements for your particular version of Acrobat.

Using Engage Designer

Getting Started

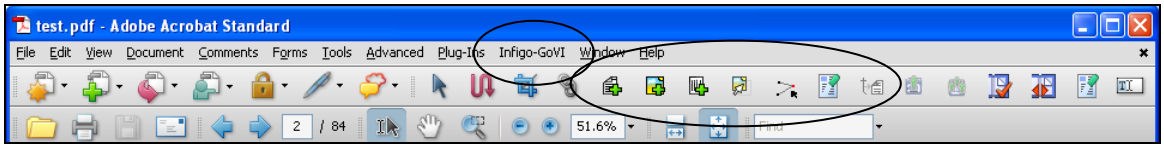
The Engage Designer plug-in runs under Adobe Acrobat, Versions 8, 9 or X, running under either the Windows or the Mac operating system.

While the functionality of the Engage Designer plug-in almost identical on both the Mac and Windows operating systems, screen snaps throughout this manual are for the Windows version.

The Engage Designer plug-in enables you to create areas within a PDF file that define the properties of the variable printing fields that are to be used within the Engage printing solution. Using the configuration data stored in these fields, Engage VDP or Engage Web-to-Print can subsequently populate those fields with specific data prior to printing.

See the Engage documentation supplied with your particular Engage product for details on submitting your files for printing.

Engage Designer plug-in's functionality is accessed from seven buttons on the Acrobat Advanced Editing Toolbar and from the Engage Go-VI menu on Acrobat's main menu bar, all of which are automatically inserted into Acrobat's user interface when you install the Engage Designer plug-in.



If Acrobat's Advanced Editing Toolbar is not visible, select Acrobat's **View** menu option, followed by **Toolbars** followed by **Advanced Editing**.

The Engage Designer plug-in's seven buttons on Acrobat's Advanced Editing Toolbar allow you to define graphic and text fields, and to subsequently select them for viewing and/or editing:

-  Add text field
-  Add graphics field
-  Add bar code field (only supported when output through Engage VDP)
-  Select field (can only be selected after at least one field has been added)
-  Edit Text on a Curve (Windows only)

-  Mask parts of the document
-  Convert text to field

Selecting the **Add Text Field, Add Graphics Field,** or **Select Field** buttons gives you access to the Field Settings dialog where you can create or edit variable text or graphic fields and their properties. Properties are used throughout the Engage system and are best thought of as simply a space that can be filled in when the output file is generated. Properties, for example, UIDescription, TabId, GroupName etc define the behaviour of the print submission programme, Engage Web-to-Print or Engage VDP. They are used to build up the processing form dynamically: the relevant values are populated in the output file during processing.

Two versions of the Properties dialog are available, one for graphics, one for text. An additional version of this dialog box is supported under Engage VDP, which allows you to add or edit variable bar codes and their properties. Choose the **Add Bar Code Field** button to access this version of the Field Settings dialog.

If you select an existing variable field within the file and then choose the **Select Field** button, the Field Settings dialog that displays will already be populated with the settings of the selected field.

The **Edit Text on a Curve** button enables you to edit text on a curve.

The **Masking** button allows you to select rectangular areas of the PDF document and mask (hide) any information or content within that area. This content will no longer be visible, and will no longer be shown when that document is printed. This functionality has no effect on annotations.

The **Convert Text to Field** button allows you to convert text selected with the text select tool in Acrobat to a text field.

Working with Text

Selecting the Add Text Field button changes the mouse cursor to a cross-hair shape to indicate this tool is now active. Move the mouse cursor to the point at which you wish the top left corner of the field to start, then press down the left mouse button and drag a bounding box around the area where you want the field to be located. This raises the text version of the Field Settings dialog, which allows you to create a variable text field, define the text that is to be stamped within it, and specify the properties associated with that text. Text defined here will be stamped at the selected location within the PDF file when the file is printed. Full details on all the options available under this dialog box are given in *Text Field Settings* later in this manual.

You can enter any text you want: in addition you can also include some special fields relating to variable data such as page numbering and date/time stamps. These special fields are automatically delimited by the '<' and '>' characters to distinguish them from ordinary text. See *Specifying Variable Text* for a full list of all these special variables. All these special fields will be replaced with the appropriate data, such as the current date, or page numbering information, when the PDF file is stamped with your text.

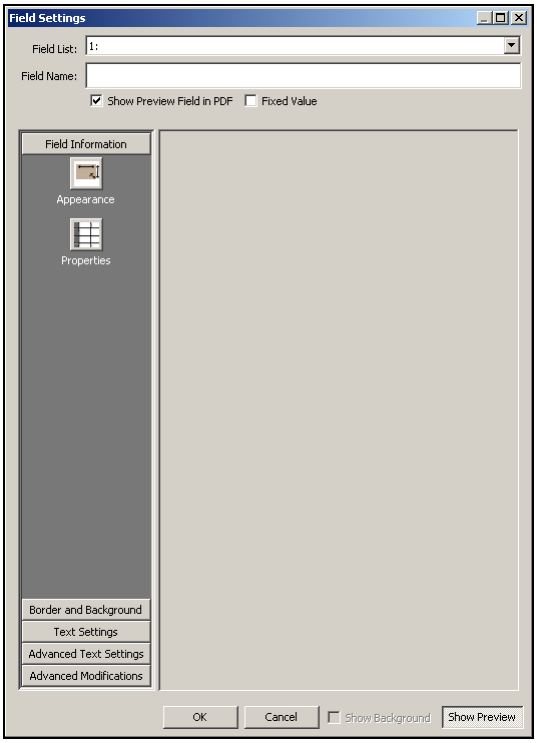
If you wish to include the '<' or '>' characters as ordinary text you must precede them with the escape character '\', while to include the '\' character itself within your text you must use '\\'.

To add a text field:

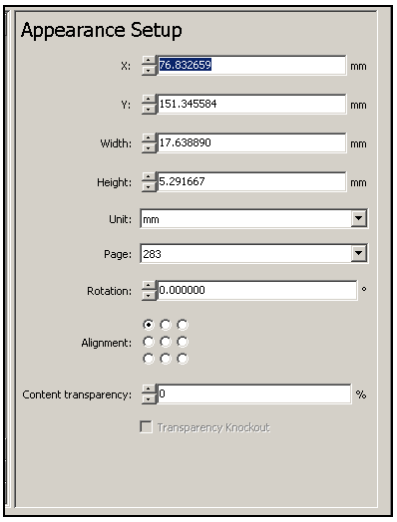
1. Open the PDF file in which you wish to insert one or more text fields.
2. Navigate to the first page on which you wish to insert a text field.
3. Click the **Add Text Field** icon on Acrobat's Advanced Editing Toolbar.

4. The mouse cursor will then change to a cross-hair shape to indicate this tool is now active. Move the cursor to the point in your document at which you wish the top left-hand corner of the new text field to be located. Press down the left mouse button and drag a bounding box around the area of the page where you want this text field to appear.

   On releasing the left mouse button a text field is created in the area selected and the text version of the Field Settings dialog then displays, where you can set various settings for this new text field.



5. Enter a name for the new text field in the **Field Name** field. You must make an entry into this field and the name you enter must be unique within this document. The name can only contain alphanumeric characters, spaces, scores and underscores.
6. Next click the **Appearance** or **Properties** icon to display further options controlling this field. (The **Appearance** options are illustrated below.)



7. Make entries into the other fields as appropriate. See the section, ***Text Field Settings*** below for details on all the fields available in this dialog box and how to use them.

8. Click **OK** to create the text field and stamp the appropriate text into your PDF file. (By default, a Preview window displays which shows the effect that stamping this new text field would have in your document – to turn the display of this field off, click the **Show Preview** button.)

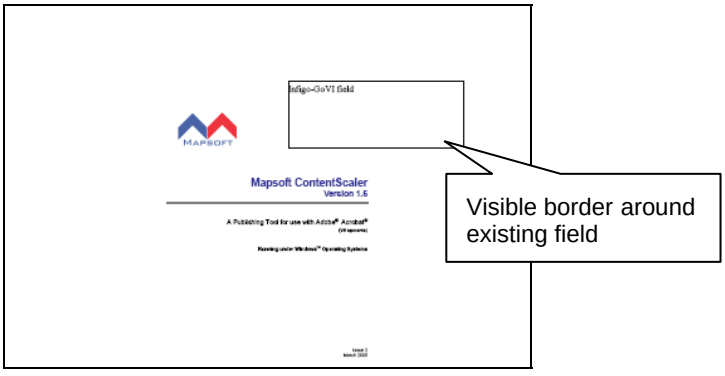
You can also edit, existing text fields that have previously been set using Engage Designer. To do so choose the Select Field entries icon from Acrobat's Advanced Editing toolbar.

To edit existing text fields:

1. Open the PDF file that contains the text field(s) you wish to edit.

2. Click the **Select Field** button on Acrobat's Advanced Editing toolbar.

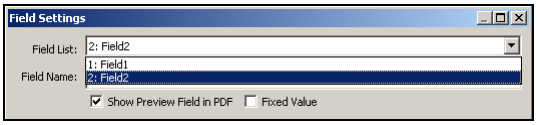
3. The cursor will change shape and the boundary around all existing fields that have already been defined using Engage Designer (text, graphic and bar code fields) will be made visible, as illustrated below.



4. **To edit** the settings or the contents of a field simply double-click within its boundaries. Double-clicking within a field will raise the Field Settings dialog (shown above) but in this instance the dialog box will be automatically populated with the settings that are currently active for that particular field.

5. You can then make any edits you require to any of the fields within this dialog box before clicking **OK**.

Alternatively, if you know the name of the field you wish to change, you can select it using the Engage Designer option from Acrobat's main menu, followed by Show Field Settings. This raises the Field Settings dialog box from where you can choose the field you wish to edit: simply choose the required field from the drop down list of available fields in the Field List field located at the top of this dialog.



Selecting the field you require populates the rest of the fields in this dialog box with the settings that are currently active for that field. Make the changes you require and click OK. This feature is particularly useful where you have overlapping fields, as double-clicking on a field would give just the top-most field the focus so this feature enables you to maintain the settings for all fields. You can also delete, move or resize fields.

To move an existing field to another location on the same page:

1. Ensure the boundaries of all fields within the file are visible (see above).
2. Click once within the boundaries of the field you wish to move. The currently selected field will then be bounded by a red rectangle.
3. Hold down the left mouse button and drag the field to a new location on the page before releasing the mouse button. Alternatively, use the arrow keys on your keyboard to move the field to its new location.

You can also move more than one field at a time. To do so, drag out a selection rectangle to cover multiple fields. All fields inside that rectangle, or which touch the rectangle at any point will be selected and will be moved when you drag the bounding box to the new location. You can also hold down the Shift key when you drag out the selection rectangle, in which case then only fields which lie completely within that rectangle will be selected and moved.

Alternatively, you can hold down the **Ctrl** key and select multiple fields one at a time before moving them to a new location.

To resize a field:

1. Ensure the boundaries of all fields within the file are visible (see above).
2. Click once within the boundaries of the field you wish to resize. The currently active field will then be bounded by a red rectangle. (If multiple fields are selected only the size of the currently active one will be changed.)
3. 'Grab' one of the handles on the red bounding box and pull the box out to the new required size.
4. Release the mouse button.

You cannot use the dragging handles to resize fields with rotation applied as the new width and height of such fields cannot be calculated as dragging affects only the width and height of the bounding box. Instead you can resize rotated fields by changing their settings in the Field Settings dialog box.

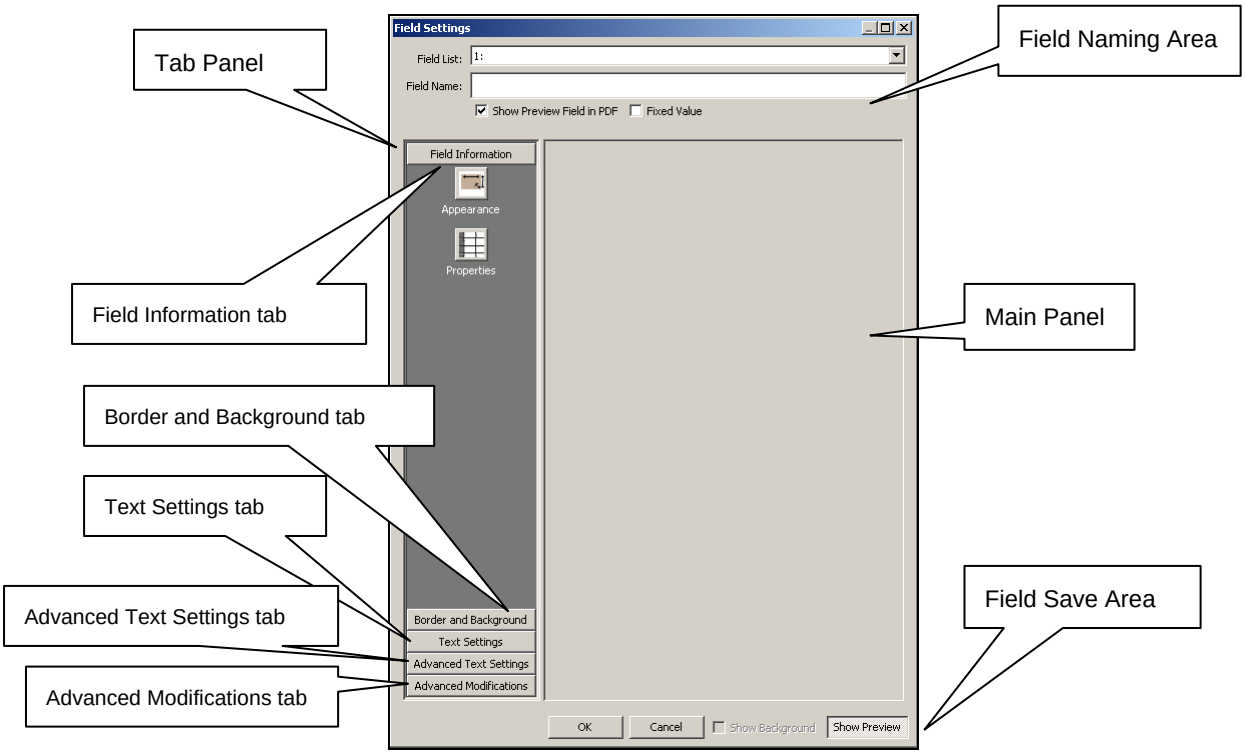
To delete a field:

1. Ensure the boundaries of all fields within the file are visible (see above).
2. Click once within the boundaries of the field you wish to delete. The currently selected field will then be bounded by a red rectangle.
3. Press the **Delete** key on your keyboard.

You can delete more than one field at a time (in a similar way as you can resize more than one field at once – described above).

Text Field Settings

The text version of the Field Settings dialog is split into a number of different areas as illustrated below.



The top portion of the dialog, the Field Naming Area, allows you to name the current field, or select an existing text field to edit.

The panel to the left of the dialog, the Tab Panel, has five different tabs, allowing you to set details on the following:

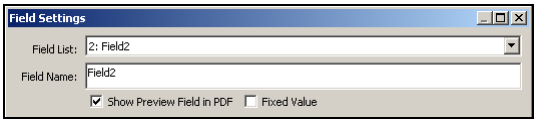
- Field Information
- Border and Background
- Text Settings
- Advanced Text Settings
- Advanced Modifications

Clicking on a tab makes that tab the active tab and displays icons that are specific to that tab in the left hand panel in the Field Settings dialog. Each icon controls/sets various aspects of the selected text field. In the screen shown above, the **Field Information** tab is active. This has two icons associated with it, the Appearance and the Properties icons, which allow you access to options controlling the appearance and the properties of your text field respectively. When you click on one of the icons in the Tab Panel, the options associated with that icon display in the dialog's Main Panel. *In the screen shown above, the options associated with the **Appearance** icon are displayed.

Options in the Field Save Area at the foot of the dialog allow you to save your settings.

Naming a Text Field

The Field Naming area at the top of the Field Settings dialog box allows you to name your field or select an existing text field to edit.



Field Contains a drop-down list of all the currently defined fields. (This includes text, graphics and barcode fields.)

Field Name The name of the field added into the PDF file using the Engage Designer plug-in. This name must be unique within this document. The name can only contain alphanumeric characters, spaces, scores and underscores. You must make an entry into this field.

Show Preview Field in PDF Checking this checkbox ensures the contents of the text field will not continuously redraw. Unchecking this checkbox will result in the contents of this field being hidden on the page.

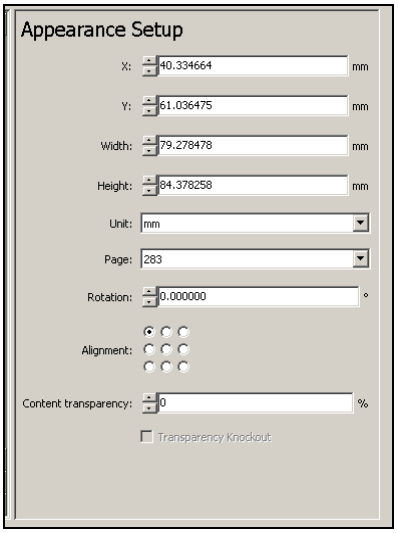
Fixed Value Checking this checkbox means that the user filling in the processing form cannot change the value you enter here, as this field will be hidden in that form. However, you can change this value using JavaScript.

Setting Field Information

The Field Information tab in the Field Settings dialog box allows you to control the Appearance and the Properties of the current text field. Simply click the Field Information tab followed by the Appearance or Properties icon in the Tab Panel to display that icon's associated options in the Main Panel.

Managing Text Appearance

The Appearance Setup options allow you to control the horizontal and vertical positioning of a field within a page, its rotation and its transparency.



Using the options found in this area of the dialog box you can pinpoint the exact position on the page at which your text is to be stamped.

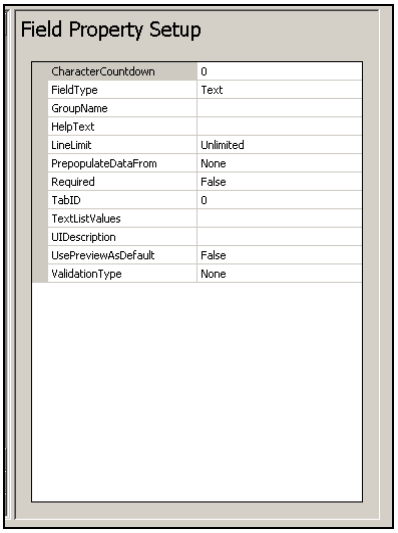
X The horizontal (X) position of the text. This is calculated from the top left-hand corner of the page.

Y The vertical (Y) position of the text. This is calculated from the top left-hand corner of the page.

Width	The width of the field.
Height	The height of the field.
Unit	The unit of measurement to be used in calculating the positioning of the text field. Their position can be calculated in **inches, points** or **centimetres**. The unit you select here will be stored for the current document.
Page	The page within your document on which you want this text field to appear. Choose from the drop-down list.
Rotation	The degree by which the text is rotated, that is, the angle at which it displays. An entry of '0' represents a horizontal position, while the higher the value the greater the angle (rotating counter-clockwise).
Alignment	The position from where you want the horizontal and vertical alignment of text to be calculated.
Content Transparency	The percentage of transparency to be applied to the text within this field.
Transparency Knockout	Determines whether shadowing behind the actual text will be visible or not when transparency is applied.

Managing Text Properties

The Field Property Setup options allow you to manage the properties for the currently selected text field.



To add your own entries, or change existing ones, click the entry whose value you wish to change/add then enter the new value. For some entries, such as HelpText you can simply type the new value: for others, such as Required, you must select the new value from the drop down list of available values for that particular entry. Click OK to save your changes.

When using Engage Designer in Advanced Mode, an Add and Remove button are also available for the Field Property Setup enabling you to add a new property or remove an existing property for the currently selected field.

Creating customised properties currently has no meaning within Engage Designer and thus should not be used.

Managing Global Document Properties

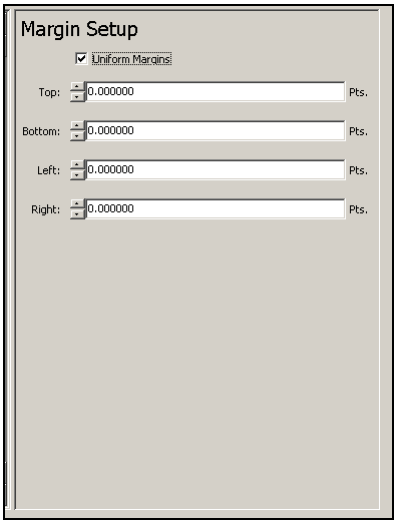
When working in Advanced Mode, options are available for setting and removing global document properties. Again, as for local variables, this functionality currently serves no purpose and should not be used.

Setting Border and Background Information

The Border and Background Information tab in the Field Settings dialog box allows you to control the appearance of the Margins, Border, Masking, Background Fill and Box Shadow effects for the current text field. Simply click the Border and Background tab followed by the appropriate icon in the Tab Panel to display that icon's associated options in the Main Panel of the Field Settings dialog.

Managing Margins

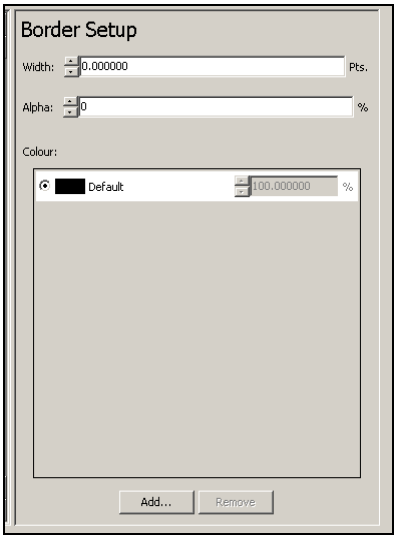
The Margin Setup options allow you to set the margins for this particular text field.



Uniform Margins	Set if all the margins are to be the same.
Top	Top margin to be applied to the text contents.
Bottom	Bottom margin to be applied to the text contents.
Left	Left margin to be applied to the text contents.
Right	Right margin to be applied to the text contents.

Managing Borders

The Border Setup options allow you to specify the appearance of the borders for this text field.



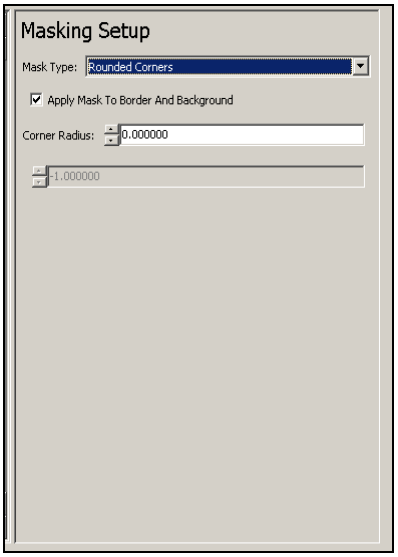
Width The width of the border line in points.

Alpha The transparency percentage.

Colour The border colour. The current colour is shown in the solid rectangle to the right of this field. Double-click on this box to show the Edit Colours dialog where you can select the colour you require, edit existing colours or add new ones. See ***Managing Colours*** below for more details.

Setting Masking Information

The Masking Setup options allow you to mask fields within your document. The mask type can be either Rounded Corner or Ellipse. The options available are slightly different for each.



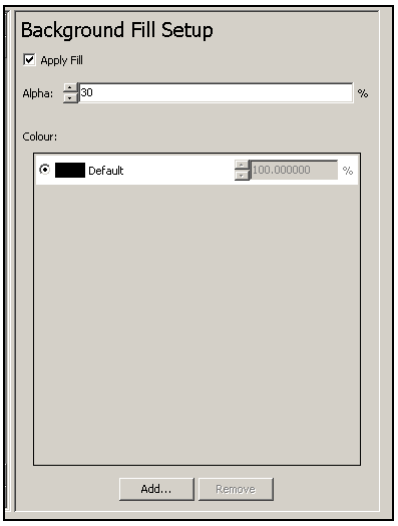
Mask Type None, Rounded Corner or Ellipse.

Apply Mask to Border and If this button is selected then the whole field will have the mask applied including its border and its background. Otherwise, the

Background	mask is just applied to the text contents.
Corner Radius (rounded corners only)	Controls how rounded the corners of the bounding rectangle around the mask are. The greater the corner radius, the greater the degree of roundness at the tip. Entering a value of zero degrees as the corner radius creates a sharp point. (This option is only available for Rounded Corner masks.)
Width (perc) (Ellipse only)	The width of the ellipse expressed as a percentage of the surrounding rectangle at its widest point.
Height (perc) (Ellipse only)	The height of the ellipse expressed as a percentage of the surrounding rectangle at its highest point.

Setting Background Fills

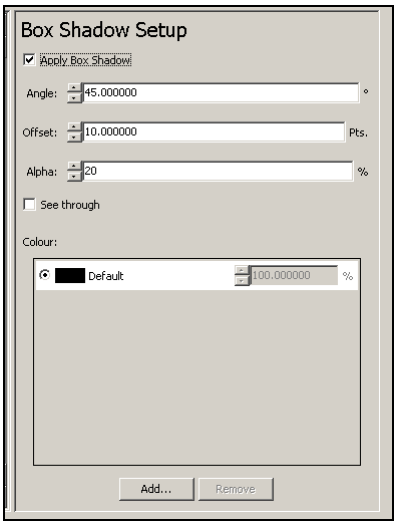
The Background Fill Setup options allow you to set a background fill for the current text field.



Apply Fill	Check this box if a fill is to be applied to the field background.
Alpha	The transparency percentage that is to be applied to the background fill.
Colour	The background fill colour. The current colour is shown in the solid rectangle to the right of this field. Click on this box to show the Edit Colours dialog where you can edit existing colours or add new ones. See ***Managing Colours*** below for more details.

Setting Box Shadows

The Box Shadow Setup options allow you to set box shadows for the bounding box surrounding the current text field.



Apply Box Shadow	Applies a shadow to the field's bounding box.
Angle	The angle of the shadow in relation to frame and the offset. This is the opposite to the angle of the light source.
Offset	The amount by which the shadow protrudes from the frame. An entry of '0' represents a horizontal position, while the higher the value the greater the angle (rotating counter-clockwise).
See Through	If set, the shadow will shine through a transparent border/background: if unset, the shadow does not shine through.
Colour	The colour of the shadow. The current colour is shown in the solid rectangle to the right of this field. Double-click on this box to show the Edit Colours dialog where you can select the colour you require, edit existing colours or add new ones. See ***Managing Colours*** below for more details.

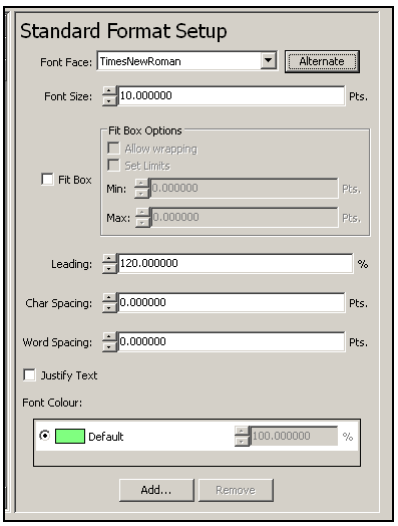
Setting Text Information

The Text Setting tab in the Field Settings dialog box allows you to specify the text that is to appear in the current text field and to set options controlling its appearance, such as its font type, size, word spacing etc. The text you specify can also contain variable data that will be replaced with 'real' data when the document is printed. This could be for example, a person's name or contact details, or it could be 'special' variables, such as today's date.

Simply click the Text Setting tab followed by the appropriate icon in the Tab Panel to display that icon's associated options in the Main Panel.

Setting Standard Text Settings

The Standard Format Setup options allow you to control the appearance of the text in the current field.



Font Face The typeface of the text used in your impression, for example 'Helvetica'. Make your selection from the drop-down list associated with this field. You can also select multiple alternative fonts by clicking the **Alternatives** button. The fonts you choose here will be shown as a drop down list in the processing form.

Font Size The point size of the text as it appears in your text field.

Fix Box Check this box if you want the field to be automatically sized around the text. If you check this you can also set the actual font size limits to be used in conjunction with this, by clicking the **Additional Options** button and entering the relevant size limits. You can also specify if text wrapping is to be permitted or not.

Leading (Line spacing) The vertical distance in points between the bases of the lines of text in points. Here this is specified as a percentage of the font size (so for example, a font size of 10 pt. with a Leading setting of 120% will result in a leading of 12 pt) Leading is automatically re-set whenever you change the **Size** setting but for multi-line text you may wish to specify its leading manually here. This should be the height of the font plus the amount of space that you wish to appear between the lines.

Char Spacing The white space between characters, in points.

Word Spacing The white space between words, in points

Justify Text Check this box if you want multi-line text to be justified.

Font Colour The colour of the text. The current colour is shown in the solid rectangle to the right of this field. Double-click on this box to show the Edit Colours dialog where you can select the colour you require, edit existing colours or add new ones. See ***Managing Colours*** below for more details.

Specifying Variable Data

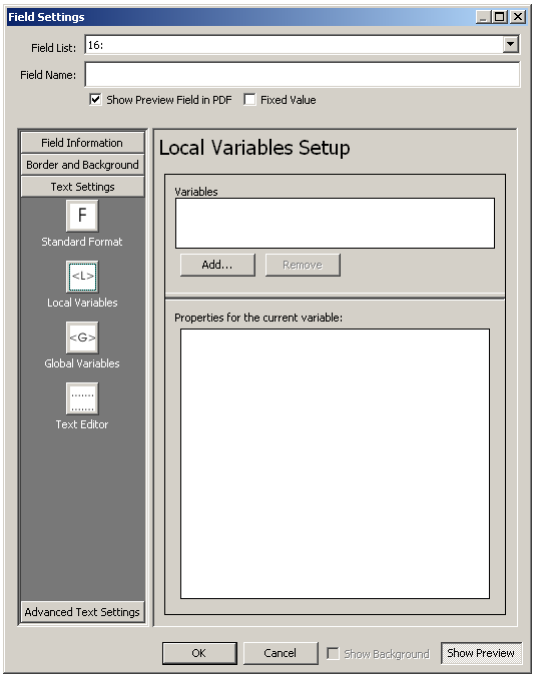
Text fields can contain variable data, such as a person's name and contact details. This data can be set globally or locally using the Local Variables or Global Variables options on the Text Settings tab in the Field Settings dialog box.

The options available for global and local variables are identical: the only difference is that global variables are available for selection for all fields within a document, while local ones apply only to the currently selected field. (Global variables can be managed via the Engage Designer menu.)

To create a variable:

1. Click the **Text Settings** tab in the Field Settings dialog and then click either the **Local Variables** or **Global Variables** icon, depending on the type of variable you wish to set.

2. The Local or Global Variables Setup Panel then displays. The Local Variables Setup Panel is shown below but the options on both panels are identical.

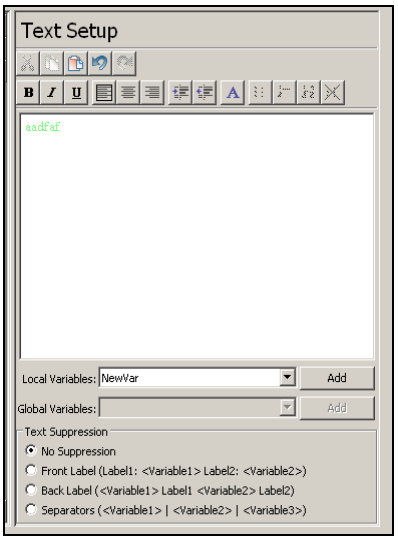


3. Click **Add** in the **Variables** field to add a new variable. You will be prompted to enter a name for the new variable together with the details that are to be inserted into the text field. The name must consist of alphanumeric characters only.

4. Click **OK** in the Variables dialog box to set your new variable. The new variable you have just set will now be available for selection from either the **Local Variables** or **Global Variables** field in the Text Editor Panel of the Field Settings dialog as illustrated below.

Specifying Text

The Text Editor options allow you to specify the text that is to appear in the current field. This text can include variable data, which is populated with live' data when the file is printed. The variable printing fields added using this Engage Designer plug-in are always populated with live data when the output file is generated: but for fields containing variable date, only the variable data is replaced with the live data, the rest of the text within those fields remains unchanged in the output file. (For fields that contain no variable data, the live data replaces the field text completely.)



The Text Editor tab acts as a mini text editor allowing you to specify the actual text you want to appear in the current text field. Type the text you require into the free-format field in the Text Setup Panel; this text can be any text of your choice. Select the relevant properties, bold, italic, underline etc that you wish to apply to the selected text from the icons above this field. For fields without variables, this is the preview of the live data (and potentially used in the form as default text if the property UsePreviewAsDefault is switched on). For text fields which use variables, this text is used to build up the final text (with the variable part containing the live data) - but if using Engage in Advanced mode this text can be changed later via Javascripts.

Text specified here will be stamped at the location and page(s) within your PDF file(s) specified in the Field Information tab of the Field Settings dialog box.

You can specify if you want Text Suppression to be active or not.

You can include variable data within your text, i.e. variables, such as a person's contact details or date or time information that will be replaced by specific text when your file is stamped. With the cursor in the relevant position within your text, select the name of the variable you require from the drop-down lists in either the Local Variables or Global Variables options and then select the Add button beside either of these lists. The selected variable name is then added to your text. You will notice it has been automatically delimited by '<' and '>' characters to distinguish it from ordinary text.

You can also set and edit global variables using the **Manage Global Text Variables** menu option from the **Engage Designer** menu. This raises the same Global Variables dialog box as that raised by clicking the **Manage** option next to the **Global** field in the Field Settings dialog.

You can also include some special fields as variable data, namely:

- Date and Time Fields
- Page Numbering
- Page Count
- Filename Information
- General File Information
- Serial Numbers

You must manually type these special fields into the Text Editor and each must be enclosed within '<' and '>' characters. Some of these special fields, such as the Date/Time ones, can also have parameters associated with them. Parameters must be preceded by a % character.

Date and Time Fields

There are a number of different date and time stamps which you can use for stamping date and time information into your PDF documents. When stamping a PDF document with any of the supported date or time stamps Engage Designer reads the date or time only once, and uses the same value for all subsequent impressions while the Engage Designer dialog box remains open. This prevents any inconsistencies arising if you stamp the time more than once during the same session.

Field	Meaning
<Date>	Local date
<DateUTC>	Co-ordinated Universal Time date
<Time>	Local time
<TimeUTC>	Co-ordinated Universal Time time

The actual date/time format in which the date/time will be stamped will depend upon your locale, and will change in line with any changes that might be made to the International settings within your Windows Control Panel.

You can specify any of the parameters shown in the table below with any of the above date and time fields to further control the format in which the date/time are to be stamped.

Field	Meaning
%a	Abbreviated weekday name (locale-dependent)
%A	Full weekday name (locale-dependent)
%b	Abbreviated month name (locale-dependent)
%B	Full month name (locale-dependent)
%c	Date and time (locale-dependent)
%d	Day of the month (01-31)
%H	Hour -24-hour clock (00-23)
%I	Hour -12-hour clock (01-12)
%j	Day of the year (001-366)
%m	Month (01-12)
%M	Minute (00-59)
%p	AM/PM indicator (locale-dependent)
%S	second (00-61) (Yes, it *is* possible for a minute to contain up to 62 seconds, if it contains leap seconds)
%U	the week number of the year - the first Sunday as the first day of week 1(00-53)
%w	Weekday (0-6), where Sunday is 0

Field	Meaning
%W	Week number of the year - the first Monday is the first day of week 1 (00-53)
%x	Date – used as the default value for <Date> (locale-dependent)
%X	Time – used as the default value for <Time> (locale-dependent)
%y	Year without century (00-99)
%Y	Year with century
%Z	time zone name or abbreviation, or nothing if indeterminable (locale-dependent)

Page Numbering

The following fields are supported for stamping your PDF file with page numbering information.

Field	Meaning
<PageNumber>	Page Number, starting from 1
<BatesPageNumber>	Page Number in Bates format (e.g. 000001)

Page Count

The following field is supported for stamping your PDF file with page count information.

Field	Meaning
<PageCount>	Page count, starting from 1

File Name

The following fields are supported for stamping your PDF file with the file name information.

Field	Meaning
< FileName >	File name only (without the file extension)
< PathName >	Full path name
< FileNameExt >	File name with extension

Information Fields

The following fields are supported for stamping your PDF file with the following PDF document information.

Field	Meaning
< Title >	General Document Info Title field contents
< Author >	General Document Info Author field contents
< Subject >	General Document Info Subject field contents
<Keywords>	General Document Info Keywords field contents

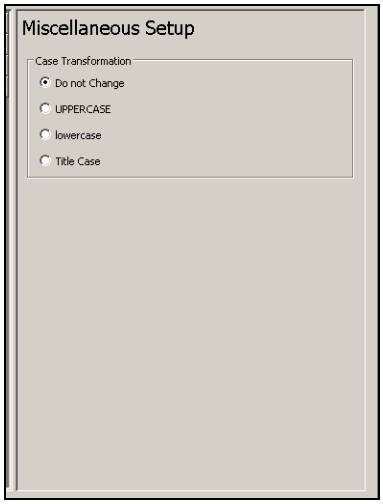
Setting Advanced Text Information

The Advanced Text Setting tab in the Field Settings dialog box allows you to set additional options controlling the appearance of the text stamped in the current text field, such as its shadow effect or its underlining style. It also allows the specified text to be stamped on a curve when it is stamped onto the document.

Simply click the Advanced Text Setting tab followed by the appropriate icon in the Tab Panel to display that icon's associated options in the Main Panel.

Miscellaneous Settings

The Miscellaneous Setup options allow you to transform the case of text typed into the Text Editor for stamping onto your document.



Do Not Change — Text will be stamped onto the document in the same case as that in which it is entered into the Text Editor.

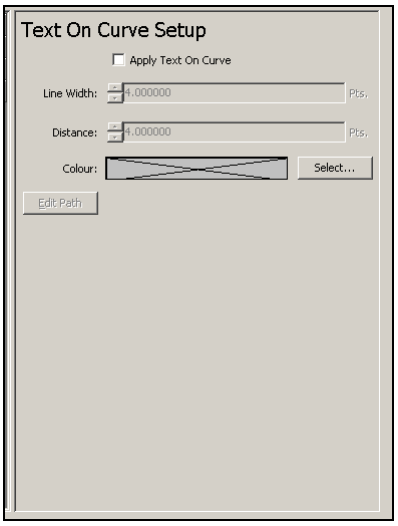
Uppercase — Text stamped into the document will be changed to UPPERCASE.

Lowercase — Text stamped into the document will be changed to lowercase.

Title Case — Text stamped into the document will be changed to Title Case (that is, the first character of each word will be shown as uppercase, while the remaining characters will be shown as lowercase)

Text On Curve Settings

The Text On Curve Setup options allow you specify that the text that is to be stamped into your document will be stamped on a curve.



Apply Text on Curve — Check this checkbox if text specified in the Text Editor for this text field is to be stamped into your document on a curve.

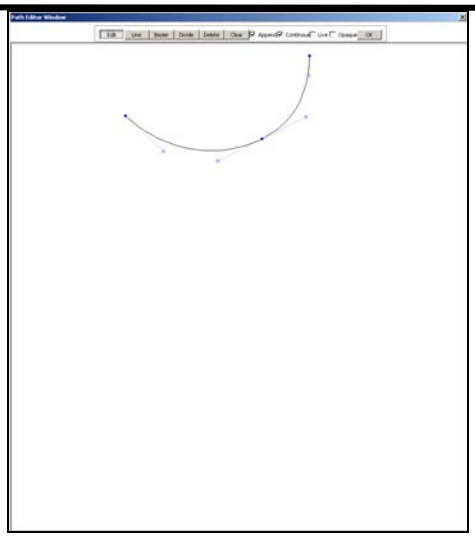
Line Width — The width of the line in points.

Distance — Distance of the text from the path in points.

Colour — Path Colour. Click on **Select** to show the Edit Colours dialog where you can select the colour you require, edit existing colours or add new ones. See ***Managing Colours*** below for more details

Edit Path — Clicking this button opens the Path Editor Window, shown below, which gives access to additional options controlling the appearance of the text on a curve. If using Engage Designer under the Windows operating system this same dialog box also displays if you select the Edit Text on a Curve icon from the Engage Designer toolbar:

This dialog provides an instant preview of how your edits will look.



Edit
Edits the points of an existing path rather than adding new points.

Line
Draws lines between the points as they are created.

Bezier
Points define a Bezier curve as they are created.

Divide
Adds new nodes onto an existing line on a path, hence dividing the path into smaller segments.

Delete
Deletes individual points as they are selected.

Clear
Clears all of the points from the curve and deletes the current path.

Append
Attaches new points to the existing path, so connecting the previous point created and the new point.

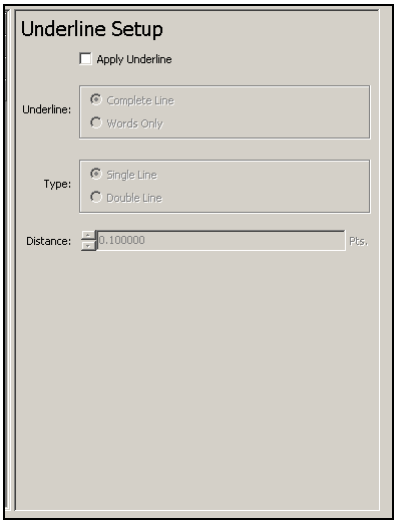
Continuous
The point where two curves come together will be smooth with no sharp edge. This will have no effect if the points join straight lines.

Live
Updates the curved text live

Opaque
Enables the background from the original document to be seen. This can be useful if the curve needs to be drawn using an existing object as a guide.

Underline Settings

The Underline Setup options allow you specify if the text specified in the Text Editor is to be underlined when it is stamped into your document, and if it is, what the style of that underline will be.



Apply Underline Check this checkbox if text specified in the Text Editor for this field is to be underlined when it is stamped onto your document.

Complete Line All text will be underlined when stamped into this text field.

Words Only Only complete words will be underlined when the text is stamped into your document, that is, any spaces between words spaces will not be underlined

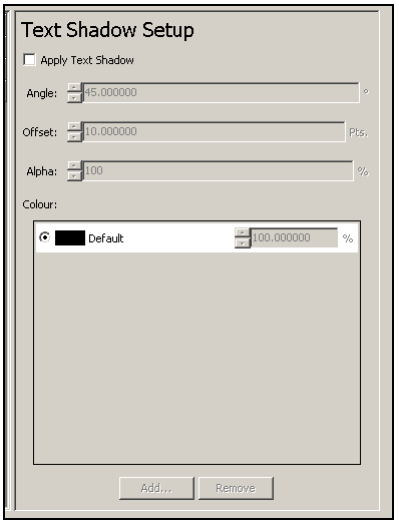
Single Line Underline applied to the text will be a single line.

Double Line Underline applied to the text will be a double line.

Distance Distance from the bottom of the text to the underline, in points. Entering a negative value here enables you to strike through text or place a line about the text.

Text Shadow Settings

The Text Shadow Setup options allow you specify text shadow effects to be applied to the text specified in the Text Editor when it is stamped into this field.



Apply Text Shadow	Check this checkbox if text specified in the Text Editor is to have a shadow applied to it when it is stamped in this field.
Angle	Angle of the imaginary light source and thus the resulting shadow angle. An entry of '0' represents a horizontal position, while the higher the value the greater the angle (rotating counter-clockwise)
Offset	Distance from the original text to the start of the shadow.
Alpha	Transparency percentage to apply to the shadow.
Colour	Colour of the shadow. Click on one of the colours to show the Edit Colours dialog where you can select the colour you require, edit existing colours, or add new ones. See ***Managing Colours*** later in this manual for more details.

Setting Advanced Modifications Information

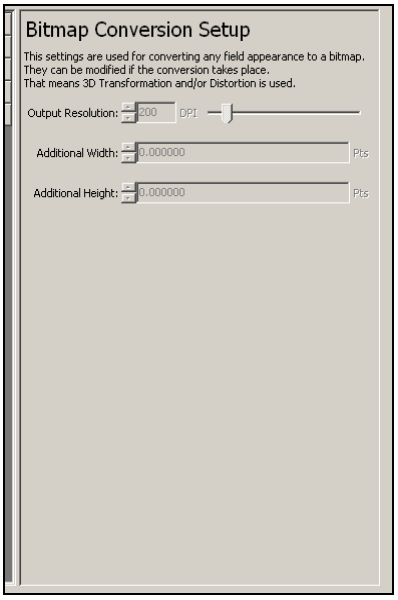
The Advanced Modifications tab in the Field Settings dialog box allows you to set more advanced options controlling the appearance of the text stamped in the current text field, namely options controlling 3D manipulations and distortions.

Simply click the Advanced Modifications tab followed by the appropriate icon in the Tab Panel to display that icon's associated options in the Main Panel.

Bitmap Conversion

The Bitmap Conversion Setup options allow you to set the output resolution of the bitmap created when 3D transformations and distortions are used. Note that real text cannot be used in these instances because these features both go far beyond what standard PDF text supports.

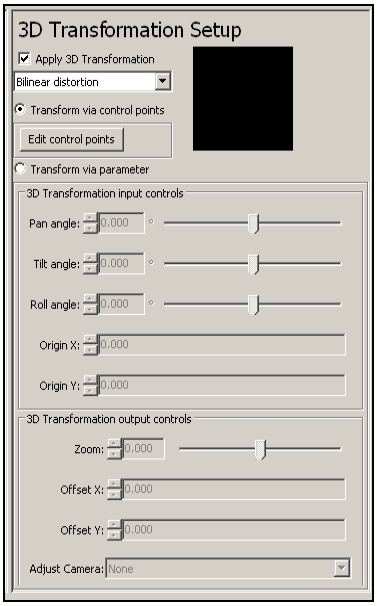
This option only has an effect if either the Apply 3D Transformation checkbox (on the Apply 3D Transformation Setup dialog) or the Apply Distortion checkbox (on the Apply Distortion Setup dialog) is set.



Output Resolution	The resolution (in DPI) of the bitmap that is generated when 3D transformations or distortions are used. By default this is 200dpi.
Additional Width	The additional width (in points) for manipulating the options controlling 3D transformations and distortions.
Additional Height	The additional height (in points) for manipulating the options controlling 3D transformations and distortions.

3D Transformation

The 3D Transformation Setup options allow you to map three-dimensional points to a two-dimensional plane to create a bitmap that appears as though it is in 3D. Transformations can be setup quickly and easily using the 3D Transformation Editor accessed via this screen, or alternatively you can have full control over the transformation by entering specific values for all the relevant parameters.



Apply 3D Transformation

Check this checkbox if text is to have a 3D transformation applied. If selected, the final output will be a bitmap set to the resolution specified in the Bitmap Conversion Setup dialog. The associated dropdown list specifies the transformation type to be used in generating the bitmaps: **Perspective Transformation** or **Bilinear Distortion**. In Perspective Transformation points are projected onto the image plane along lines that emanate from a single point: the centre of projection. Objects thus have a smaller projection when they are further away from the centre of projection and a larger projection when closer. In Bilinear Distortion appropriate intensity values are calculated for the four nearest pixel values located in diagonal directions from a given pixel.

Transform via control points

Enables the control points to be edited manually via an editor that is started by clicking the **Edit Control Points** button next to this option. Using this editor you can edit the four control transformation points directly. See ***3D Transformation Editor*** below for more details.

Transform via parameter

Allows the transformation to be applied via individual parameters. Selecting this option 'ungreys' all the remaining options on this screen, (the input and output controls), making them available for selection. As the parameters are set a thumbnail preview shows their effect on the transformation.

Input Controls

Pan angle
Angle controlling the rotation around the z axis.
Tilt angle
Angle controlling the rotation around the x axis.
Roll angle
Angle controlling the rotation around the y axis.
Origin X
The amount to move the horizontal origin of the rotations away from the centre.

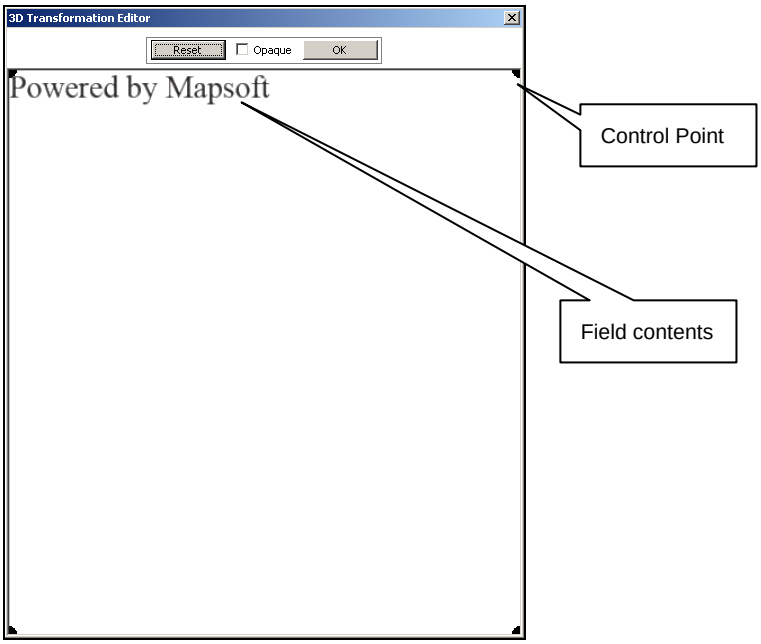
Origin Y
The amount to move the vertical origin of the rotations away from the centre

Output Controls

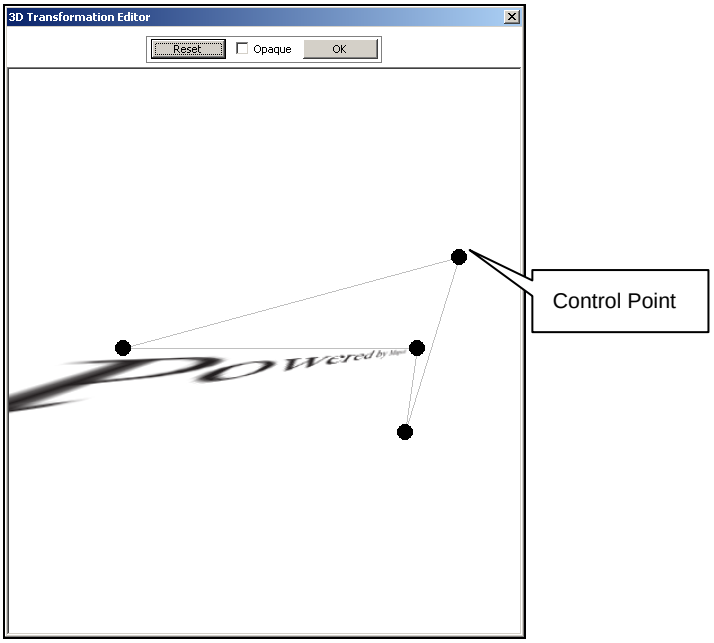
Zoom
Controls the distance from the transformed object to the camera.
Offset X
The amount by which to move the output object horizontally.
Offset Y
The amount by which to move the output object vertically.
Adjust Camera
Creates automatic adjustments to the camera. You can choose from the following options, **Nothing**, **Centre** or **Zoom and Centre**.

3D Transformation Editor

The 3D Transformation Editor is launched when you choose to perform the transformation via four pre-set control points and you click the **Edit Control Point** button in the 3D Transformation Setup dialog box.



The text that appears in the currently selected field displays in this editor, while the four control points are shown on the four corners of the screen. Simply click on each control point in turn and drag it to its required position. The control points will now appear as black circles. The currently active one will appear in pink when you select it. A preview of how the text will appear once it has been transformed will show in the editor as you move the control points around the screen, allowing you to experiment to ensure you achieve the effect you require. For example, the above text could be transformed as follows:



Simply click the Reset button at the top of the editor to rest the control points to their original positions. If you want the background to be 100% opaque click the Opaque check box at the top of the screen.

Distortion

The Distortion Setup options allow you to distort your text using a distortion grid accessible via the Distortion Editor, which is accessed from this screen.

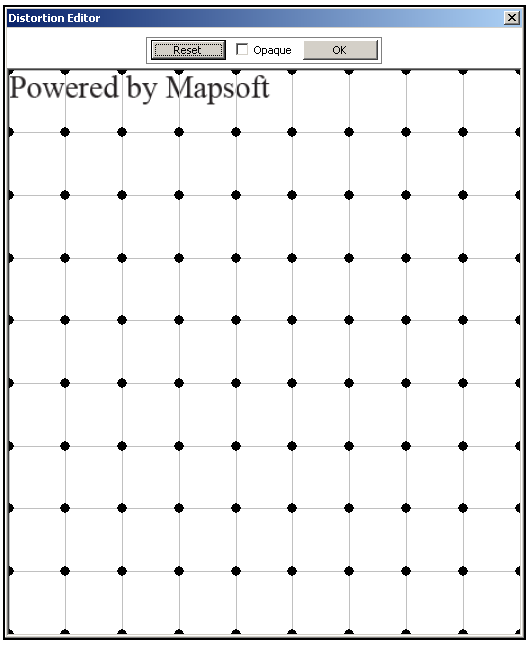
Apply Distortion	Check this checkbox if your text is to be distorted. If selected, the final output will be a bitmap set to the resolution specified in the Bitmap Conversion Setup dialog.
Change number of control points	Enables the number of control points used for the distortion to be changed. By default, 10 control points are used. Note that if you change the currently set number, any existing distortion that has previously been set is removed. Clicking the **Edit Control Points** button next to this option. Using this editor you can edit the four control transformation points

directly. See ***3D Transformation Editor*** below for more details

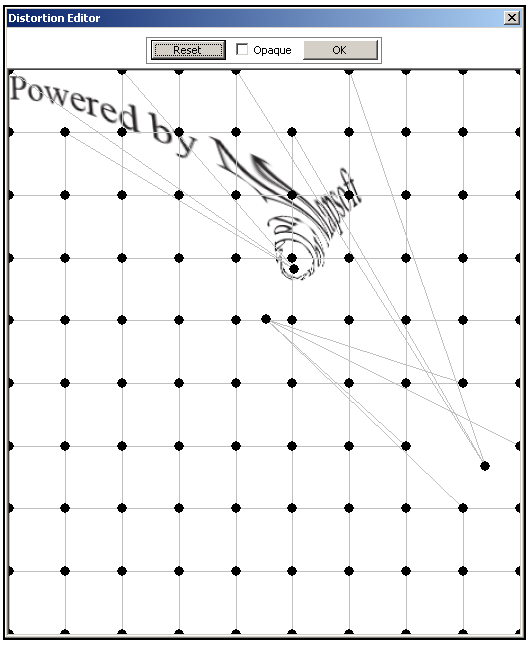
Edit Distortion Grid	Clicking this button launches the Distortion Editor. Using this editor you can distort the text associated with the currently selected field using a grid showing the currently set control points.. See ***Distortion Editor*** below for more details

Distortion Editor

The Distortion Editor is launched when you click the **Edit Distortion Grid** button on the Distortion Setup dialog box. The text that appears in the currently selected field displays in this editor. The number of squares in the grid is determined by the number of control points set in the Distortion Setup dialog box.



Simply click on the relevant control points in turn and drag them to their required position. The currently active control point will appear in pink when you select it. A preview of how the text will appear once it has been distorted will show in the editor as you move the control points around the screen, allowing you to experiment to ensure you achieve the effect you require. For example, the above text could be transformed as follows:



Simply click the Reset button at the top of the editor to rest the control points to their original positions. If you want the background to be 100% opaque click the Opaque check box at the top of the screen.

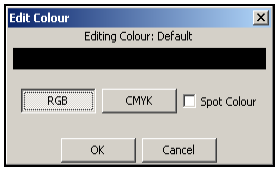
Managing Colours

The Engage Designer plug-in provides full support for Pantone CMYK and RGB colours. You can set colours locally at various points throughout the Engage Designer system (for example, the colour to be used for a field border, or as a background fill) or globally using the **Manage Colours** option on the **Engage Designer** menu. Any colours changes you make will apply to all fields set using the Engage Designer plug-in, regardless of where you actually made the changes within the system.

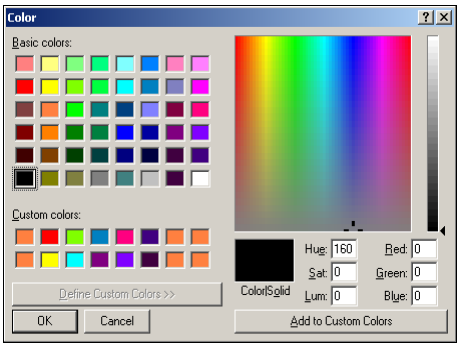
To edit a colour locally:

1. Double-click the solid rectangle of colour next to any of the currently defined colours for your chosen field.

2. The Edit Colours dialog then displays.



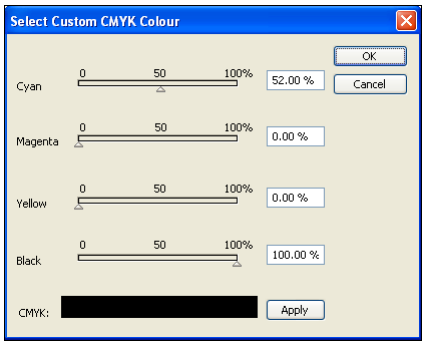
3. If setting the RGB custom colour you can enter the value you want using a colour palette. To do so double-click on the **RGB** button to display the following standard colour dialog from where you can make your selection.



Click the colour within the palette that you wish to use. Alternatively, to create a custom colour, enter the individual RGB (red/green/blue) values in the **Red, Green** and **Blue** boxes to the right of the screen. These must be in the range 0.00 to 1.00.

Click **OK** once you finish your selection.

4. If setting the CMYK colour, double-click on the **CYMK** button to display the following dialog from where you can make your selection by moving the sliders to create the exact colour you wish to use:

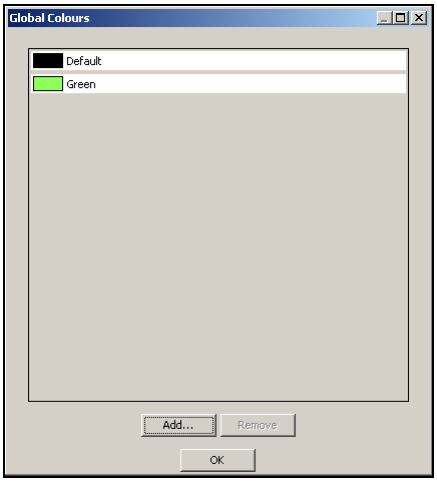


5. Click **OK** once you have made your selection.

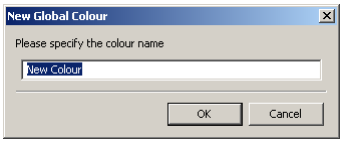
All fields that currently use this colour will be updated automatically to use the edited version.

To set a colour globally:

1. Choose the **Engage Designer** menu then the **Manage Colours** option.
2. The Global Colours dialog then displays listing the available colours. (This same dialog box displays if you click the **Add** button next to an individual colour field in the Field Settings dialog as shown above.)



3. Select the colour you require from this list and click **OK** to display the Edit Colour dialog. Follow steps 2 through 5 in the procedure above to edit your selected colour: all fields that use this colour are updated automatically.
4. Alternatively, if the colour you require is not shown, click **Add** to add it. This then raises the New Global Colour dialog where you can provide the name of the new colour to add.



5. Once you have entered the name of your new colour, click **OK** to select it.
6. The Edit Colour dialog then displays where you can select colour of your choice. Follow steps 2 through 5 in the procedure above to set a new global colour.

Working with Graphics

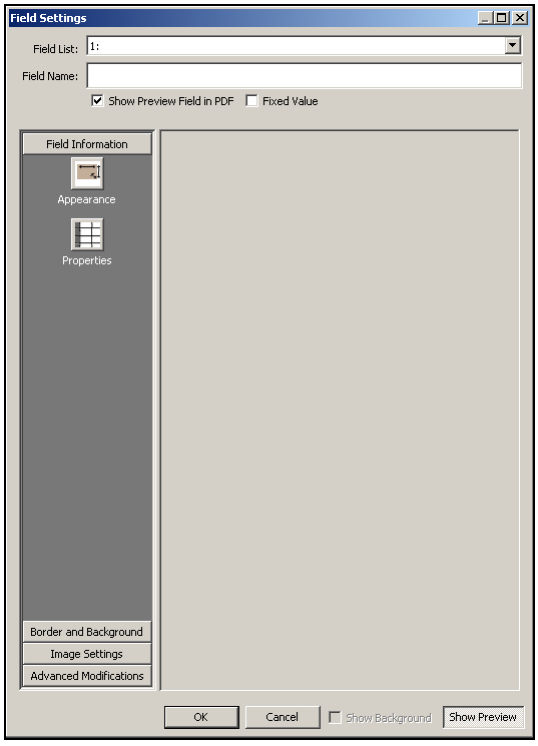
The graphics version of the Field Settings dialog enables you browse to the required graphics file that you want to be stamped into your PDF file, select it and define the graphic's properties.

To add a variable graphics field:

1. Open the PDF file in which you wish to insert variable graphic fields.
2. Navigate to the first page on which you wish to insert a variable graphic field.
3. Click the **Add Image Field** icon on Acrobat's Advanced Editing Toolbar.

The mouse cursor will then change to a cross-hair shape to indicate this tool is now active,

4. Move the cursor to the point at which you wish the top left-hand corner of the variable graphics field to be located. Press down the left mouse button and drag a bounding box around the area on the page where you want the variable field to appear. On releasing the left mouse button a graphics field is created in the area selected and the graphics version of the Field Settings dialog displays.



5. Make entries into the fields as appropriate. See the section ***Specifying Graphics*** for more information.
6. Click **OK** to create the graphics field and stamp the selected graphic into your PDF file at the selected location.

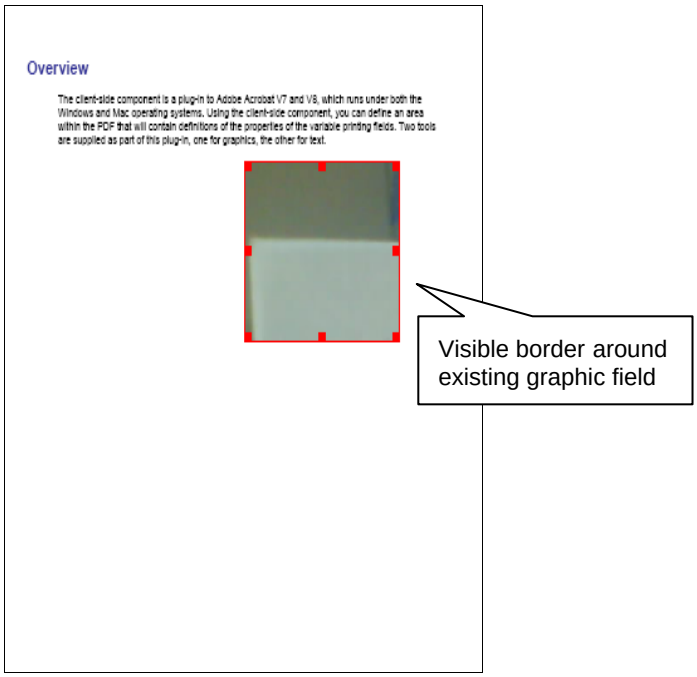
You can also edit existing graphic fields that have previously been set using Engage Designer.

To edit existing variable graphic fields:

1. Open the PDF file that contains variable graphic or text fields which you wish to edit.

2. Click the **View/Edit Currently Defined Fields** icon on Acrobat's Advanced Editing Toolbar.

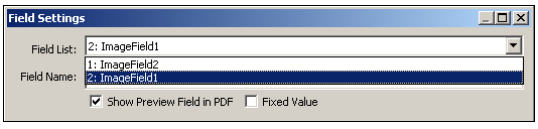
3. The cursor will change shape and the boundary around each existing text and graphic field that has already been defined using Engage Designer will then be made visible, as illustrated below.



4. To edit the settings or the contents of the field simply double-click within the boundaries of the field you wish to change. Double-clicking within a field will raise the Field Settings dialog for that particular field: the dialog will be populated with the settings that are currently active for that particular field.

5. You can then make any edits you require to any of the fields within this dialog box before clicking **Apply** or **OK**.

Alternatively, if you know the name of the field you wish to change, you can select it using the Engage Designer option from Acrobat's main menu, followed by Show Field Settings. This raises the Field Settings dialog box where you can choose the field you wish to edit from the drop down list of available fields in the Field List field.

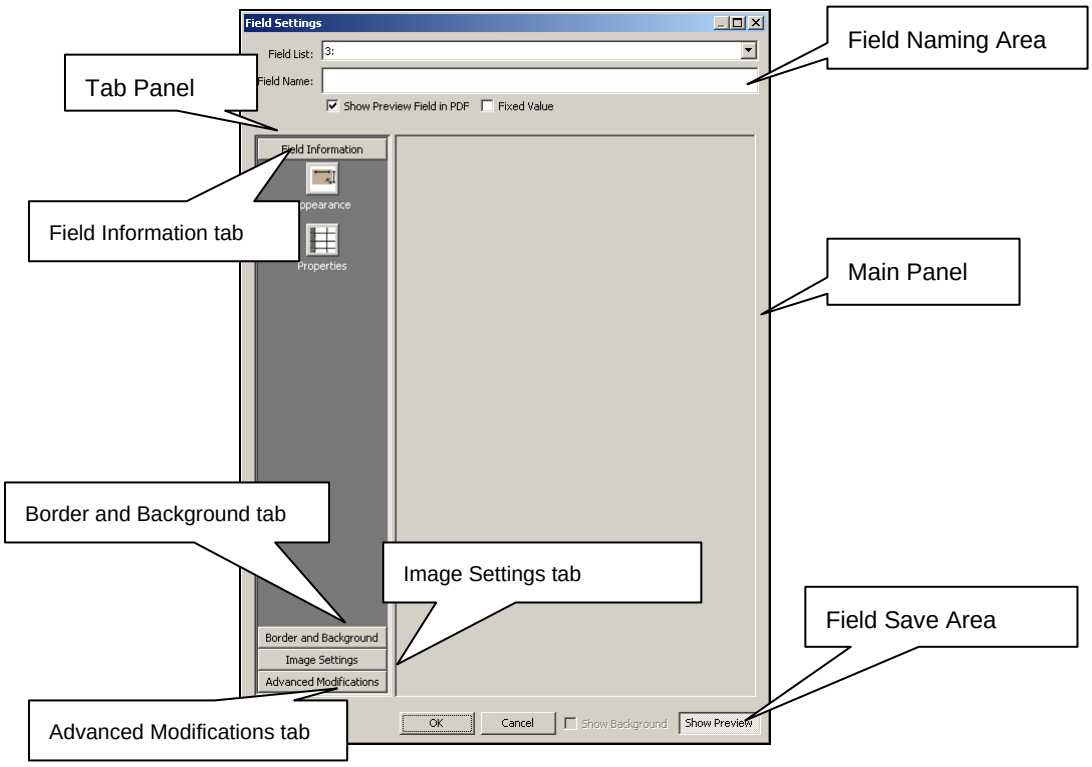


Selecting the field you require populates the rest of the fields in this dialog box with the settings that are currently active for that field. Make the changes you require and click OK

You can also delete, move or resize graphic fields. The procedure to do so is exactly the same as for text fields, described in the section *Working with Text* earlier in this User Guide.

Graphics Field Settings

The graphics version of the Field Settings dialog is similar in style to the Text Field Settings version described earlier in this manual, and again is split into a number of different areas.



The top portion of the dialog, the Field Naming Area, allows you to name the current field, or select an existing graphics field to edit.

The panel to the left of the dialog, the Tab Panel, has four different tabs, allowing you to set details on the following:

- Field Information
- Border and Background
- Image Settings
- Advanced Modifications

As with the text version of this dialog, clicking on each tab makes that tab the active tab and displays icons that are specific to that tab in the left hand panel in the Field Settings dialog (the Tab Panel). Each icon controls/sets various aspects of the selected text field. In the screen shown below, the **Field Information** tab is active. This has two icons associated with it, the Appearance and the Properties icons, which allow you access to options controlling the appearance and the properties of your graphics field respectively.

When you click on one of the icons in the Tab Panel, the options associated with that icon display in the dialog's Main Panel.

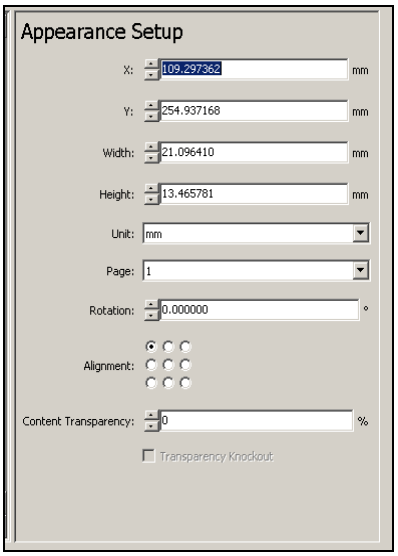
Options in the Field Save Area at the foot of the dialog allow you to save your settings. Again this is identical to the functionality offered in the text version of this dialog box and is described in the ***Working with Text*** section earlier in this manual.

Naming a Graphics Field

The Field Naming area at the top of the Field Settings dialog box allows you to name your graphics field or select an existing graphics field to edit. The procedure to do so is exactly the same as that described for text fields in *Naming a Text Field* earlier in this manual.

Setting Field Information

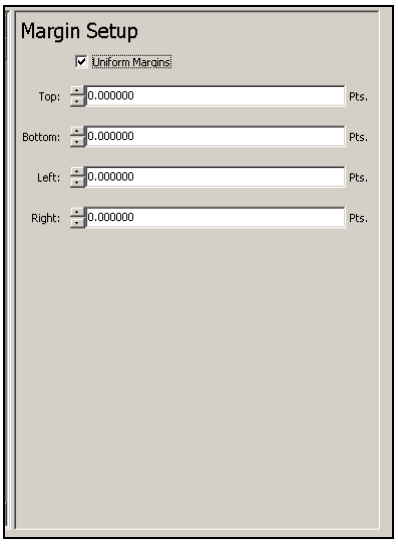
The Field Information tab contains options controlling the Appearance and Properties of your graphic.



All of the options available from both the Appearance and Properties icons mirror those available for text fields. See *Managing Text* earlier in this manual for full details.

Setting Border and Background Information

The Border and Background Information tab in the Field Settings dialog box allows you to control the appearance of the Margins, Border, Masking, Background Fill and Box Shadow effects for the current graphics field. Simply click the Border and Background tab followed by the appropriate icon in the Tab Panel to display that icon's associated options in the Main Panel.



All the options available for controlling the appearance of the borders and background of images mirror those available for text fields. See *Managing Text* earlier in this manual for full details.

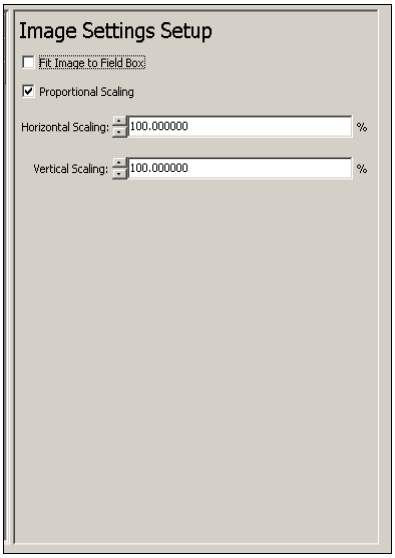
An additional masking type is available for graphics fields: the *Vignette* (a rounded corner rectangle. This is similar to an ellipse but has a smoother transition.

Managing Image Settings

The Image Settings tab contains options controlling the appearance of your graphic. Simply click the Image Settings tab followed by the appropriate icon in the Tab Panel to display that icon's associated options in the Main Panel.

Image Settings

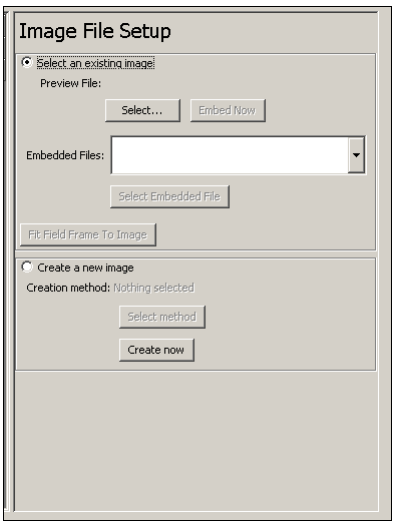
The Image Settings Setup options allow you to scale/resize an image before it is stamped into your document.



Fit Image to Field Box	Check this checkbox to ensure the graphic is automatically resized to fit the current graphics field.
Proportional Scaling	Check this checkbox to ensure the graphic is always resized proportionally
Horizontal Scaling	Enter the percentage by which the chosen graphic is to be scaled, horizontally.
Vertical Scaling	Enter the percentage by which the chosen graphic is to be scaled, vertically.

Image Selection Setup

Options accessed from the **Image Selection** icon in the Tab Panel allow you to select an existing image or create a new one to be stamped in your file. You also have the option of embedding the image file within your PDF document. Alternatively, you can choose an image file that has already been embedded within your current document.

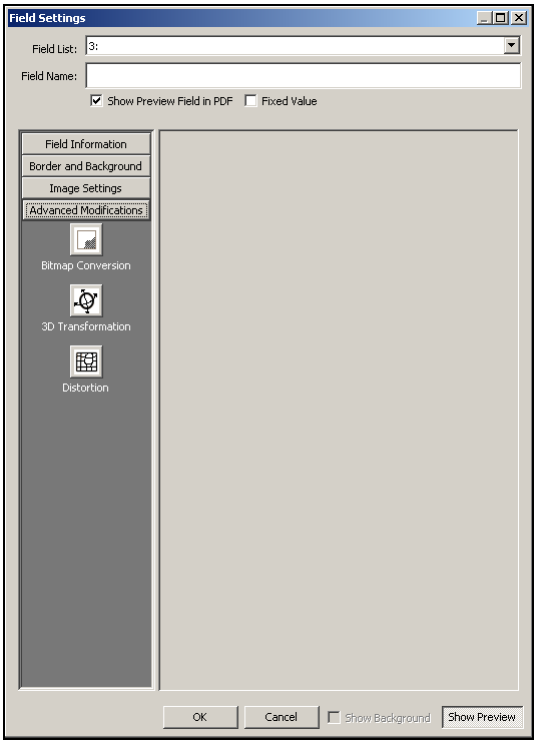


Select an existing image	Check this radio button to select an existing image to stamp in your file.
Select	Click this button to browse to the existing graphic file you wish to insert into your PDF file. Once you select the relevant file, its name will appear next to this button.
Select Embedded File	Allows you to select an image from the **Embedded Files** list, that is, graphics that have already been embedded into the current file.
Embed Now	Embeds the selected graphic into the file. This image is then always available to the file; it does not need to be copied separately when the PDF file is copied to the output environment. See ***Embedding Images*** below for further information.
Fit Field Frame to Image	Click this button if you want the field to be automatically sized around the graphic image.
Create a new Image	Check this radio button if you wish to create a new image for inclusion within the file, using a Photoshop script.
Select Method	Select this button to display a dialog box where you can select one of the provided Photoshop scripts to use in creating your image.
Create Now	Select this button to run the selected Photoshop script. By default, for performance reasons, the Photoshop script will not be updated when anything changes that could affect the created image.

Setting Advanced Modifications

The Advanced Modifications tab in the Field Settings dialog box allows you to set more advanced options controlling the appearance of the graphics stamped in the current field, namely options controlling 3D manipulations and distortions.

Simply click the Advanced Modifications tab followed by the appropriate icon in the Tab Panel to display that icon's associated options in the Main Panel.



All the options available for controlling the appearance of the borders and background of images mirror those available for text fields. See *Managing Text* earlier in this manual for full details.

Embedding Graphics

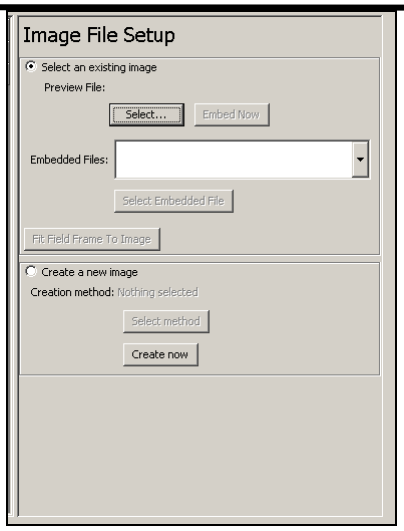
Rather than simply inserting your graphic files into the PDF document, you can choose to embed them within the PDF document itself instead. This ensures those images are always available to that file even if that file is moved or copied to another location. You will not need to copy the image file with the PDF; it will always be available within the PDF itself. In addition, once embedded, an image is available for selection for use with another graphic field within the same file. In addition, the embedded graphics can be available for selection via a drop down list within the processing form when the user comes to generate the output file.

There are two ways in which you can embed a graphics file; you can either embed a single image for a particular graphic field, or you can embed all images that have already been inserted into the PDF file.

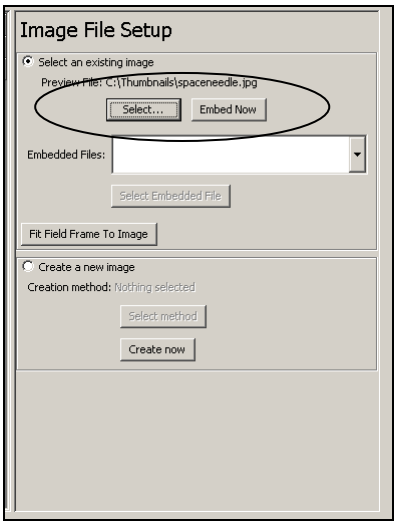
To embed a graphic for a particular graphic field:

1. With the PDF file open at the relevant page where you wish to embed the graphic, open the graphics version of the Field Settings dialog.

2. To embed an existing image, check the **Select an Existing Image** radio button then click the **Select** button to locate that graphic. (If the graphic you require has previously been embedded within the file, simply choose it from the list of available images and click **Select Embedded File**.)



3. Once you locate your graphic its name will display in the Preview File field as illustrated below.



4. Click **Embed Now** to embed this image into the PDF file. (This button is only available for selection for images that have not previously been embedded within the file.)

To embed all graphics:

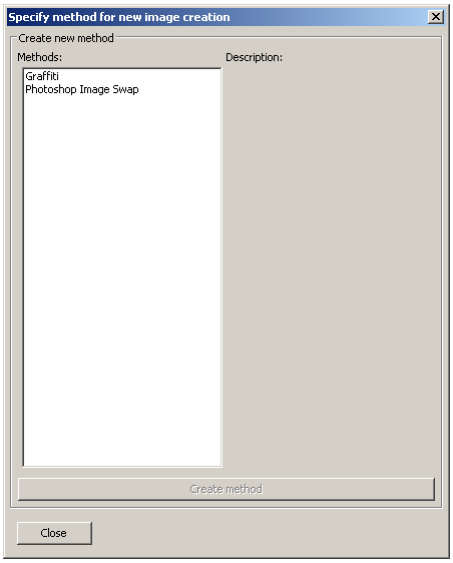
1. To embed all graphics that have already been inserted into the current PDF file select the **Embed Preview Images** option from the **Engage Designer** menu

2. All graphics currently in the file will automatically be embedded. A message will display to show the number of graphics that have been successfully embedded.

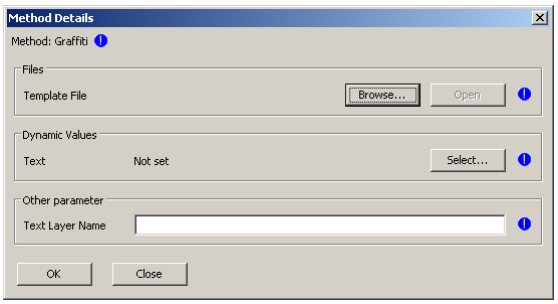
Once a graphic has been embedded within a PDF file, it is then available for selection for other graphic fields within the document. Rather than browsing to select a new graphic, you can click Select Embedded, which raises another dialog where a list of all currently embedded graphics is displayed. Simply click on the name of the graphic you require to store the image creation data for that field in the file. This also sets a general preview image to indicate that this image will be created dynamically when the output file is generated.

To create a new graphic

1. To create a new graphic, check the **Create a New Image** radio button in the graphics version of the Field Settings dialog (shown above) to display a further dialog where you can select from a list of pre-defined PhotoShop JavaScripts to use in creating your new image.



2. Select the JavaScript you wish to use in creating your graphic then click the **Create Method** button to display the Method Details dialog where you can set the parameters for use with that script. (The JavaScript selected determines what the available parameters are.)



3. Click **OK** to generate a preview image that emulates the action that would be taken in the print environment when generating the output file.

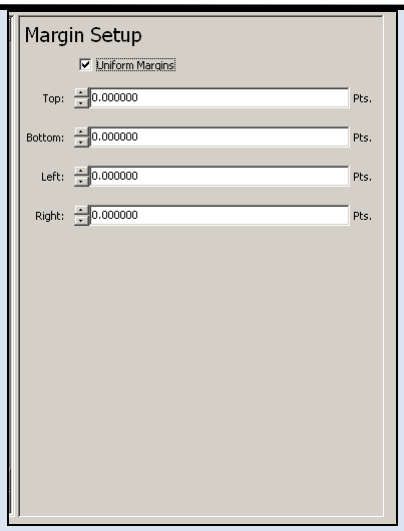
Working with Bar Codes

An additional version of the Field Settings dialog box is supported under Engage VDP, which allows you to add or edit variable bar codes and their properties. Selecting the **Add Bar Code Field** button displays this version of the Field Settings dialog.

To add a bar code:

1. Open the PDF file in which you wish to insert one or more bar codes.
2. Navigate to the first page on which you wish to insert a bar code.
3. Click the **Add Bar Code** icon on Acrobat's Advanced Editing Toolbar.

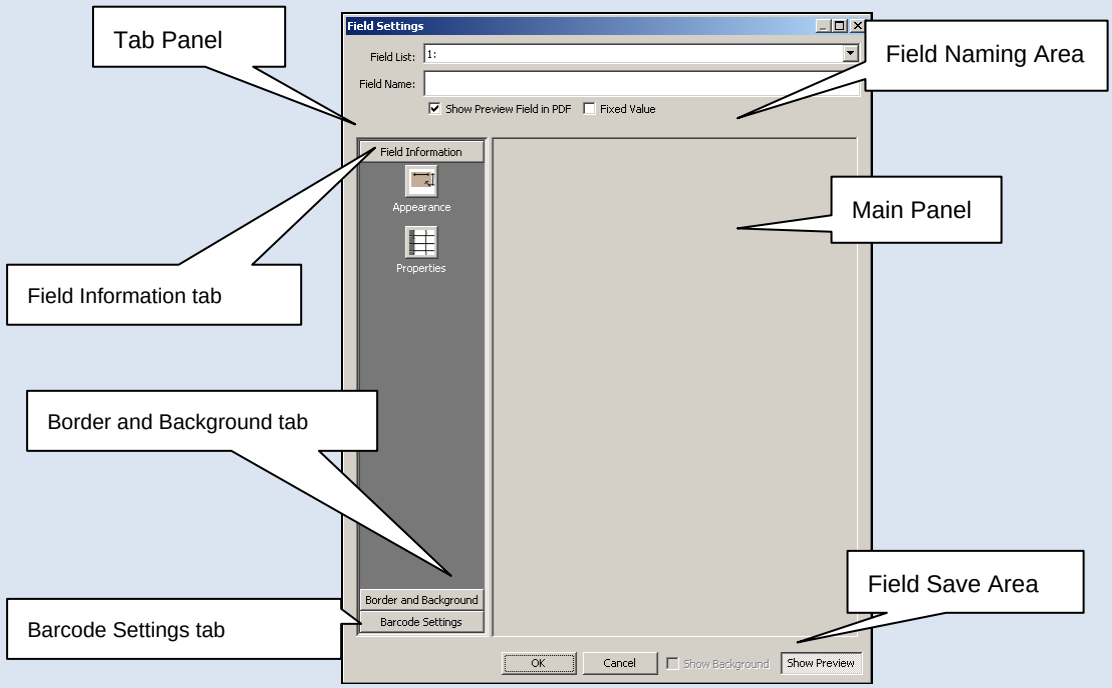
4. The mouse cursor will then change to a cross-hair shape to indicate this tool is now active.
5. Move the cursor to the point in your document at which you wish the top left-hand corner of the new bar code to be located. Press down the left mouse button and drag a bounding box around the area in which you wish to define this bar code.
6. On releasing the left mouse button the bar code version of the Field Settings dialog then displays, where you can set various settings for the new bar code.



7. This version of the Field Settings dialog is very similar to those for graphics and text. As with those, enter a unique name for the new field in the **Field Name** field: you must make an entry into this field.
8. Then make entries behind the Field Information, Border and Background, and Barcode Settings tabs as appropriate. (See below for more details on the options available behind these tabs.)
9. Click **OK** to create the bar code field: by default your new field will display in the preview window.

You can also edit, move, resize and delete existing bar code fields in exactly the same way as described for text fields in ***Working with Text*** earlier in this manual.

The bar code version of the Field Settings dialog is split into a number of different areas as illustrated below



The top portion of the dialog, the Field Naming Area, allows you to name the current bar code field, or select an existing bar code field to edit. The procedure to do so is exactly the same as that described for text fields in ***Naming a Text Field*** earlier in this manual.

The Tab panel has three tabs allowing you to set details on the following:

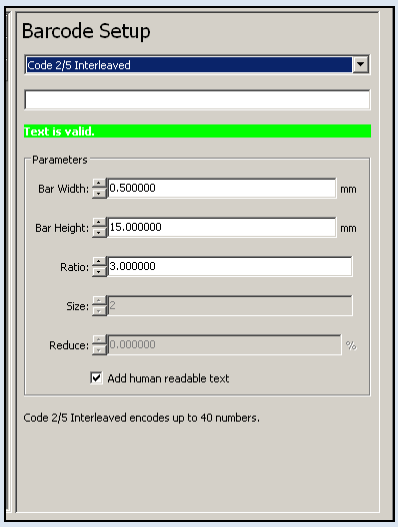
- Field Information
- Border and Background
- Barcode Settings

As with the text and graphics versions of this dialog, simply click on the tab you require to display the options associated with that tab. You name and save a barcode field in exactly the same way as you name and save a graphics or text field, as described earlier in this manual. In addition, the options behind the **Field Information** and **Border and Background** tabs are the same as those for the same tabs on the text version of this dialog. See ***Working with Text*** earlier in this manual for full details.

The options behind the **Barcode Settings** tab are described below.

Managing Bar Code Settings

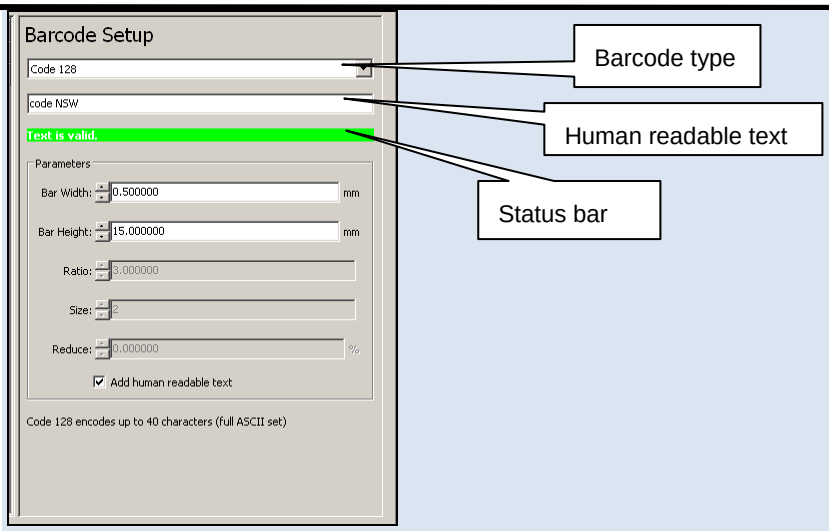
The Barcode Settings options allow you add a barcode into your PDF document.



Using the options found at the top of this dialog box you can choose the barcode symbology you wish to use. Typical point of sale barcodes, such as EAN and ISAN are supported, as are warehouse and transportation codes, such as Code 128. Options in the lower part of the dialog box enable you to set parameters controlling the appearance of the barcode, such as its height and width. You can also specify if you want human-readable text to be displayed in addition to the barcode.

Select the barcode symbology you wish to use from the drop down list at the top of this dialog box. A description of that barcode type will then appear in the Information Bar at the foot of this dialog box. If required, enter human-readable text for that barcode into the box immediately below your barcode selection.

The software has built-in safeguards to prevent you from accidentally creating barcodes that do not comply with the standard you have selected. The status bar will indicate if your selection is valid: a green ‘ribbon’ shows that your choice is valid with the barcode encoding type you have chosen (as illustrated below), a red ribbon shows that it is not.



A preview of your bar code will be displayed in the Information bar entered human-readable text (and checked the **All Human Readable Text** checkbox) le text will display beneath the bar code.

a

You can also set various parameters to control the display of your barcode: the type of barcode you select determines which of the following options are available for selection,

Bar Width	The width of the narrowest bar in the barcode – please consider the print resolution when setting this value.
Bar Height	The height of the bar code.
Ratio	The ratio between the width of the widest and narrowest bars in the chosen barcode.
Size	The size of EAN barcodes. This figure must be between 0 and 9: an entry of '2' will display the barcode at 100%
Reduce	Reduces the height of EAN symbols by the percentage given here. This figure must be between 0% and 80%

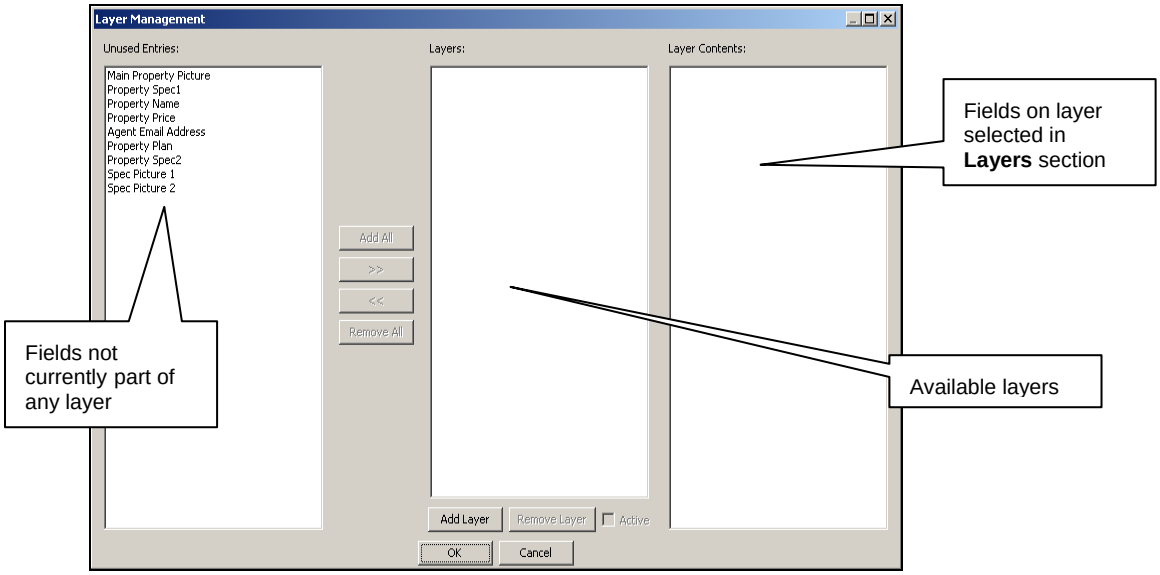
Add human readable text

If checked, the human readable version of your barcode (if this text has been entered) will display in your document as well as the barcode itself.

Managing Layers

The Engage Designer plug-in allows you to place fields on different layers within your document. This gives you control over which fields will display in the output file generated from Engage Designer, as you can choose to suppress layers (and their content) from the output file. Any fields placed on a layer that is not set as *active*, will be suppressed in the output file: conversely, fields placed on layers that are activated will be shown in the output file. See *Suppressing Layers* below.

By default, fields created using Engage Designer are *not* placed on a layer automatically. To place fields on a layer you use the Manage Layers option from the Engage Designer plug-in's menu. Selecting this option displays the Layers dialog where you can create layers and add existing fields to those layers. This dialog is split into three sections. The leftmost section Unused Entries lists all fields within the PDF document that are currently not part of any layer. The Layers section in the middle of the dialog lists all the existing layers within the document. The rightmost section Layer Contents shows the fields that are currently on the layer highlighted in the Layers section.

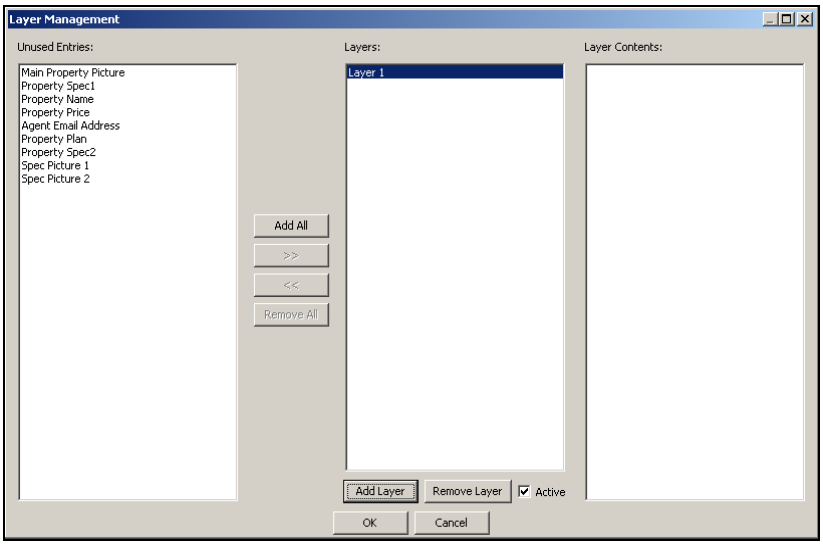


The fields you wish to add to a layer must have been created using the Engage Designer plug-in before you can add them to a layer.

You can also remove existing layers if you no longer require them. This does *not* remove the fields that were on those layers just the layers themselves: the fields remain in the document but are no longer part of a layer.

To add a field to an existing layer:

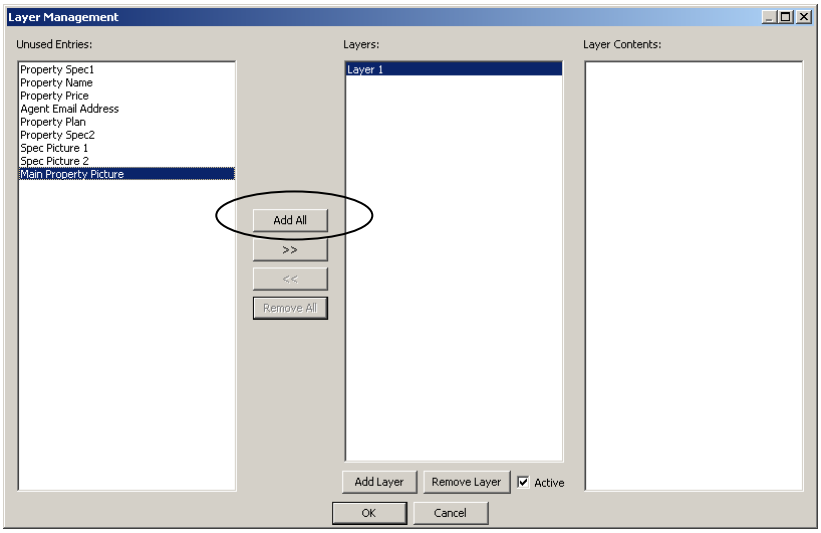
1. Select the **Manage Layers** option from the Engage Designer menu.
2. The Layers dialog then displays. All variable printing fields within the current document that have *not* been allocated to a layer (and are so available for allocation to a layer) are listed in the **Unused Entries** column.



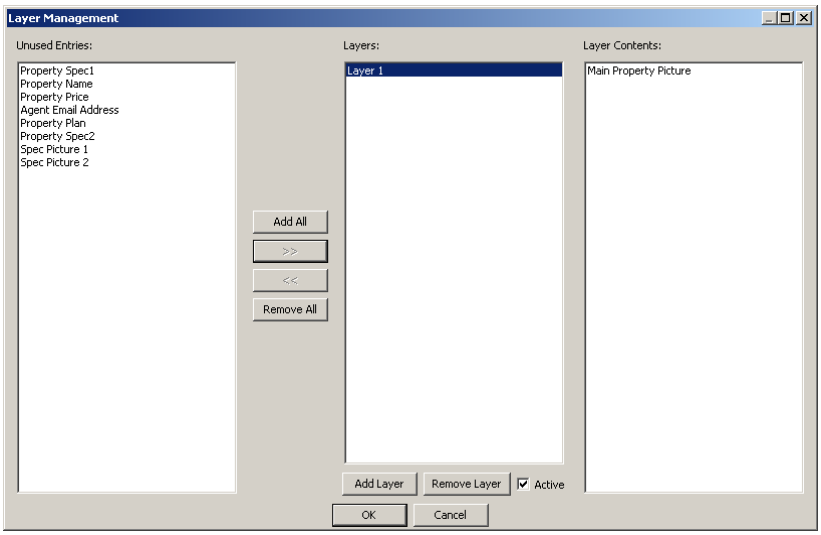
3. Highlight the name of the layer in the **Layers** field to which you wish to add one of more of the available fields.

4. To add all available fields to the currently highlighted layer, simply click the **Add All** button. This moves all the fields from the **Unused Entries** section of the dialog to the **Layer Contents** section.

5. To add a single field to the currently highlighted layer, click on the name of the relevant field in the **Unused Entries** section. This entry is then highlighted automatically to show you have selected it. Then click the **>>** button to move that field into the list of fields used in this layer (listed in the **Layer Contents** column)



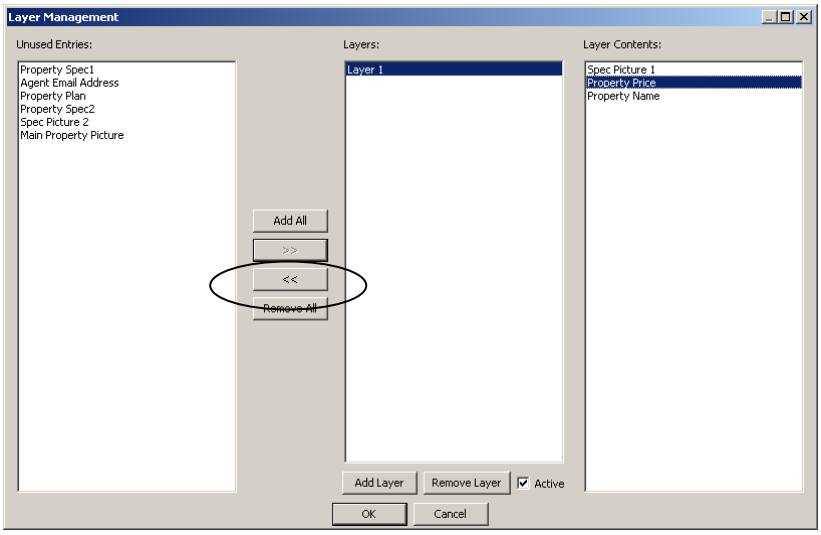
6. The selected field will then be moved from the **Unused Entries** section of the dialog to the **Layer Contents** section as illustrated below.



7. Click **OK** once you have selected all the fields you wish to add to this layer. The dialog box closes and all the fields in the **Layer Contents** section are then added to the selected layer.

To remove a field from a layer:

1. With the Layers dialog open, highlight the name of the layer you require in the **Layers** section of the dialog.
2. To remove all the fields from that layer click the **Remove All** button.
3. To remove a single field from that layer, highlight its entry in the list in the **Layer Contents** field then click the **<<** button.



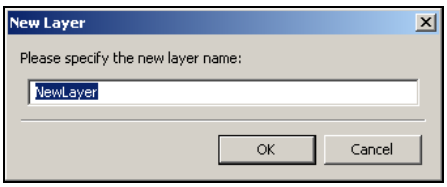
The entry for that field is then moved to the **Unused Entries** section to show it is no longer part of the currently selected layer.

4. Click **OK**.

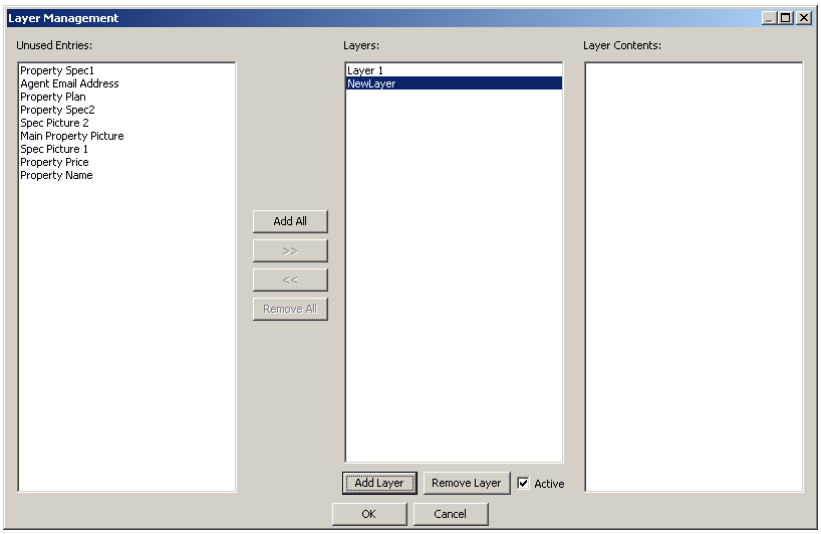
To add a new layer:

1. Click the **Add Layer** button in the Layers dialog.
2. The New Layer dialog displays.

3. Enter the name of your new layer and click **OK**.



4. You are returned to the Layers dialog where the new layer you just added is now listed in the **Layers** section.



5. You will notice no new entries have appeared in the **Layer Contents** section as you have yet to add any fields to the new layer. If you wish to do so, follow the steps given earlier to add the required fields to this new layer.

6. Click **OK** once you complete your entries.

To remove an existing layer:

1. Highlight the name of the layer you wish to remove from the list of existing layers shown in the **Layers** field in the Layers dialog box.

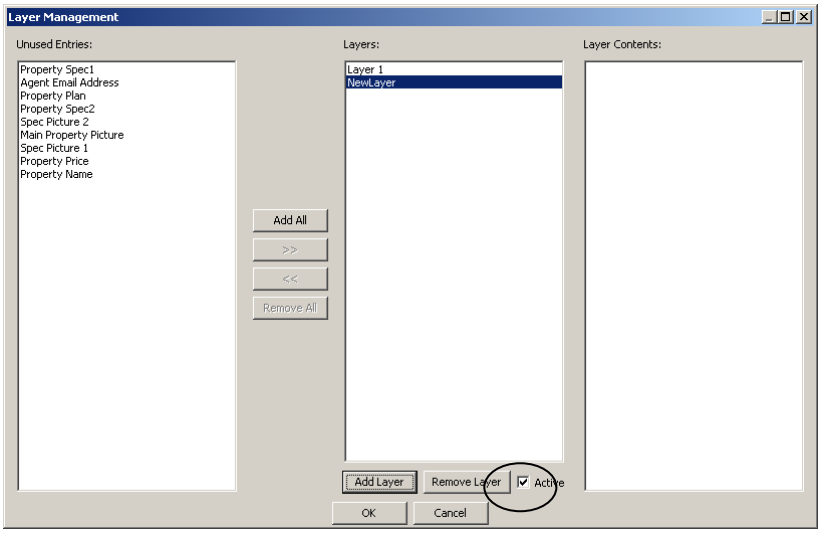
2. Click the **Remove Layer** button to remove this layer.

   This removes the layer from your document, but *not* the fields themselves. Fields that were on this layer are automatically moved to the **Unused Entries** section of the Layers dialog to show they are now available for re-allocation to another layer if required.

3. Click **OK**.

Suppressing Layers

The setting of the Active checkbox in the Layers dialog controls whether the fields on a specific layer appear within the output file. When this checkbox is set for a particular layer (the default setting), the content of all the fields on that layer appear within the output. When that checkbox is not set for a particular layer, the contents of all the fields on that layer do not appear within the final output.



Layers can be switched on/off in the default Acrobat layer view: however, this is not related to the Engage Designer output. Thus you have two different concepts of hidden and visible layers:

- The Acrobat layer tab, during the design phase, this helps to maintain potential overlapping layer, or to focus on the current task.
- Activating or deactivating layers using the **Active** checkbox in the Layers dialog switches the display of fields on specific layers on or off when Engage Designer generates the output file.

Manipulating Fields

A number of options are available to you from the Engage Designer plug-in's menu which control the positioning of the variable print fields within your document: the Align, Centre on Page and Spread Equally fields. In addition you can Equalise Size of the fields and change their Order.

Aligning Fields

You can align multiple variable printing fields using the Align option on the Engage Designer menu. The selected fields will be moved automatically to align them *against each other* in accordance with your chosen alignment.

You can choose from the following options for aligning the selected fields:

- Left – all fields are aligned to the left-edge of the left-most field.
- Horiz Centre – all fields are centred horizontally against the middle-most position of all fields.
- Right – all fields are aligned to the right-edge of the right-most field.
- Top– all fields are aligned at the top-edge of the top field.
- Vert Centre – all fields are centred vertically against the middle-most position of all fields.
- Bottom – all fields are aligned at the bottom-edge of the lowest field.

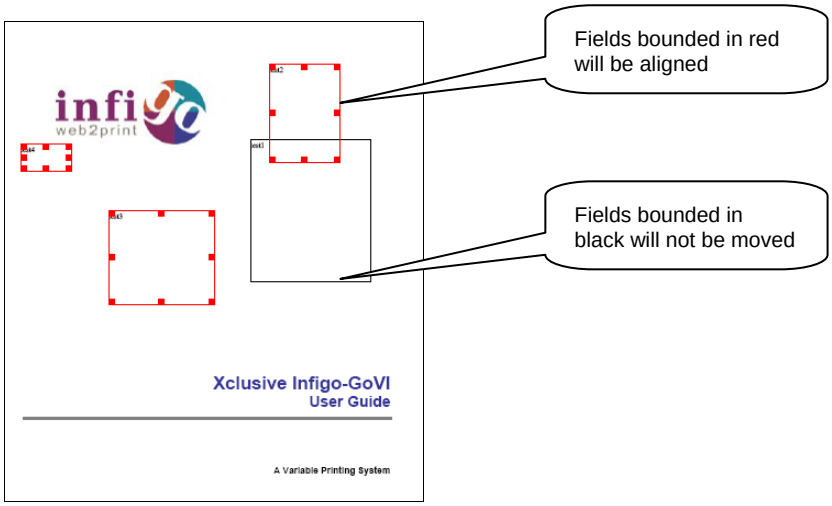
To align multiple fields:

1. With the appropriate PDF file open within Acrobat, click the View/Edit Currently Defined Fields icon on Acrobat's Advanced Editing toolbar to display the boundaries around the existing fields. (A black 'box' will be shown around each field.)

2. Once the boundaries around all the existing fields are displayed, click once with the mouse within the boundaries of one of the fields you wish to align. The boundary line around that particular field will then change to red to indicate that field is currently selected.

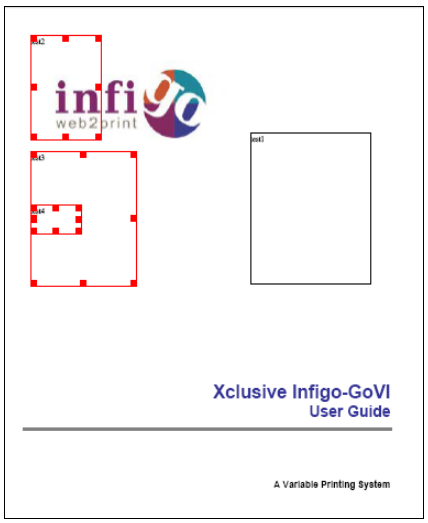
3. Hold the **Ctrl** key on your keyboard down and click once with the mouse within the boundary of a second field that you wish to align. The boundary line around that field will also change to red.

4. Repeat step 3 (still holding the **Ctrl** key down) until you have selected all the fields you wish to align. The boundary line around all the selected fields will now be red. In the example below, three fields have been selected and are bounded in red; one field has not been selected and is still bounded in black. Only the selected fields will be aligned when you choose the appropriate Align menu option; fields not selected will remain in their current location.



5. Select the **Align** option from the Engage Designer menu then choose the alignment option you require from the drop-down list.

   For example to align the selected fields against the left edge of the first field choose the **Left** alignment option.



   Alternatively, you could choose **Vert Centre** to centre the selected fields vertically (from the first field):

Centering Fields

You can centre multiple variable printing fields using the Centre to Page option on the Engage Designer menu. The selected fields will be moved automatically to centre them *against the page* in accordance with your chosen centering option:

- Centre horizontally – all fields are aligned horizontally against the centre of the page.
- Centre vertically – all fields are aligned vertically against the centre of the page.
- Centre – fields are centred between the left and right page margins.

To centre fields:

1. With the appropriate PDF file open within Acrobat, click the View/Edit Currently Defined Fields icon on Acrobat's Advanced Editing toolbar to display the boundaries around the existing fields.

2. Once the boundaries around all the existing fields are displayed, click once with the mouse within the boundaries of one of the fields you wish to centre. The boundary line around that particular field will then change to red to indicate that field is currently selected.
3. Hold the **Ctrl** key on your keyboard down and click once with the mouse within the boundary if you wish to centre a second field. The boundary line around that field will also change to red.
4. Repeat step 3 until you have selected all the fields you wish to centre.
5. Select **Centre on Page** option from the Engage Designer menu then choose the centering option you require from the drop-down list: **Centre Horizontally**, **Centre Vertically** or **Centre**.

Spreading Fields Equally

Alternatively you can choose for your variable printing fields to be **Spread Equally** across the selected fields. You must choose at least three fields within your file for this feature to work correctly. The fields will be moved so that there is an equal distance between the left-most field in the selection and the right-most field. You can choose if the fields should be:

- Spread horizontally
- Spread vertically

To spread fields equally across a page:

1. With the appropriate PDF file open within Acrobat, click the View/Edit Currently Defined Fields icon on Acrobat's Advanced Editing toolbar to display the boundaries around the existing fields.

2. Once the boundaries around all the existing fields are displayed, click once with the mouse within the boundaries of one of the fields you wish to centre. The boundary line around that particular field will then change to red to indicate that field is currently selected.
3. Hold the **Ctrl** key on your keyboard down and click once with the mouse within the boundary if you wish to centre a second field. The boundary line around that field will also change to red.
4. Repeat step 3 until you have selected all the fields you wish to centre.
5. Select the **Spread Equally** option from the Engage Designer menu then choose the equalising option you require from the drop-down list: **Spread horizontally** or **Spread vertically**.

Equalising Field Sizes

You can adjust the size of selected variable printing fields to make all those fields the same width, the same length or the same width and length.

To equalise field sizes:

1. With the appropriate PDF file open within Acrobat, click the View/Edit Currently Defined Fields icon on Acrobat's Advanced Editing toolbar to display the boundaries around the existing fields.

2. Once the boundaries around all the existing fields are displayed, click once with the mouse within the boundaries of one of the fields whose size you wish to equalise. The boundary line around that particular field will then change to red to indicate that field is currently selected.
3. Hold the **Ctrl** key on your keyboard down and click once with the mouse within the boundary if you wish to centre a second field. The boundary line around that field will also change to red.
4. Repeat step 3 until you have selected all the fields whose sizes you wish to equalise.
5. Select the **Equalise Size** option from the Engage Designer menu then choose the option you require from the drop-down list: **Adjust Widths**, **Adjust Height** or **Adjust Both**.

Changing the Drawing Ordering of Fields

You can change the drawing ordering of the fields within your document by choosing the Order option from the Engage Designer menu. This is particularly useful where you have multiple fields on top of each other. For example you might have an image with a number of text fields lying over it and depending on the order in which you created those fields, the text might be 'hidden' behind the image.

You can choose from the following options for ordering fields:

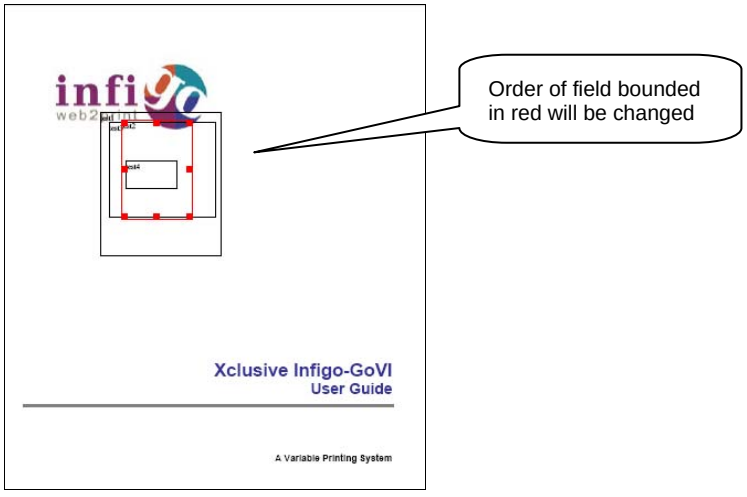
- Move to Front
- Move to Back
- Move Forward
- Move Back

You can only change the ordering of one field at a time. To change the order of multiple fields you must select each individually and change their order on a one-by-one basis.

To change the drawing order of a field:

1. With the appropriate PDF file open within Acrobat, click the View/Edit Currently Defined Fields icon on Acrobat's Advanced Editing toolbar.

2. Once the boundaries around all the existing fields are displayed, click once with the mouse within the boundary of the field whose order you wish to change.



3. Select the **Order** option from the Engage Designer menu then choose the ordering option you require from the drop-down list.

   For example to move the currently selected field to the top of the selected fields, select the **Move to Front** option.

Managing Groups

You can group multiple fields together to form a single group. This allows you to perform certain actions on a group of fields. Two different functions are supported for groups:

- Dynamic text fields - to move fields horizontally, to ensure that when variable text information is inserted into a non-fixed text field the other field within that group is still positioned correctly in relation to that field
- Dynamic suppress fields – a more complex type of group for dynamically suppressing fields depending on certain conditions

Both types can be created using the Combine to Group option on the Engage Designer menu. See the sections *Dynamic Text Field Groups* and *Dynamically Suppressing Groups* below for details on how to do so.

Dynamic Text Field Groups

Groups configured with the dynamic text field function can only contain two fields, both of which must be on the same page. At least one of the fields contained within this type of group must be a non-fixed text field. One of the fields within the group will be used as a reference field for the other: this reference field must always be a non-fixed text field. The other field will be a subsidiary of that field and will be moved automatically in the server-output to ensure that when 'real' values are inserted into the reference field, the other field is moved in relation to the sizing of that field to ensure it is still positioned correctly next to it. The subsidiary field can be a fixed text field or an image field.

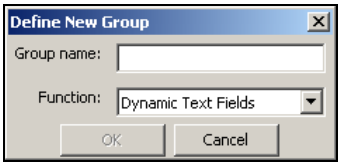
If only one of the fields contained within the group is a non-fixed text field, the system automatically selects that as the reference field. If both fields are non-fixed text, you can select which of the two fields should be used as the reference field.

For example, if you had a non-fixed text field called 'Name' where the actual name could be inserted, and a fixed text field called PHD with the value '(PhD)', you could add both these fields into a dynamic text field group, with the Name field as the reference field. The Name field would be populated with actual names such as 'Jonathan Smith' or 'Clare Deakin' which would change the size of that field depending on the actual name entered. Creating a group containing these two fields would ensure that the subsidiary field, 'PhD' text would automatically move horizontally left or right depending on the width of the text inserted into the reference field (Name in this example).

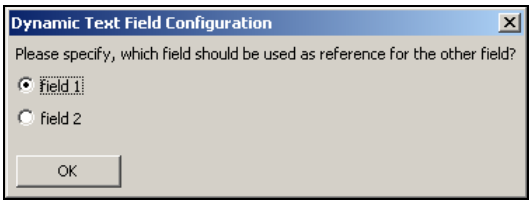
To create a dynamic text field group:

1. Open the PDF file containing the relevant fields at the page containing the two fields you wish to group together.
2. Click the **View/Edit Currently Defined Fields** icon on Acrobat's Advanced Editing toolbar.

3. Once the boundaries of the currently defined fields on that page are displayed, click within one of the fields you wish to add to this new group.
4. Hold down the **Ctrl** key on your keyboard and click with the boundaries of the second field you wish to add to this group.
5. Select the **Combine to Group** option on the Engage Designer menu. To create a dynamic text field group at least one of the fields selected must be a non-fixed text field: if this is not the case you will receive an error message and will not be able to create a group based on these two particular fields.
6. When the Group Name dialog displays enter a **Group Name** and then select the 'Dynamic Text Fields' option from the drop-down list in the **Function** field.



7. Click **OK**.
8. If only one of the fields you have selected is a non-fixed text field, that field is automatically selected as the reference for the other. If both fields are non-fixed text, a further dialog displays where you can select the field to be used as the reference for the other.



Dynamically Suppressing Fields

The dynamic suppress fields group type is a more complex type of group which allows fields to be dynamically suppressed depending on certain conditions. There are no restrictions on the type or number of fields that can be added to this type of group, although as with dynamic text field groups all the fields within a group must be on the same page within your PDF file.

If a field is empty, the subsequent fields will move up or down in the output file, (depending on the field order) to ensure there are no line 'gaps' (blank lines). Whether a line is empty of not depends on if you have a master field set, of you have the All Set checkbox set.

To create a dynamic text field group:

1. Open the PDF file containing the relevant fields at the page containing the fields you wish to group together.

2. Click the **View/Edit Currently Defined Fields** icon on Acrobat's Advanced Editing toolbar.

3. Once the boundaries of the currently defined fields on that page are displayed, click within one of the fields you wish to add to this new group.

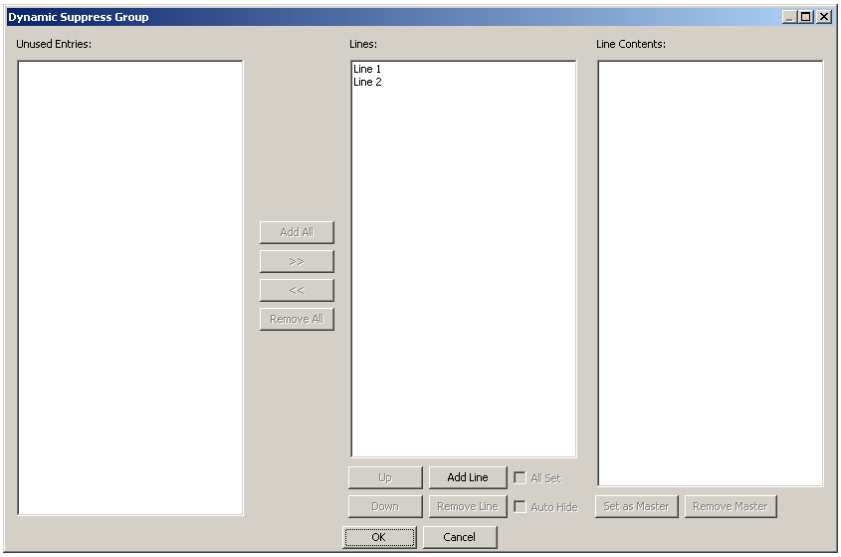
4. Hold down the **Ctrl** key on your keyboard and click with the boundaries of each of the additional fields you wish to add to this group.

5. Select the **Combine to Group** option on the Engage Designer menu to display the Group Name dialog.

6. Enter a **Group Name** and select the 'Dynamic Suppress Group' **Function** from the drop down menu.

7. Click **OK**.

8. The Dynamic Suppress Configuration dialog then displays.



This dialog works in a similar way to the Layers dialog described earlier in this Guide and gives you control over which fields will display in the server output.

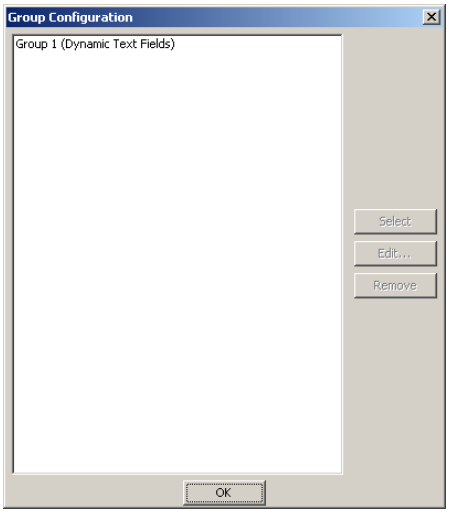
Checking if Fields are Part of an Existing Group

You can check which fields have already been assigned to a particular group using the Group Functions menu.

To check which fields are part of a group:

1. With the relevant PDF file open, select the **Group Functions** option from the Engage Designer menu.

2. The Group Function dialog then displays listing all the groups that are currently set.

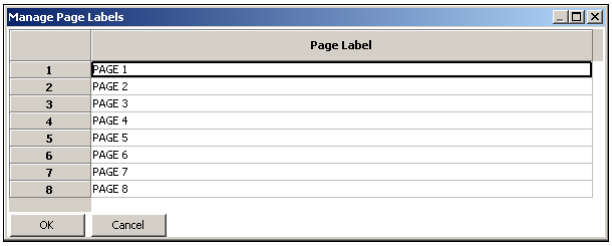


3. Select one of the fields from this list and click **Select**. This outlines the fields within that group in red in your document to enable you to easily identify which fields are part of that group.

You can also Remove a group using this dialog box; the fields within that group are *not* deleted, just the group itself. You can also Edit dynamic suppress field type groups.

Manage Page Labels

Manage Page Labels can be selected from the **Engage Designer** menu in Acrobat. This enables you to quickly name pages in Acrobat.

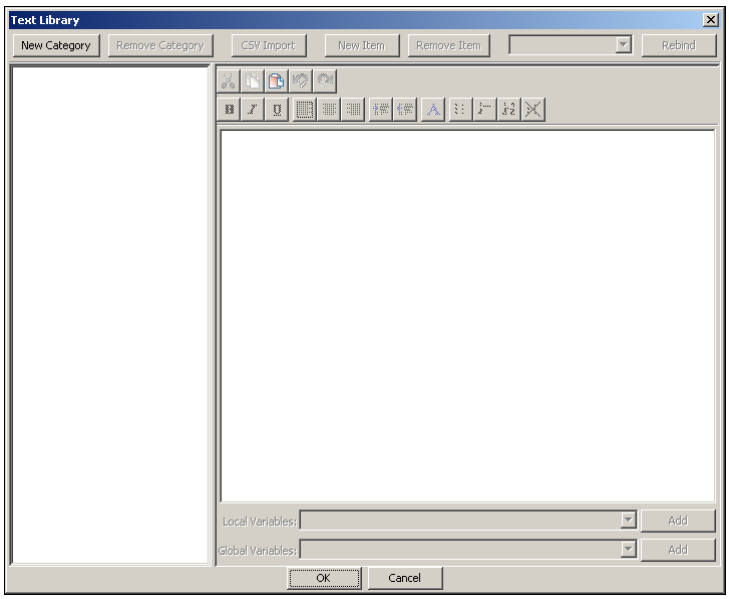


The page names shown here will appear in the Page Label field in the Acrobat Page Navigation bar.

When used for the first time if only the first label is filled in then that label will be assigned to all the fields.

Managing the Text Library

This functionality is available from the **Engage Designer** menu. This enables you to store text items that can be used in text fields which can also include the use of variables. Items and categories can be renamed by clicking on the tree view and pressing **Enter**.



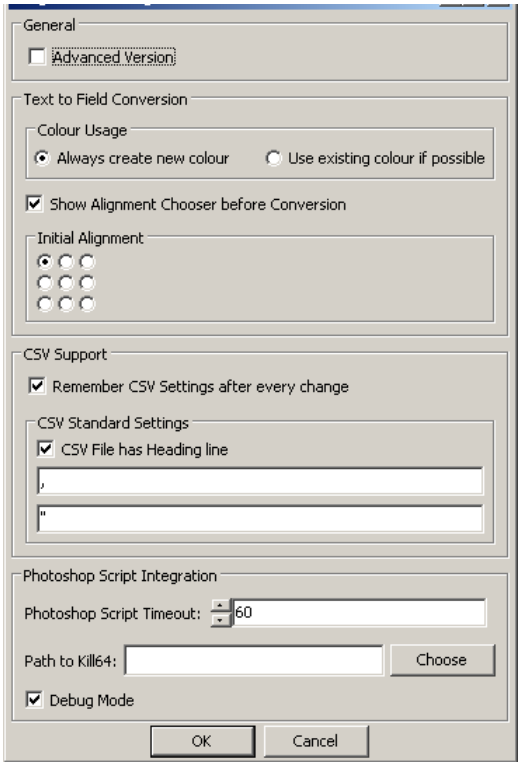
New Category	Displays a dialog box where you can provide the name of a new text item category
Remove Category	Remove a category
CSV Import	Imports from a delimited file where each line represents a Text item name and its associated text.
New Item	Asks for the name to give a new text item, adds it to the selected Category and activates the text editor.
Remove Item	Removes the selected text item from the relevant Category.
Rebind	Binds an item to a field. This displays the text's default appearance, and enables you to use local variable within the library item. (Local variables are only available for the corresponding field and so the two must be bound in order to use them within the library). Once an item has been bound to a field it cannot be bound to another one.

Managing the library is only the first step: you actually have to then use that library, either via the JavaScript Wizard, or the text library script, one of the predefined scripts supplied with the system (which is the easier and more commonly used way)

Configuration Options

The **Configuration** option on the Engage Designer menu allows you to set user preferences for use with Engage Designer.

These are *global* options rather than those which are just specific to the current document. Take great care in using this feature as it affects the behaviour of the entire Engage Designer plug-in. We recommend that only users with Systems Administrator status use this option.



Advanced Version	If checked, this switches various advanced options on within the Engage Designer plug-in, such as advanced JavaScript options and the ability to be able to edit document properties.
Always create a new colour	When selected and the text field conversion function is used a new colour will always be created for the text.
Use existing colour if possible	When selected and the text field conversion function is used, Engage Designer will attempt to use an existing colour if it matches. If more than one colour matches you are prompted to choose one, if none match a new colour will be created.
Show Alignment Chooser before conversion	If this button is checked the Alignment Option dialog box will be displayed before text is converted to a field allowing you to select your preferred alignment. Otherwise the Initial Alignment default will be used. See the section ***Converting Existing Text to a Text Field*** for more information.
Initial Alignment	The default alignment selected when the alignment chooser is displayed. Alternatively, if this feature is switched off, the default alignment that is selected for all text fields that are created by converting existing text.
Remember CSV Settings after every change	When this checkbox is checked, Engage Designer will ensure every change will retain the last setting stored (such as, the quote or separation character). This enables Engage Designer to cater for CSV files that vary in

format.

CSV File has Heading line	When checked, the first line of a CSV file will contain the names of the fields rather than the data.
Photoshop Script Timeout	(Windows only) The maximum amount of time that the plug-in will wait for Photoshop to finish running a script in seconds. An entry of -1 or 0 means that there is no timeout.
Path to kill64	(Windows only) If 64bit Photoshop is being used this defines the path to the kill64.exe executable file.
Debug Mode	When this button is selected PhotoShop will operate in debug mode. In this mode timeout is disabled, output is more verbose and the User Interface in Photoshop is enabled

Engage JavaScript Object Model

Many of Engage Designer's operations can be automated by using the Engage JavaScript Object Model. This feature is for use by advanced users who have a thorough understanding of the use of JavaScript.

Further information on this model is available on request.

Handling XML

You can export your PDF file to XML using the Create XML option from the Engage Designer menu. You can browse to the location on your local machine where you wish to store this output.

You can also import XML data into your PDF file using the Import XML Data option on the Engage Designer menu.

Further information on the XML file format is available on request.

Perform Output Action

This menu item enables you to do a test on a specific PDF file in emulating the expected output. This feature enables you to test your PDF files locally without having to actually output them either using the web-based version of Engage or the standalone Engage VDP product.

To perform the output action select the Perform Output Action menu item from the Engage Designer menu and then select a PDF file that you wish to test.

Creating a Watermark

You can preview how your final output file will look by selecting the Create Watermark option from the Engage Designer menu. This file will be identical to the final version, but will have a watermark printed across it to show it is a draft (proof) version. This feature is only available in the Windows Version of the plug-in.

You will be prompted for a file name and location on your local machine where you wish to store this preview file. You will then be prompted to specify the text to be used as the watermark; by default the text 'Preview' is stamped across your preview file, but you can change this to different text. You can also specify the resolution at which the watermark will be stamped.

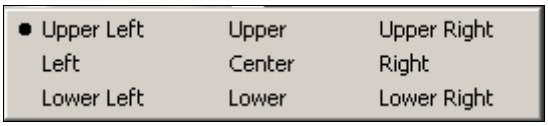
Converting Existing Text to a Text Field

Engage Designer offers powerful text conversion facilities that enable you to quickly create new templates for your customers. You can select existing text from within a PDF document and Engage Designer will automatically convert it into a fully editable field.

To convert existing text into a variable text field:

1. Select some text in the PDF file that you wish to become a variable text field.
2. Select the **Convert Selected** text to a text field button.

The alignment guide will be displayed, if Engage Designer has been configured for this guide to be shown. See ***Configuration*** for more details.



3. Select the required alignment for the field.
4. The Field Settings dialog will be displayed where you can set various settings for this new text field as described in ***Working with Text*** earlier in this manual.

During the text field conversion various error messages may be displayed, including one to say that the font is not available on the system. In these situations the TimesNew Roman font will be used by default for the field. To avoid this, you should make sure that the fonts used in the original PDF file are present on your system or that the original author of the document has fully embedded the required fonts into the PDF file. (Look at the **Fonts** section of the Document Properties dialog box in Acrobat to see if the font has been fully embedded or not.)

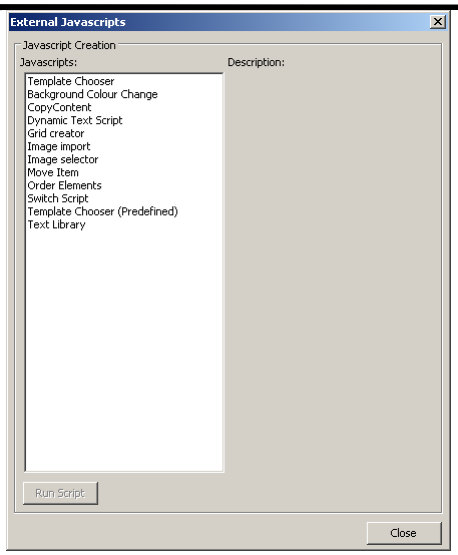
The conversion is done with a best effort approach and there might still be errors in certain situations the plug-in cannot detect (e.g. missing or additional spaces).

JavaScripts

Engage Designer has its own implementation of JavaScript allowing you to perform actions that are specific to Engage Designer. A number of predefined JavaScript are supplied with Engage Designer for use in creating new images and are available to the system, but you can also create your own JavaScripts for use with the system.

Predefined JavaScript

You can select the predefined JavaScripts supplied with your Engage Designer system by choosing the **Predefined JavaScript** option from Engage Designer's drop-down menu. This displays the External Javascripts dialog, where the available JavaScripts are listed.



Simply choose the JavaScript you want from the list of those shown in the External JavaScript dialog and click the **Run Script** button. This will display further dialog boxes where you can enter additional information. (The actual dialogs that display depend on the JavaScript selected.)

The predefined JavaScripts supplied with Engage Designer fall into two different categories. The first type of JavaScript performs an action on the currently open document (for example, ImageEmbedder embeds additional images from a directory) and is thus for use during the design phase. The second type creates specialised Javascripts which are stored in the document for execution when the output file is created (either on the server if using the web-based version of Engage or under Engage VDP). (For example, Order Elements controls the order in which the Engage fields appear within the final output.)

JavaScripts that are embedded within the document will appear within the dialog box that displays when you select the **JavaScript Management** option from the Engage Designer menu (see screensnap below). Here you can edit or remove existing JavaScripts. This functionality is available only when running the Engage Designer plug-in in Advanced Mode.

Externally Created JavaScript

You can also manually create your own JavaScripts (outside the Engage system). To make these available to the Engage system, copy them into Acrobat's Plug-In/Xclusive/JavaScript folder. These JavaScript will then appear in the list of available JavaScripts in the External JavaScript dialog (shown above).You select these externally created JavaScript in exactly the same way as the predefined ones supplied with your system.

This feature is for use by advanced users only who have a thorough understanding of the use of JavaScript. These JavaScripts **must** be approved by the Engage Server Administrator prior to use within the Engage environment.

Working with the JavaScript Wizard

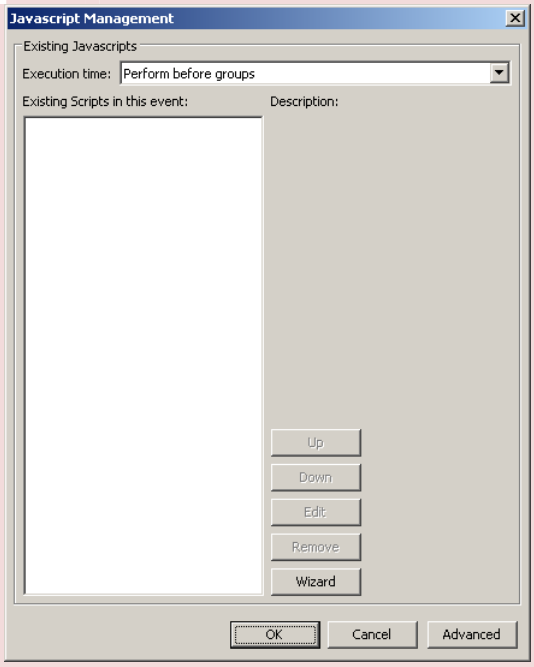
Managing JavaScripts

When working with the Engage Designer plug-in in Advanced mode, the JavaScript Management dialog box is available. This enables you to access the Engage Designer plug-in's JavaScript Wizard: the easiest way to create JavaScript and assign it to events within Engage. It also contains options that enable you to edit or remove existing JavaScripts and to change the order in which JavaScripts are run when the output file is generated. It is very important when processing the variable data fields in your file that the JavaScripts are run at the correct time.

Only JavaScripts that were created using the Engage JavaScript Wizard can be edited here.

To display this dialog, select the **JavaScript Management** drop-menu item from the Engage Designer menu.

This menu option is available only when working in Advanced Mode: it is not visible when working in Standard Mode.



Execution Time	Defines when the JavaScript will be run once the file is processed. Javascripts can be executed: - Before XML output is created - Before the groups are evaluated - After the groups have been evaluated As you select one of these events from the drop down menu in this field, then the list of all the currently defined JavaScripts with the selected Execution Time is displayed in the **Existing Scripts in this event** list. You can then use the **Up** and **Down** buttons to change the processing ordering of those scripts.
Up/Down	When individual JavaScripts are selected in the **Existing Scripts in this event** list the **Up** and **Down** buttons will move them up and down in the list. A script's position within the list affects the order in which it is processed.

Edit	Allows you to edit JavaScripts created using the JavaScript wizard. Select the JavaScript that you want to edit from the list of scripts shown in the **Existing Scripts in this event** field then click this button to load the selected script into the JavaScript Wizard where you can make the edits you require. See ***JavaScript Wizard*** below
Remove	Removes individual JavaScripts that are selected in the **Existing Scripts in this event** list. The selected scripts are permanently removed from Engage when you click **OK** to save your changes and quit the JavaScript Management dialog box. (Clicking **Cancel** would cancel the removal of the selected scripts.)
Wizard	Launches the JavaScript Wizard which guides you through creating JavaScript for use with the Engage Designer plug-in. See ***JavaScript Wizard*** below
OK	Saves any changes you have made and closes the JavaScript Management dialog.
Cancel	Cancels any changes you have made and closes the JavaScript Management dialog.

JavaScript Wizard

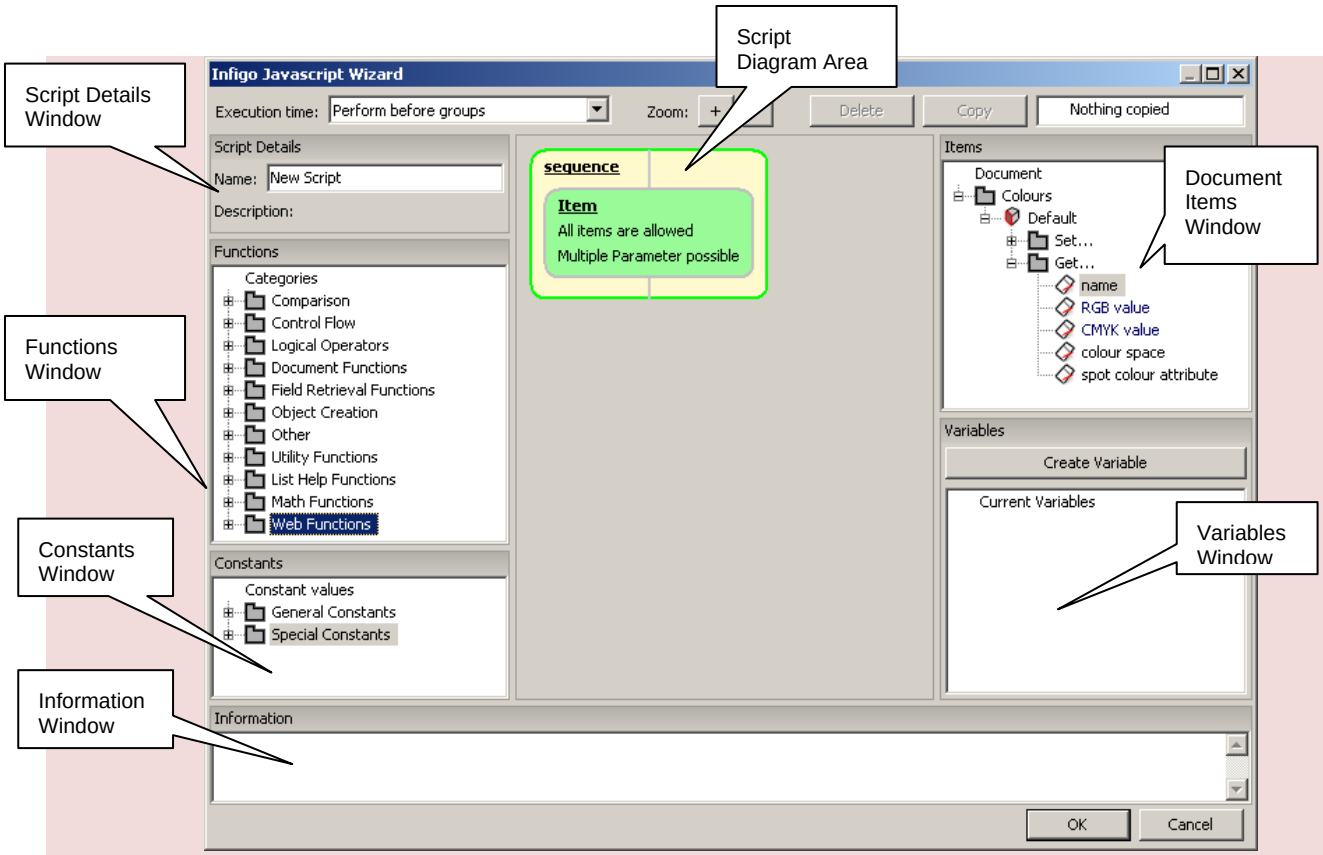
When working in Advanced Mode, a JavaScript Wizard is available for creating JavaScript for use with Engage Designer: this is the easiest way to create JavaScript and assign it to events within Engage. This interface provides an Integrated Development Environment (IDE) for easy script generation or editing enabling you to write simple or highly complex JavaScripts via flow diagrams rather than having to write JavaScript code directly. Simply drag the relevant items from the appropriate windows in the JavaScript Wizard (for example, a function from the Functions Window) into the central portion of the screen (the Script Diagram Area) to create your script. The Wizard also automatically generates a flow diagram representation of your script.

Only experienced JavaScript developers should use the JavaScript Wizard.

The JavaScript Wizard is accessed from the JavaScript Management dialog box (shown above). Selecting either the **Wizard or Edit** buttons in that dialog raises the JavaScript Wizard.

Only scripts that were originally generated using the JavaScript Wizard can be edited using the wizard.

The JavaScript Wizard dialog is split a number of different areas as illustrated below.



The top portion of the JavaScripts Wizard screen contains a number of options:

Execution Time	Defines when the JavaScript will be run once the file is processed. It is important for processing the variable data fields in your file that the JavaScript are run at the correct time and you must ensure you select the correct execution time before defining your script. Make your selection from the dropdown list in this field to run JavaScripts: - Before XML output is created - Before the groups are evaluated - After the groups have been evaluated.
Zoom	Enables you to increase or decrease the size of the diagram associated with your new script to ensure the most optimal display for your size of screen.
Copy	Allows you to copy elements (or groups of elements) from within the script diagram to another location within that diagram. This button is only available for selection when an element within the diagram has been selected. See **Script Diagram Area** for more details
Delete	Deletes an element from within the script diagram. This button is only available for selection when an element within the diagram has been selected. You cannot delete the original sequence shown first: although this is overwritten once you start to create your own sequences

Details on each specific area within the rest of the screen are given below.

Script Details Window

You can enter the **Script Name** and its associated **Description** in the Script Details Window in the JavaScript Wizard: The name is used for identifying the script in the JavaScript Management dialog: it displays in the **Existing Scripts in this event** list, while its description appears in the **Description** field in that dialog once a script is selected from the list of existing scripts. Ideally the description should explain the script's function.

Functions Window

The Functions Window contains a list of functions (rules) which can be used in the creation of the script. The scripts fall into the following categories:

- Comparison Functions
- Control Flow Functions
- Logical Operators
- Document Functions
- Field Retrieval Functions
- Object Creation
- Other Functions
- Utility Functions
- List Help Functions
- Mathematical Functions
- Web Functions

These categories are described below. Each category contains a number of functions that are specific to that particular category: click the **+** symbol next to the relevant category to expend the list hierarchy to display the available functions.

Comparison Functions

Comparison functions are used to compare two values. The following functions are available in this category.

Function Type	Description
Textual Equality	Two texts must match exactly
Numerical Equality	Two numbers must match exactly
Numerical Greater	The first of two numbers must be greater than the second
Numerical Equal or Greater	Two numbers must match exactly, or the first number must be greater than the second
Numerical Less	The first of two numbers must be smaller than the second
Numerical Equal or Less	Two numbers must match exactly, or the first number must be smaller than the second

Control Flow Functions

Control Flow functions are used to control the script's flow. The following functions are available in this category.

Function Type	Description
Sequence	Executes one action after another. Splits a series of actions into a defined module. There must always be at least one Sequence in a script.
Condition	Executes a branch if a certain condition is true (see Comparison Functions above), and, optionally, executes another if the condition is not true. A

Function Type	Description
	Condition only has two branches (unlike Switches -see below) but the tests for a match can be far more complex than for a Switch and there can actually be further conditions
Numerical Switch	Similar to a Condition but executes a branch if the integer matches a specific value. Unlike a Condition, a Switch can have more than two branches
Numerical Switch Branch	Sub item of a Numerical Switch. This is a way of easily adding individual branches to the Numerical Switch.
Textual Switch	Identical in functionality to a Numerical Switch, but is for text items rather than integers.
Textual Switch Branch	Sub-item of Textual Switch: identical to Numerical Switch Branch but for text items.

Logical Operators

Logical operators are used to combine comparison values in a statement. The following functions are available in this category.

Function Type	Description
Logical and	Combines two Comparison Values, both of which must be true in order for a statement to be true.
Logical or	Combine two Comparison Values, one of which has to be true for the statement to be true.
Negation	Checks to see whether a value in a statement is not true.

Document Functions

Document functions are for use with documents. The following functions are available in this category.

Function Type	Description
Document File Name	The filename, including the complete path and file extension.
Number of Pages	The total number of pages in the document.
Page Width	Returns the width of the relevant page, in points.
Page Height	Returns the height of the relevant page, in points.
New Page	Creates one or more new pages (depending on how many new pages you specify) and appends them at the end of the document.
Delete Page	Deletes the specified page.
Copy Page	Copies the specified page to the end of the document.

Field Retrieval Functions

Field retrieval functions provide different ways of getting a reference to a field that can then be used within the JavaScript. The following functions are available in this category.

Function Type	Description
Get Field by ID	Returns a specific field by its ID. For example, you could store the IDs of all dynamically-created fields in an integer array and later perform an action on every 10th field - referring to it by Field ID. You could also store the IDs to a property when writing out the XML file and read them in later. Using the Field ID for retrieving a field is much quicker than using the Field Name as using the ID means the function can perform a 1:1 lookup, while using the Field Name would mean having to iterate through all fields.
Get Field by Name	Returns a specific field by its Name. Retrieving a field is quicker using its ID rather than its Name (see above).
Get all Fields by Page	Returns a list of all the fields on a particular page.
Get Fields by Property	Returns a list of all the fields that have a particular text property.
Get all Fields	Returns all fields in the document.

Object Creation Functions

Object Creation functions are used to create new objects. These can be any of the three different types of fields supported by Engage Designer (text, image and barcode), variables, text library categories, document properties, layers, colours and groups.

Please see the relevant sections earlier in this *User Guide* for details on how these are used

Other Functions

The miscellaneous functions listed below are also available.

Function Type	Description
Valid Object Check	Checks that any object returned is actually valid. This object could be a field, text variable, colour, embedded file, property, group, layer, text library category or a text library item.
Display Message	A message that will be displayed in a dialog box when running Engage VDP on a client machine, or will appear in the log on the server when running the web based version of Engage. This text can be used as either a constant or any object that has text associated with it, such as a property or text field.
Engage Version Number	The version of the Engage processing application - this is *not* the version of the current file.
Update Field Appearance	Not currently used.

Utility Functions

A number of other Utility functions are also available, split into the following categories:

- Convert Utility Functions
- File Utility Functions
- Layer Utility Functions
- Path Utility Functions
- Regular Expression Utility Functions
- Text Library Utility Functions
- Text Utility Functions

These are described in the following sections.

Convert Utility Functions

The following Convert Utility functions are available:

Function Type	Description
Get Number From	Converts text to a decimal number.
Get Integer From	Converts text to a whole number.
Round to Integer	Converts numeric text to a whole number, rounding in the process.
Get Text From	Gets the text representation of a number.

File Utility Functions

The following File Utility functions are available:

Function Type	Description
Is Embedded File Reference	Checks if the reference is from a file that is embedded into the PDF document.
MarkFile Embedded	Returns the file as an embedded reference.
Extract File Name	Gets the original filename from an embedded reference.

Layer Utility Functions

The following Layer Utility functions are available:

Function Type	Description
Has Field	Checks to see if the field is part of a layer.
Add Field	Add a field to a layer.
Remove Field	Removes the field from a layer.
Remove All Fields	Removes all fields from a layer.

Path Utility Functions

The following Path Utility functions are available:

Function Type	Description
Get Directory	Gets the directory part of the path.
Get File	Gets the file part of the path.
Get Extension	Gets the extension part of the path.
Get File (No Extension)	Gets the file part of the path without the extension.
Is Directory	Checks to see if this is a valid directory.
Is Absolute	Returns ‘true ‘if this is an absolute path (i.e. the full path to the file rather than a partial path, relative path or just the filename)

Regular Expression Utility Functions

The following Regular Expression Utility functions are available:

Function Type	Description
Replace	Finds all occurrences of the target (regular expression) and replaces with the specified text.
Search	Finds all occurrences of the target (regular expression). This is case sensitive.
Search (No Case)	Finds all occurrences of the target (regular expression). This is not case sensitive.
Find Matches	Finds all occurrences of the expression and returns a text based list.

Text Library Utility Functions

The following Text Library Utility functions are available:

Function Type	Description
Has Item	Returns ‘true’ if the item exists in this category.
Get Item	Returns the new item The item name must be unique.
Create Item	Creates a new item.
Get Library Item Text of	Gets the text of the text library item with this particular name.
Get Category Item Names	Gets the category item names as a text list.

Text Utility Functions

The following Text Utility functions are available:

Function Type	Description
Text Length	Returns the number of characters in the text string.
Connect	Connects a number of items, including other text strings, to make one text string.
Find	Returns ‘true’ if the supplied text is found within the text.
Find Term Position	Finds the first term position or returns ’-1’ if not found. You can specify a character position for the start of the search.
Find Last Term Position	Finds the last term position or returns ’-1’ if not found. You can specify a character position for the start of the search.
Extract	Extracts a specified number of characters from text. You have the option of specifying a start position.
Character	Returns a character from a specified position in the text. The first character position is zero.
Lower Case	Converts the text to lower case.
Upper Case	Converts the text to upper case.
Split	Splits the text at a specified position and returns the two values as a text list.

List Help Functions

The following List Help functions are available:

A number of List Help functions are available, split into the following categories:

- Field List Help Functions
- Integer List Help Functions
- Number List Help Functions
- Text List Help Functions

These are described below.

Field List Help Functions

The following Field List Help functions are available:

Function Type	Description
Listing Count	Returns the number of fields in the field list.
Get Item	Returns the field item at the specified index in the field list
Set Item	Sets the field item at the specified index in the field list.
Add Item	Adds a field item to the field list.
Remove item	Removes a field item from a field list.
Create Listing	Creates a new field list.
For Each Element	Performs a defined action on each element in the field list.

Integer List Help Functions

The following Integer List Help functions are available:

Function Type	Description
Listing Count	Returns the number of integers in the integer list.
Get Item	Returns the integer item at the specified index in the integer list
Set Item	Sets the integer item at the specified index in the integer list.
Add Item	Adds an integer item to the integer list.
Remove item	Removes an integer item from an integer list.
Create Listing	Creates a new integer list.
For Each Element	Performs a defined action on each element in the integer list.

Number List Help Functions

The following Number List Help functions are available:

Function Type	Description
Listing Count	Returns the number of numbers in the number list.
Get Item	Returns the number item at the specified index in the number list

Function Type	Description
Set Item	Sets the number item at the specified index in the number list.
Add Item	Adds a number item to the number list.
Remove item	Removes a number item from a number list.
Create Listing	Creates a new number list.
For Each Element	Performs a defined action on each element in the number list.

Text List Help Functions

The following Text List Help functions are available:

Function Type	Description
Listing Count	Returns the number of text items in the text list.
Get Item	Returns the text item at the specified index in the text list
Set Item	Sets the text item at the specified index in the text list.
Add Item	Adds a text item to the text list.
Remove item	Removes a text item from a text list.
Create Listing	Creates a new text list.
For Each Element	Performs a defined action on each element in the text list.

Mathematical Functions

A number of mathematical functions are available:

Function Type	Description
Add	Adds two numbers.
Subtract	Subtracts two numbers.
Multiply	Multiplies two numbers.
Divide	Divides two numbers.

Web Functions

The following Web functions are available:

Function Type	Description
Google Map Routes	Generates the Google maps route as an image and returns the text used by image fields.

Constants Window

The Constants Window contains a list of constants which can be used in the creation of the script. Constants are fixed values, that is, their values are not the result of a computation. However, they can be of various types: text, numbers, barcodes etc. Constants are split into two groups, General Constants and Special Constants.

General Constants

A number of General Constants are available:

General Constants	Description
Text	Text.
Number	Decimal number.
Integer	Whole number.
Logical Value	Either 'True' or 'False'.
Location	X and Y values.
Rectangle	X, Y, width and height values.

Special Constants

Special Constants are used for comparing or setting certain values for fields (e.g. their alignment, case, mask type, barcode type, etc). Each special constant is actually represented by an integer constant but they are easier to read and understand in the form shown in the Constants Window.

Special Constants Category	Supported Constants
Alignment Constants	upper left alignment upper alignment upper right alignment left alignment centre alignment lower left alignment lower alignment lower right alignment
Barcode Constants	EAN 8 EAN 13 ISBN 10 ISBN 13 UPC A UPC E Code 128 Code 128 GS 1 Code 39 Code 2/5 Interl Code 2/5 industrial Codabar Datamatrix PDF 417 Code QR
Case Constants	case unchanged uppercase lowercase title case
Group Constants	dynamic suppression group dynamic text fields
Mask Constants	no mask rounded corners ellipse vignette
Property Constants	text property text list property integer property number property

logical value property

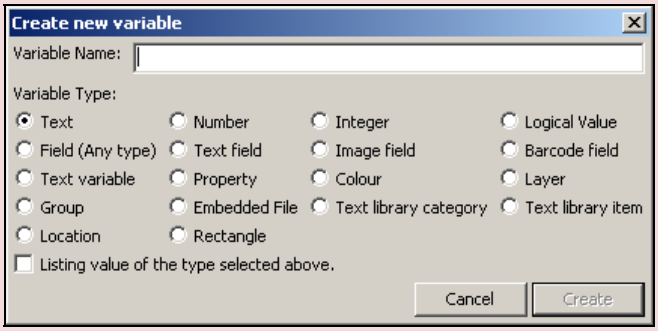
Document Items Window

The Document Items Window shows all Engage items available in the PDF document, separated by their types (text fields, image fields, colours, etc.). Each Document Item shown in the hierarchical list in this window represents the object itself. Working down the hierarchical list you can either **Set** or **Get** each item's values and access local sub-objects (such as properties, variable or text library items.

Variables Window

The Variables Window shows all variables which are either part of the current script or are about to be used in it. Variables are items that contain values that can vary: a variable can represent different objects/values at different times during the script execution.

Different types of variables are available depending on the type of data that they can contain. The different types of variable are shown in the Create New Variable dialog box (which displays when you click the **Create Variable** button in the Variables Window).



Information Window

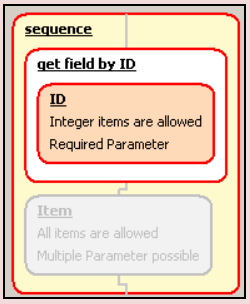
The Information Window at the foot of the Wizard's screen provides extra information and messages when working with the Wizard. For example, it could contain tool tips or error information.

Script Diagram Area

The Script Diagram Area lies in the centre of the Wizard's screen. Scripts created using the Wizard appear diagrammatically within this area. For new scripts a single sequence is shown: this acts as the starting point from where the flow diagrams can be created. You cannot delete the original sequence, but it will be overwritten once you create your own diagram.

To create a new script diagram:

1. Select the first item you wish to add to the new JavaScript diagram. For example, select the **Get Field by ID** from the **Field Retrieval Functions** in the Functions window.
2. Drag the selected function into the Script Diagram Area.
3. Drop the function into the Script Diagram Area. You will only be able to drop items into areas within the diagram where they are valid.
4. A diagrammatic representation of your item now appears in the Script Diagram Area, as illustrated below.



5. Repeat the steps above until you have added all the necessary items to your JavaScript diagram.

The above steps are also valid for adding additional items to an existing diagram.

You can also copy elements from a JavaScript diagram to another location within the same diagram.

Using the JavaScript Wizard

As you create JavaScripts using the JavaScript Wizard, a diagrammatic representation of those scripts appears in the Script Diagram Area in the central part of the JavaScript Wizard window. To add items into the script diagram, simply drag them from the relevant window in the JavaScript Wizard, for example the Functions Window. Items can only be dropped into areas that are valid within the diagram: these must be empty 'slots' but they must also be relevant to the item being dragged.

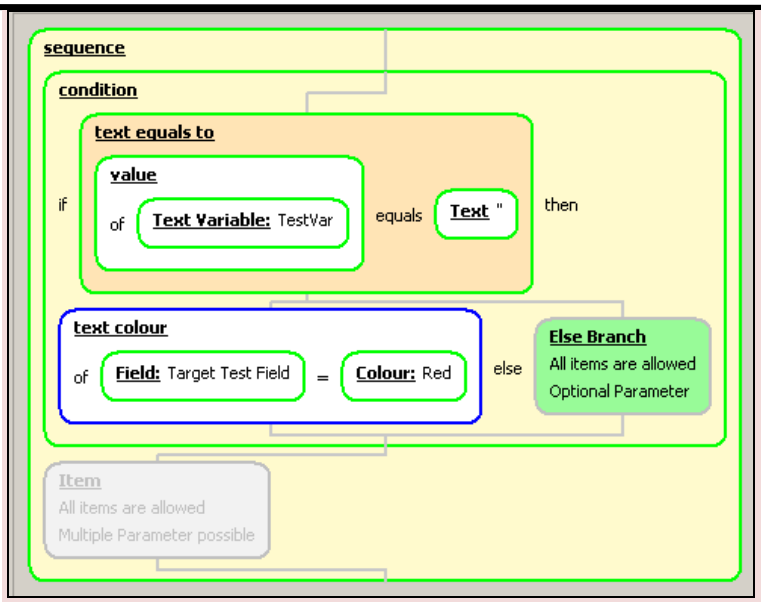
Holding down the **Shift** key when you drag an item into the script diagram will add the selected item to the front of a queue instead of the back (where a queue exists, for example Sequence Items can be part of a queue).

Holding down the **Ctrl** key when you drag an item into the script diagram allows you to not only fill in the empty slots within a script diagram, but also to replace an existing item. This should be used with care to prevent you from accidentally deleting items.

Once an item has been added to the diagram you can then add parameters to that item. See ***Parameter Slots*** below.

As the JavaScript flow diagram is constructed, the control flow of the script is visualised by a grey line, which starts at the top of the diagram and goes to the bottom. If different execution branches exist (such as a condition or a switch), there will be more than one grey line and these lines will be shown in parallel.

A sample diagram of a simple JavaScript is shown below, as it would appear in the Script Diagram Area in the JavaScript Wizard to illustrate how you can use the JavaScript Wizard to build up your JavaScript.



This represents the following condition:

If the text in the text variable named **TestVar** is equal to an empty text string then the colour of the text in the field named **Target Test Field** is assigned the colour **Red**.

Or, put simply, if **TestVar** is empty the text in the field **Target Test Field** is red.

The steps below show how the above diagram was originally constructed using the JavaScript Wizard.

1. A Condition was added.
2. The function “text equals to” was dropped into the Condition.
3. The Global Variable/TestVar/ Get../ value from the Items Window was dropped onto “text equals to’s” first parameter.
4. General Constants text was dropped onto “text equals to’s” second parameter. (The dialog box that then displayed was not filled in as the string is going to remain empty.)
5. Text Fields/Target Test Field/Set…/text value/text colour was dropped onto the Condition’s ‘If’ branch.
6. Colours/Red from the Items Window was dropped onto text colour Value.

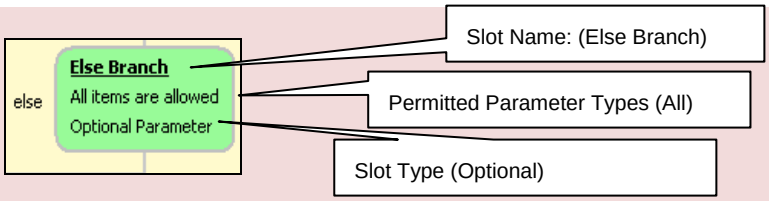
Parameter Slots

Each JavaScript item has a list of parameter ‘slots’ which can be filled with other items. You can simply drag relevant parameters into the appropriate place within the JavaScript flow diagram to fill the empty slots. Alternatively, hovering with the mouse over an item within the diagram will display a black button next to that item, labelled with the relevant parameter types. By selecting the button, the relevant dialog box is displayed where you can select the parameter value that is to be added. Additional information on each parameter type is usually shown in the Information Window when you ‘hover’ over that parameter, or when filling in the relevant parameter dialog box.

Three lines of information are shown for empty slots, or slots that still need to be filled in:

- Slot name
- Permitted parameter types (for example, all types or text types only etc
- Slot type, which can be Required, Optional or Multiple (this last type indicates any number of parameters can be inserted into that slot)

This is illustrated below for the Else branch of the simple condition shown in the sample JavaScript diagram above.



The background colour of empty or unpopulated parameter slots in the JavaScript diagram denotes their current status:

Colour	Status
Bright Green	Optional parameter slot and first multiple parameter slot
Grey	All multiple parameter slots other than the first
Red	Required parameter slot

Colouring

Different colours are used in the JavaScript diagram to represent the status of each item in the diagram.

Background Colour

Colour	Status
Yellow	Control flow item
Orange	Comparison tests
White	Everything else

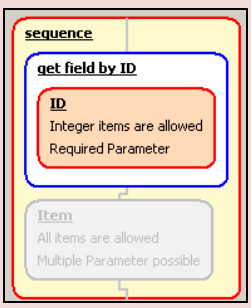
Border Colour

Colour	Status
Grey	Empty parameter slots
Red	Script items that were not set up correctly. The actual error condition will display in the Information Window when you 'hover' over the incorrect item
Green	Valid script items

Manipulating Script Items

To select an item from the script diagram:

1. Click on the item you wish to select in the flow diagram in the Script Diagram Area. A blue border will appear around that item to indicate it is the currently selected item.



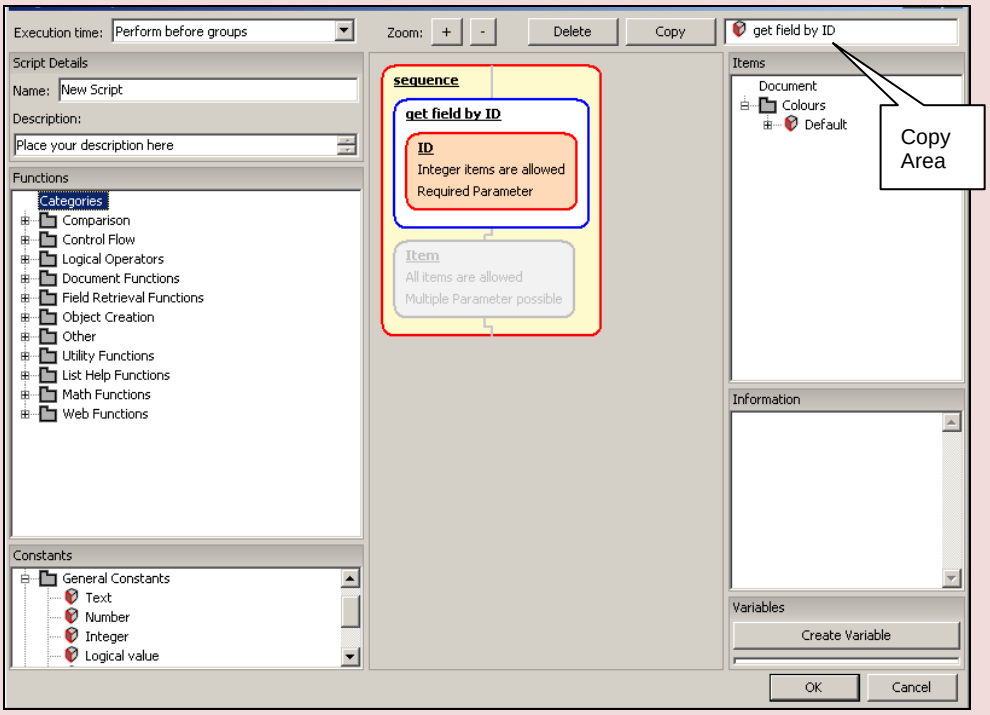
To delete an item from the script diagram:

1. Select the element you wish to delete from the flow diagram in the Script Diagram Area.
2. The element now displays with a blue border to indicate it has been selected.
3. Either click the **Delete** button at the top of the JavaScript Wizard dialog, or press the **Delete** key on your keyboard.
4. The currently selected element will be deleted from your JavaScript flow diagram.

You cannot delete the original element from the script diagram.

To copy an item from the script diagram:

1. Select the item you wish to copy from the flow diagram in the Script Diagram Area.
2. The border around the selected element now displays in blue to indicate it is the currently selected item.
3. Click the **Copy** button at the top of the screen. The selected item now appears in the Copy Area of the JavaScript Wizard's screen (to the right of the **Copy** button).



4. Simply drag the item out of the Copy Area and into the required location within the script diagram.

You can also copy groups of elements within a script diagram in exactly the same way. Simply select the group you want to copy, rather than an individual element within that group.

Using Constants

To add a constant from the script diagram:

1. Select the item you require from the hierarchical tree in the Constants Window.
2. Drag the item to the relevant position in the script diagram and release the mouse button once you reach the required location to drop that item into place.

3. Enter the relevant values for the constant in the dialog box that displays once you release the mouse button.

If you drag a **Get** function to the JavaScript diagram from the Document Items Window, constants will display in dark green to indicate that the Get value will be picked up immediately

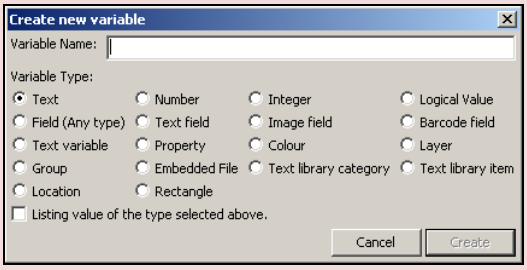
To modify a constant value:

1. Double-click with the mouse on the constant where it appears in the script diagram.
2. A dialog box then displays where you can type in the modified value. Alternatively you can select the black popup button for that constant to display the relevant dialog box.
3. Depending on the constant type, you may have the option of switching to a suitable unit (for example for X or Y co-ordinates).

Using Variables

To create a new variable:

1. Select the **Create Variable** button in the JavaScript Wizard dialog.
2. The Create New Variable dialog then displays where you can enter the new **Variable Name** and select the radio button corresponding to its variable type.



3. To create a list of multiple items of the same type check the **Listing Value of the Type Selected Above** checkbox.
4. Click **Create** to create the new variable and add it to the list of current variables shown in the Variables Window, or click **Cancel** to exit the Create New Variable dialog without saving your settings.

   When a new variable is created, **Get Variable** and **Set Variable** sub-items are also automatically created in the hierarchical variables list shown in the Variables Window. **Set Variable** sets the variable's value, while **Get Variable** retrieves the variable's value You can only drag a **Get Variable** item into the Script Diagram Area if that variable has already been set previously, using **Set Variable**. **Get Variable** for object types has similar options as the actual objects themselves (in the Document Items Window) and can be used accordingly, but the variable must still have been previously set.