FTDesign

User Guide

September 2011

Version 7.3.02

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Revision History

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Software Version

This manual supports FTDesign for Windows, Version 7.3.02

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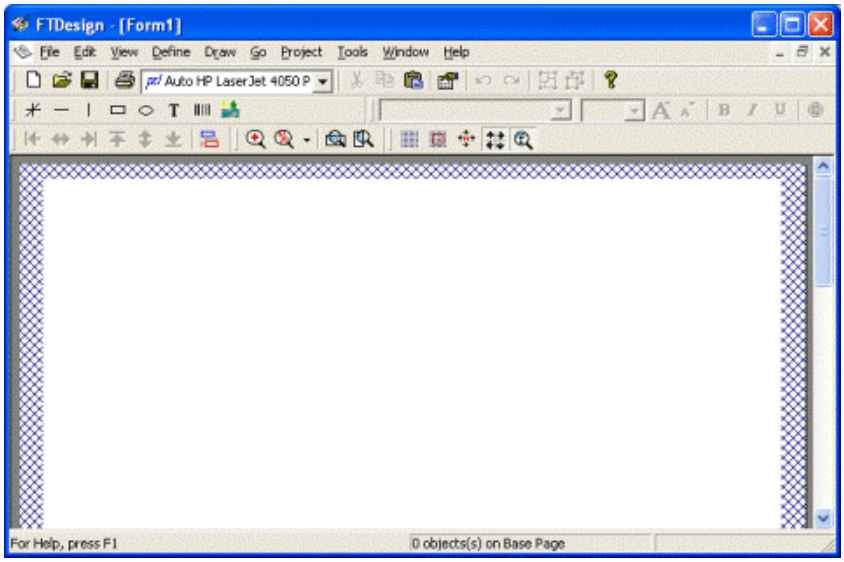
Theory and Decisions

CHAPTER 1

FTDesign allows professional looking documents to be formatted and designed in a GUI interface much like those which are found in many of today's word processing software packages. Use color, frames, images, barcodes and many other graphic elements to create a good looking document.

Substitute your own company address and demographics, either based on the input data or from simple text files so you won't need to change forms if you change your address or add a new division. Make objects print conditionally - based on test on the input data or comparisons on input data. Use masking to present data as you'd like to with address or other details strung together in sentences with superfluous spaces removed, or as words replacing amounts or as special masking with constants surrounding your data. The next few pages will show you how to do this and more with FormTrap.



Design Process

FormTrap applications, while simple and easy to use, are advanced and therefore you will need to spend time learning the theory and concepts.

The design process typically involves the following steps:

- Create a new project and then add a new form to the project.
- Design your form layout, creating objects and defining page elements.
- Capture representative print line data from your host application. Ensure one multi-page document is included (for records mode forms, see below).
  - Use the FormTrap Repaginator to simplify your Print Line mode data to simplify the forms design.
  - Map the Print Line data directly to your forms.
- For Records Mode data, save the output file from your application, making sure at least one document will extend more than one page.

    - Enter the field names for your records according to the specifications (you may ignore unused records, these will be ignored).
    - Link the field names to your printed variables.
- Test the form using the Preview Function in color or B&W.
- Build the project to generate the load (.asc) file.
- Design and add the rest of your forms to the project.
- When test results are satisfactory, build the project to generate the load (.asc) file.
- Update the load (.asc) file to the production environment.

Planning Form Design

Before you put together a form design, there are several issues you need to consider. All involve defining your needs in conjunction with studying the application that generates the information to go onto the forms.

The key to effective form design is to identify what information you need in the form, where to get it and when to print it.

Here are some questions you should consider to before you start the form design.

- Whether to use Print Line mode or Records mode?
- What output language to use (PCL or PCLXL (PCL6) or PostScript)?
- What design elements you will need?

Print Line or Records Mode

When planning the design of your new form, you have the option of either extracting information from existing print lines (with the Repaginator available to simplify your data) or writing a program to deliver records mode output.

Print Line mode caters for existing applications and requires minimal change. Here are some questions you should consider to determine whether or not you can produce an output from an existing print program. Please do a Repagination of the data, and see if you can answer these questions:

- Can you easily segregate the first and subsequent page headers for a document using a "change" in the document ID or page number - for page number, can you easily determine Page 1 (from Page 10, 11 and so on)?
- Can you recognize the document footer (totals)?
- Can you identify and remove "end of page", "continued" and "brought forward" lines?
- Are you able to eliminate redundant lines? If so, then just select non-blank lines to finish.
- Are there different types of detail lines? Do they have distinguishing features or literals or the absence of data that can be used for tests to select the types your require?

Print Line mode excels when working with consistent documents. If your application output is generally consistent, or can be made consistent with the Repaginator, designing forms with Print Line mode is suggested.

Records mode is ideal for new applications and where your new requirements cannot be supported from the existing print lines. In this mode, the data required is written as records, with the first character of each record identifying the page element.

The different design concepts used in Print Line mode and Records mode will be explained in the Printline (page 19) or Records Mode section (page 31).

PCL or PostScript Output

FormTrap supports the output file formats PCL (PCL5e and PCL5c), PCLXL (PCL6) and PostScript (Level 2). The mode of output is selected when you build your project, not at run time. Outputs appear identical, but there may be small differences in font handling. PCLXL (PCL6) output may be transferred to ANY Windows printer if that option has been purchased for your production system.

In some cases you may need to build the same project for different printers, for example for older PCL only printers and color PDF delivery.

When do I choose PCL?

PCL is faster and the output is smaller. You would choose the PCL option:

- For printing forms across networks, particularly networks with low bandwidth or high traffic or;
- For printing checks (cheques). FormTrap supports the MICR font only in PCL mode. (This will be extended to PCLXL (PCL6) if there is sufficient customer interest.)

When do I choose PCLXL (PCL6)?

PCLXL (PCL6) while smaller than PostScript is still at least 2 times larger than PCL. It is a more modern language than PCL and is therefore available as the sole PCL choice in some printers (Xerox and Lexmark printers for example). Select PCLXL (PCL6) when:

- Using printers that no longer support PCL but support PCLXL (PCL6).
- When you wish to use the "Print to ANY Windows Printer" option.

When do I choose PostScript?

PostScript files are typically 3 times larger than the PCL equivalent. You would choose the PostScript option:

- If you want to produce color PDF files for email delivery or;
- If you plan to outsource your printing. PostScript files are more readily supported than PCL by third party printing houses.

Note: If your printer is a less known model, PostScript is the least likely to have glitches or differences from the standard, which we have seen with PCL from time to time.

Form Design

Here are some questions you should consider to before you start the form design.

Static or Dynamic Form?

The terms static or dynamic are used to describe the handling of the Detail Area in a form design. In a Static form, the Detail Area is a fixed area on the page. In a Dynamic form, the size of the Detail Area will shrink and grow to accommodate different document headers and footers.

A ***Static*** form is the simplest design method. Use this approach for short documents that rarely go over one page. The static form "wastes" the space of the footer on all pages except the last but is by far the simplest to design.

A ***Dynamic*** form is more flexible but also more complex to design. You would use a Dynamic form to allow more space for details on long documents or when documents require "C/Fwd with subtotals" on intermediate pages. Dynamic forms are good with repaginated data or with Records Mode files.

For Static forms, without a repagination step, you must accommodate the number of detail lines that are printed on any one page. If all the detail lines do not fit into the detail area, FormTrap will produce an overflow page, with the same Base page information and the remaining detail lines. For Dynamic forms (including Records Mode), FormTrap calculates the "fit" and paginates when necessary.

Do I need a Detail Area?

It is not always necessary to have a Detail Area. Forms for a single transaction (like a car hire) or that are largely details about an individual (like a loan transaction) may not need a detail area.

Forms dealing with multiple products or multiple transactions require a detail area. A typical example is an invoice, where the detail area details multiple products.

In either mode, it is common to define only those lines that you require. FormTrap ignores undefined lines.

How do I identify Data Items?

While you can easily identify various items of information on an existing printed page, some fields may be uncommon and may only print when some special event occurs. Similarly, some fields may have special conditions that are not obvious.

Once you have identified all of the data fields, it is a good idea to list them and allocate a name to them. At this time you should also note the maximum number of characters in each field and any special characteristics.

Here is an example of some data fields we have extracted from an invoice and the field names we have assigned them:

Data Field	*Record Field Name*
invoice number	inv no
invoice date	inv date
customer name	cust name

Data Field	*Record Field Name*
customer number	cust no
customer address line 1	cust add1
customer address line 2	cust add2
item description	item desc
quantity ordered	qty ord
total amount	total amt

For more information on Defining Fields in Print Line Mode see page 23.

For more information on Defining Fields in Records Mode see page 31.

How many different Detail Lines do I need?

This is again a decision you need to make to produce the clearest and most legible form possible. Good practice is to have a detail line on the form for each different type of detail line in the data. Note that a consistent block of data over more than one line should defined as a single "detail line". Highlight important information by using different font styles and sizes.

In Print Line mode, define only those detail lines that you require and remove irrelevant and unwanted lines with the Repaginator.

When do I use Headers and Footers?

Use these features when designing a Dynamic form. Headers and footers allow you to define a different amount of space at the top and bottom of given pages in a document, such as having a large space for the headers of the first page and a smaller space for the headers of the remaining pages. The same is true of footers, which allow you to define a larger space on the final page to cater for trailer details such as totals.

These options are useful when you don't need detailed information in the headers and footers on every page of a document, such as delivery address details, which would only be necessary on the opening page.

When do I use Group Headers?

Group headers appear in the Detail Area and can be considered as the table headers of a typical document. There are two types of group header, implicit, which is defined by the subsequent detail line, and explicit, which is defined by the input data.

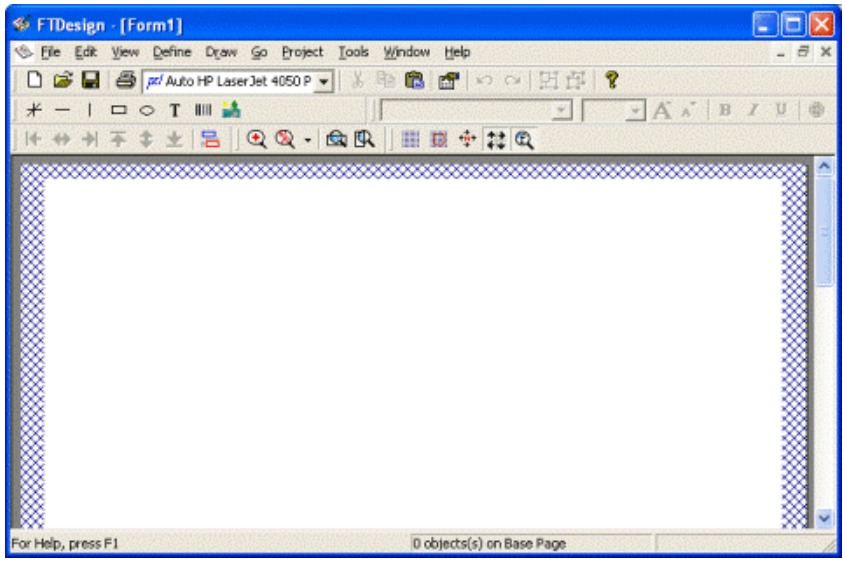
When headers appear in the detail section of your input data, you should use an explicit header in your form design. This type of header works in the same way as a normal detail line (and repeats on subsequent pages if defined that way) and is generated when found in the input data.

When headers do not appear in the input data, you can use the successful creation of a detail line to imply the preceding header. In this case, when a certain type of detail line is created in the output, FormTrap will generate an implicit header object before printing that detail line. This is common with Repaginated data.

Tools and Options

CHAPTER 2

When you launch FTDesign, you are presented with a blank workspace. The workspace is the area in which all your form design takes place. This includes placing all your graphic and text objects, variable and constant. FTDesign is a windows environment, so everything appears in your workspace exactly as it does on the final output.



The blue cross-hatched area around the edges of your workspace represents the unprintable area of the page and can be customized as part of the Base page preferences.

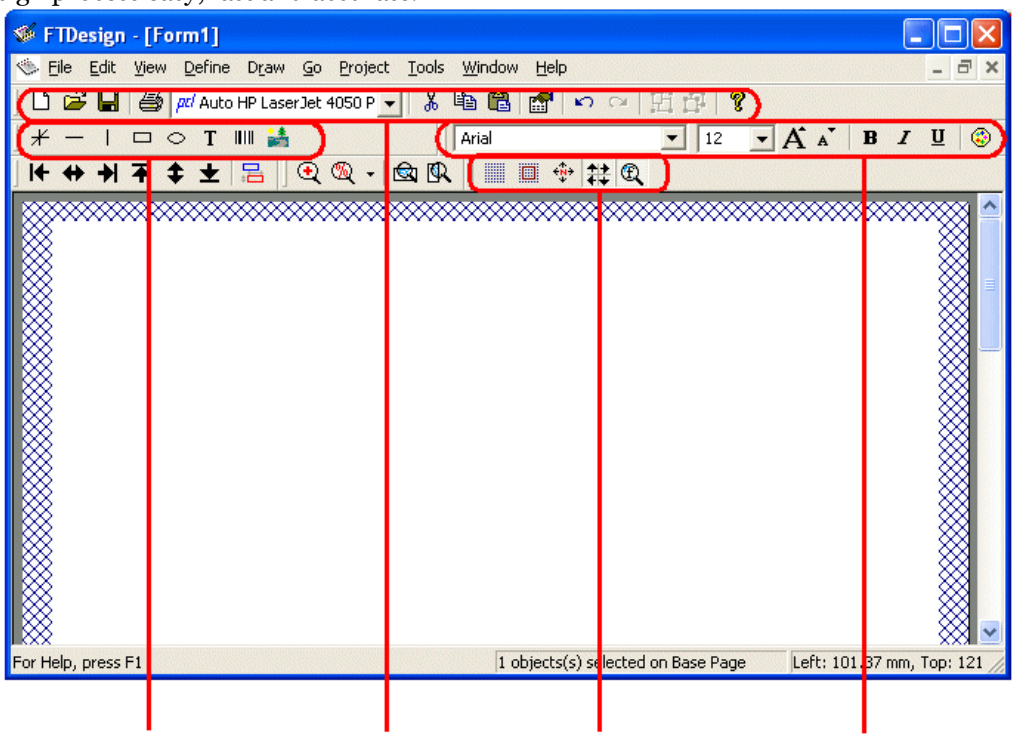
Design Window

Standard toolbar contains the options common in most Windows programs such as file saving, printing and opening.

Drawing toolbar contains the tools used to create the objects that make up the framework of your form design including text, lines, boxes, ellipses, images and barcodes.

Properties toolbar contains the tools used to modify the properties of the objects that make up the framework of your form design including text, lines, boxes, ellipses, images and barcodes.

Tools toolbar contains icons for all of the special formatting tools used to make the form design process easy, fast and accurate.



Drawing Toolbar Tools Toolbar
Standard Toolbar Properties Toolbar

Using the Zoom Tools

The Zoom tools control the size of the page in the FTDesign workspace. You can enlarge the page to work closely on one area of the form, or reduce the zoom to appreciate the entire design.

Tool	*Action*
	The ***Zoom*** tools are used to control the size of the page.
	To access the ***Zoom*** tools click the Zoom button on the Tools toolbar. When the Zoom button is toggled the Zoom tools will appear on a separate toolbar in the FTDesign toolbar area.
	***Drag Zoom*** - zoom to a selected area. Click the ***Drag zoom*** tool and hold the left mouse button down while drawing a box around the area you wish to zoom to.
	***Zoom by Value*** - zoom to a selected ratio. Click the ***Zoom by value*** tool, and from the list of options that appears, select the required zoom percentage.

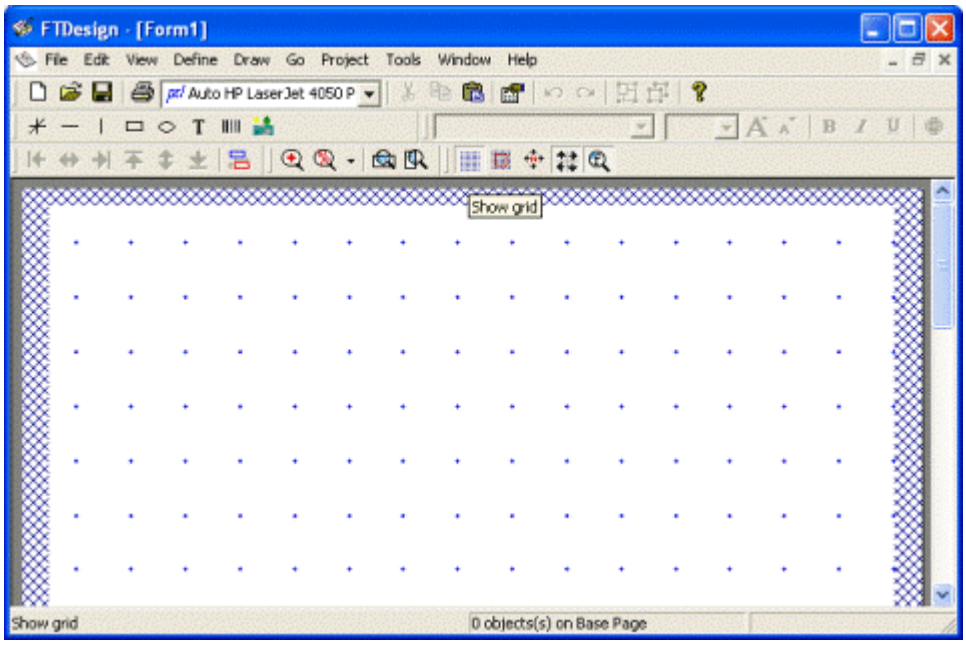
Tool	Action
	***Page Width*** - zoom to fit page width in the screen. Click the ***Zoom to page width*** tool.
	***Page Height*** - zoom to fit page height in the screen. Click the ***Zoom to page height*** tool.

The amount of magnification can also be set using the ***Zoom...*** option from the ***View*** menu.

Using the Grid Tools

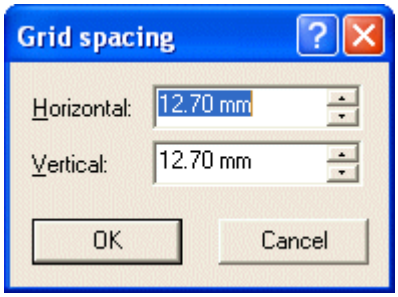
The grid tool is available to facilitate arranging and moving objects.

A visible grid with a snap to grid functionality is available as a guide for laying out objects during form design. You can view the grid when designing but it is not printed. When you turn on Snap to grid, objects are automatically aligned with intersections of the grid, making it easier to lay out objects with uniform spacing.



To configure grid settings:

- Select ***Grid...*** from the ***Tools*** menu.
- Modify the values to change the distance between horizontal and vertical grid intersections.
- Click the ***OK*** button to accept the changes



When Snap to grid is turned on, objects are automatically aligned with intersections of the grid. Turn on Snap to grid by clicking the button on the ***Tools*** toolbar, or by selecting ***Snap to grid*** in the ***Tools*** menu.

Design Options

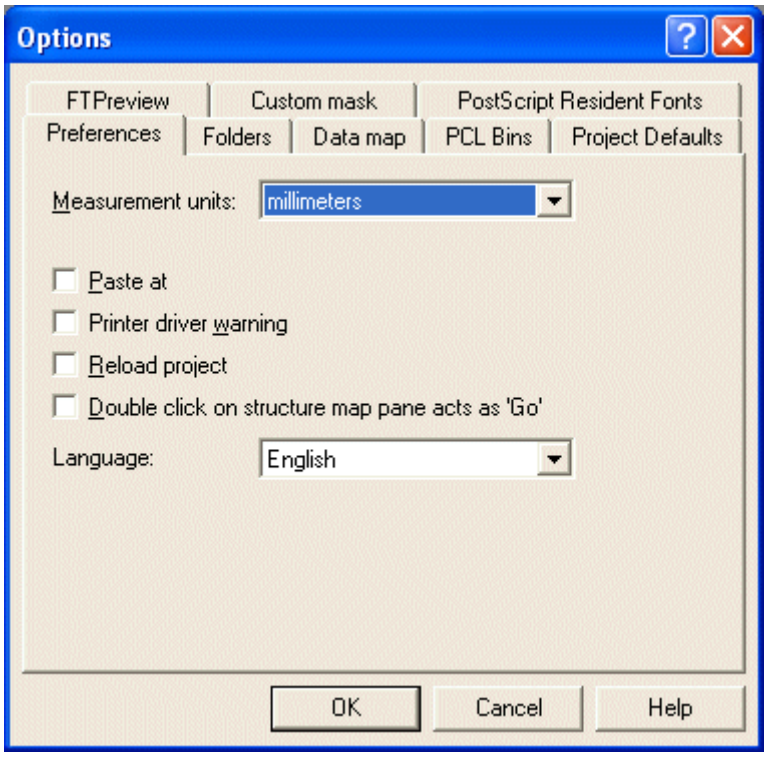
Before you start designing forms you can customize your design environment to suit your own preferences. To view the current design environment settings, select ***Options*** from the ***Tools*** menu.

Preferences

On the ***Preference*** tab, you can set the following options:

- ***Measurement units*** - allows you to select the unit of measurement used for all design functions. Options include millimetres, centimetres, inches, points, picas and 300dpi.
- ***Paste at*** - allows you to select where an object pasted from the clipboard will be inserted.
- ***Printer driver warning*** - a warning is given when an incompatible printer is selected.
- ***Reload project*** - FTDesign automatically reloads the last project on start up.
- ***Double click on structure map pane acts as 'Go'*** - when selected, double-clicking on a page element in the structure map pane will place that page element in focus in the design window.
- ***Language*** - Changes the language used in FTDesign, FTSplitDef and the Repaginator. These applications must be restarted in order for this change to take effect. FTDesign, FTSplitDef and the Repaginator will now be displayed in

the selected language, including menus, dialog boxes, field names and page element names.

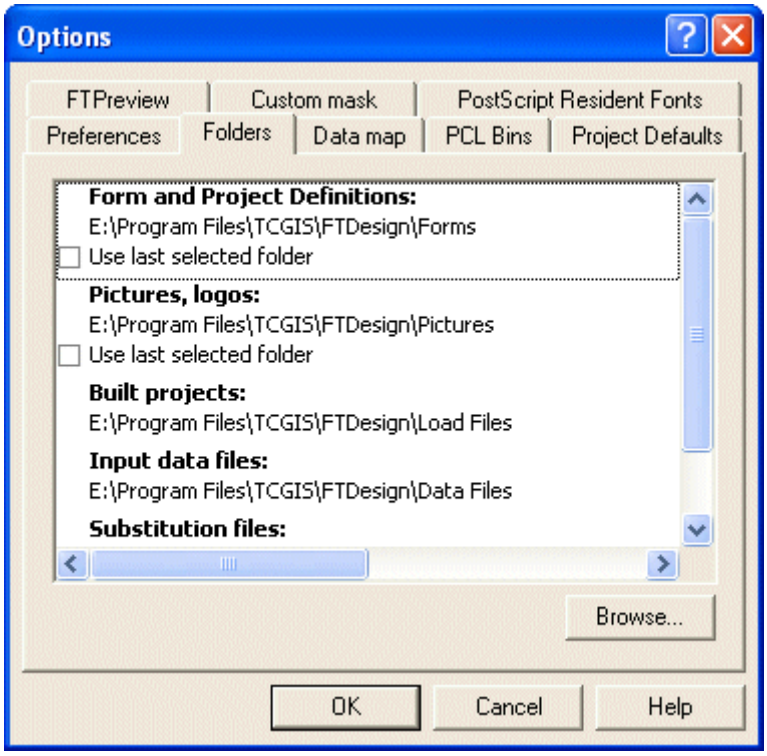


Folders

On the ***Folders*** tab, you can set the following options.

- ***Forms and Project definitions*** directory - default directory when opening and saving a new form. Select ***Use last selected folder*** to set the default form and project directory to the last folder selected when opening or saving a form or project.
- ***Pictures, logos*** directory - default directory when inserting a picture or a logo on the form. Select ***Use last selected folder*** to set the default picture directory to the last folder selected when inserting a picture.
- ***Built projects directory*** - default directory for output built project (.asc) files.

- ***Substitution files directory***- default directory for test substitutions files.

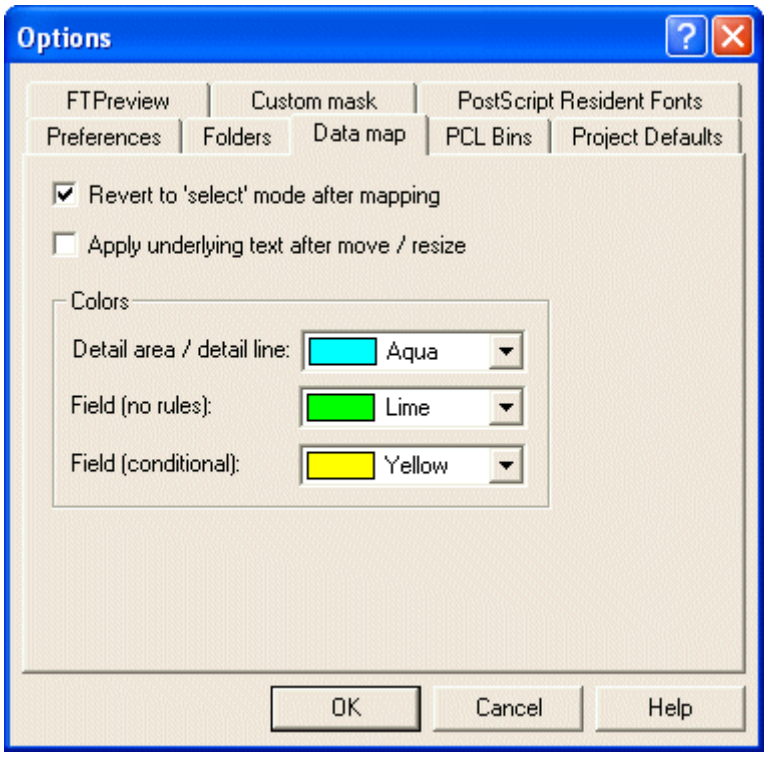


Data Map

On the ***Data map*** tab, you can set the following options:

- ***Revert to 'Select' mode after mapping*** - after a data field is mapped, the cursor will return to select mode.
- ***Apply underlying text after move/resize*** - when a test field is moved to another data field, the rule will change so it reflects the new data.

- ***Colors*** - select your own colors for print mapping in Print Line mode.



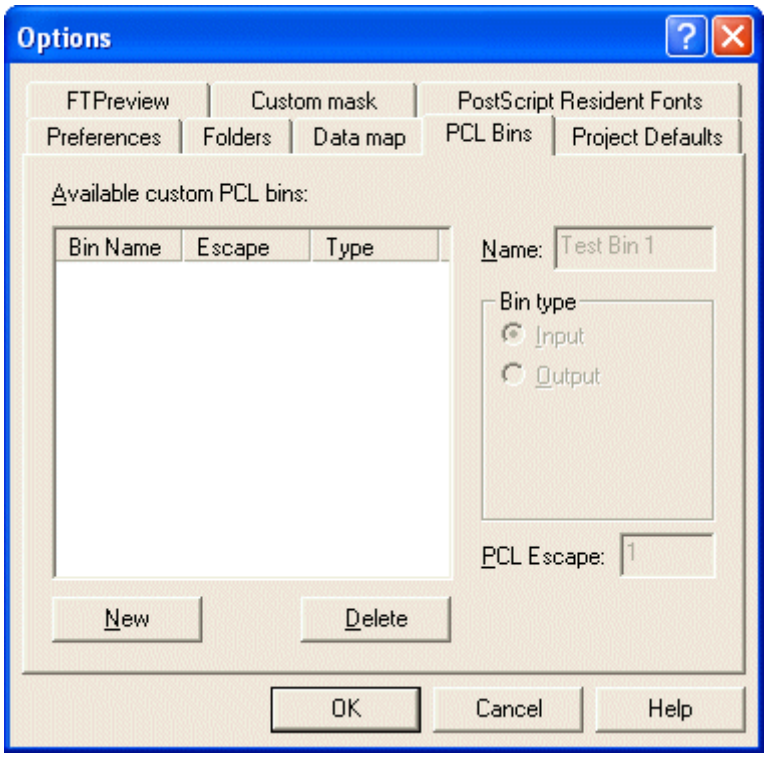
PCL Bins

Available custom PCL bins store the required attributes to force the printer to select other than the normal bin for input and output. Input is for paper selection, output for is destination. This section assumes you will give preference to one of PCL (PCL52 or PCL5c) or PCLXL (PCL6) for your bin selections for custom bins as they may be different. PostScript bins cannot be permanently labeled in this fashion as they are provided by the printer driver.

On the ***PCL Bins*** tab, you can set the following options:

- ***Name*** - the name of the custom printer bin to be displayed in FTDesign. Custom PCL Bins are used to define extra printer input and output bins when the printer driver does not make them visible.
- ***Bin type*** - set whether the custom bin is an input tray or output bin.
- ***PCL Escape*** - set the numeric part of the PCL escape code for selecting the custom bin. This value can be found in your printer manual.

You can edit the preferences of any custom PCL bin at anytime by simply left-clicking the appropriate bin in the ***Available custom PCL bins*** box and changing the settings. PCL bins are only available when a PCL printer driver has been selected.



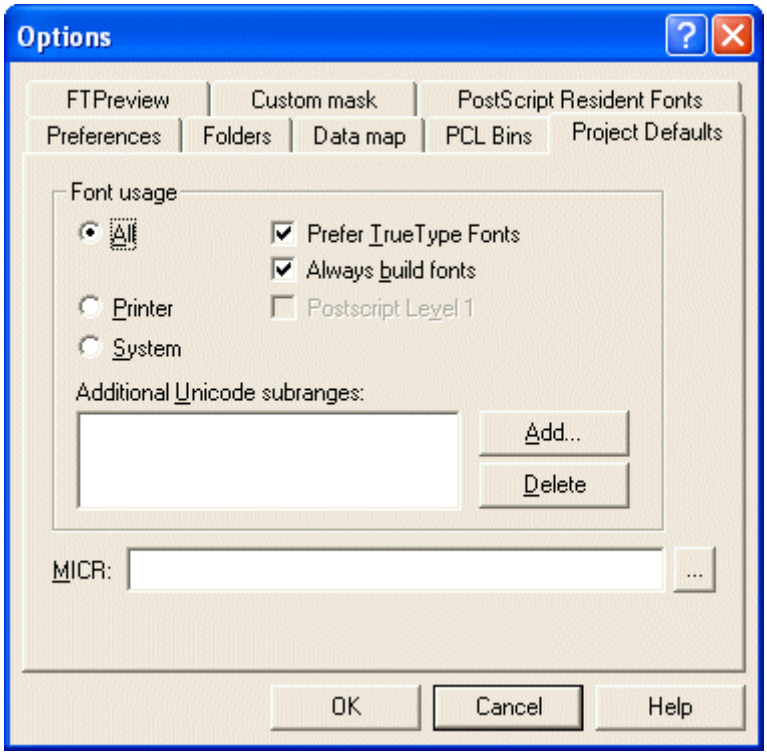
Project Defaults

Project defaults are used to initialize newly created projects and when the stand-alone form is viewed using the preview options.

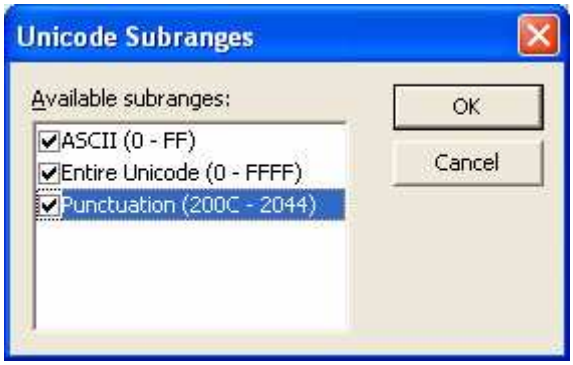
On the Project defaults tab, you can set the following Font usage and MICR options:

- ***All*** - FormTrap uses a combination of True Type fonts and printer-resident fonts when designing and building your form. Once ***All*** is selected you can then set the following options:
  - ***Prefer True Type Fonts*** - defaults to True Type fonts on all new projects. FormTrap uses True Type fonts instead of printer-resident fonts when both are present i.e. font 'Arial' exists both as a printer-resident and system based True Type font). ***Prefer True Type Fonts*** is the default option. Uncheck this box to default to printer-resident fonts on all new projects.
  - ***Always build fonts*** - when FormTrap cannot find either the True Type or printer-resident fonts it will substitute the next best fit for the missing font.

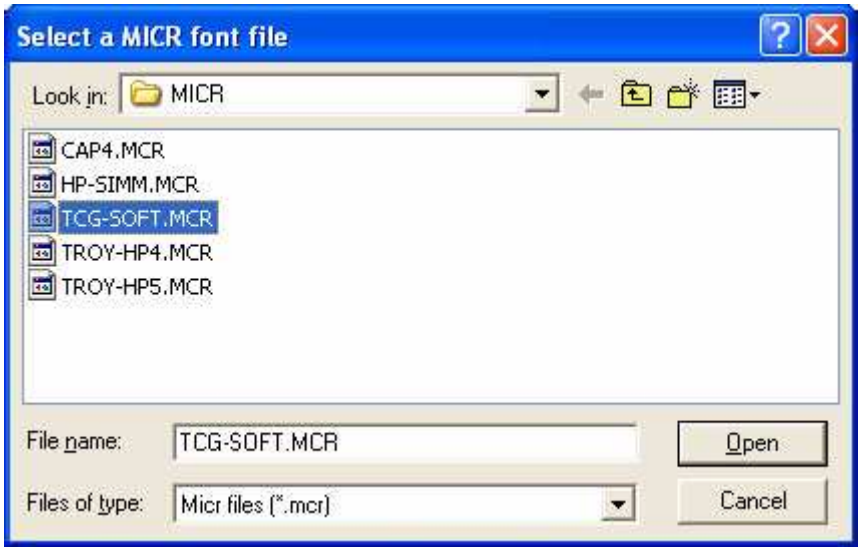
Check this box to ignore font related errors or when the exact appearance of text glyphs is irrelevant.



- ***Printer*** - FormTrap uses only printer-resident fonts when designing and building your form. Printer-resident fonts are installed on the printer. Once Printer is selected, you can then set the following option:
  - ***Post Script Level 1*** - produces Postscript Level 1 output files. This option is generally used for specific faxing solutions that require Postscript Level 1 input.
- ***System*** - FormTrap uses only True Type fonts when designing and building your form. True Type fonts are installed in your Windows font directory.
- ***Add Unicode subranges*** - this allows you to include additional ranges of character glyphs into your load (.asc) file. Subranges are supplied by TCG during the installation and on request. To add a new Unicode subrange:
  - Click the ***Add*** button. The ***Unicode subranges*** dialog box will open.
  - Select from the list of available subranges and click the ***OK*** button.



- ***MICR*** - Select a default MICR file for all new projects. The MICR box refers to the location of the MICR font file you are using to generate the MICR line on check forms. The MICR font is only available when using a PCL printer driver to design and build forms.
  - Click the browse "..." button and locate the MICR directory.
  - Select the correct MICR file and click the ***OK*** button.
  - If you are not producing checks (cheques) or you are not using the PCL printer driver you can ignore this option.

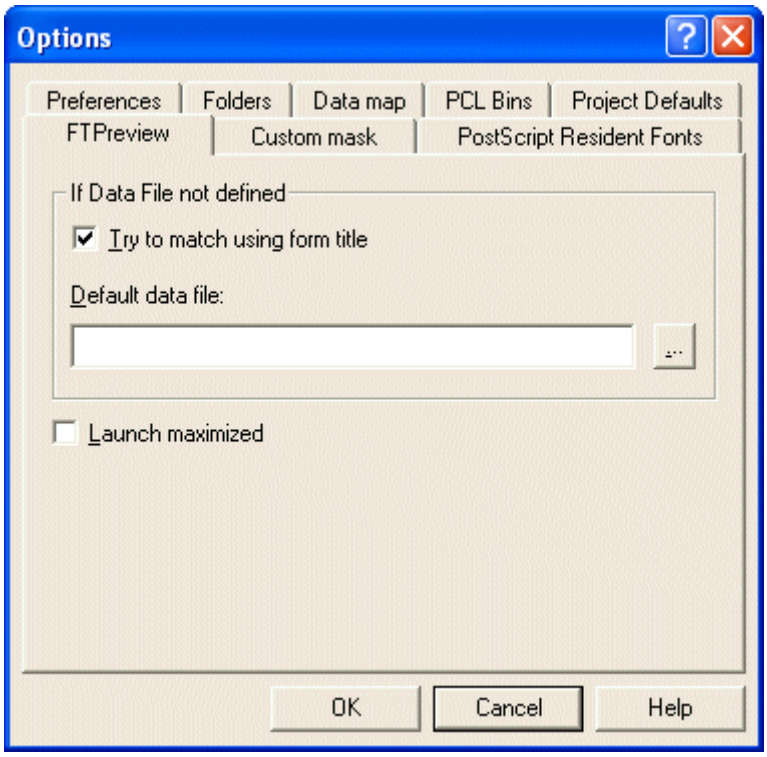


FTPreview

On the ***FTPreview*** tab, you can set the following options:

- ***Try to match using form title*** - FTPreview will try to find a data file which matches the title of the form. For example, if the form is named invoice.frm, FTPreview will look for a data file called invoice.txt or invoice.dat in the specified ***Input data files*** folder.
- ***Default data file*** - click the browse "..." button to select a default sample data file. If a data file has not been loaded FTPreview will use the specified data file as the default.

- ***Launch maximized*** - the FTPreview window will open maximized.

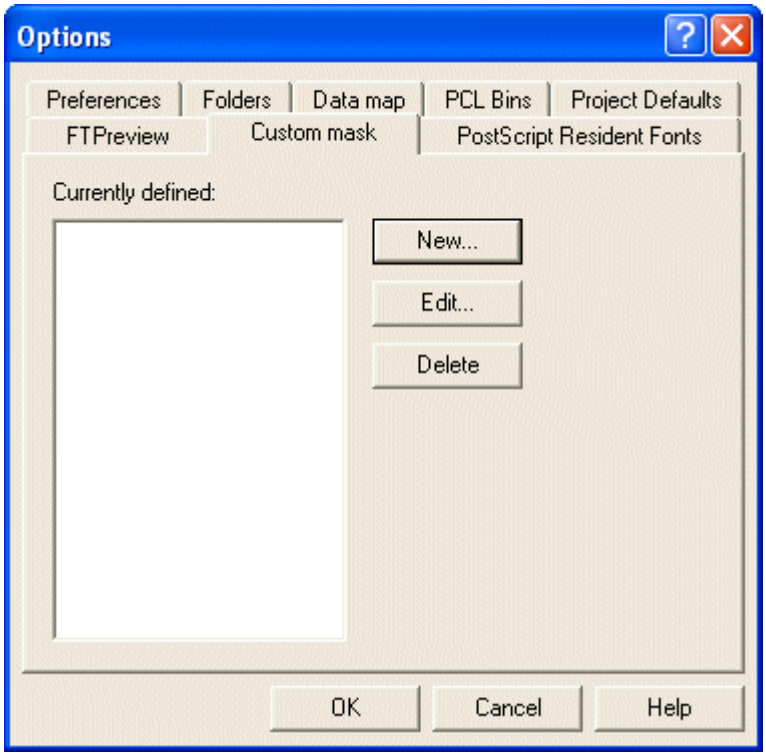


Custom Mask

On the ***Custom mask*** tab, you can set the following options:

- ***New*** - create a new custom amount mask. This is useful if you regularly use a currency format that is not available in the default list. The new mask will then be available in the list of mask types.
- ***Edit*** - edit the format of an existing custom mask.

Delete *- delete an existing custom mask.*



For more information on Creating Custom Masks see page 133.

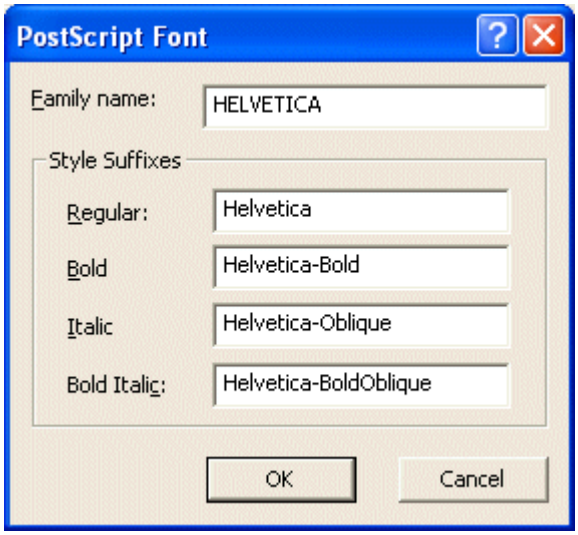
Postscript Resident Fonts

On the ***PostScript Resident Fonts*** tab, you can add additional fonts which can be used when designing a form.

The following options are available:

- ***New*** - Use the ***New...*** button to add a font to the available font list.
  - You will need to determine the name the printer uses for the font you wish to add. You can find the font name by printing a list of the printer resident PostScript fonts from the production printer.
  - Enter the ***Family name*** for the font and the ***Style suffixes*** for ***Regular***, ***Bold***, ***Italic*** and ***Bold Italic***.
  - Click the OK button.
- ***Edit*** - edit the information for an already available PostScript font. Select the appropriate font and click the Edit button.

- ***Delete*** - delete a PostScript font from the list of available FTDesign fonts. Select the appropriate font and click the ***Delete*** button.



Print Line or Records Mode

CHAPTER 3

FormTrap has two fundamental modes of operation.

- ***Print Line mode*** - converts existing print applications, especially legacy systems.
- ***Records more*** - Used for new applications (or planned major changes to an existing application).

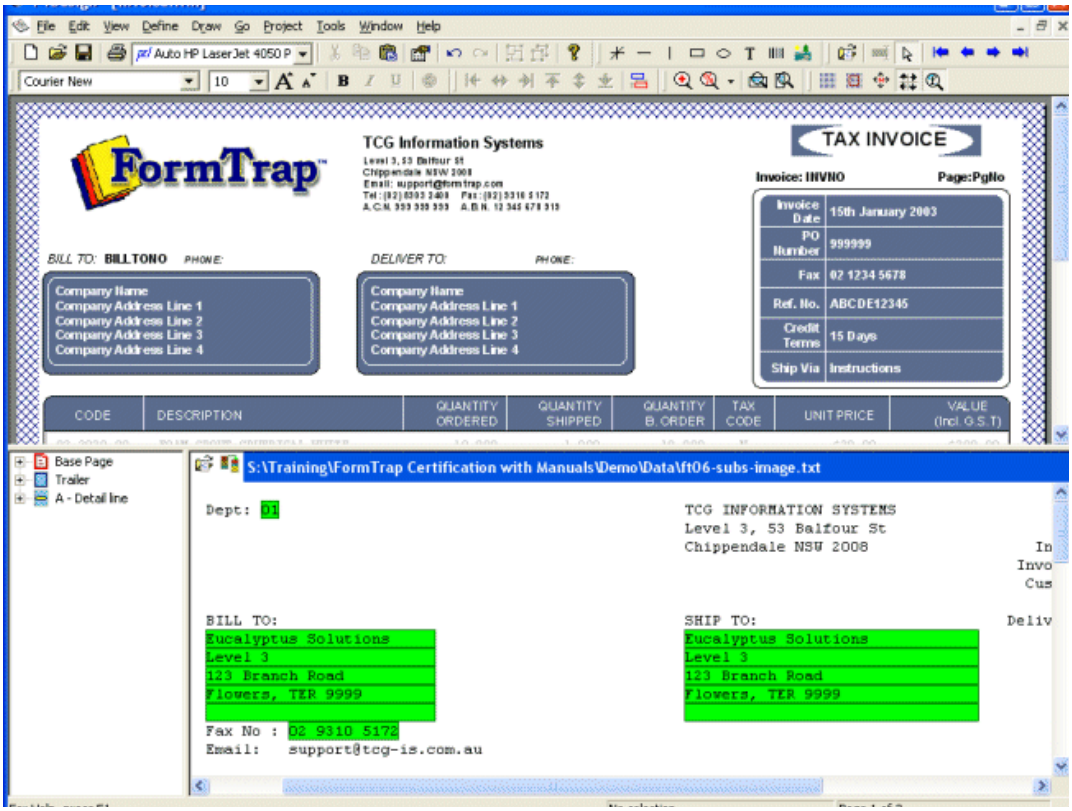
In the absence of other considerations, Records mode provides better control and is faster to put into production. However, it does require creation of a program to extract the required data ready for printing.

Print Line mode requires no changes to the existing system. It is therefore ideal when used with either legacy systems or systems where the report designs come standard with the application software. With the facilities provided by the Repaginator, this mode is close to Records mode in flexibility and performance.

For more information on the Repaginator see page 154.

Print Line Mode

The data sent to FormTrap in Print Line mode is unchanged from the original application. Unlike Records mode, the purpose of Print Line mode is to extract data from a print stream as it is generated by the application. FormTrap achieves this by mapping areas of the print stream data for print line extraction. Most print streams with more than one simple detail line should have been run through the Repaginator first, to remove redundant lines and to move total lines behind the Header (they can then be treated as part of the header). These steps simplify Print Line form design as well as allowing use of some of the advanced features.



Print line extraction is the process of identifying fields in the print line data and linking them to the field names allocated to variable text objects on the form. Data is identified according to its position on a page in the print stream and linked to the form by highlighting areas of sample text. This is called print mapping.

Input Data

Before you begin designing a Print Line form, you will need a sample data file from your application to use for mapping fields and testing your form. For best results, you should select a data file that includes the maximum amount of data that may appear on any given page and contains at least one multiple page document as it is the variation across input pages that allows you to define when to print sub-forms, group headers and different types of detail lines. Check that you have all of the variation in detail lines included in your sample file(s).

FTDesign will load any Unicode text file to use for print mapping. Non-Unicode files (normally ASCII) will convert to Unicode as they are loaded into FTDesign.

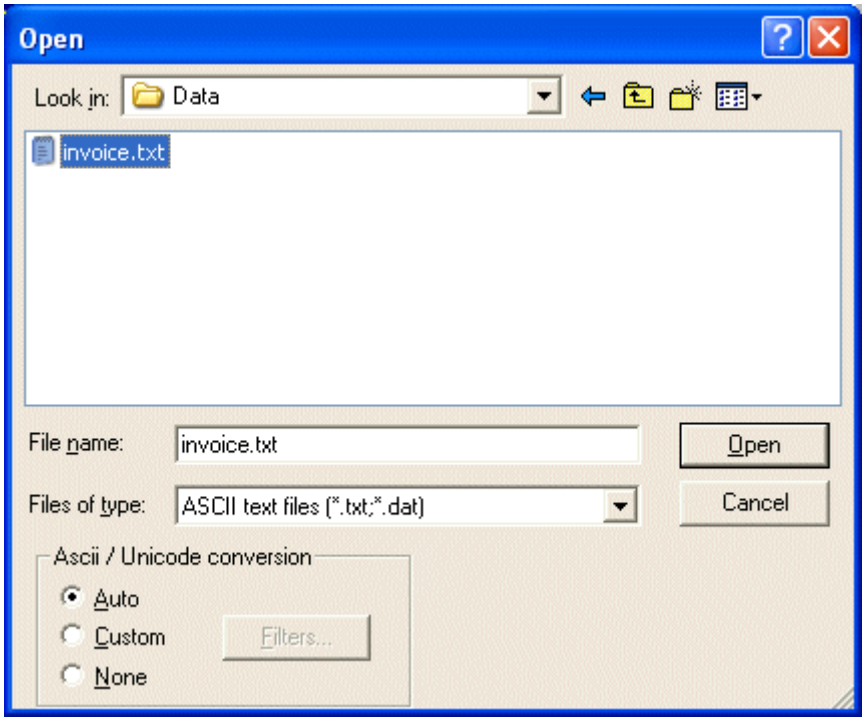
Loading a Sample Input File

Data files are processed by FormTrap through the Repaginator, if repagination has been specified for the file. The Repaginator step eases Form Design by removing lines that are not required.

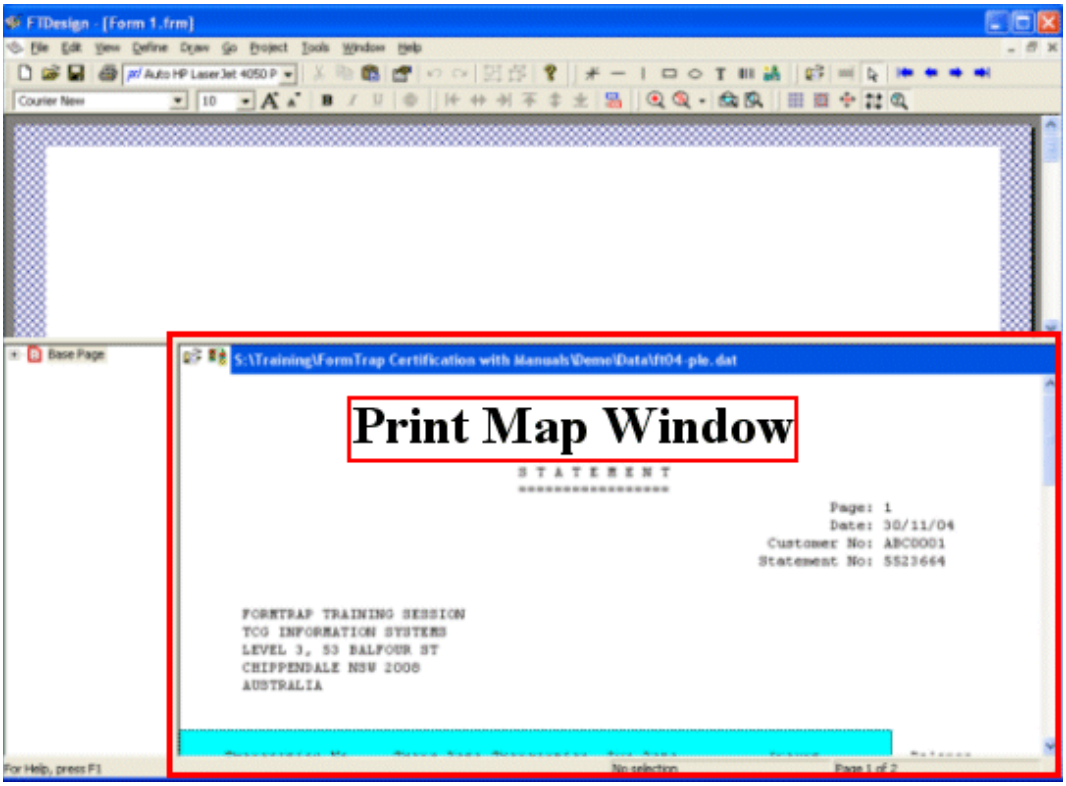
To load a sample data file:

- Select ***Load data file...*** from the Tools menu.
- In the ***Open*** dialog box, select the data file to use as a sample.
- In the ***Ascii/Unicode conversion*** frame select the appropriate conversion options:
  - ***Auto*** - FTDesign will automatically convert the selected sample data file to Unicode based on your current system locale.
  - ***Custom*** - choose a custom filter to convert the data file. Click the ***Filters...*** button and the Input Filters dialog box will open. Click ***Add*** and select a filter to be used for conversion.

- ***None*** - no conversion filter is used.

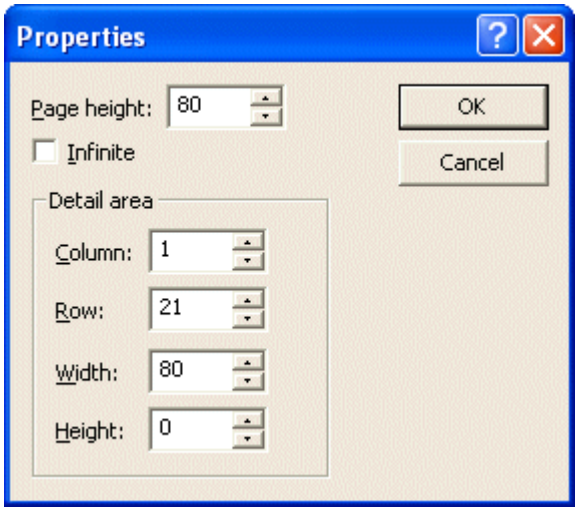


- Click the ***Open*** button to load the sample data file.
- The sample data file appears in the ***printmap*** window.



- Double click on the printmap work space to display the properties of the data file.

- ***Page height*** - the number of rows per page. This defaults to 80 on the assumption that most samples will have each page terminated by a Form Feed before 80 rows per page.
- ***Infinite*** - this should be ticked for repaginated files.
- ***Column*** - starting column of the Detail Area in the printmap workspace.
- ***Row*** - starting row of the Detail Area in the printmap work space.
- ***Width*** - width of the Detail Area in the printmap workspace.
- ***Height*** - height of the Detail Area in the printmap workspace.



Moving through the Sample Data File

These four icons move through the Data file, moving to the First, Previous, Next and Last page respectively. For files other than those with the ***Infinite*** attribute, press the Next page icon to check the ***Page height*** is correct.

Incorrect page height may occur on files from Unix systems that do not have Form Feeds. Change ***Page Height*** to 60 and check again. Adjust ***Page Height*** up and down until each page appears at the same level within the printmap work space.

Repagination

The FormTrap Repaginator is a tool used to restructure Print Line mode data files before they are processed by the FormTrap Print Logic and merged with your form. The Repaginator modifies pagination within your data files, reduces each document to one long page and moves data elements header, footer and details into set positions. Repaginator allows deletion of subsequent page headers and removal of unwanted lines from the input, thus reducing complexity in form design.

Launching the Repaginator

To launch the Repaginator from within FTDesign:

- Select ***Printline repaginator...*** from the ***Tools*** menu or click the ***Repaginator***  tool button in the top left hand corner of your printmap work area.

- The FormTrap Repaginator will be launched in a separate window, displaying the sample data file you loaded in FTDesign. You can now create your Repagination rules.

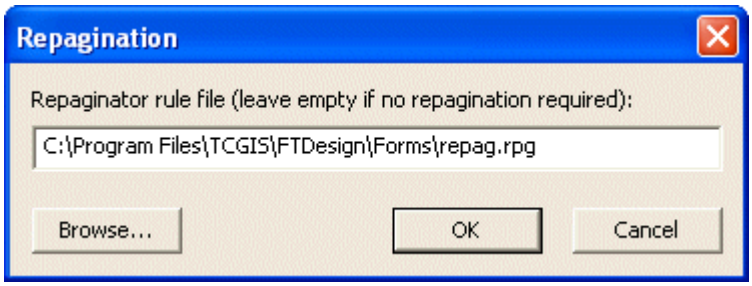
The Repaginator file (.rpg) is included in your load (.asc) file when you build your project. FormTrap checks for the Repaginator file in your load (.asc) file and, if present, repaginates the data file prior to processing the data with your form.

Configure Repaginator file

A repagination file may be used with multiple forms and this provides a way to link in an existing Repagination file (for example Invoices and Credit Notes may share their format and require just the one repagination file).

To set the FormTrap Repaginator file for your project:

- Select ***Repagination...*** from the ***Define*** menu.
- The ***Repagination*** dialog box opens.
- In the ***Repaginator rule file*** text box enter the full path and name of your Repaginator file or click the ***Browse...*** button to locate the Repaginator file and click the ***Open*** button. Repagination files are normally stored in the same folder as the forms they link to.



- Click the ***OK*** button. When you build your project, the repaginator file you have selected will be included in your load (.asc) file.

Defining Fields

Before starting to design the layout of a Print Line mode form, you can define the fields that belong to each element of the form. Each field can also be defined as the variable text or barcode object is created.

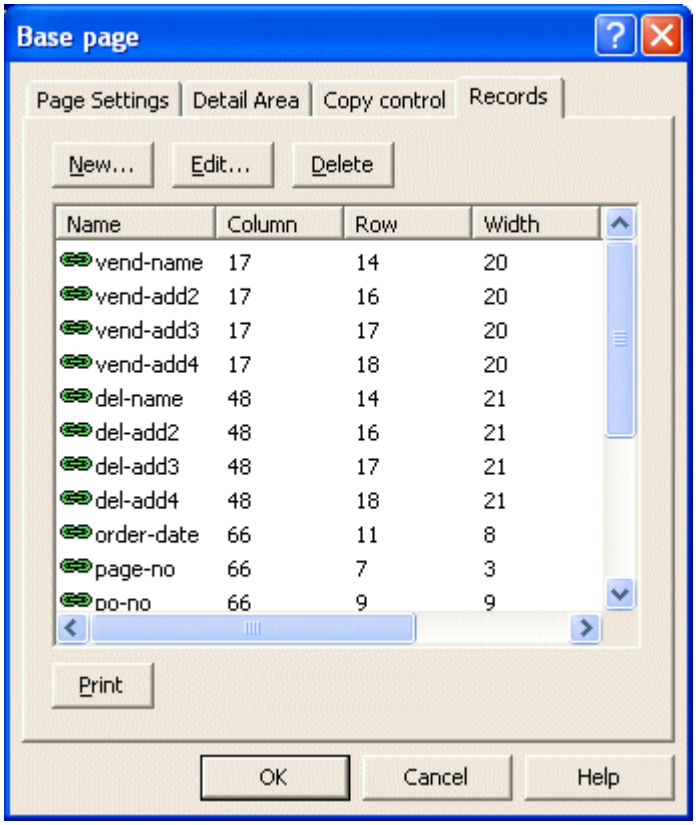
After creating the fields, you need to map the fields to the corresponding areas in the loaded sample data.

Create Record Fields

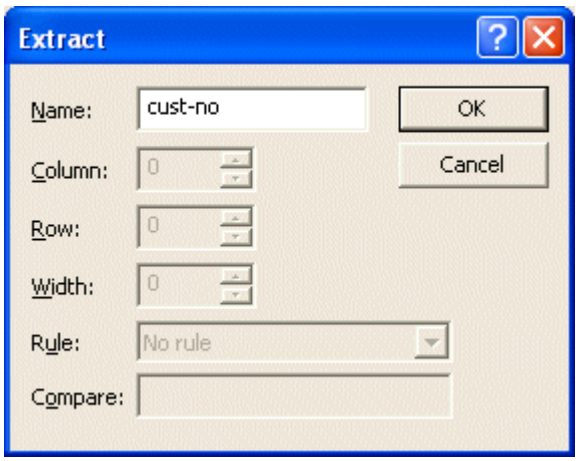
To define the record fields on each page element:

- Select the appropriate element on the ***Go*** menu.
- Select ***Properties of...*** from the ***Define*** menu.

- On the ***Records*** tab, click on the ***New...*** button to add a new record field.



- Type in a field name, unique if the Base Page is being processed, otherwise unique to detail lines or sub-forms.



- Click the ***OK*** button (and press OK again to enter another new field).
- Repeat the above steps to add other record fields

Delete Record Fields

To delete an existing field

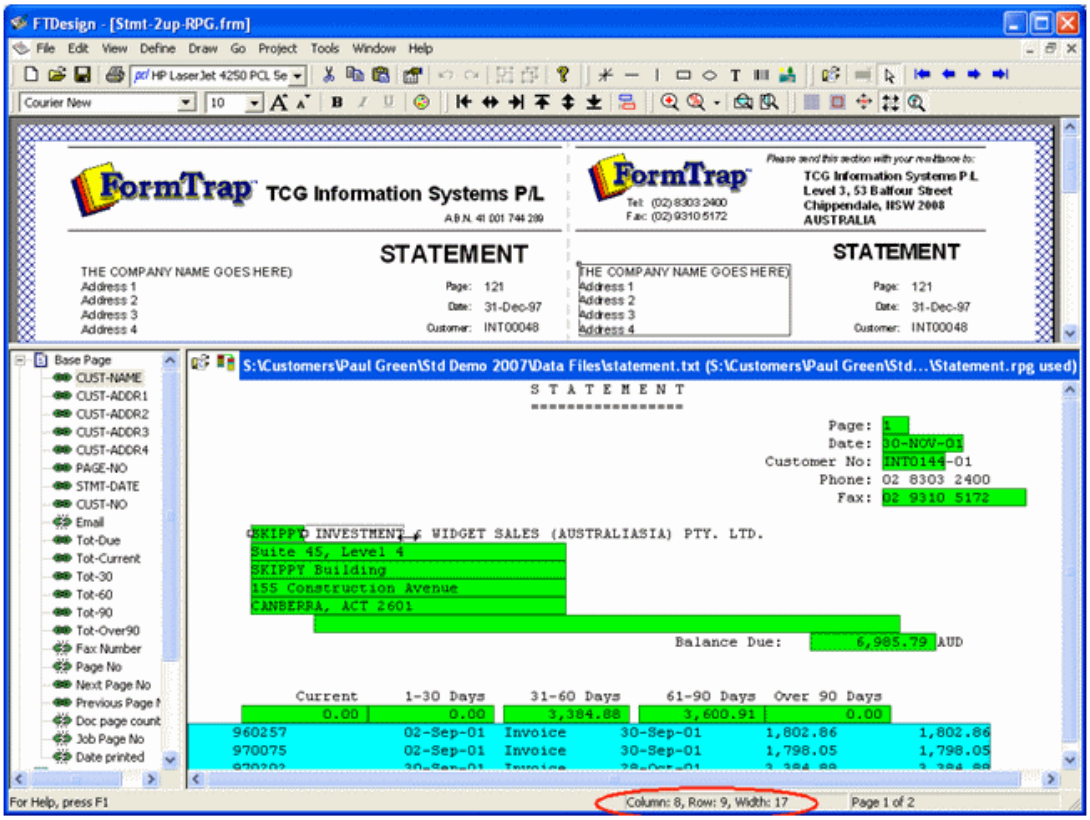
- Select the appropriate element on the ***Go*** menu.
- Select ***Properties of...*** from the ***Define*** menu.

- On the ***Records*** tab, click and select the field you wish to delete.
- Click on the ***Delete*** button to delete the field.

Mapping Fields

Map using create extract button

This form of mapping is used when a field may exist but is not represented in this particular data file, Drag and Drop is preferable. Note that the position including length of the field is shown progressively in the bottom bar of the Data File Windows.



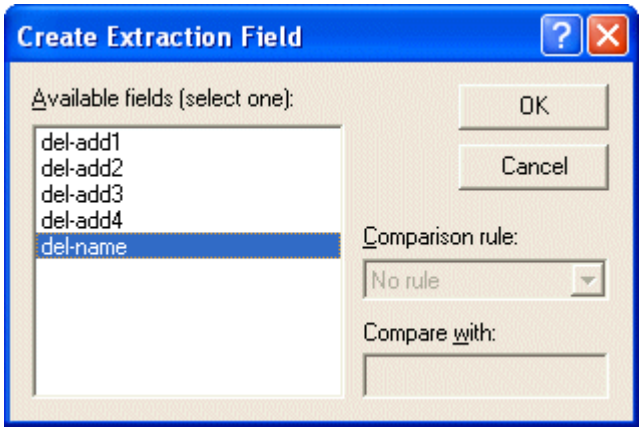
To map fields using the create extract field button:

Click the ***Create extract*** button on the toolbar. The cursor will change to an I-bar , or stop sign if no field is yet selected. For stop sign, select a data field name from the field list (left of the printmap work area) to change to an I-bar.

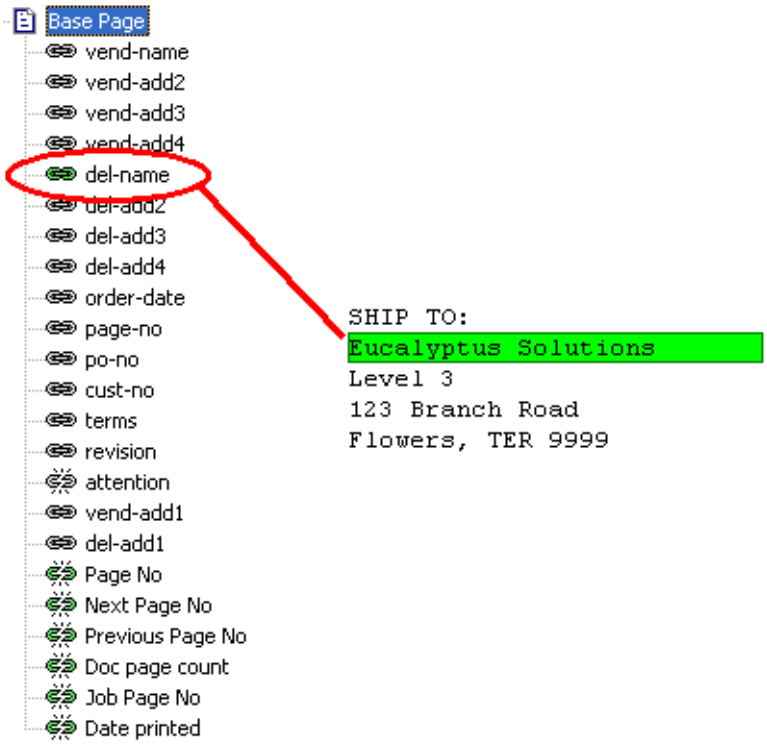
- Holding down the left mouse button, highlight the characters representing the field in your sample data file, displayed in the printmap window.

```
Eucalyptus Solutions
Level 3
123 Branch Road
Flowers, TER 9999
```

- Release the mouse button to open the ***Create Extraction Field*** dialog box.



- Select the corresponding field from the ***Available fields*** list.
- Click ***OK*** to map.
- The mapped characters will be highlighted green and the field will be linked and highlighted on the field list.

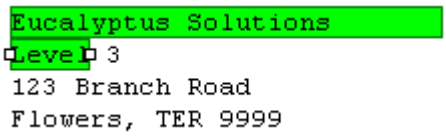


Map using drag and drop

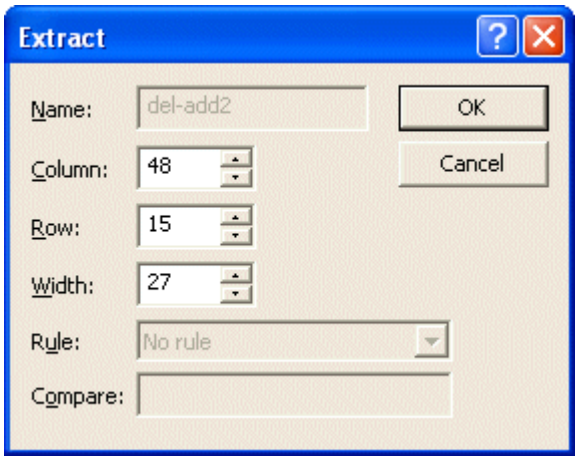
To fields using the drag and drop method:

- Click to select the field you wish to map from the ***Structure Map Pane***.

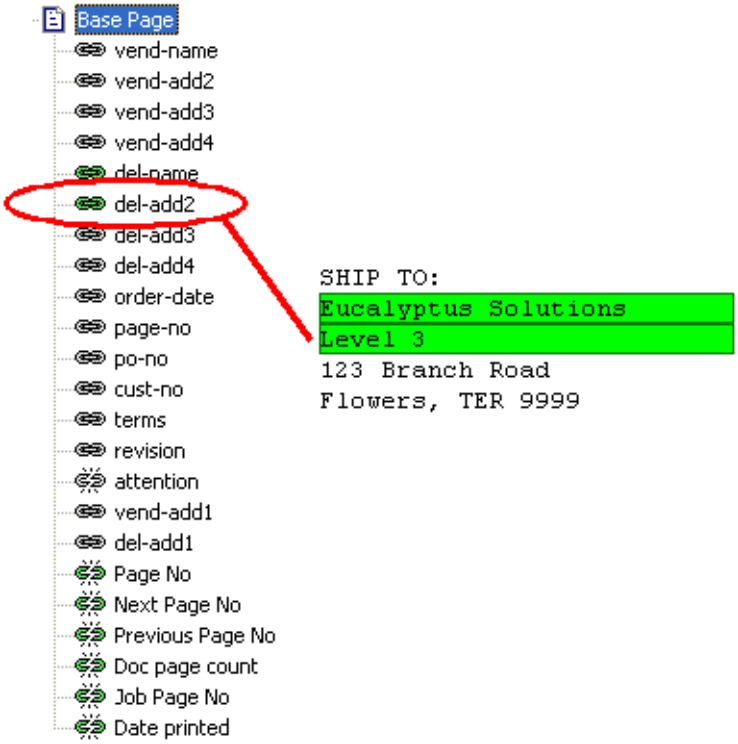
- Holding the left mouse button down, drag the field and drop it on top of the characters representing the field in your sample data file, displayed in the print-map window.



- Left click on the field and drag to resize, or double click and change the ***Column***, ***Row*** or ***Width*** values in the Extract dialog box.



- The mapped characters will be highlighted green and the field will be linked and highlighted in the field list.



- Repeat the above steps for all remaining fields on your page.

Establishing Comparison Rules

Data files may contain different detail lines and sub-forms. The method used to distinguish between different lines (to select and print the correct format) is to use comparison rules to allow FormTrap to identify what it is looking at.

Each rule is a simple test. The following rules are available:

Rule	*Description*
No Rule	Default setting
Blank	Field must be blank
Not Blank	Field must contain data
Equal to	Field must equal the supplied characters
Not equal to	Field must not equal the supplied characters
Greater than	Field must be greater than the supplied characters
Greater than or equal to	Field must be greater than or equal to the supplied characters.
Less than	Field must be less than the supplied characters.
Less than or equal to	Field must be less than or equal to the supplied characters.

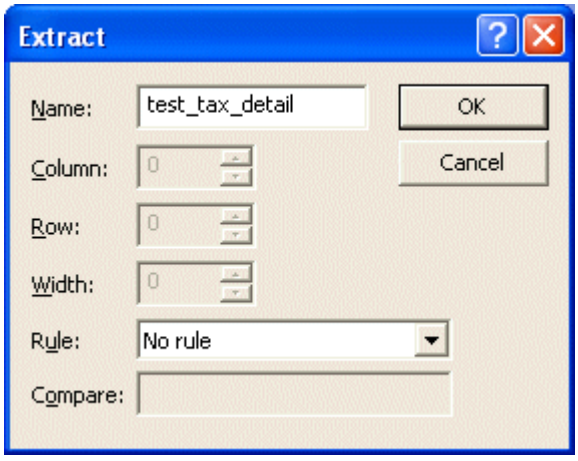
Setting Detail Line Rules

When a form has more than one detail line a comparison rule is used to establish which detail line is printed. Each rule is a simple test that must be satisfied for the detail line to print. Where a detail line has multiple rules, all of the rules must be satisfied to qualify. "Detail line" may be multiple lines from the file in some instances, where the set is represented in the same format. (Note: Test fields should be created last for each deatil line).

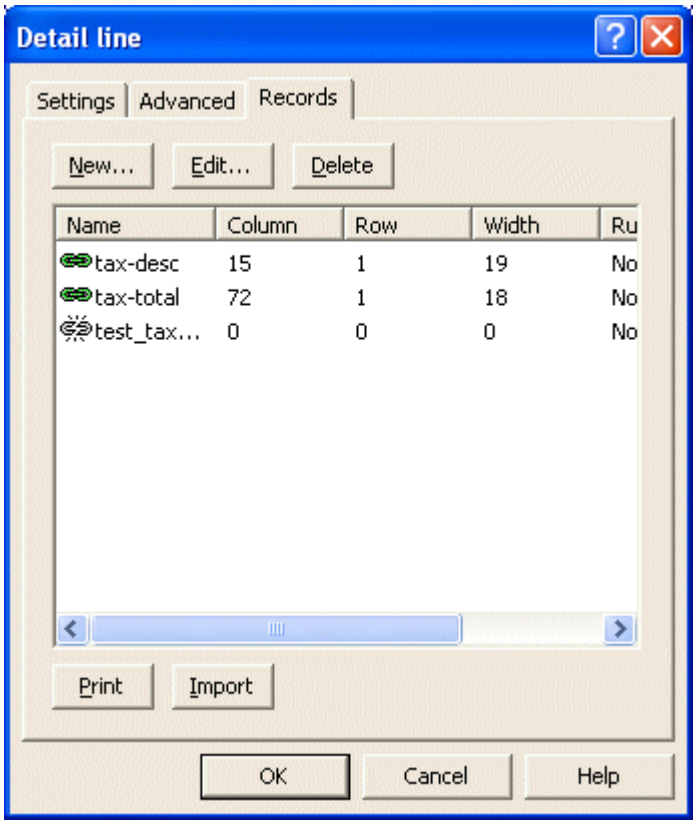
To create a test field on a detail line:

- Ensure that the appropriate detail line is selected on the ***Go*** menu.
- Select ***Properties of...*** on the ***Define*** menu.
- On the ***Records*** tab, click the ***New...*** button to add a new field.

- Enter an appropriate name into the ***Name*** text box.



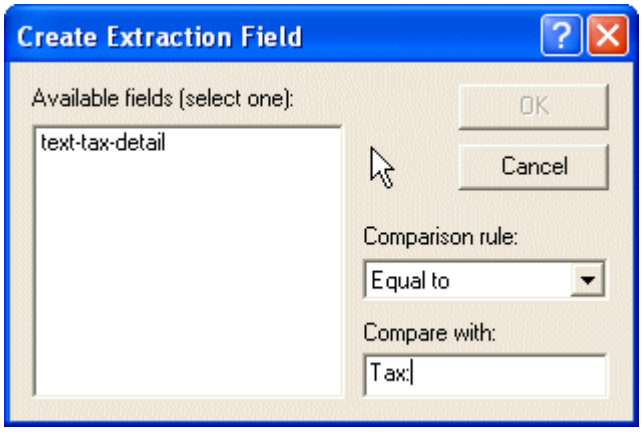
- Click the ***OK*** button to create the field and then OK again to accept the changes.



- In the Structure Map Pane select the appropriate detail line.
- Find something that is unique to the detail line. In this example we will use the word "Tax".

- Click the Create extract button  on the toolbar. The cursor will change to an I-bar  .

- Press and hold the left mouse button to highlight the characters representing the test data in your sample data file, displayed in the Printmap window. Allow for the full size of the field, not just what is visible on this page.
- Release the mouse button to open the ***Create Extraction Field*** dialog box.
- Select the corresponding test field name from the ***Available Fields*** list.
- Select a comparison rule from the ***Comparison rule*** drop down menu. In this example we use the ***Equal to*** comparison rule and enter the comparison string "Tax" in the ***Compare with*** text box. The rule is case sensitive.



- The mapped Characters will be highlighted yellow to indicate a test field.

Defining Rule Evaluation Order

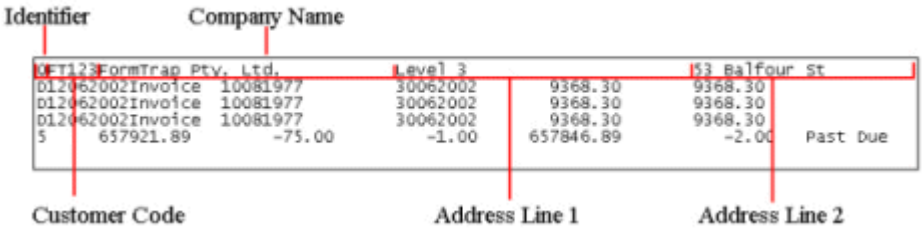
Evaluation order is the sequence in which FormTrap tests the comparison rules on the detail lines. Set the evaluation order of detail lines so there is no ambiguity in the evaluation, with the most specific rules evaluated first.

To change the order of evaluation for the detail lines:

- Right click on the detail line in the ***Structure Map Pane***.
- From the drop down menu select ***Evaluation order***.
- Move the detail line up or down using the options on the menu.
  - ***Highest*** - top of the evaluation order.
  - ***Higher*** - up one in the evaluation order.
  - ***Lower*** - down one in the evaluation order.
  - ***Lowest*** - bottom of the evaluation order.

Records Mode

In Records mode, the data sent to FormTrap is specially formatted. The first column of each line identifies the page element and indicates to FormTrap which part of the form it should print. The rest of the line is comprised of fields that have a fixed start position and a fixed length. The figure below shows a sample records mode data file.



Input Data

Records mode does not require a sample data file loaded before designing the form. However to preview the form and make sure that all required fields are included a sample data file must be used. For best results, you should generate a file that overflows to two pages.

You may ignore records in the sample data that are not required on the form by simply not defining them as detail lines or sub-forms.

Defining Fields

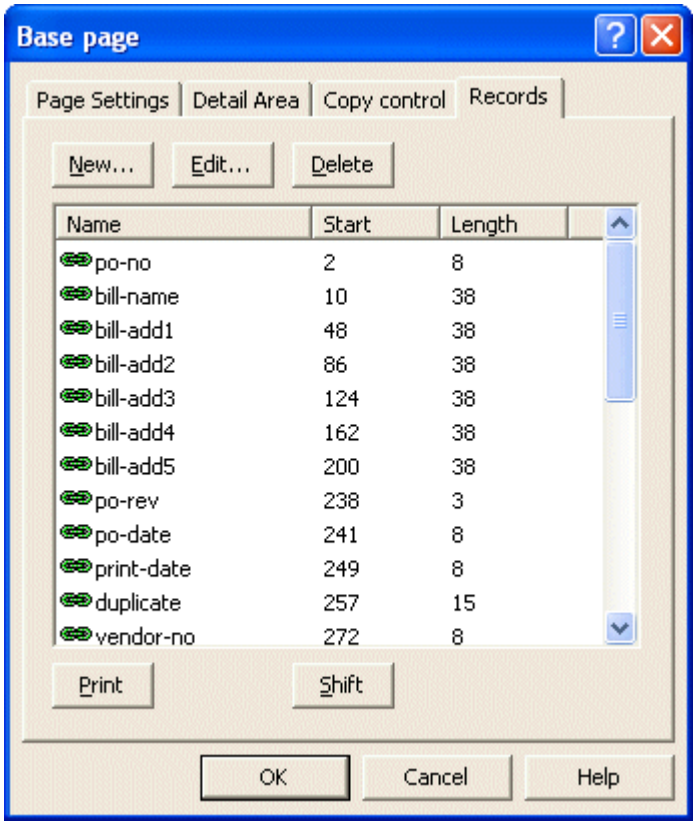
In Records mode the unique page element identifier, as the first character of that row, indicates what fields follow. The name, start position and length defines each field. While unusual, each field can also be defined as needed, as the variable text or barcode object is created.

Create fields

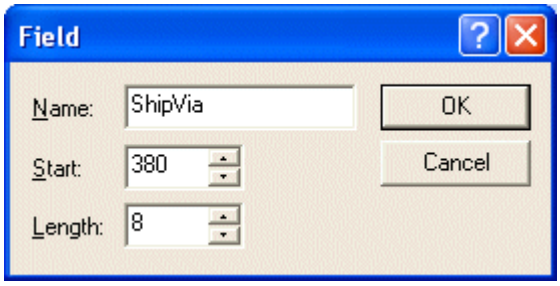
To define the fields on each page element:

- Select the appropriate page element on the ***Go*** menu.
- Select ***Properties of...*** from the Define menu.

- On the ***Records*** tab, click on the ***New...*** button to add a new field.



- Type in the field name, start position and length. Note, you may sub-define a field, in which case the longer field is sorted ahead of its sub-definition fields.



- Click the ***OK*** button.
- Repeat the above steps to add other fields to the page element.

Delete fields

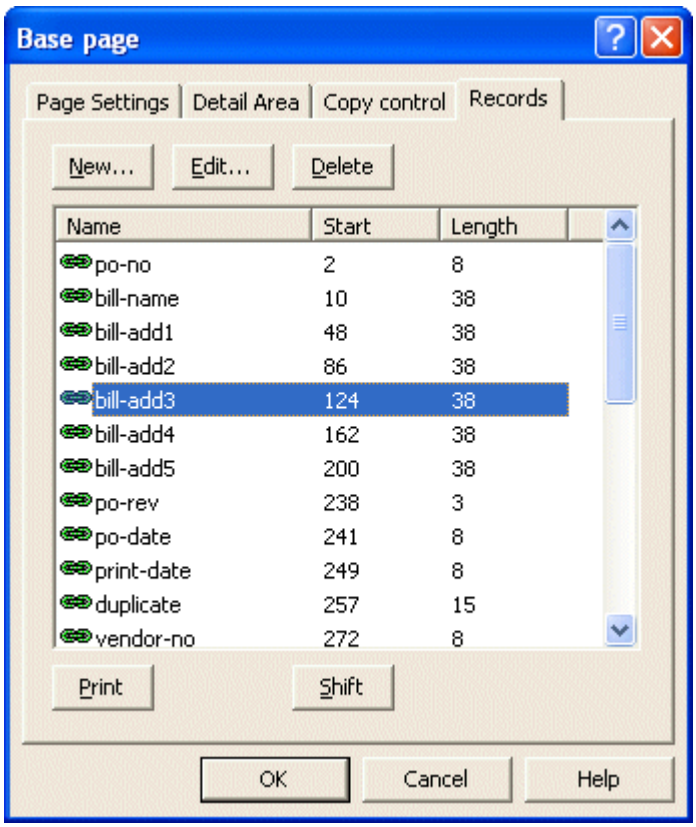
To delete a field:

- Select the appropriate page element on the ***Go*** menu.
- Select ***Properties of...*** from the ***Define*** menu.
- On the ***Records*** tab, click and select the field you wish to delete.
- Click on the Delete button to delete the field.

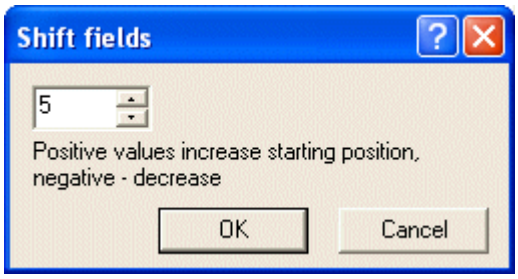
Shift fields within a record

To shift the starting position of fields within a record:

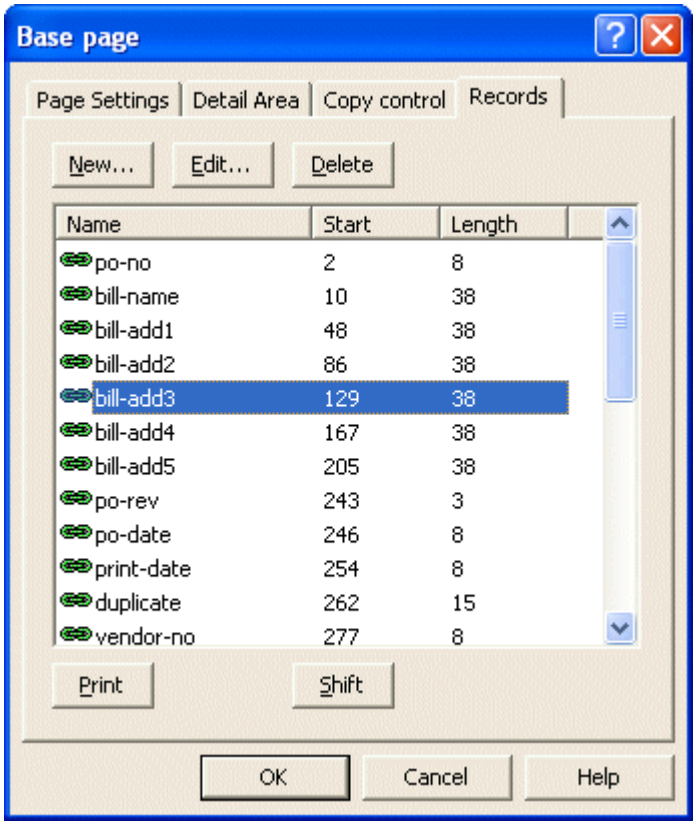
- Select the appropriate page element on the ***Go*** menu.
- Select ***Properties of...*** from the ***Define*** menu.
- On the ***Records*** tab, click and select the field you wish to shift.



- Click on the ***Shift*** button.
- In the ***Shift fields*** dialog box, enter a positive number to increase the starting position and a negative value to decrease the starting position.

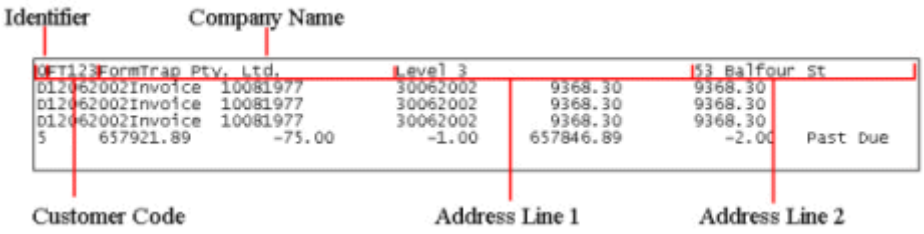


- The starting position of the selected field and all subsequent fields will shift accordingly.



Identifiers in Design

In Records mode, the first column of each line is a page element identification and will indicate to FormTrap which part of the form it should print. The rest of the line is comprised of fields that have a fixed start position and a fixed length. The figure below shows a sample records mode data file.



Records starting with ***o*** contain data for the Base page. Almost all form designs include Record o. Data on the Base page is document based (e.g. invoice number, customer and address) and consistent on each page. When FormTrap sees a o identifier in the first column it starts a new document. Good practice is to place a literal identifying the document content as the first field (i.e. oInvoice...).

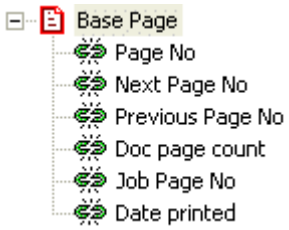
Lines starting with ***uppercase A through Z*** identify detail lines. When FormTrap sees an A-Z identifier in the first Column it will print the corresponding detail line.

Lines starting with ***lowercase a through j*** identify explicit group headers. When FormTrap sees an a-j identifier in the first column it will print the corresponding group header.

Lines starting with ***1 through 9*** identify sub-forms. When FormTrap sees a 1-9 identifier in the first column it will print the corresponding sub-form. Sub-forms are used to print conditional information that may occur only once in the data.

Predefined Fields

FormTrap offers a number of pre-defined fields to cover common data requirements. These include the previous, current and next page numbers for the current document, the current system date, and the current number of pages in the entire print job.



Field	*Description*
Page No	Current page in the document
Next Page No	Next page in the document
Previous Page No	Previous page in the document
Doc Page count	Total number of pages within the document
Job Page No	Current page in the print job
Date printed	Date the document is printed

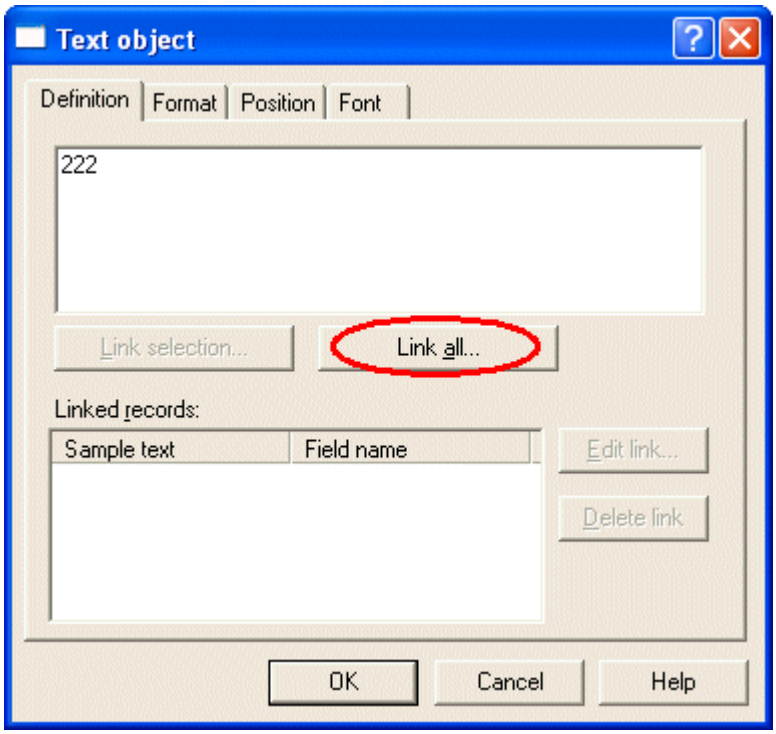
These fields are calculated by FormTrap at runtime.

Use pre-defined field

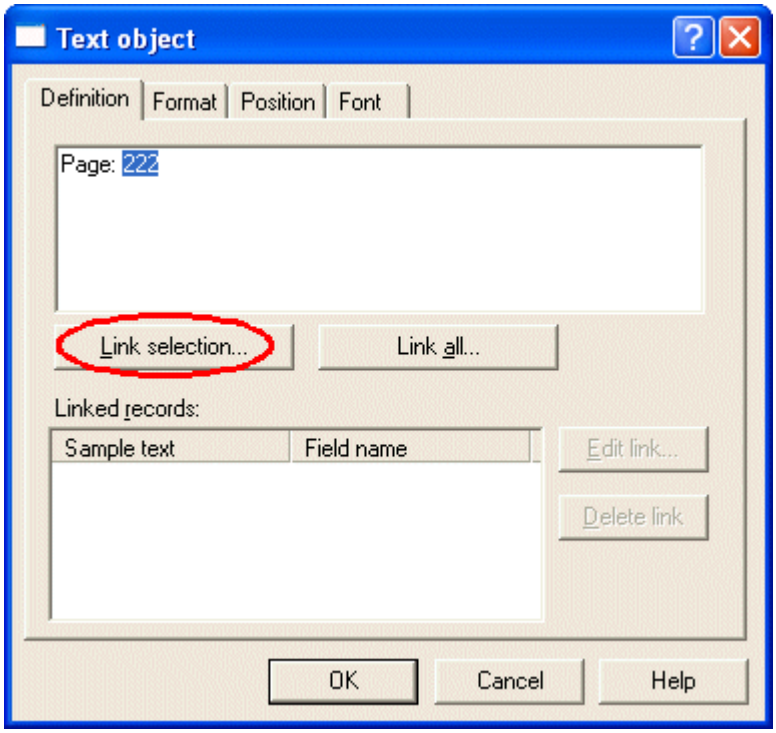
To use a pre-defined field:

- Choose ***Text*** from the ***Draw*** menu or click the ***Text*** tool button on the toolbar.
- Click and drag diagonally to add the new text frame.
- Release the mouse button and the ***Text*** dialog box will open.
- On the ***Definition*** tab, enter sample text into the text box. When creating variable text objects it is best to make the sample text the maximum possible length of the field extracted from the data.

- To link all the sample text to the field, click on the ***Link all...*** button.

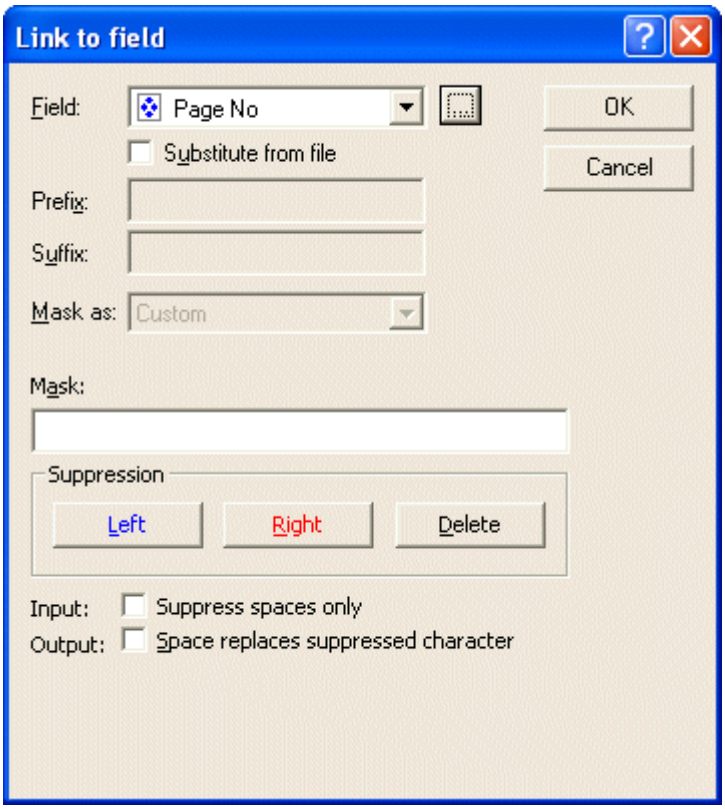


- To link a section of the sample text to the field, highlight the relevant text and click the ***Link selection...*** button.



- In the ***Link to field*** dialog box, select the pre-defined field name from the Field drop down menu - pre-defined fields are last in this list.

For more info on Masks see Masking and Font Change on page 124.



- Click the ***OK*** button to link the field to the pre-defined field.

Design and Objects

CHAPTER 4

This section introduces the design concepts important to creating your form, both individually in detail and collectively as part of the full design process. Basic and advanced design concepts are covered.

This section describes the concepts of form design that are shared by both Records and Print Line modes of FormTrap input. Differences between the two design modes are explained in detail in Printline or Records Mode in the previous chapter.

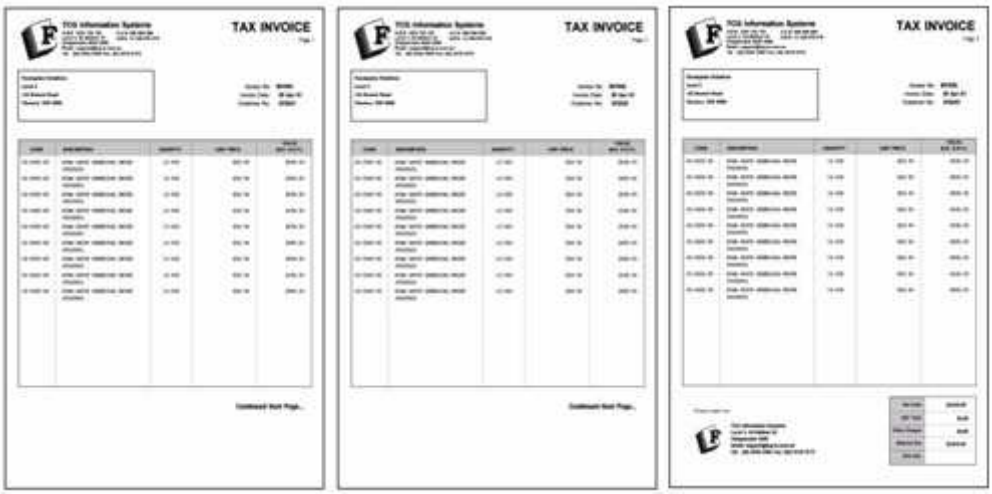
Designing a Static Form

A static form design has the Detail Area in a fixed area on the page. This approach is typically used to handle Print Line mode data, where the input has a constant number of detail lines on each page of the input file. Static form are ideal where most of the documents are one page only.

A static form uses the basic features of FormTrap and reflects the designs of previous versions. The Base page contains the framework for the form and most fixed objects appear on the Base page. Details print within a defined area that is fixed on every page. Forms designed with versions prior to 6.0 and opened with FTDesign are "static" by default.

A static form is characterized by:

- Header on Base page - the heading information is displayed on each page of the document. The heading area remains the same size on each page.
- Static Detail Area - the area holding detail lines (Detail area) is in the same position and the same size on each page.
- Table object on Base page - the column headings and frame for the detail area (collectively Table object) is defined on the Base page.
- Report footer on Sub-form - the total information and intermediate page "continued" messages are on different sub-forms with the total at the end of the document.



Designing a Dynamic Form

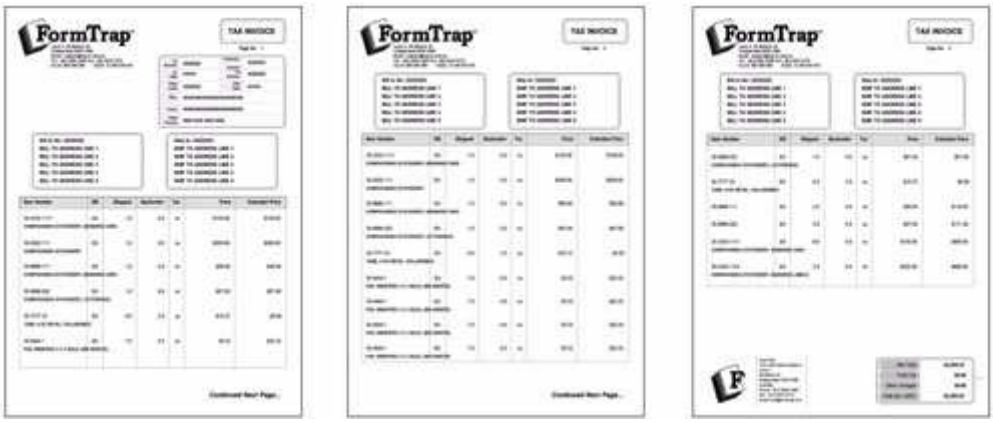
In a dynamic form, the Detail Area shrinks and grows to accommodate different sized document headers and footers. This approach is better suited to handling Records mode data and especially repaginated Print Line mode data.

A Dynamic form is more flexible but also more complex to design. Use a Dynamic form for long documents where you require more details per page and/or "C/Fwd" amounts on intermediate pages. In this mode, Page headers may have less detail on pages after the first page of a document, and more space is left on the final page to carry trailer details.

The design process for creating a dynamic form harnesses many of the advanced features of FormTrap. A dynamic form is one on which the framework is not fixed, but will print in different positions according to the size of headers and footers. Little is defined on the Base page and the area in which details print will also be defined dynamically page to page as the form is printed.

A dynamic form is characterized by:

- Dynamic header - using the Report and Page headers you can structure a dynamic heading area which can be used to conserve space on a form.
- Floating Detail Area - the Detail Area moves up or down to accommodate the headers and footers.
- Table object created as needed - the table object surrounding the Detail Area is created with its assigned group header.
- Dynamic footer - using the Report and Page footers you can structure a dynamic footer area which can be used to conserve space on a form.
- C/Fwd is defined as part of the Page Footer and with a B/Fwd within the Detail area on the following page.



Creating Objects

When you design FormTrap forms with FTDesign, you create objects and arrange them on a page. Objects are the building blocks of a form and may include text, barcodes, lines, boxes, ellipses and pictures. You can format these objects to suit your needs and arrange them with the tools in FTDesign.

Objects can be of two types:

- ***Constant objects*** represent a value that is the same each time the form is printed. Constant objects may be a company logo or a return address that is the same on each page of your form. Lines and rectangles are also considered constant objects.
- ***Variable objects*** obtain their values from the print stream. These are the place holders for fields in the data you want to print on the form. Variable objects also control the appearance of the data by formatting it with font styles or even displaying data as a barcode.

Objects may be direct or retrieved through Substitution files. Substitution files replace the form object with information from a file - meaning the information is easily and permanently changed without modification to the form. Substitutions may be fixed (for example, company name, address and phone number copied from files rather than built into the form) or variable (same information for different companies where the file name includes variable data).

Creating Line Objects

There are three tools used for creating horizontal, vertical, and diagonal lines.

 Horizontal Line tool

 Vertical Line tool

 ***Line tool*** used to draw a diagonal line

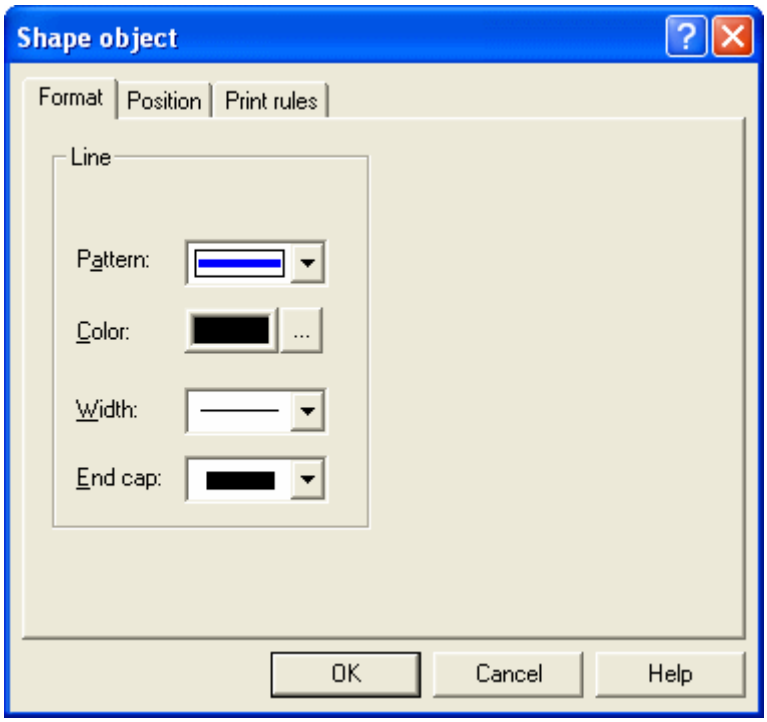
To create a line object:

- Choose ***Line*** from the ***Draw*** menu or click the Line tool button on the toolbar. The cursor changes to a cross-hair pointer.
- Click and hold down the left mouse button on the page where you want to start the line. Drag the mouse to draw the line.
- Release the mouse button where you want to end the line.
- Hold the ***CTRL*** key down whilst using the mouse to move the endpoint of the diagonal line. This will round the angle of the line to an increment of 15 degrees.
- To resize the line, click on one of the black handles and drag in or out to make the line longer or shorter.

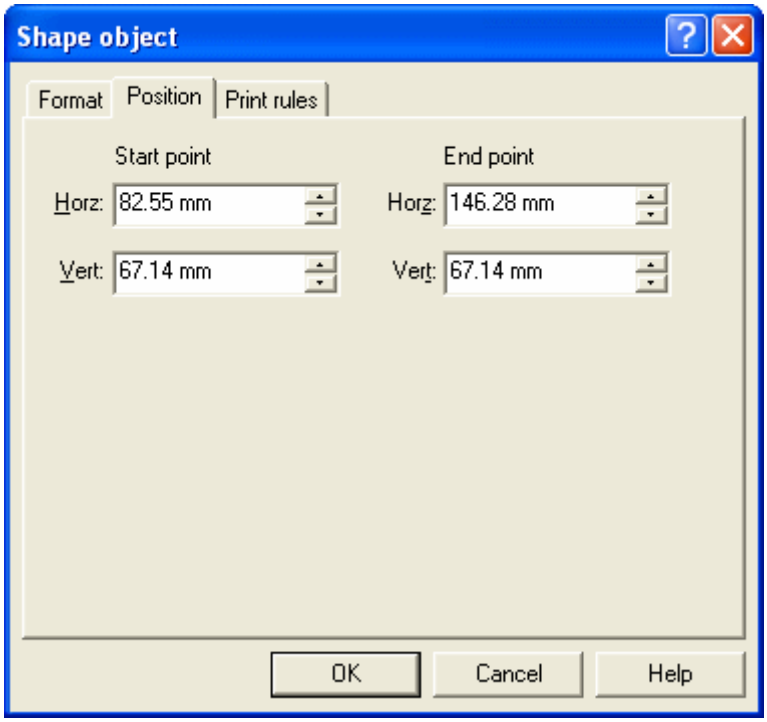
To change the properties of a selected line:

- Double click on the line or select the line and then click on the ***Object properties*** button on the toolbar.
- On the ***Format*** tab, edit:
  - ***Pattern*** - solid, dotted or dashed line.
  - ***Color*** - change the color of the line.
  - ***Width*** - make the line thin or thick.

- ***End cap*** - modify the end of the line to a rounded or square end.



- On the ***Position*** tab, edit the line's position.



The Print rules tab allows conditions to be set for printing of this object, *see Print Rule for an object on page 74.*

Creating Rectangle and Square Objects

The Rectangle tool is used to create a rectangle or a square.

To create a rectangle:

- Choose ***Rectangle*** from the ***Draw*** menu or click the ***Rectangle*** button on the toolbar. The cursor changes to a cross-hair pointer.
- Click and drag the mouse diagonally to define the size of the rectangle.
- Release the mouse button.
- To resize the rectangle, click on one of the black handles and drag in or out to make the rectangle bigger or smaller.

To create a square:

- Choose ***Rectangle*** from the ***Draw*** menu or click the ***Rectangle*** button on the toolbar. The cursor changes to a cross-hair pointer.
- Click and drag the mouse diagonally across while holding the ***CTRL*** key down.
- Release the mouse button.
- To resize the square, click on one of the black handles and drag in or out while holding the ***CTRL*** key, to make the square bigger or smaller.

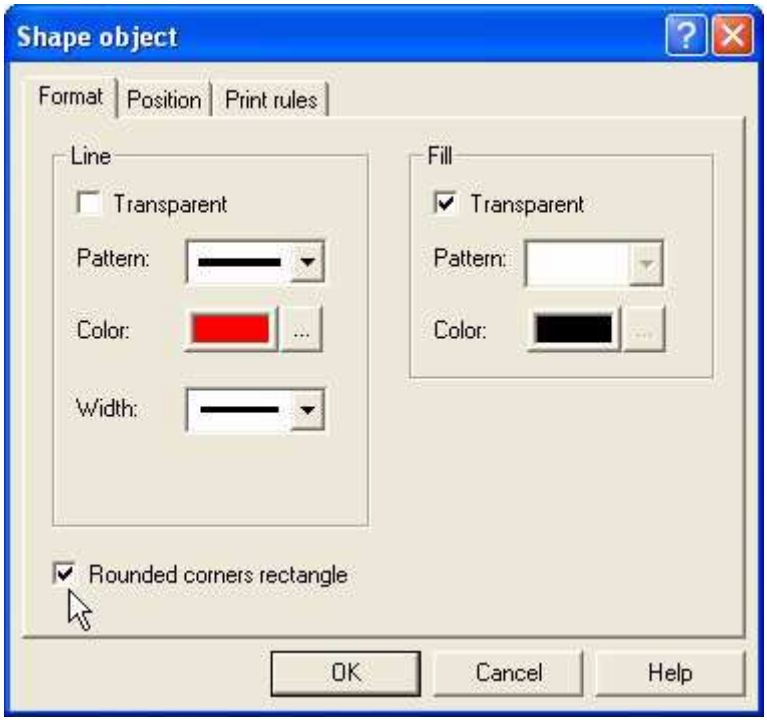
To create a rectangle from its centre point:

- Choose ***Rectangle*** from the ***Draw*** menu or click the ***Rectangle*** button on the toolbar. The cursor changes to a cross-hair pointer.
- Click and drag the mouse diagonally across while holding the ***SHIFT*** key down.
- Release the mouse button.
- To resize the rectangle, click on one of the black handles and drag in or out while holding the ***SHIFT*** key, to make the rectangle bigger or smaller.

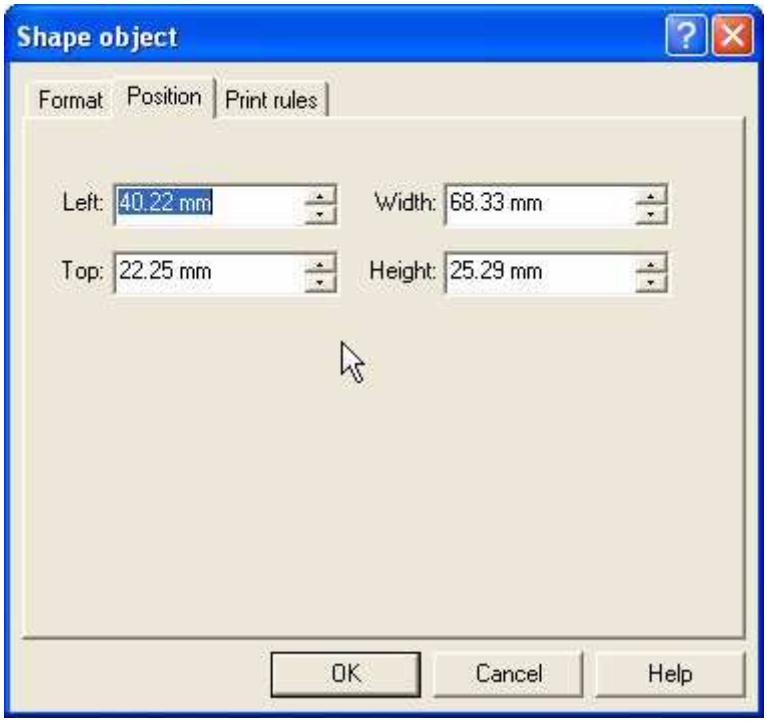
To change the properties of a selected rectangle:

- Double click on the rectangle or select the rectangle and then click on the ***Object properties*** button on the toolbar.
- On the ***Format*** tab, edit:
- ***Line*** attributes - transparency, pattern, color and width.
- ***Fill*** attributes - transparency, pattern and color.

- ***Rounded corners*** - give the rectangle rounded corners.



- On the ***Position*** tab, edit the rectangle's position and size.



The Print rules tab allows conditions to be set for printing of this object, *see Print Rule for an object on page 74.*

Creating Ellipse and Circle Objects


The Ellipse tool is used to draw an ellipse or a circle.

To draw an ellipse:

- Choose ***Ellipse*** from the ***Draw*** menu or click the ***Ellipse tool*** button on the toolbar. The cursor changes to a cross-hair pointer.
- Click and drag the mouse diagonally to define the size of the ellipse.
- Release the mouse button.
- To resize the ellipse, click on one of the black handles and drag in or out to make the ellipse bigger or smaller.

To draw a circle:

- Choose ***Ellipse*** from the ***Draw*** menu or click the ***Ellipse tool*** button on the toolbar. The cursor changes to a cross-hair pointer.
- Click and drag the mouse diagonally across while holding the ***CTRL*** key down.
- Release the mouse button.
- To resize the circle, click on one of the black handles and drag in or out while holding the ***CTRL*** key, to make the circle bigger or smaller.

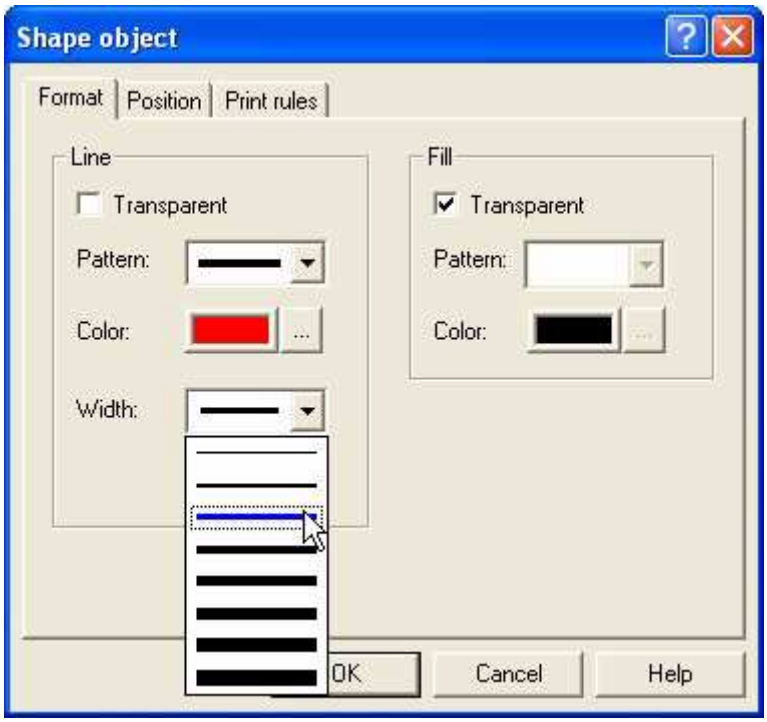
To draw a ellipse from its centre point:

- Choose ***Ellipse*** from the ***Draw*** menu or click the ***Ellipse tool*** button on the toolbar. The cursor changes to a cross-hair pointer.
- Click and drag the mouse diagonally across while holding the ***SHIFT*** key down.
- Release the mouse button.
- To resize the ellipse, click on one of the black handles and drag in or out while holding the ***SHIFT*** key, to make the ellipse bigger or smaller.

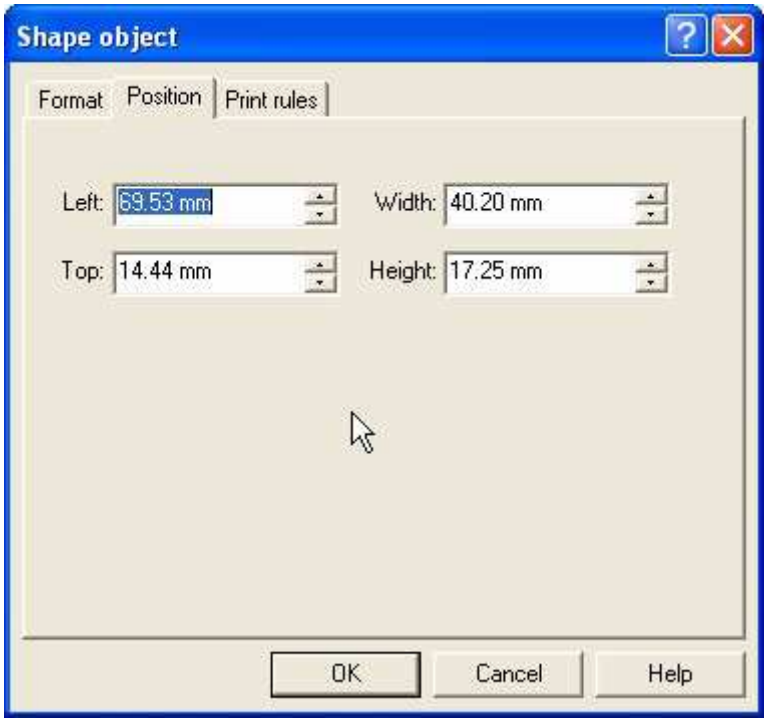
To change the properties of a selected ellipse:

- Double click on the ellipse or select the ellipse and then click on the ***Object properties*** button on the toolbar.
- On the ***Format*** tab, edit:
  - ***Line*** attributes - transparency, pattern, color and width.

- ***Fill*** attributes - transparency, pattern and color.



- On the ***Position*** tab, edit the ellipse's position and size.



The Print rules tab allows conditions to be set for printing of this object, *see Print Rule for an object on page 74.*

Image Objects

 The ***Picture tool*** is used to insert an image.

Creating Image Objects

Graphics such as logos and scanned signatures can be inserted easily into the form design. FTDesign supports bitmap (.bmp), JPEG (.jpg), GIF and TIFF graphics. To include graphics in other file formats, you need to convert them using one of the many freely available graphics format converters.

To insert an image:

- Choose ***Picture*** from the ***Draw*** menu or click the ***Picture tool*** button on the toolbar. The cursor changes to a cross-hair pointer.
- Click and drag the mouse diagonally to locate the top-left corner of the picture. The picture draws at it's native size.
- Release the mouse button and the ***Picture*** dialog box will open.
- On the ***Settings*** tab, edit
  - By clicking the browse "***...***" button you may choose a different picture file.
  - ***Linked*** - these pictures are not copied into the form, but referenced by the form from a folder when FTDesign is used. The production system MUST have access to pictures that are linked. To link the picture, tick the ***Linked*** checkbox.
  - ***Scalable*** - these pictures can be resized by moving the black handles when the picture is selected. Holding the ***SHIFT*** key down while resizing will retain the proportions of the image. To make the image scalable tick the ***Scalable*** checkbox.

Note: Image scaling is the most process intensive function in FormTrap, for production efficiency build logos and images to their final size using your graphics tools rather than scaling in FormTrap.

- ***Print white color transparent*** - Checking this box will make all the white pixels within a picture transparent. The transparent pixels do not print at run time. This option is especially useful when placing a picture on top of a filled/colored background. To make the white pixels within an image transparent check the ***Print white color transparent*** check box.

Image Substitution

FormTrap allows you to change the text and graphics that are printed on the form without amending the form itself. FormTrap's special Substitution facility permits you to insert information from external files onto the output form. Using Substitution, the one FormTrap Load File (.asc) can be used for a number of different organizations - with their specific logo and address information contained in external files and inserted during a print run. This is convenient for:

- ***Customizing Forms without Rebuilding*** - where a common form needs different graphics or text, the graphic/text can be replaced without re-designing forms or even requiring FTDesign.

- ***Code Interpretation*** - where a form requires a particular text or graphic to appear based on a code from your incoming data, the value of the data is used to access the graphic or text to be placed on the form.
- ***Personalization and/or Additional Information (constant field)*** - where a form includes a personalization or other information not supplied from the incoming file data. Company name, logo, address, PO Box, phone and fax number etc. are best represented this way and can be shown in various fonts/sizes and locations on many forms, with just the one location to instantly change the details.

For more information on Barcode Substitution see page 70.

For more information on Text Substitution see page 58.

The substitution file is the external file that is opened by FormTrap at run time. Any information in the file will be inserted onto the form using the formatting and alignment applied to the substitution object.

For more information on Substitution Location see page 11.

Constant Image Substitution

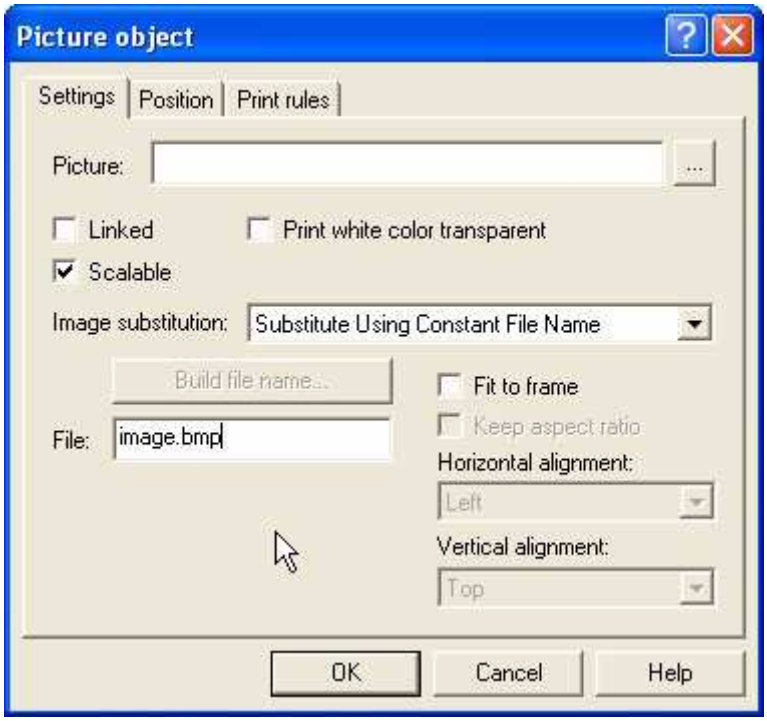
To insert a constant substitution image object:

- Double click on the image object created.
- On the ***Settings*** tab, enter the name of the substitution file into the text box.
  - Select ***Substitute Using Constant File Name*** from the ***Image substitution*** dropdown menu.
  - Enter the full name of the image e.g. image.jpg, you wish to substitute into the ***File*** text box.
  - Check the ***Fit to frame*** check box to force the image to resize to fit the allocated image box on the form.

Note: This is inefficient, for commonly used graphics, please scale and save a right-sized image in the substitution file.

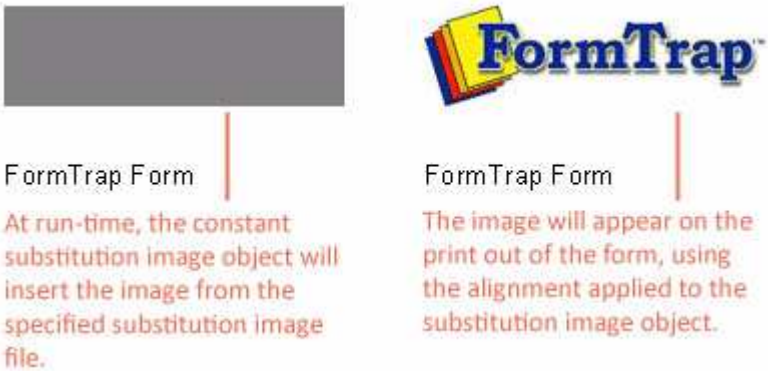
  - Check the ***Keep aspect ratio*** box to maintain the proportions of the inserted image.

- Use the ***Horizontal alignment*** and ***Vertical alignment*** to align the inserted image within the allocated image box.



- Click the ***OK*** button.
- Resize the grey substitution image box to fit the allocated space on the form.
- In the example below FormTrap will open image.jpg and insert the image from the file onto the form using the formatting and alignment applied to the substitution image object.

For more information on Substitution Location see page 11.

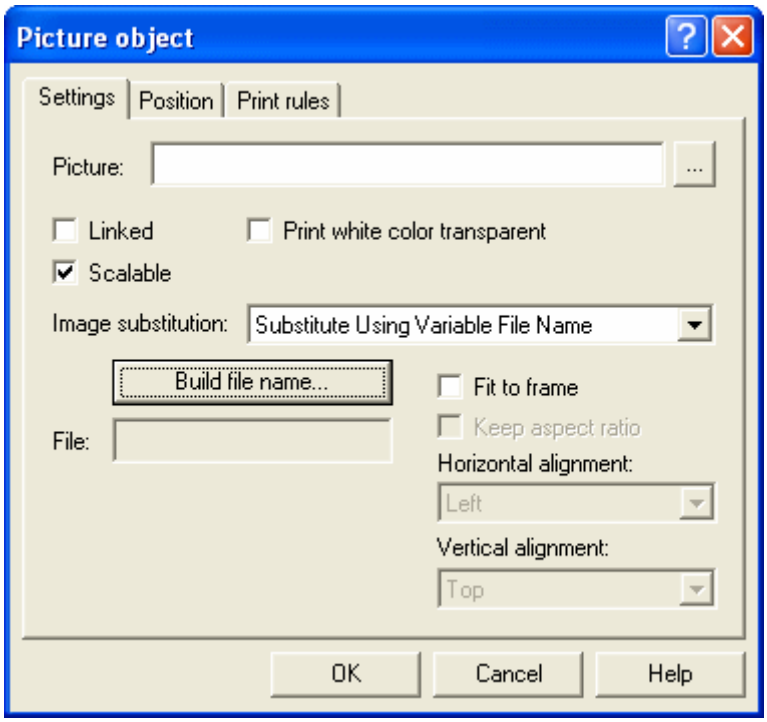


Variable Image Substitution

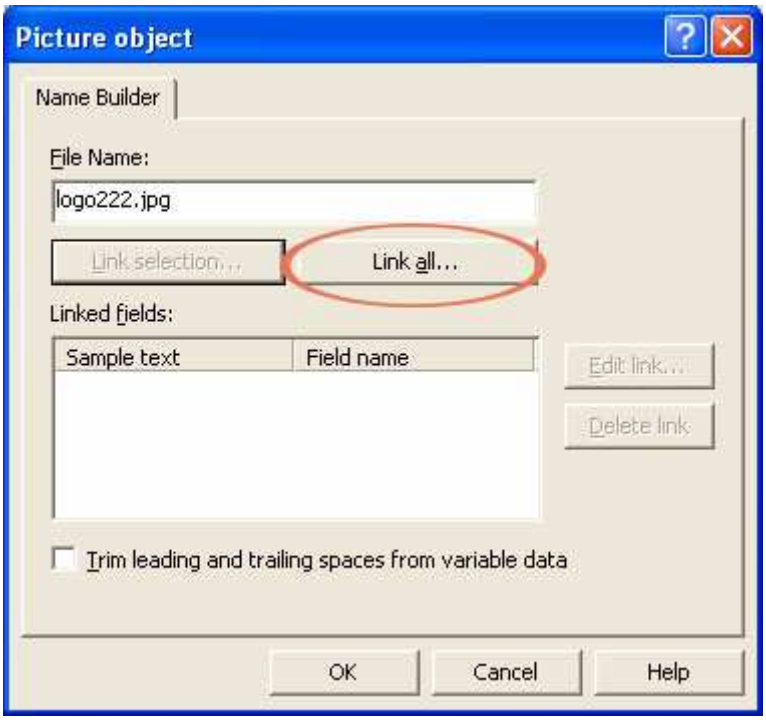
To insert a variable substitution image object:

- Double click on the image object created.

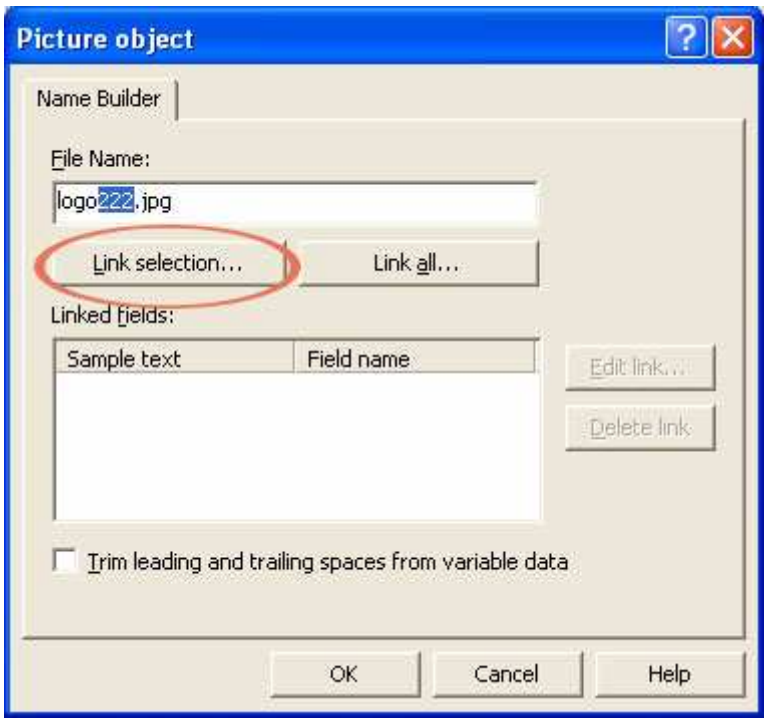
- On the ***Settings*** tab, select ***Substitute Using Variable File Name*** from the ***Image substitution*** dropdown menu.



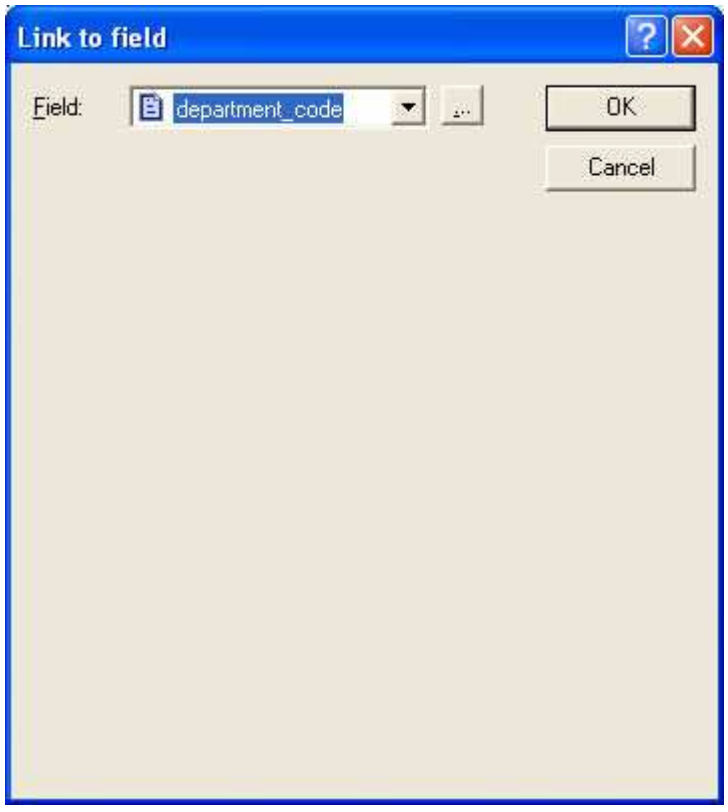
- Click the ***Build file name...*** button to create the variable file name.
- On the ***Name Builder*** tab enter the sample text into the ***File Name*** text box. When creating substitution text objects it is best to make the sample text the maximum possible length of the field extracted from the substitution file.



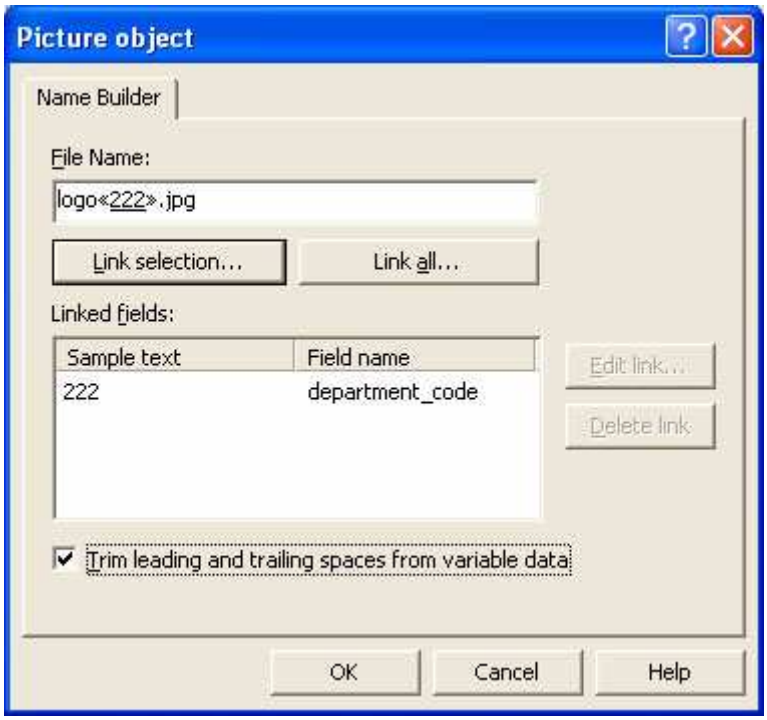
- To link all the sample text to the variable, click on the ***Link all...*** button. To link a section of the sample text to the variable, highlight the relevant text and click the ***Link selection...*** button.



- In the ***Link to field*** dialog box, select the predefined field name from the ***Field*** drop down menu.

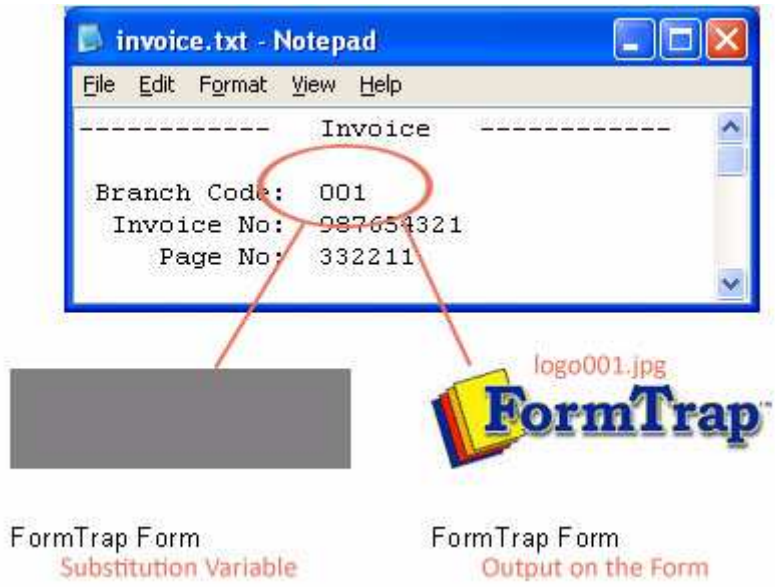


- Click ***OK*** to link the record variable to the substitution object.
- Check the ***Trim leading and trailing spaces from variable data*** to remove leading or trailing spaces from the file name.



- Click the ***OK*** button.
- In the example below FormTrap will open logo001.jpg and insert the image from the file onto the form using the alignment applied to the substitution image object.

For more information on Substitution Location see page 11.



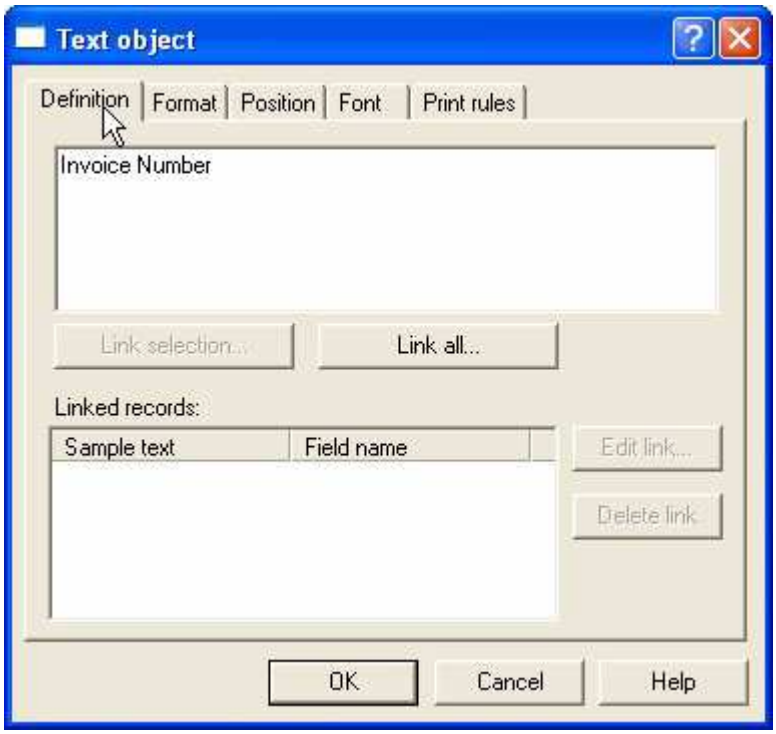
Text Objects

T The Text tool is used to insert a constant or variable text object.

Creating Text Objects

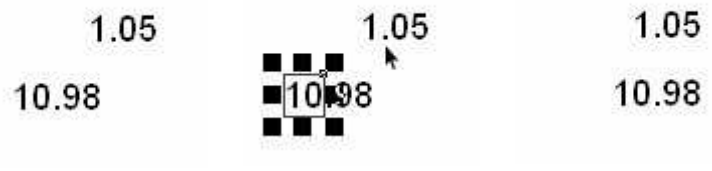
To insert a text object:

- Choose ***Text*** from the ***Draw*** menu or click the ***Text tool*** button on the toolbar. The cursor changes to a cross-hair pointer.
- Click and drag the mouse diagonally to add the text frame.
- Release the mouse button and the ***Text*** dialog box will open.
- On the ***Definition*** tab, enter the desired text into the text area to create a constant text object. Click the ***Link selection*** or ***Link all*** button to define a variable text object. This object will "import" data from a field in the data file.



- On the ***Format*** tab, set the attributes of the constant text object:
  - ***Alignment*** - alignment of text within the text frame. Using decimal alignment as an example, which is often applied on numeric text objects,
    - Select the ***Decimal*** option for the ***Horizontal Alignment*** of the two text object to be aligned.
    - Select the ***Right*** alignment tool on the alignment toolbar.
    - Click on the "." (dot) of the first object.

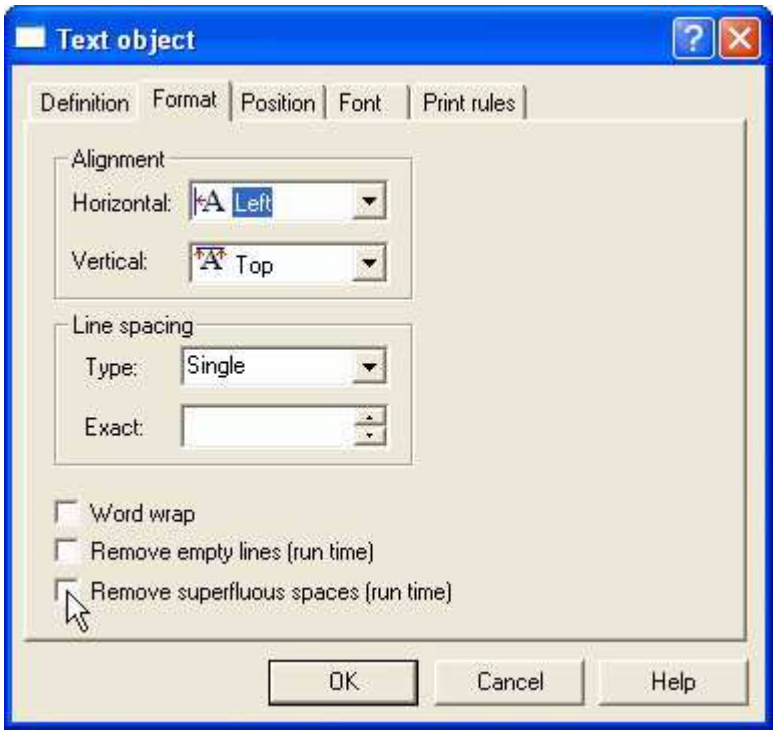
- The second object decimal aligns itself to the "." (dot) of the first object.



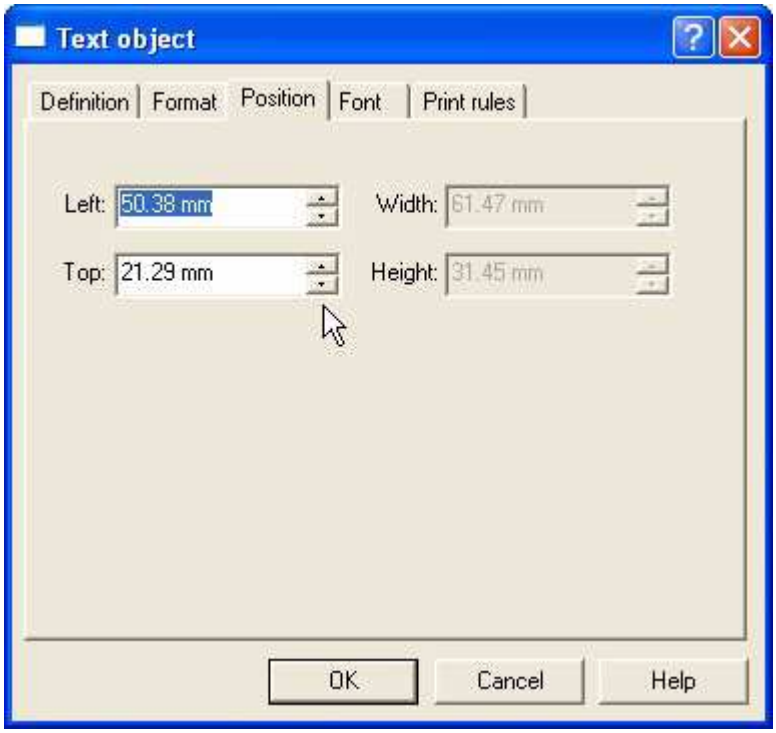
- ***Line spacing*** - for multi-line text objects, select a fixed spacing or enter a custom line spacing. To enter a custom line spacing, select ***Exact*** from the ***Type*** menu and then enter a value in the ***Exact*** text box.
- ***Word wrap*** - for a multi-line text object, check the ***Word wrap*** box to wrap lines automatically, varying the height of the text object according to the amount of text entered. The text may grow down, up or both ways depending on the Vertical alignment being Top, Bottom or Center.

Note: The position at which the text word-wraps is defined by the size of the text frame which you can reset by moving the handles.

- ***Remove empty variable lines*** - remove blank lines from the variable data. For example, if a set address lines is missing line 2, the blank line is suppressed at runtime.

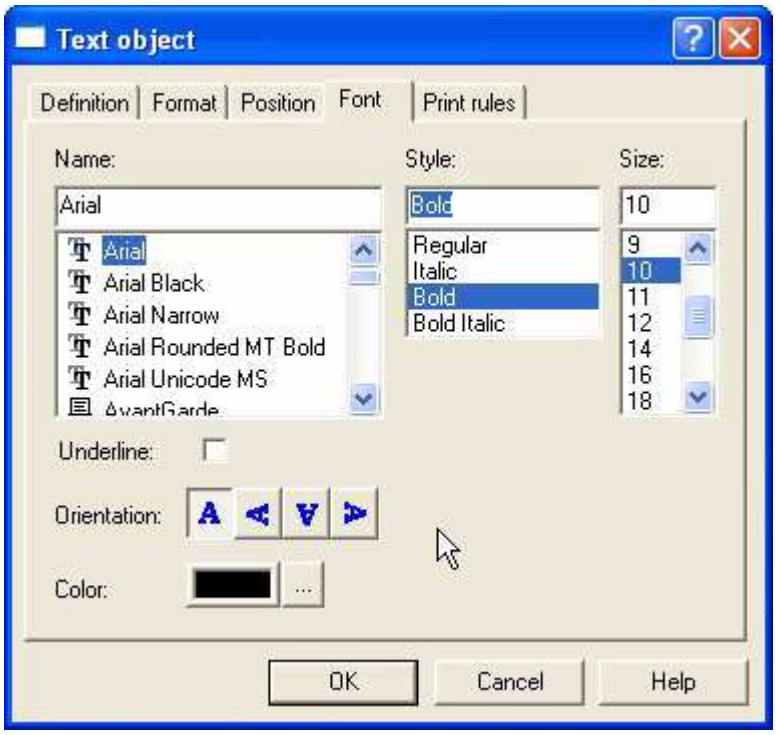


- On the ***Position*** tab, set the position of the constant text object. Enter a value in ***Left***, for the object's offset from left value and ***Top***, for the object's offset from top value.



- On the ***Font*** tab, set the attributes of the font used for the constant text object:
  - ***Name*** - select the font type.
  - ***Style*** - font can be Regular, Bold, Italic or Bold Italic.
  - ***Size*** - select the size of the font.
  - ***Underline*** - check the Underline box for the text to be underlined.
  - ***Orientation*** - orientation of the text relative to the page.

- ***Color*** - select the color of the text.



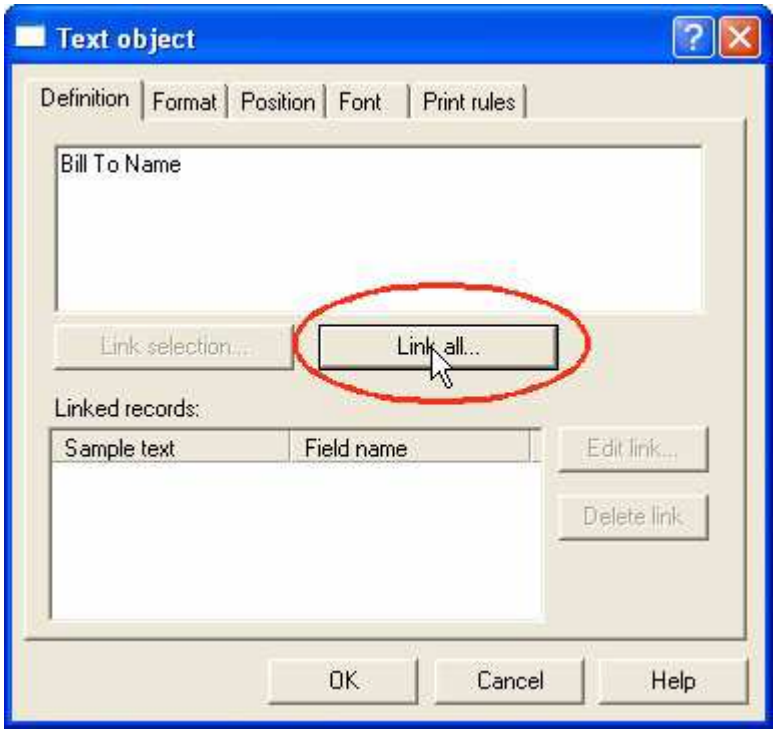
The Print rules tab allows conditions to be set for printing of this object, *see Print Rule for an object on page 74.*

Linking to a Field

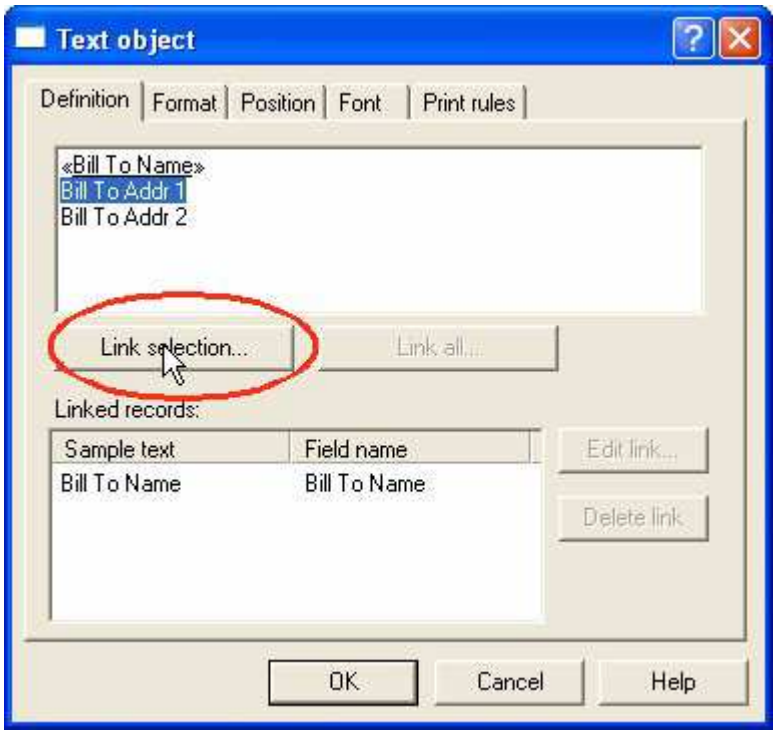
To link a text object to a field:

- Double click on the text object created.
- On the ***Definition*** tab, edit the sample text in the text box. The sample text should be the same length and similar data to the incoming field (for example, enter dates as valid and in the same format as the incoming data).

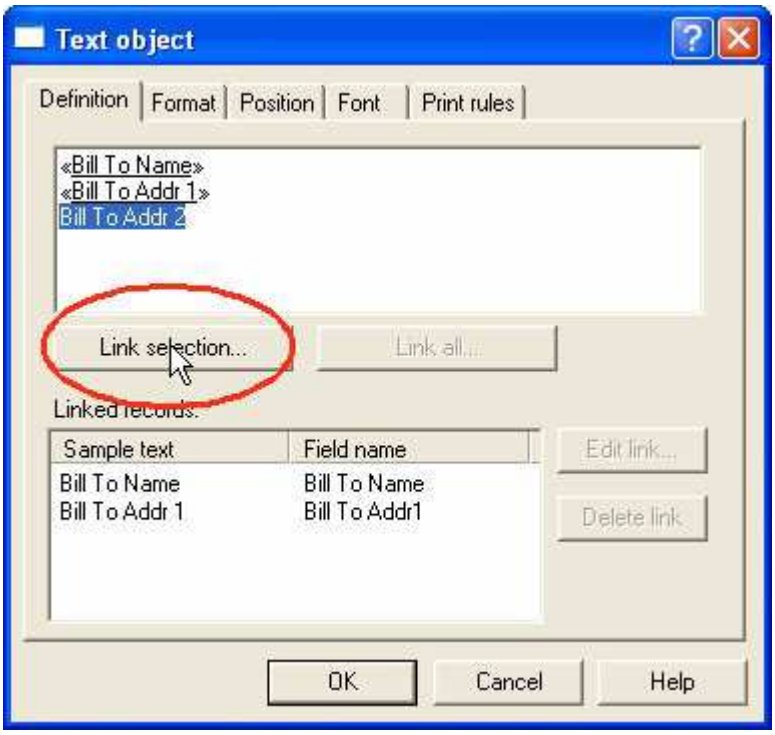
- To link the entire field, click on the ***Link all*** button.



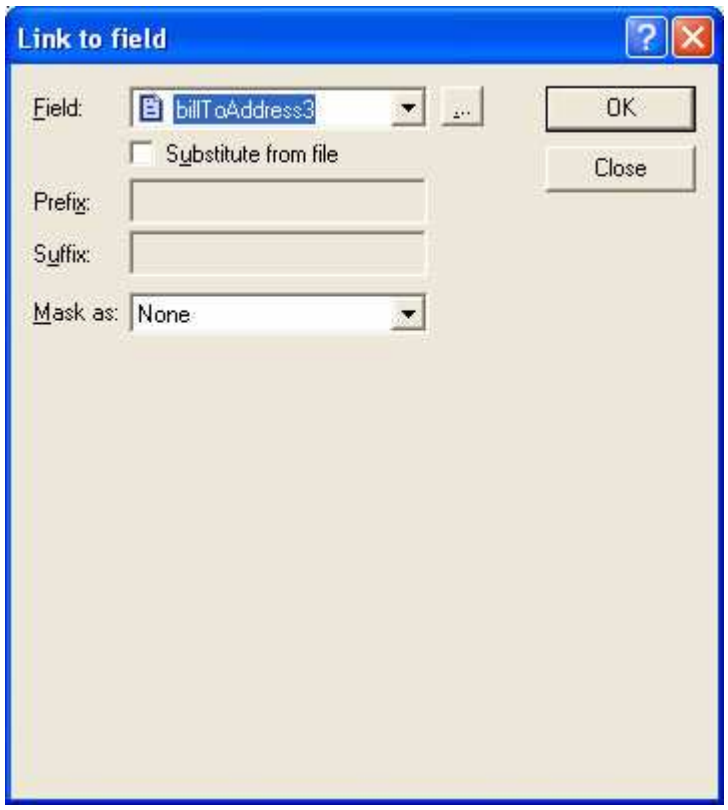
- To link a section of the sample text to the field, highlight the relevant text and click the ***Link selection*** button.



- Using the ***Link selection*** button you can have a number of fields within the one text object.



- In the ***Link to field*** dialog box, select the field name from the ***Field*** drop down menu.



- Check the ***Substitute from file*** check box to insert information from external files onto the output form.
- From the ***Mask as*** drop down menu select a mask to format the variable.
- If the variable is not available, click on the new "..." button to add a new variable.

For more information on Defining Fields in Print Line Mode see page 23.

For more information on Defining Fields in Records Mode see page 31.

Text Substitution

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- ***Code Interpretation*** - where a form requires a particular text or graphic to appear based on a code from your incoming data, the value of the data is used to access the graphic or text to be placed on the form. This can be used to translate terms in one language to another - for example units of measure.
- ***Personalization and/or Additional Information (constant field)*** - where a form includes a personalization or other information not supplied from the incoming file data. Company name, logo, address, PO Box, phone and fax numbers etc. are best represented this way and can be shown in various fonts/sizes and locations on many forms, with just the one location to instantly change the details.

For more information on Image Substitution see page 46.

For more information on Barcode Substitution see page 70.

The substitution file is the external file that is opened by FormTrap at run time. Any information in the file will be inserted onto the form using the formatting and alignment applied to the substitution object.

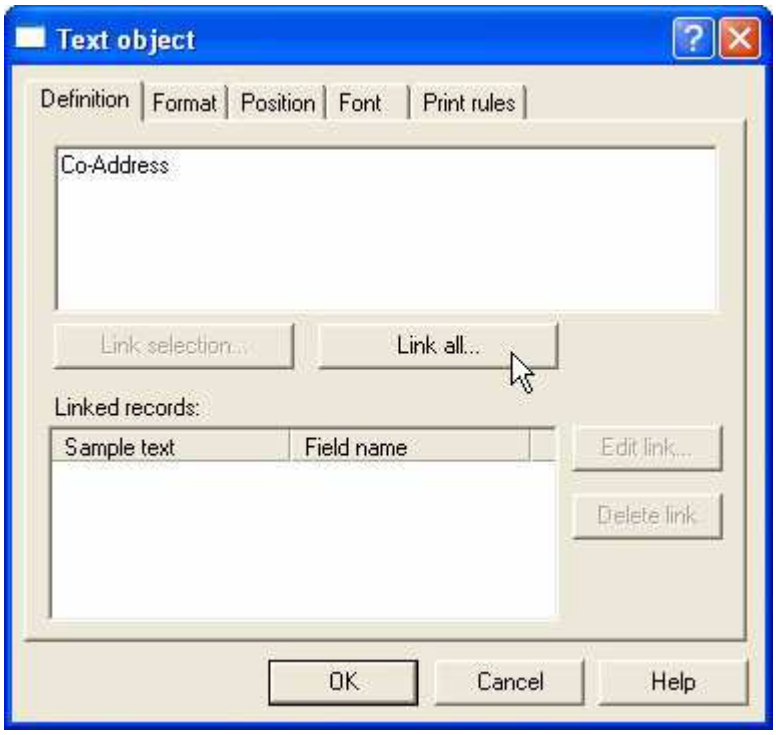
For more information on Substitution Location see page 11.

Constant Text Substitution

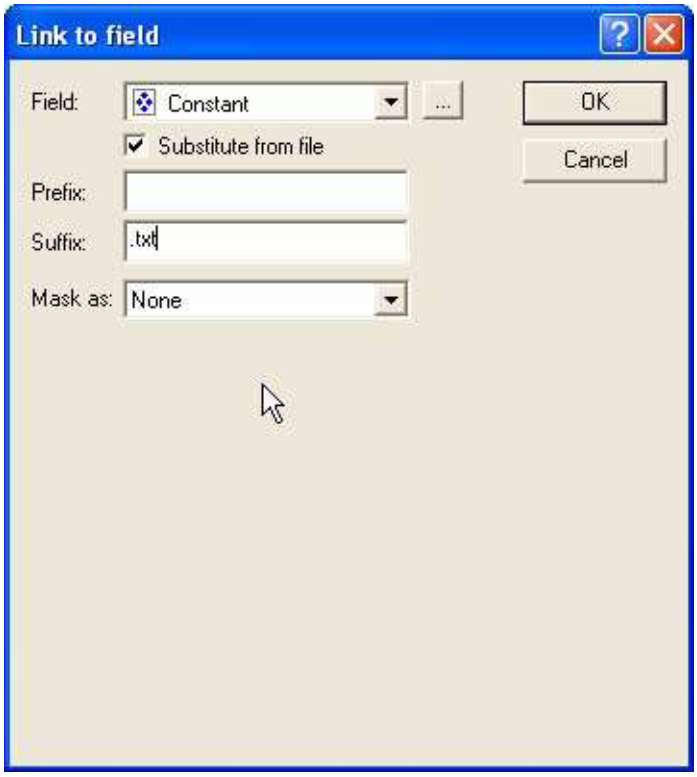
To insert a constant substitution text object:

- Double click on the text object created.

- On the ***Definition*** tab, enter the name of the substitution file into the text box.

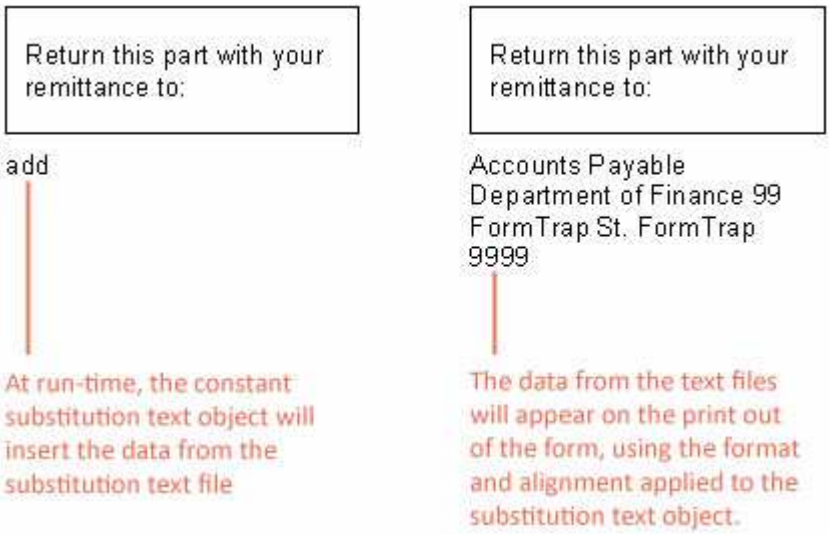


- Click the ***Link all...*** button to link the sample text to the substitution file.
- In the Link to field dialog box:
  - Check the ***Substitute from file*** check box.
  - Select ***Constant*** from the ***Field*** drop down menu.
  - Leave the remainder blank and select ***None*** for ***Mask as***.



- Click the ***OK*** button.
- In the example below FormTrap will open add.txt and insert information from the file onto the form using the formatting and alignment applied to the substitution text object.

For more information on Substitution Location see page 11.

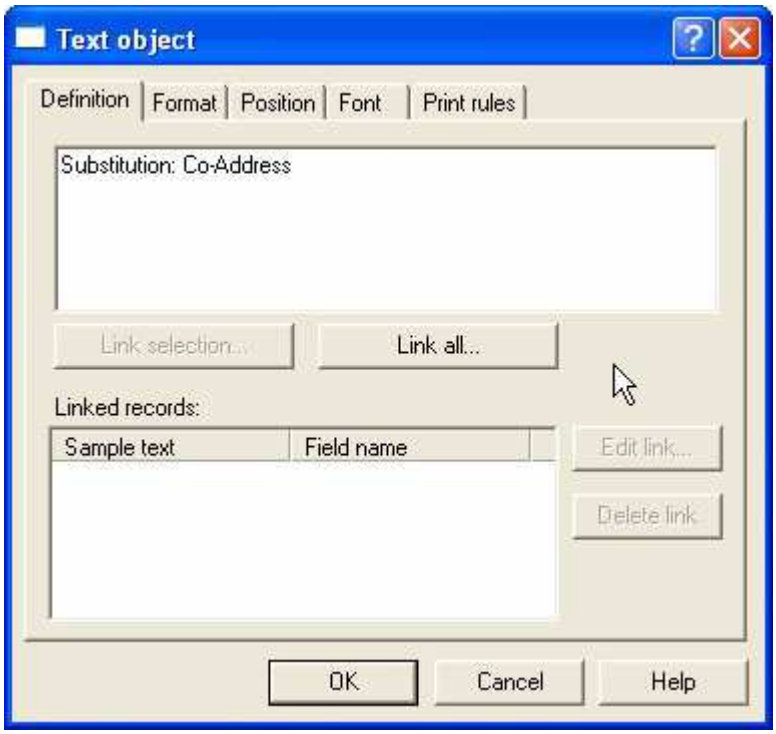


Variable Text Substitution

To insert a variable substitution text object:

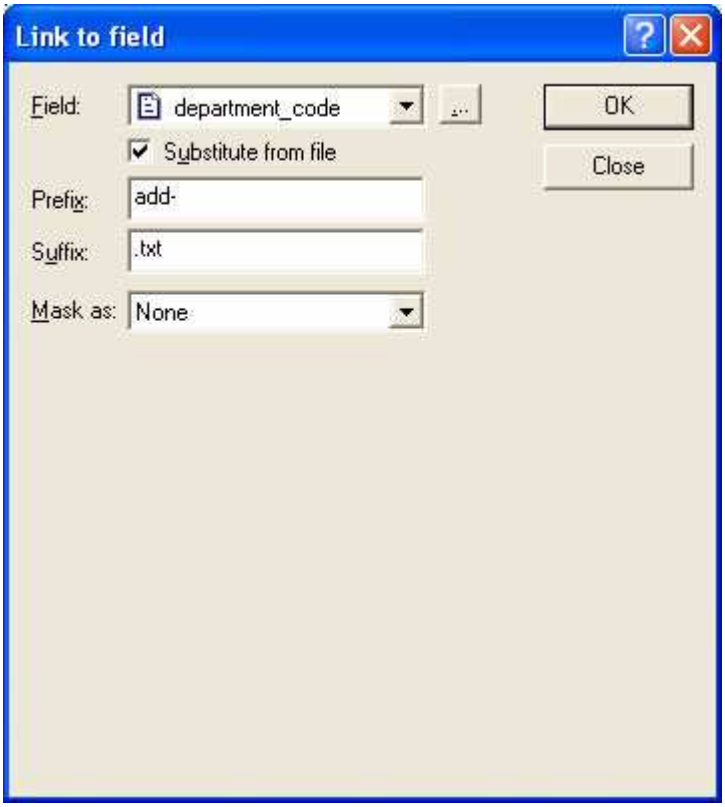
- Double click on the text object created.

- On the ***Definition*** tab, enter sample text into the text box. When creating substitution text objects it is best to make the sample text the maximum possible length of the field extracted from the substitution file.



- Click the ***Link all...*** button to link the sample text to the record variable.
- In the ***Link to field*** dialog box:
  - Check the ***Substitute from file*** check box.
  - Select the appropriate variable from the ***Field*** drop down menu.
  - Enter the prefix of the variable substitution files into ***Prefix*** e.g. add-.

- Enter the extension of the variable substitution files into ***Suffix*** e.g. .txt (including the dot).



- Click the ***OK*** button.
- In the example below FormTrap will open add-001.txt and insert information from the file onto the form using the formatting and alignment applied to the substitution text object.

Note: Regarding the File Name: The linked "field" portion of the file name is automatically left and right stripped of spaces

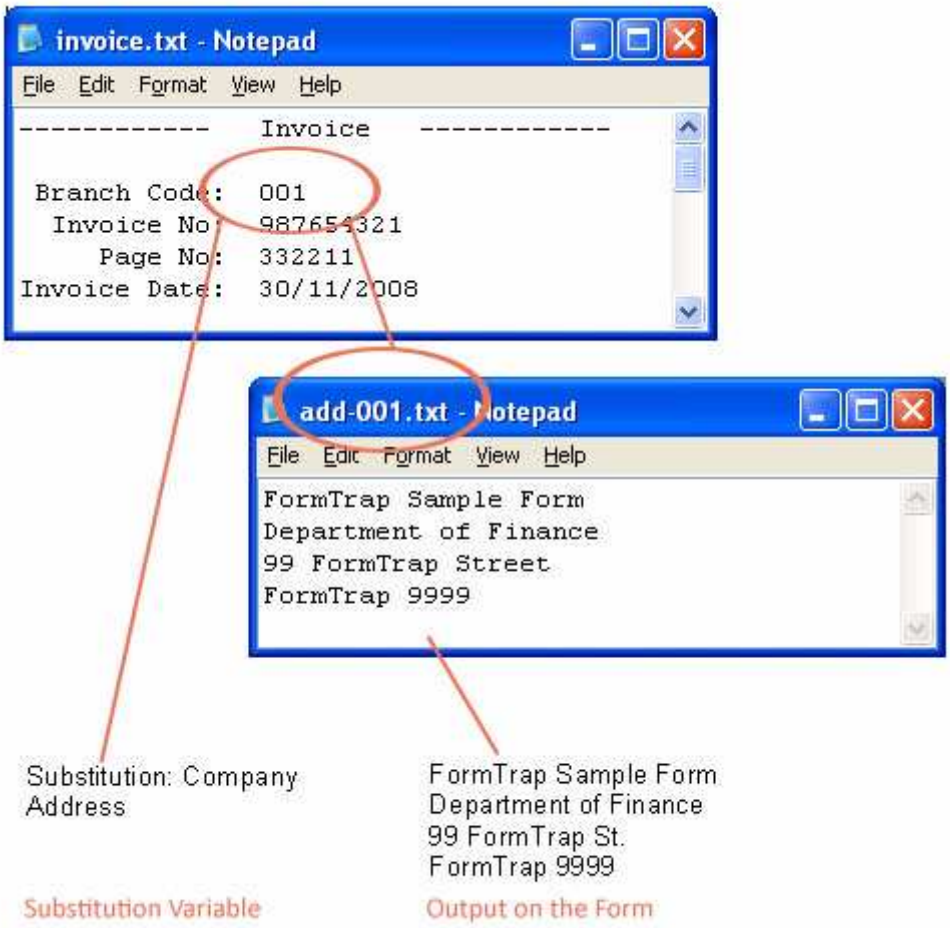
Field content (>field<) File Name Accessed

> 001 < add-001.txt

> 001< add-001.txt

>001 < add-001.txt

For more information on Substitution Location see page 11.

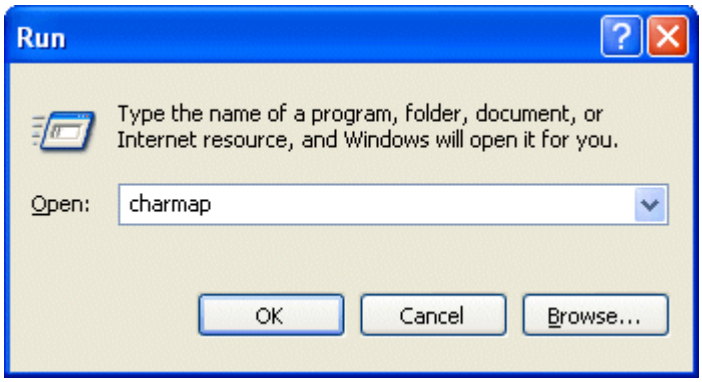


Symbol Characters

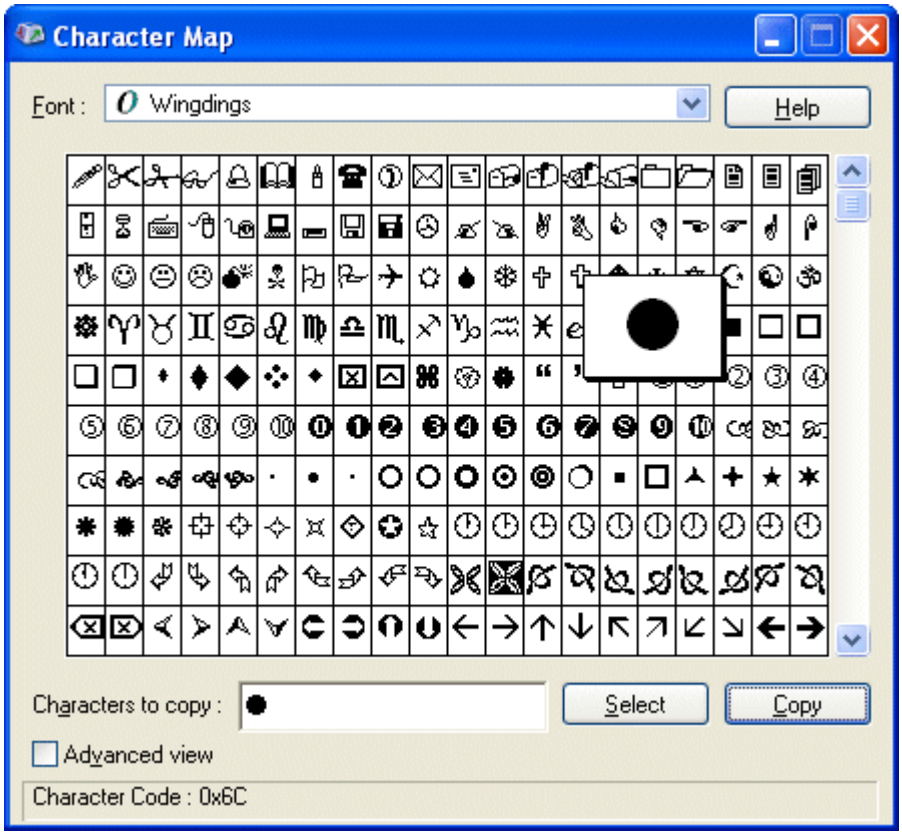
To add a symbol character in FTDesign:

Copy Symbol in Character Map

- Open Windows Character Map. Select Start Menu > Run > and type "charmap".



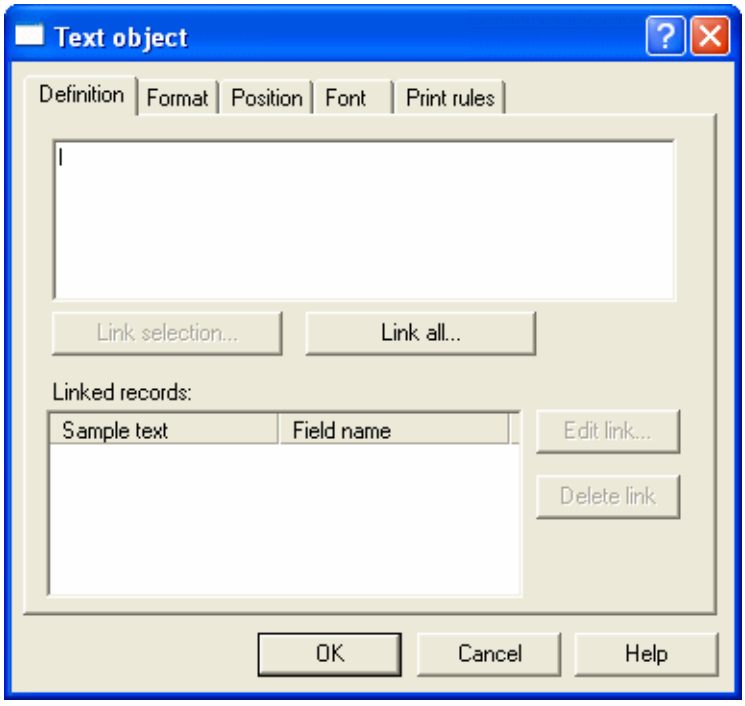
- Click ***OK***.



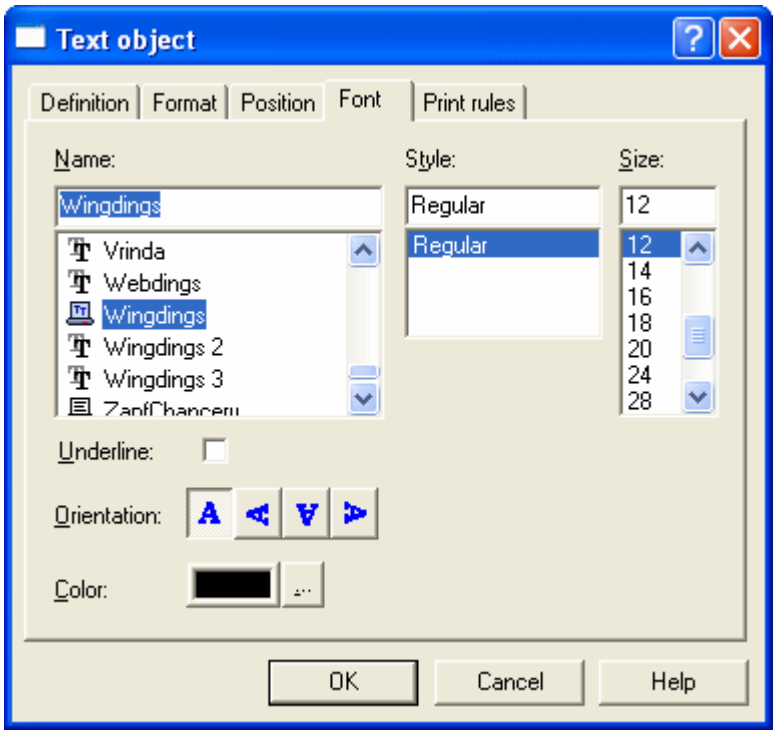
- In ***Character Map*** mark the required symbol and press ***Select***, then ***Copy***.

Insert Symbol in FTDesign

- Create a new text object.
- Paste (CTRL + V) the symbol in the definition tab.



- On the Font tab, select the same font as was used in Character Map.



- Click ***OK***.

Note: The character may not appear correctly in the definition tab, nor on the form design, but it will print correctly.

Barcode Objects

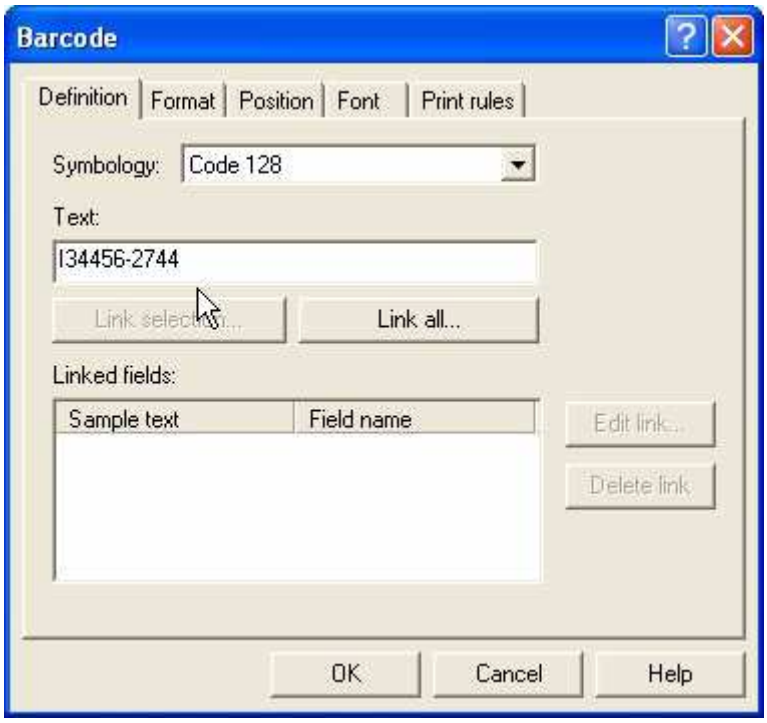
The ***Barcode tool*** is used to insert a constant or variable barcode object.

Creating Barcode Objects

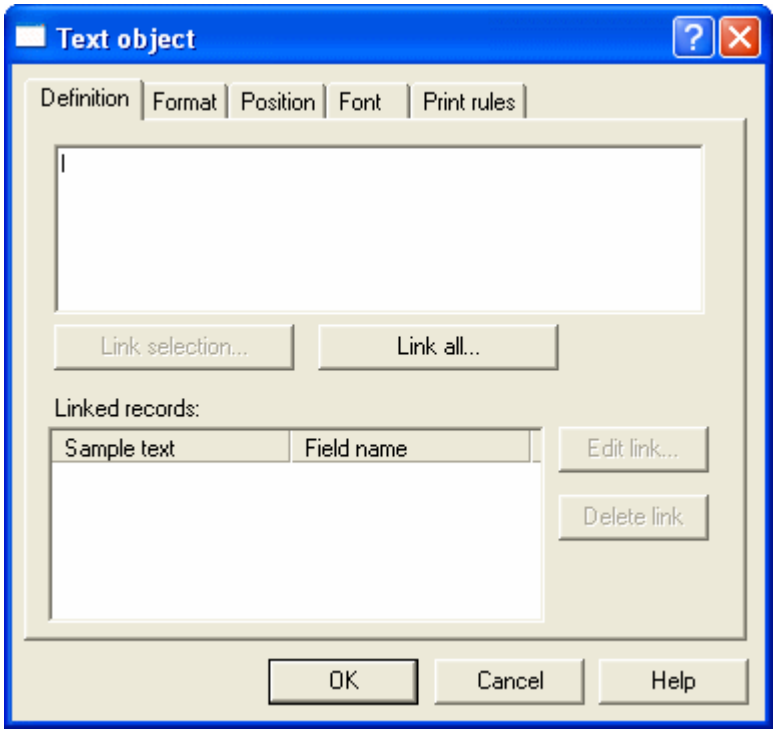
To insert a barcode object in FTDesign:

- Choose ***Barcode*** from the ***Insert*** menu or click the ***Barcode tool*** button on the toolbar. The cursor changes to a cross-hair pointer.
- Click and drag the mouse diagonally to add the barcode frame.
- Release the mouse button and the ***Barcode*** dialog box will open.
- On the ***Definition*** tab
  - ***Symbology*** - select the appropriate barcode encoding method from the ***Symbology*** menu.

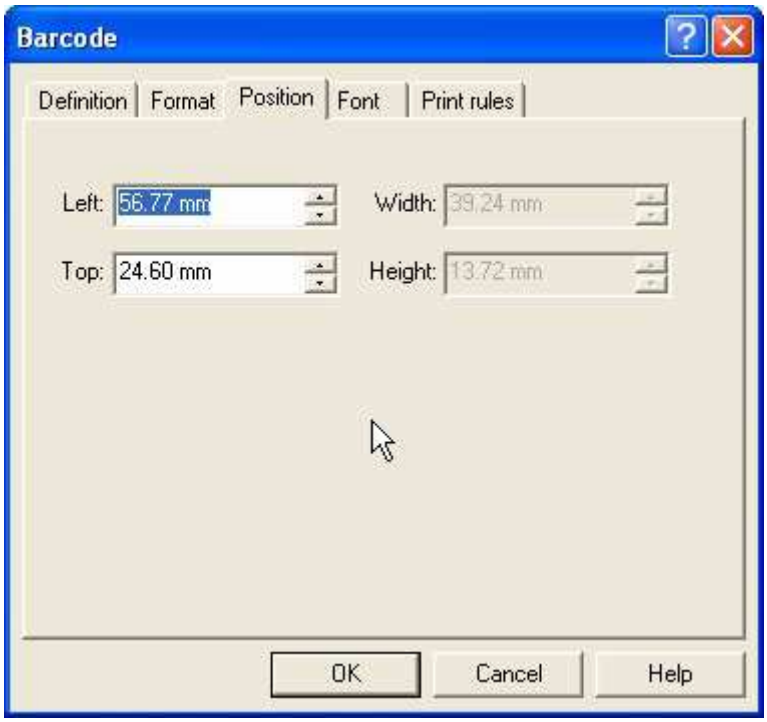
- ***Text*** - enter the desired barcode value into the ***Text*** box. Click the ***Link selection*** or ***Link all*** button to define a variable text object.



- On the ***Format*** tab, set the attributes of the constant barcode object:
  - ***Text location*** - the value of the barcode can be hidden, or appear above or below the barcode.
  - ***Rotated*** - check the Rotated box for the barcode to be rotated 90 degrees.

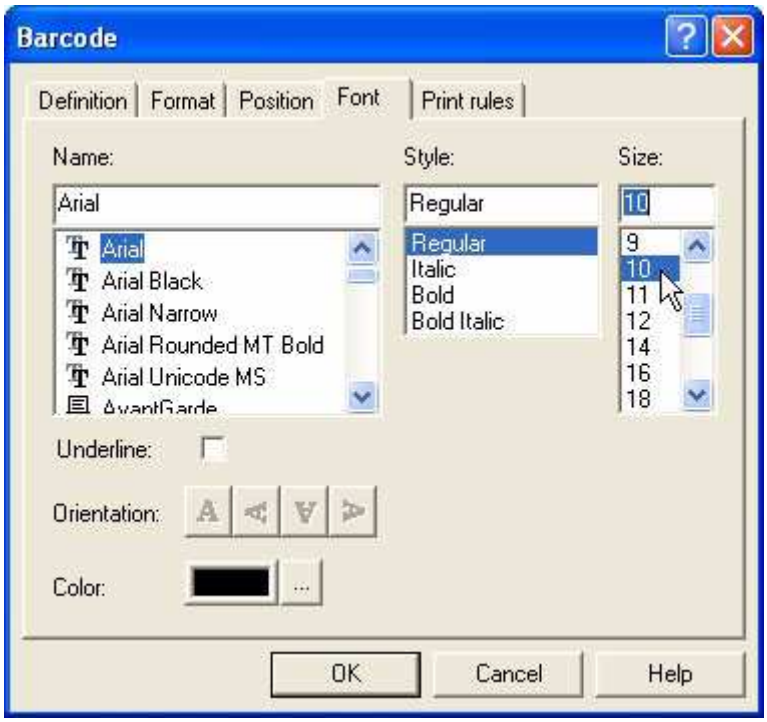


- On the ***Position*** tab, set the position of the constant barcode object. Enter a value in ***Left***, for the object's offset from left value and ***Top***, for the object's offset from top value.



- On the ***Font*** tab, set the attributes of the font used for the constant barcode object:
  - ***Name*** - select the font type.
  - ***Style*** - font can be Regular, Bold, Italic or Bold Italic.
  - ***Size*** - select the size of the font.
  - ***Underline*** - check the Underline box for the text to be underlined.
  - ***Orientation*** - orientation of the text relative to the page.

- ***Color*** - select the color of the text.



The Print rules tab allows conditions to be set for printing of this object, *see Print Rule for an object on page 74*.

To change the size of the selected barcode object:

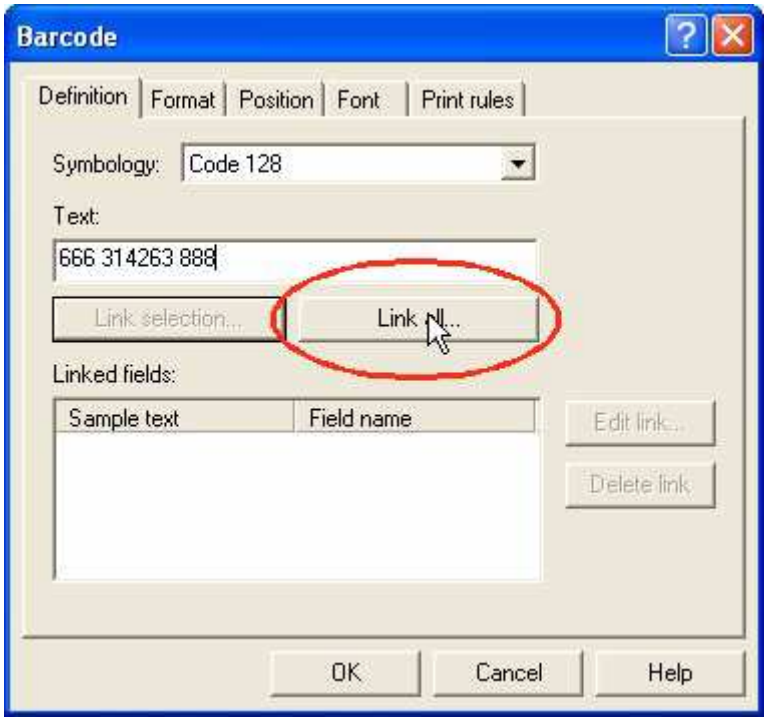
- Select the handles and drag to size. The width of the barcode “jumps” from size to size as additional increments are added to all bars and spaces. The height handles move smoothly as the height is increased or reduced.

Linking to a Field

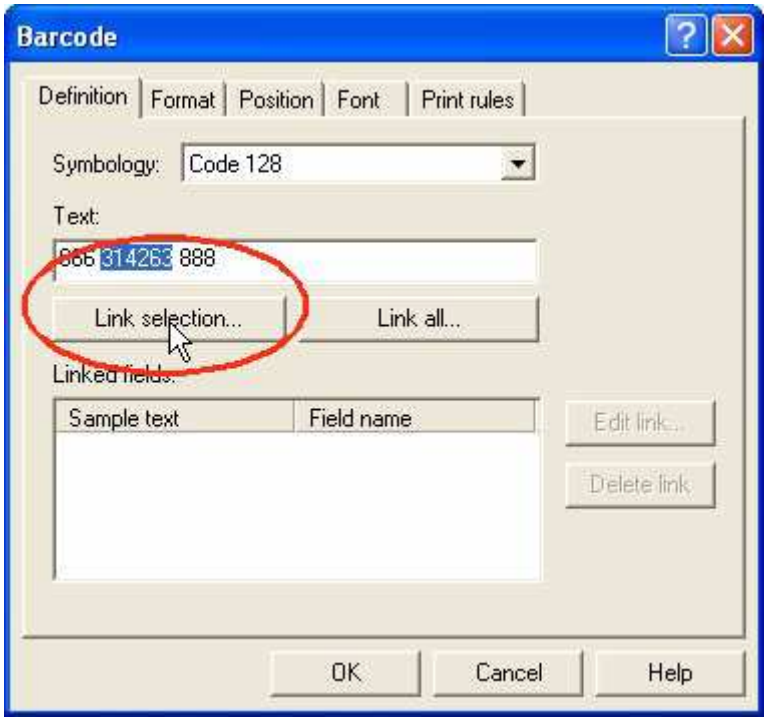
To link a barcode object to a field:

- Double click on the barcode object created.
- On the ***Definition*** tab, edit the sample barcode digits in the text box. It is best to make the sample barcode digits the same length as the field extracted from the input file.

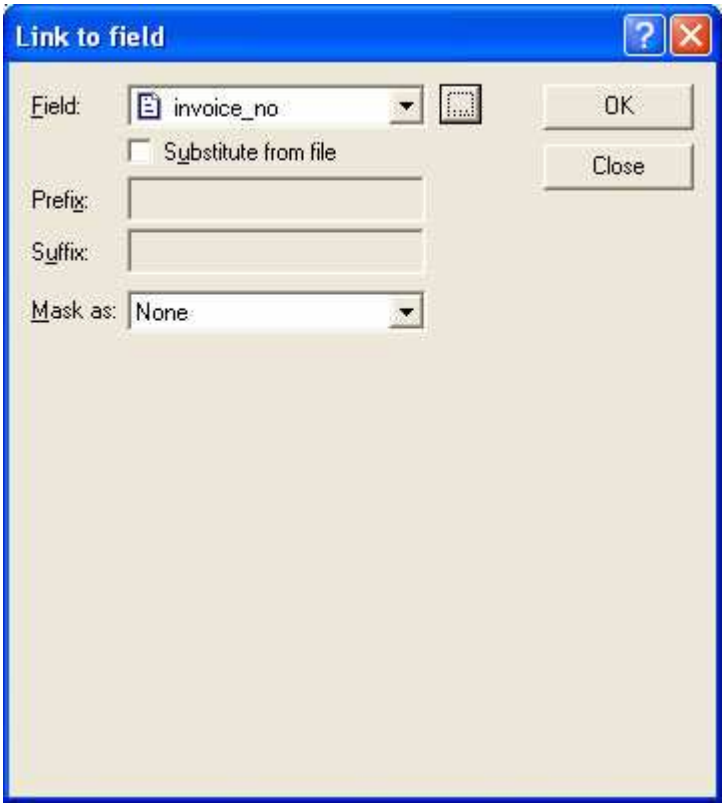
- To link all the sample barcode to the field, click on the ***Link all*** button.



- To link a section of the sample barcode to the field, highlight the relevant characters and click the ***Link selection*** button.



- In the ***Link to field*** dialog box, select the field name from the ***Field*** drop down menu.



- If the field is not available, click on the new "..." button to add a new field.

For more information on Defining Fields in Print Line Mode see page 23.

For more information on Defining Fields in Records Mode see page 31.

Barcode Substitution

Barcode substitutions are almost never used, however are possible using the same instructions as text objects.

For more information on Image Substitution see page 46.

For more information on Text Substitution see page 58.

The substitution file is the external file that is opened by FormTrap at run time. Any information in the file will be inserted onto the form using the formatting and alignment applied to the substitution object.

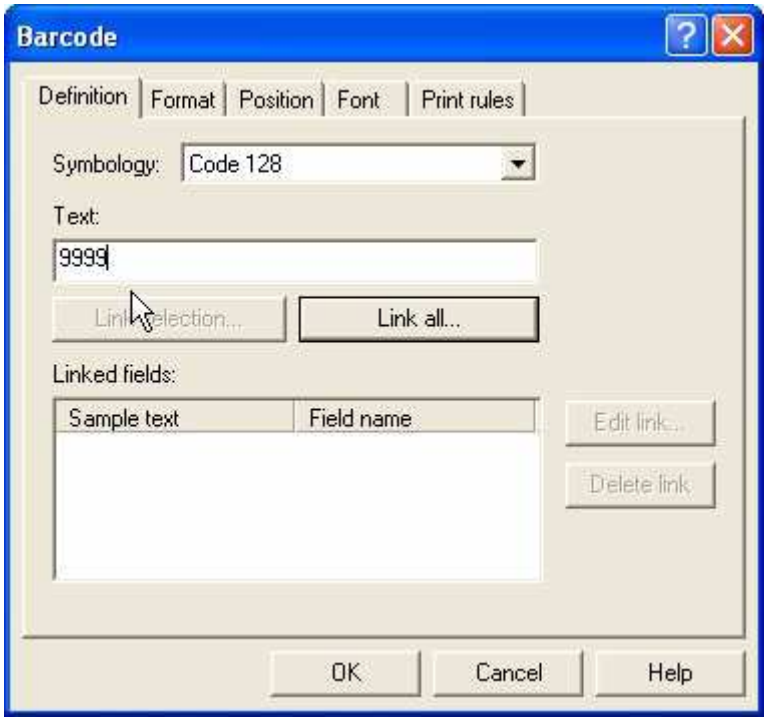
For more information on Substitution Location page 11.

Constant Barcode Substitution

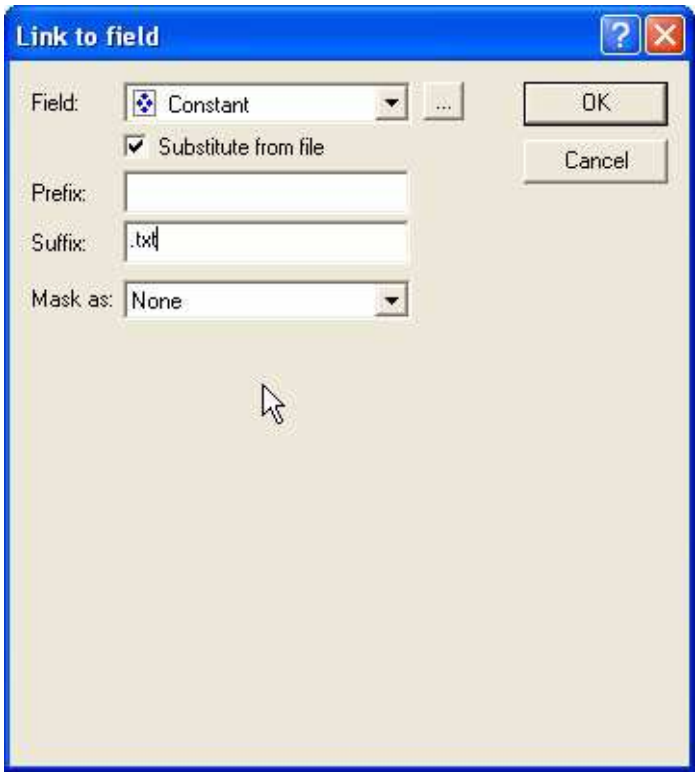
To insert a constant substitution barcode object:

- Double click on the barcode object created.

- On the ***Definition*** tab, enter the name of the substitution file into the text box.

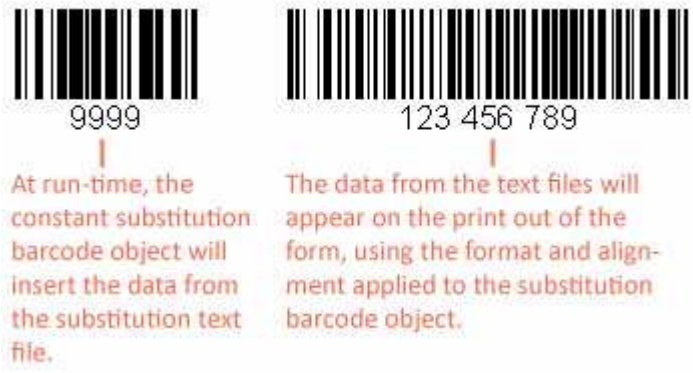


- Click the ***Link all...*** button to link the sample barcode digits to the substitution file.
- In the ***Link to field*** dialog box:
  - Check the ***Substitute from file*** check box.
  - Select ***Constant*** from the ***Field*** drop down menu.
  - Leave the remainder blank and select ***None*** for ***Mask as***.



- Click the OK button.
- In the example below FormTrap will open 9999.txt and insert information from the file onto the form using the formatting and alignment applied to the substitution barcode object.

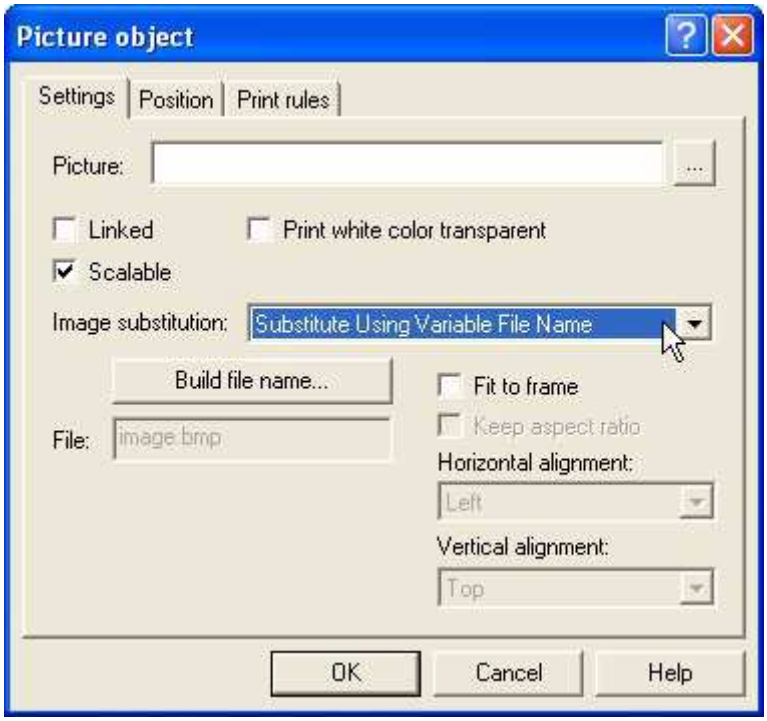
For more information on Substitution Location see page 11.



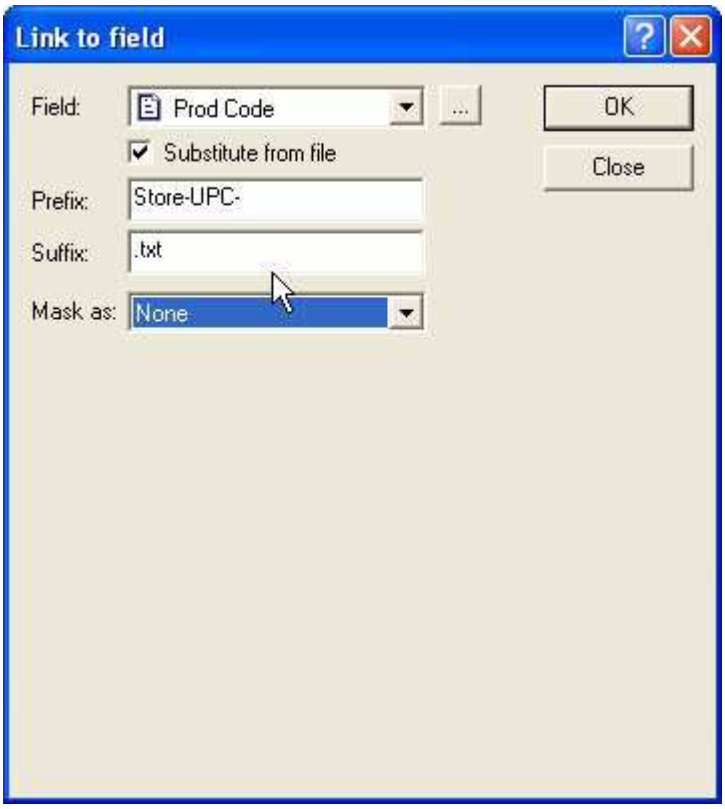
Variable Barcode Substitution

To insert a variable substitution barcode object:

- Double click on the barcode object created.
- On the ***Definition*** tab, enter sample barcode digits into the text box. It is best to make the sample barcode digits the same length as the field extracted from the substitution file.



- Click the ***Link all...*** button to link the sample barcode digits to the record variable.
- In the ***Link to field*** dialog box:
  - Check the ***Substitute from file*** check box.
  - Select the appropriate variable from the ***Field*** drop down menu.
  - Enter the prefix of the variable substitution files into ***Prefix*** e.g. barcode-.
  - Enter the extension of the variable substitution files into ***Suffix*** e.g. .txt (including the dot).



- Click the ***OK*** button.
- In the example below FormTrap will open barcode-987654321.txt and insert information from the file onto the form using the formatting and alignment applied to the substitution barcode object.

Note: Regarding the File Name: The linked "field" portion of the file name is automatically left and right stripped of spaces

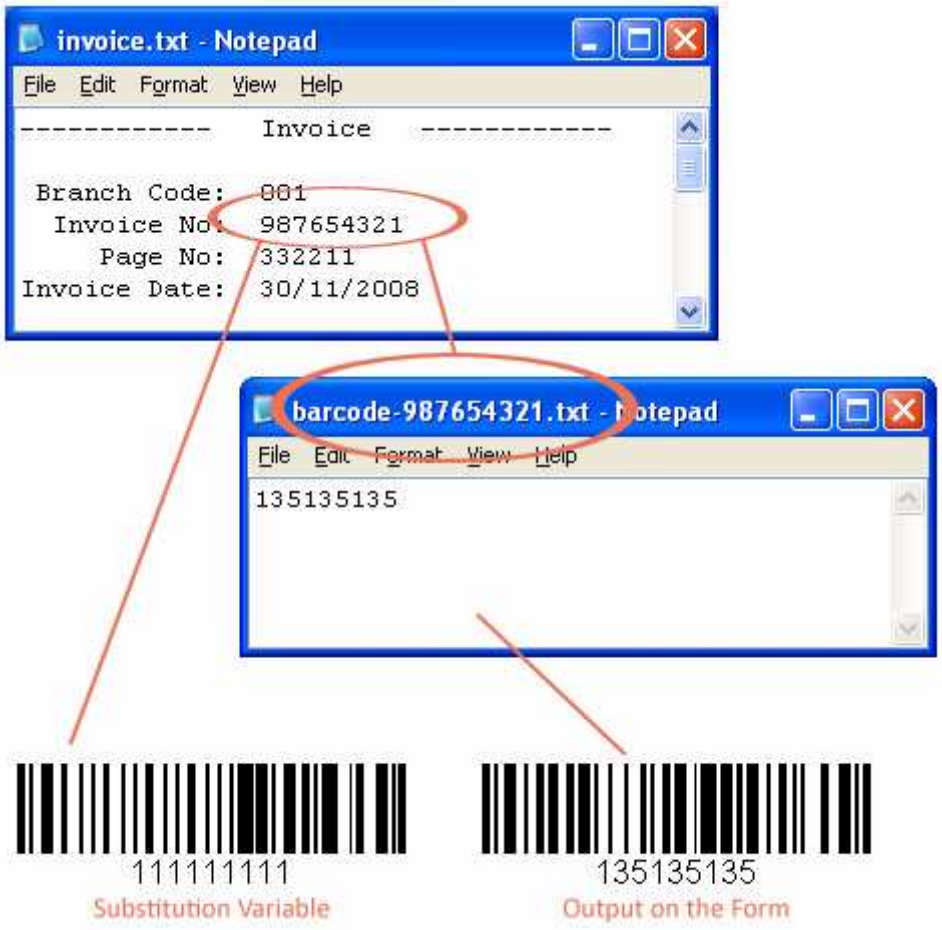
Field content (>field<) File Name Accessed

> 987654321 < barcode-987654321.txt

> 987654321< barcode-987654321.txt

>987654321 < barcode-987654321.txt

For more information on Substitution Location page 11.



Print Rules

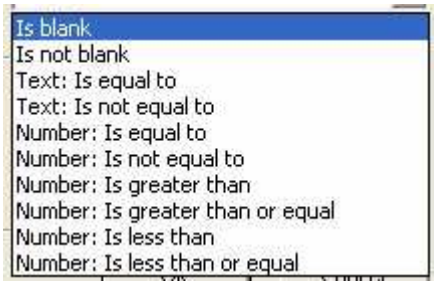
Set Print Rules for an Object

This tab allows you to set conditions, which must be true, otherwise the object is ignored for printing. Text objects ignored may include Substitutions and/or Associated File Objects, as well as normal text.

To change print rules for an object:

- On the ***Print rules*** tab, edit:
  - ***Add*** to add a new print rule.
  - Select ***What to compare*** from the list drop-down. The drop-down has the full field list applicable to the form component which holds this object (ie Base Page, Detail Line etc.).

- Select ***How to compare***, there are a number of options available.



Number: and ***Text:*** versions of ***Is equal to*** and ***Is not equal to*** compare differently.

Number: Is equal to compares these equally:

o

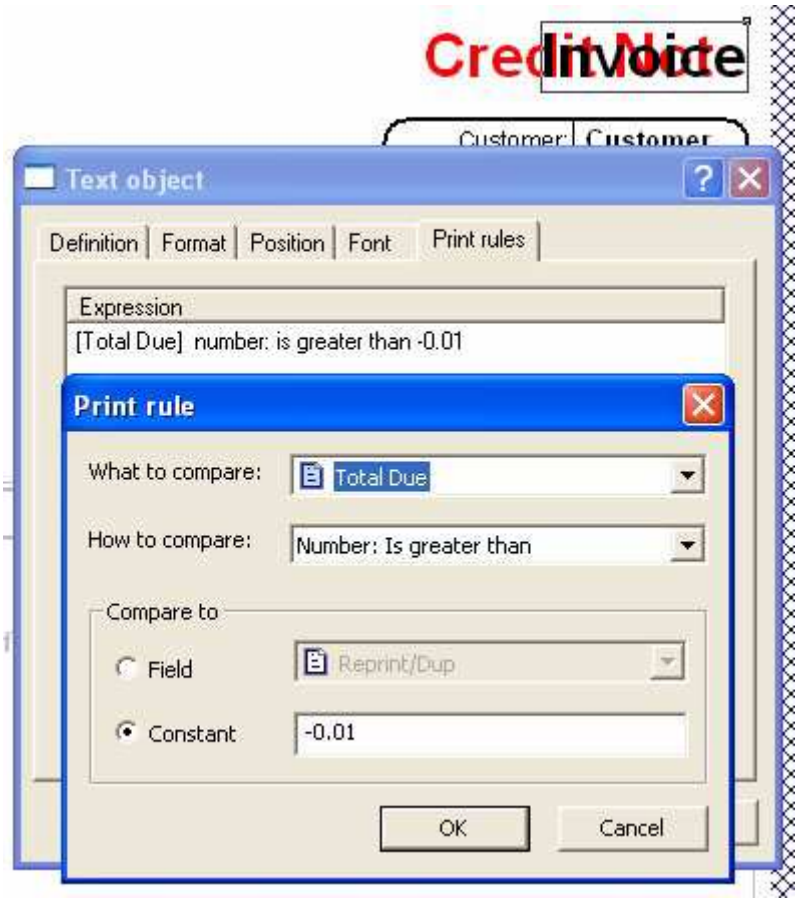
o

o.oo

-o.oo

Text: Is equal to does not compare them equally

- ***Compare to*** offers ***Field*** - select another field to compare from the drop down, and ***Constant*** - key a constant.



In this example "Invoice" will print when the value of the field "Total Due" is greater then -0.01. (i.e. 0.00 or greater)

In this example "Credit Note" will print when the value of the field "Total Due" is less then 0.00.

The finished expression is shown in the window, with any additional expressions forming a list. You may ***Edit*** and ***Remove*** a selected expression, or ***Remove all*** to delete the entire contents.

Expressions must all be true to print the object.

Deleting Objects

To delete an object:

- Select the object you wish to ***delete***.
- Right click on the selected object and choose Delete from the menu, or press the ***Delete*** button on the keyboard.

To delete a number of objects on the same page element:

- Select the objects you wish to delete by holding down the SHIFT key.
- Right click on the selected objects and choose ***Delete*** from the menu, or press the ***Delete*** button on the keyboard.

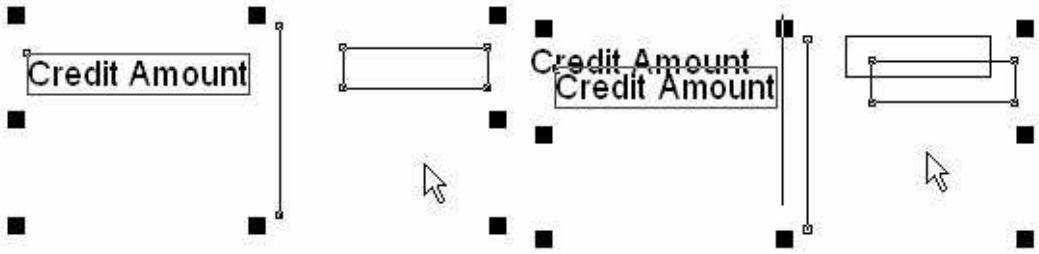
Arranging Objects

Once you have created objects on your form, you can change your form design efficiently using object arrangement tools. FormTrap offers features which are used specifically for laying out the form.

Duplicating Objects

Duplicate command will create a copy of an object, offset from the original.

- Select the object to be duplicated.
- Select ***Duplicate*** from the ***Edit*** menu, or use the keyboard short cut ***CTRL+D***.



Grouping Objects

By grouping objects together, you can control them as a single entity - useful when you need to move or align or duplicate several objects at once.

To group objects:

- Select the objects that you wish to group by holding down the ***SHIFT*** key and clicking each object or by drawing a marquee around them.
- Select ***Group*** from the ***Edit*** menu or click the ***Group tool*** button on the toolbar.
- One set of black handles appears around the group.

To separate the group of objects:

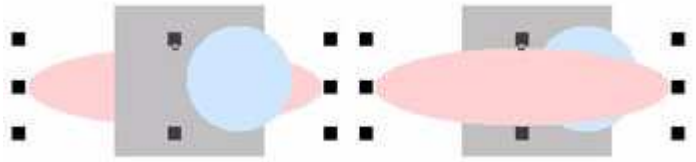
- Click on the group to select it.
- Select ***Ungroup*** from the ***Edit*** menu or click the ***Ungroup*** tool button on the toolbar.

Changing Object Order

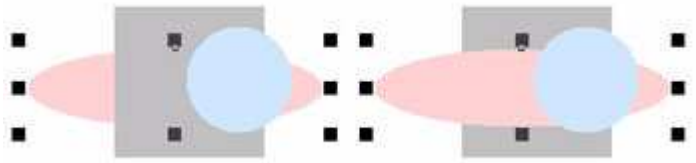
When you create a new object, FTDesign places it on top (in front) of objects already on the page. Object order allows you to control how objects overlap on the same page by putting them in front of, or behind other objects.

There are four options available when modifying object's order:

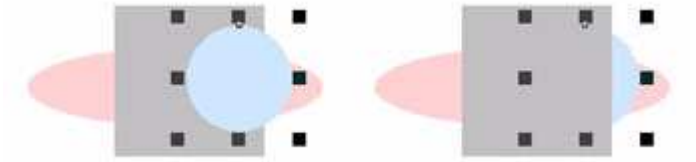
- ***Bring to front*** - object brought to the top most layer



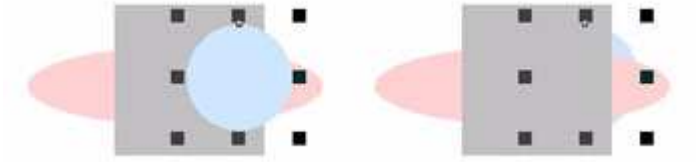
- ***Front one*** - object brought forward one layer



- ***Back one*** - object sent back one layer



- ***Send to bottom*** - object sent to the bottom most layer



To modify the object's order:

- Select the object you wish to move.
- From the ***Edit*** menu, select ***Order*** and then choose the appropriate option.
- Alternatively, right click on the selected object and choose the appropriate option from the ***Order*** menu.

Multiple Objetc Sizing

Resizing objects to a uniform size is quickly achieved with FTDesign's size function.

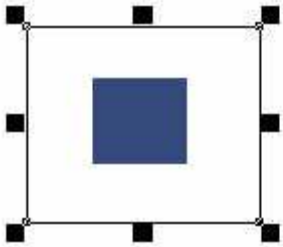
There are four options available when resizing objects:

- ***To widest*** - resize all objects to the same width as the widest object.
- ***To narrowest*** - resize all objects to the same width as the narrowest object.

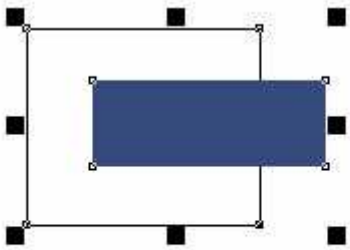
- ***To tallest*** - resize all objects to the same height as the tallest object.
- ***To shortest*** - resize all objects to the same height as the shortest object.

Following is one example of adjusting the smaller rectangle to the same size as the bigger one.

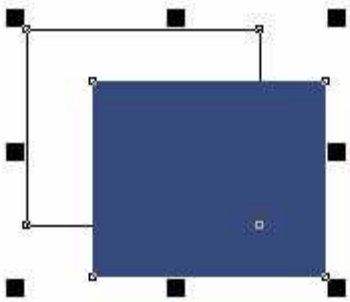
Select the objects to be sized by clicking on each of them while holding the ***SHIFT*** key, or by drawing a marquee around the objects. Two or more objects must be selected.



- Choose ***Size*** from the ***Edit*** menu, and then select ***To widest*** option.



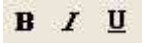
- Choose ***Size*** from the ***Edit*** menu, and then select ***To tallest*** option.



Multiple Object Properties

 ***Tool for Color***

 ***Font up one point size, Font down one point size***

 ***Bold (or not bold), Italic (or not italic), Underlined (or not underlined)***

Font and Point size

Multiple Object Properties

Changing the properties of individual objects can be time consuming, particularly if you have a large number of objects that you need to make the same change to on your form. FTDesign allows you to change the font and color properties of multiple objects using the toolbar.

To change the properties of multiple objects simultaneously:

- Select the objects you wish to modify by holding down the ***SHIFT*** key and clicking each object or by drawing a marquee around them.
- Use the ***Properties*** toolbar to modify the properties of the selected objects:
  - If you have selected text and barcode objects you can change the ***Font***, ***Font Size***, ***Font style*** or ***Color*** using the tools on the ***Properties*** toolbar.
  - If you have selected other objects such as lines, boxes and ellipses you can change the color using the ***Color*** tool on the ***Properties*** toolbar.

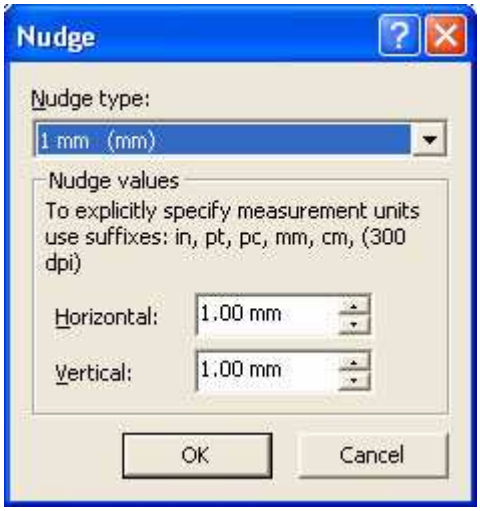
See Replacing Fonts on page 139 for global font changes.

Using the Nudge Tool

 The ***Nudge tool*** defines horizontal and vertical increments to move selected object(s) actioned by the arrow keys on your keyboard.

There are three methods of defining the nudge increment in FTDesign:

- ***Pre-defined*** - select the nudge increment from the pre-defined options
- ***Custom*** - enter a custom vertical and horizontal nudge increment.
- ***Difference between selected objects*** - set the nudge increments to the horizontal and vertical difference between two selected objects (shown only when two objects are selected).



To set the nudge increment:

- Click the ***Nudge tool*** button or select ***Nudge*** from the ***Tools*** menu.
- Either select a value from the ***Pre-defined value*** menu, or enter a value in the ***Horizontal*** and ***Vertical*** text boxes.
- Click the ***OK*** button.

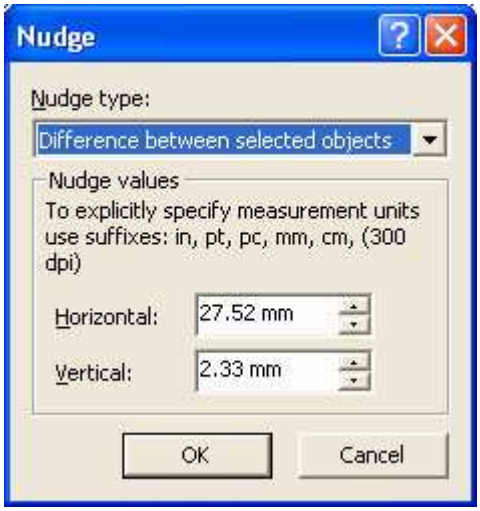
Once the nudge increment is defined, use the arrow keys on the keyboard to move selected objects one increment per press, in that direction.

For more information on Measurement Units see page 9.

Difference between Selected Objects automatically calculates and sets the nudge increment to the difference between two selected objects. This is handy if you want to create uniform space between text objects or lines.

To set the nudge distance to the difference between two selected objects:

- Select ***two*** objects on your form, either by clicking each of them while holding down the ***SHIFT*** key or by drawing a marquee around the objects.
- Click the ***Nudge tool*** button or select ***Nudge*** from the ***Tools*** menu.
- Select ***Difference between selected objects*** from the ***Pre-defined values*** menu. The ***Horizontal*** and ***Vertical*** nudge values will be automatically calculated, as shown in the ***Nudge value*** box.
- Click the ***OK*** button.



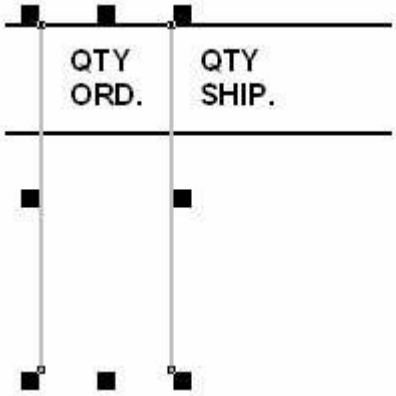
Once the nudge increment is defined, you can use the arrow keys on the keyboard to move selected objects one increment per press, in that direction.

Nudge Tool Example

Use ***Difference between selected objects*** nudge option to create quantity columns that are equal in width.

- Select two column lines on the ***QTY ORD***. column.
- Choose ***Nudge*** from ***Tools*** menu, or click on the ***Nudge tool*** button from the toolbar.
- Select ***Difference between selected objects*** from the ***Pre-defined values*** menu.

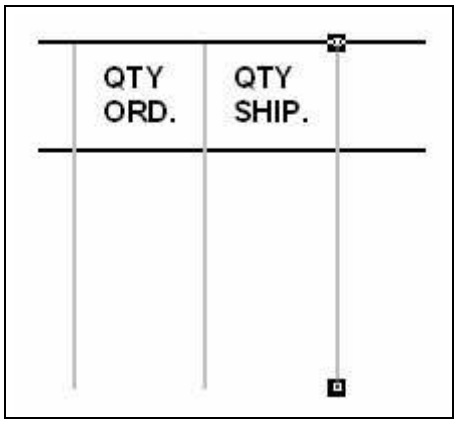
- Click the ***OK*** button.



- Select the right column line and select ***Copy*** then ***Paste*** from the ***Edit*** menu, or click ***Copy tool*** then Paste tool from the Toolbar.

Note: Paste draws directly over the Cut or Copied object.

Press the right arrow on the keyboard. Now you have columns for ***QTY ORD***. and ***QTY SHIP***. that are equal in width.



Using the Alignment Tool

The ***Alignment tool*** allows selected objects to be exactly aligned to any other object on the page.

There are six alignment tools that can be used to manipulate single objects, multiple selected objects, or objects selected as a group.

Left align - aligns the left side of the object.

Horizontal center - aligns the object between two points horizontally.

Right align - aligns the right side of the object.

Top align - aligns the top side of the object.

Vertical center - aligns the object between two points vertically.

Bottom align - aligns the bottom of the object.

When aligning objects, you must consider how the objects are referenced by the alignment tool. To align objects:

- Select the object to be aligned.
- Select the appropriated alignment tool.
- Click on another object which is used as a point of reference.

The second object, i.e. the reference object, is divided into four parts, a top and bottom half, and a left and right half. Alignment of the first object will depend on which part of the second object is used as a reference point.

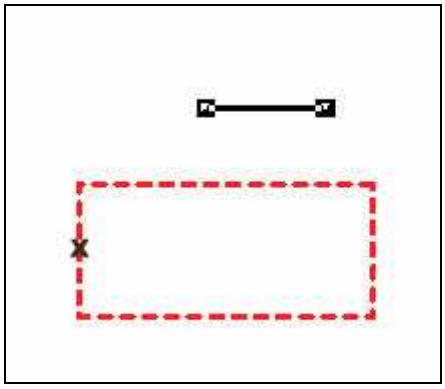
Following are five examples of how to use the alignment tools:

Aligning Objects Example 1

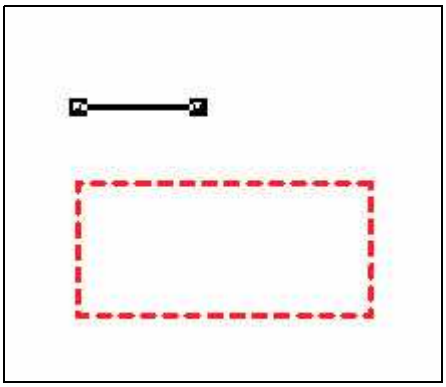
Align the left side of an object to the left side of another object.

Select the object to be aligned.

- Select the ***Left*** alignment tool on the alignment toolbar.
- Click on the left side of the second object.



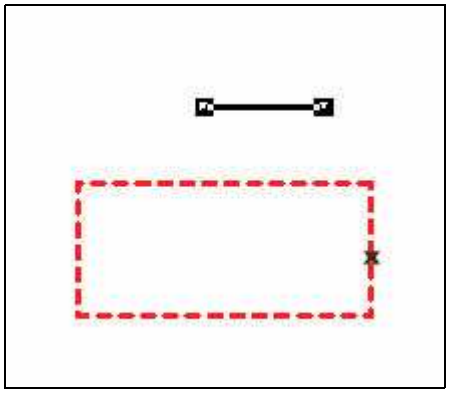
The first object aligns itself to the left of the second object.



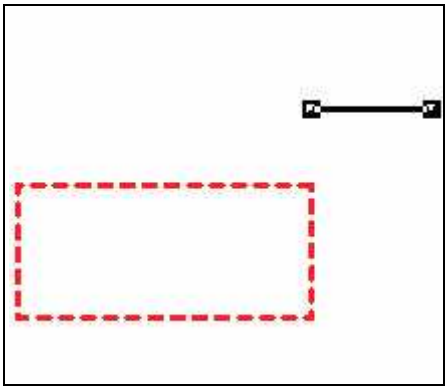
Aligning Objects Example 2

Align the left side of an object to the right side of another object.

- Select the object to be aligned.
- Select the ***Left*** alignment tool on the alignment toolbar.
- Click on the right side of the second object.



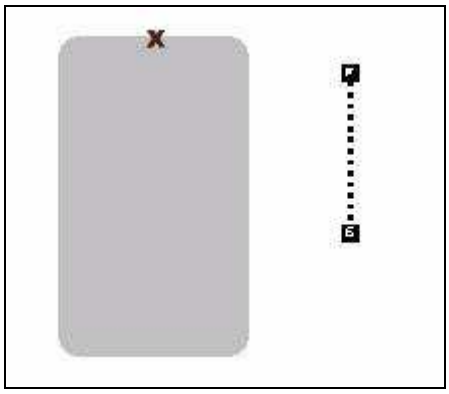
The first object left aligns itself to the right of the second object.



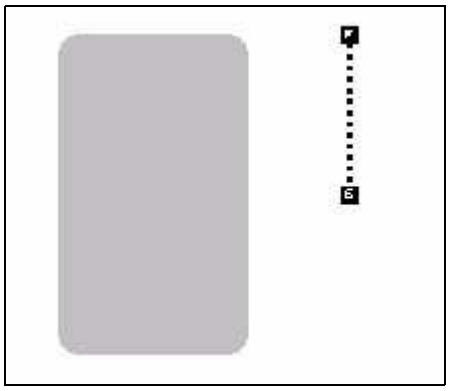
Aligning Objects Example 3

Align the top of an object to the top of another object.

- Select the object to be aligned.
- Select the ***Top*** alignment tool on the alignment toolbar.
- Click on the top of the second object.



The first object aligns itself to the top of the second object.

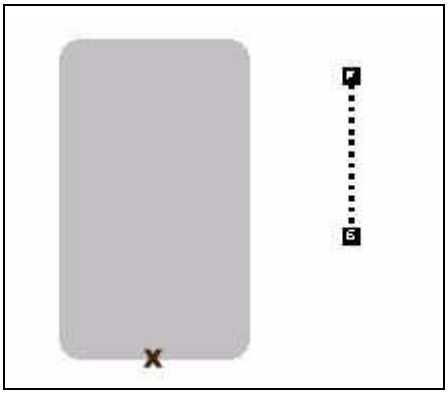


Aligning Objects Example 4

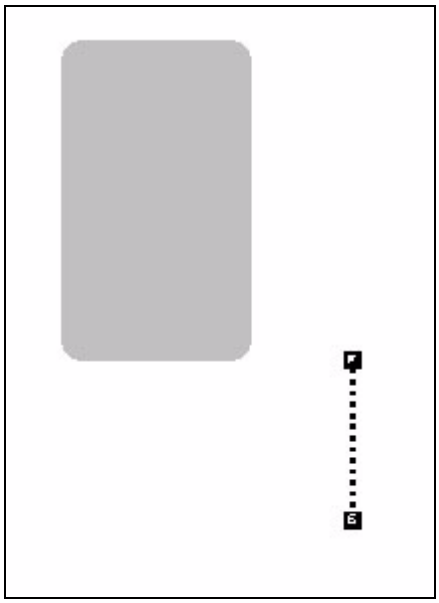
Align the top of an object to the bottom of another object.

- Select the object to be aligned.
- Select the ***Top*** alignment tool on the alignment toolbar.

- Click on the bottom of the second object.



The first object aligns itself to the bottom of the second object.

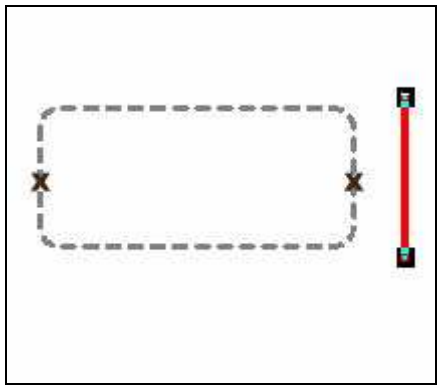


Aligning Objects Example 5

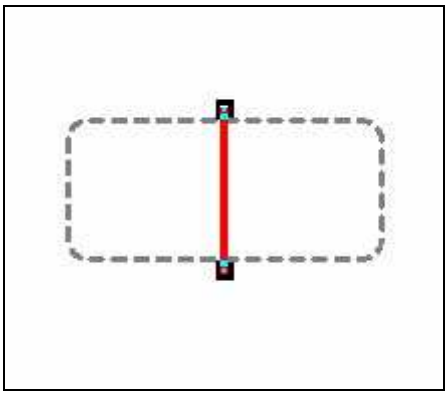
Horizontally center a selected object between the left and right sides of another object.

- Select the object to be aligned.
- Select the ***Horizontal center*** alignment tool on the alignment toolbar.

- Click on the left and right sides of the second object.



The first object is horizontally centered between the left and the right sides of the second object.



 ***Stretch alignment*** enables you to stretch objects to fit between other objects, or to size them to other objects.

To enable stretch alignment, select the ***Stretch Alignment*** option from the ***Align*** under the ***Tools*** menu or click the ***Stretch Alignment*** tool button on the toolbar. Stretch alignment will remain enabled until the button is clicked again.

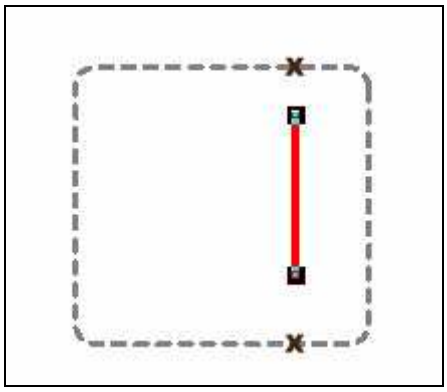
 Stretch tool disabled

Using Stretch Alignment Example

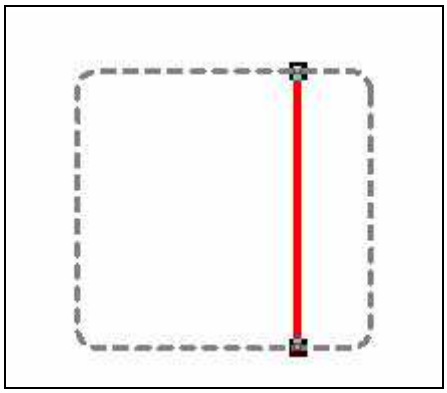
Stretch the vertical line to fit the height of the rectangle.

- Select the object to be stretched.
- Enable the ***Stretching tool***.
- Select the ***Vertical center*** alignment tool on the alignment toolbar.

- Click on the top and bottom sides of the second object.



The first object (vertical line), is stretched to be the same height as the second object (rectangle).



Creating Page Elements

Page elements are defined before new objects are created.

- ***Base page*** is the only compulsory page element for a form design, and is created by default for each new page. Data included on the Base page is typically that which identifies and heads the document, and appears on every page of the output.
- ***Detail Area*** contains ***Detail Lines*** that print repeated variable data.
- ***Sub-form*** is defined for the additional information that occurs only once in the data, such as an invoice total, or occurs repetitively as a "Ship to" address.
- ***Group headers*** print heading information that appears at the top of a group of detail lines and automatically at the top of subsequent pages for this group.
- ***Report header*** is used to print information which is needed only on the FIRST page of the document. ***Report footer*** is used to print information which is needed only on the LAST page of the document. This may include information such as the total of an invoice or a remittance advice slip.
- ***Page header*** is used for a "miniaturized" version of the header, typically omitting address lines, thus creating extra space for details on all pages subsequent

to the first page. ***Page footer*** is often used to print C/Fwd details and is smaller than a report footer and so creates extra space for details on all pages previous to the last page.

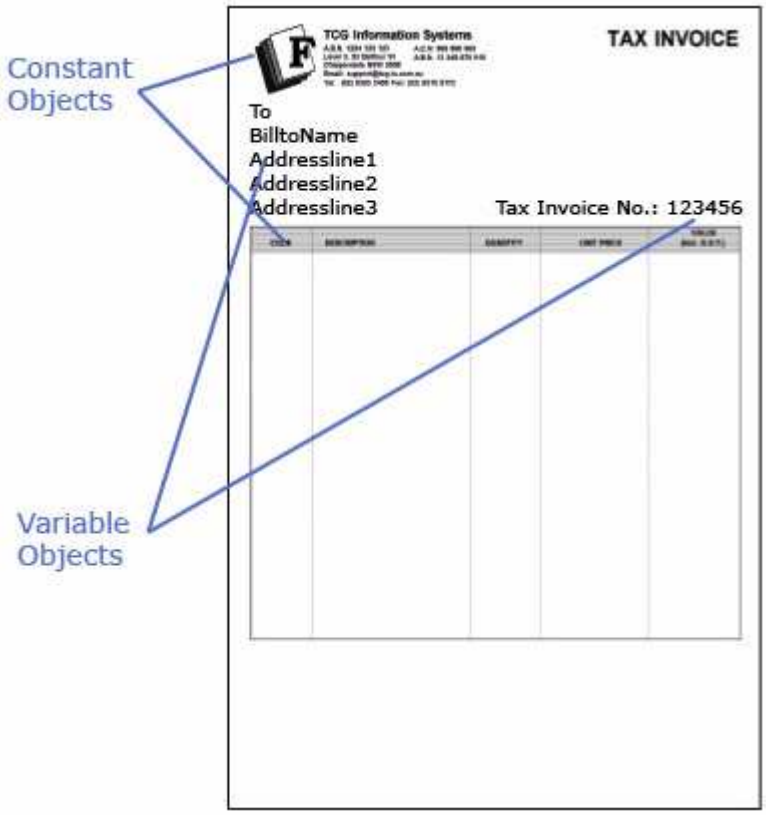
- ***First Page footer*** is a special footer that will be printed on the first page only, such as printing a check (cheque) form.
- ***Second Page footer*** is a special footer printed on the back of a first page footer on duplex documents to prevent detail lines occupying a tear-off portion (such as a payment slip).
- The ***Carried forward*** and ***Brought forward*** page elements are special types of detail lines that, enable the carrying of totals across pages.

When a form design becomes complex, some page elements may appear to obstruct others or may even not fit on the page in the design window. You can define which page elements are currently visible on screen and in which order to place those visible elements from the Placement and visibility option in the ***Define*** menu.

Base Page

The Base page is used as a template for each new page and contains data common to all pages. Data included on the Base page is typically that which identifies the document, and appears on every page of the output.

The figure below shows a sample Base page. It contains both constant objects (objects that always appear the same when printed) and variable objects (objects that obtain their value from the data). The logo and heading are constant objects while the customer address and the date fields are variable text objects. When the form prints, the same logo and heading will appear at the top of each printed page, however, the address and invoice number are extracted from the data and change with each new document.

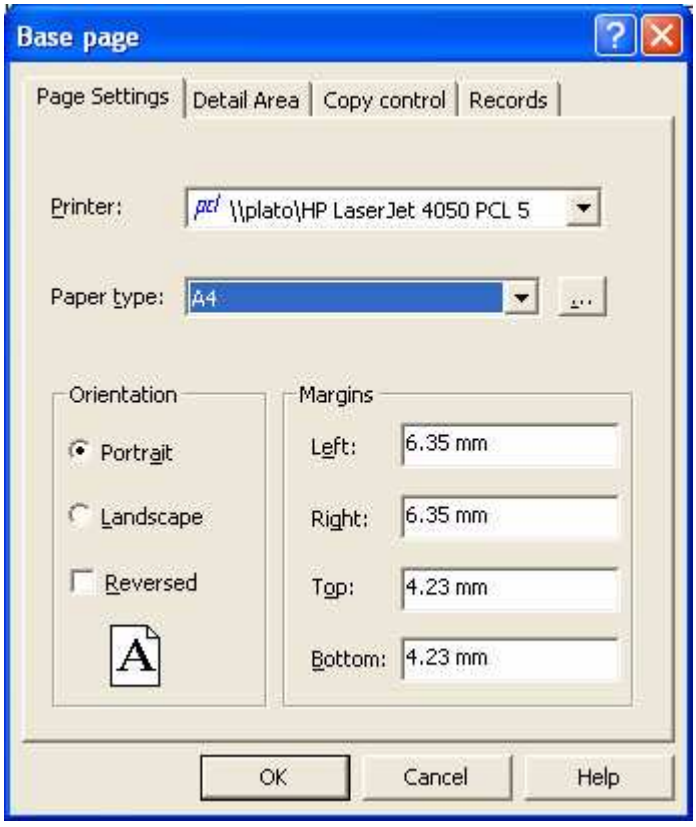


When you create a blank form in FTDesign, you automatically start on the Base page.

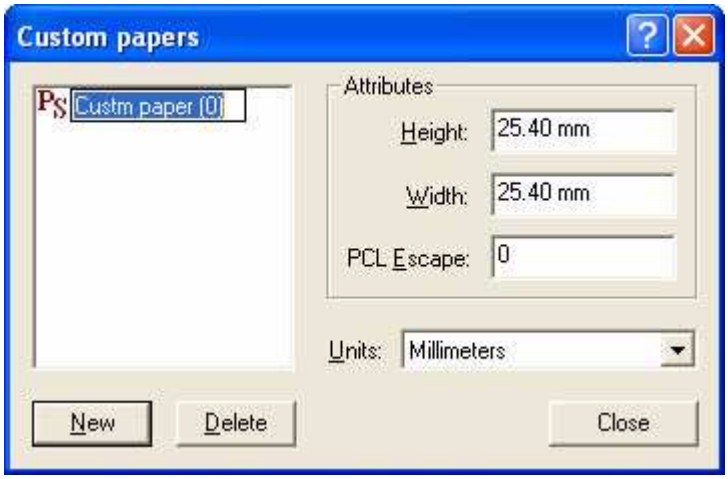
To define the properties of the Base page:

- Ensure the ***Base page*** is selected on the Go menu.
- Select ***Properties of the Base page*** from the ***Define*** menu.
- On the ***Page Settings*** tab:
  - ***Printer*** - use the ***Printer*** menu to select either a PCL or PostScript printer which you will use to design the form.
  - ***Paper type*** - select the appropriate page size from the ***Paper type*** drop down menu.
  - ***Orientation*** - change the page orientation of the page by choosing ***Portrait*** or ***Landscape*** settings in the ***Orientation*** frame. Check the ***Reversed*** check box for the page to print reversed (from the bottom to the top).

- ***Margins*** - modify the page margins in the ***Margins*** frame.

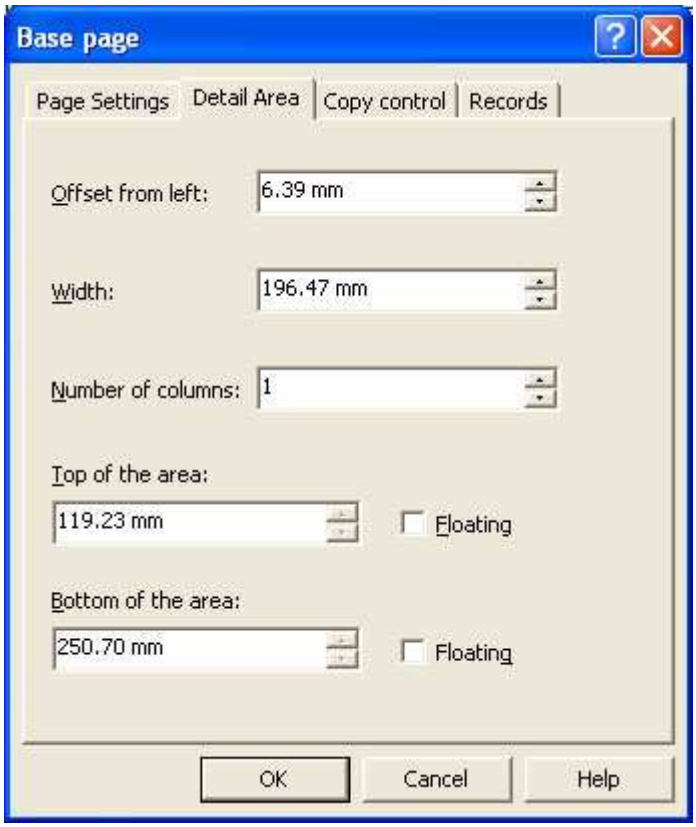


- To create a custom paper type:
  - Click the "..." button to create a custom page size.
  - Give the custom page size a ***Name***, ***Height***, ***Width*** and ***PCL Escape***. The PCL Escape is the code sent to the printer. The PCL escape code value can be found in your printer manual. Email support@formtrap.com for other non-standard paper instructions for PostScript and PCLXL.
  - Choose measurement units for the defined paper size from the ***Units*** drop-down menu.

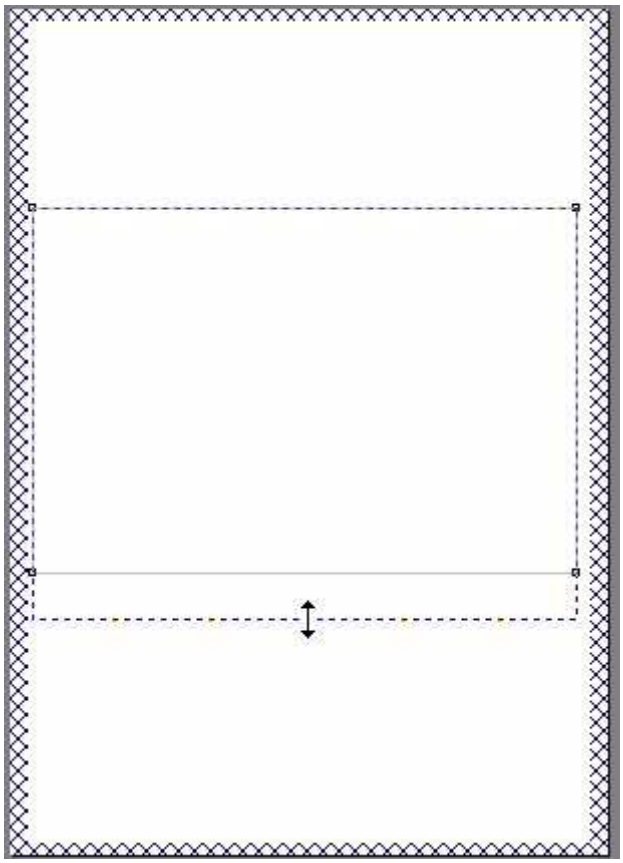


- The ***Detail Area*** tab allows definition of the area of the form used for detail lines:

- ***Offset from left*** - left margin, between the left edge of the Detail Area and the left of the page edge.
- ***Width*** - width of Detail Area.
- ***Number of columns*** - number of columns in Detail Area. Detail lines are added starting at the top of the first column, moving down to the end of the Detail Area. When the first column is filled, detail lines are added to the top of the second column and so on. Multiple columns are commonly used in label printing.
- ***Top of the area*** - margin between the top edge of the Detail Area and the top of the page.
- ***Bottom of the area*** - margin between the bottom edge of the Detail Area and the top of the page.
- ***Floating*** - tick the checkbox to allow the top or/and bottom edge of the Detail Area float depending on the size of that page's heading and trailers.



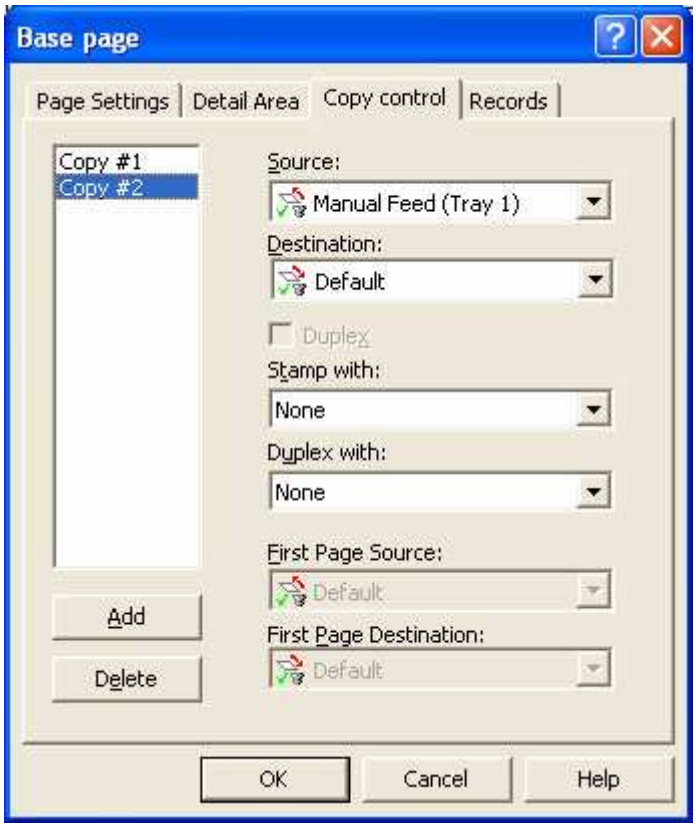
Note: The Detail Area is delineated by a faint grey outline, which can be adjusted using the mouse by pulling the handles. This facility is only available when the base page is in focus.



- The ***Copy Control*** tab allows definition of selected bins and/or multiple copies for up to five copies. This method requires manual decollation of copies and it is simpler to produce an alternate full copy using another similar form. (Copies are retained for backwards compatibility purposes).
- Configure each copy:
  - ***Source*** - alter the paper tray FormTrap prints from.
  - ***Destination*** - alter the output bin FormTrap prints to. If you are using a PostScript printer driver you will need to enter the name of the output bin in the ***Destination*** text box. This information can be found in your Printer manual.
  - ***Stamp with*** - select a stamp/duplex sub-form from the dropdown menu to be stamped on this copy. Tick the ***Duplex*** checkbox to allow a stamped sub-form to be printed on the reverse of the page.
  - ***Duplex with*** - select a stamp/duplex sub-form from the dropdown menu to be printed on the reverse of the page.
  - If you have defined a First Page footer, you can set different source and destination bins for this copy.
    - ***First Page Source*** - alter the paper tray FormTrap prints the first page from.
    - ***First Page Destination*** - alter the output bin FormTrap prints the first page to. If you are using a PostScript printer driver you will need to

enter the name of the output bin in the ***Destination*** text box. This information can be found in your Printer manual.

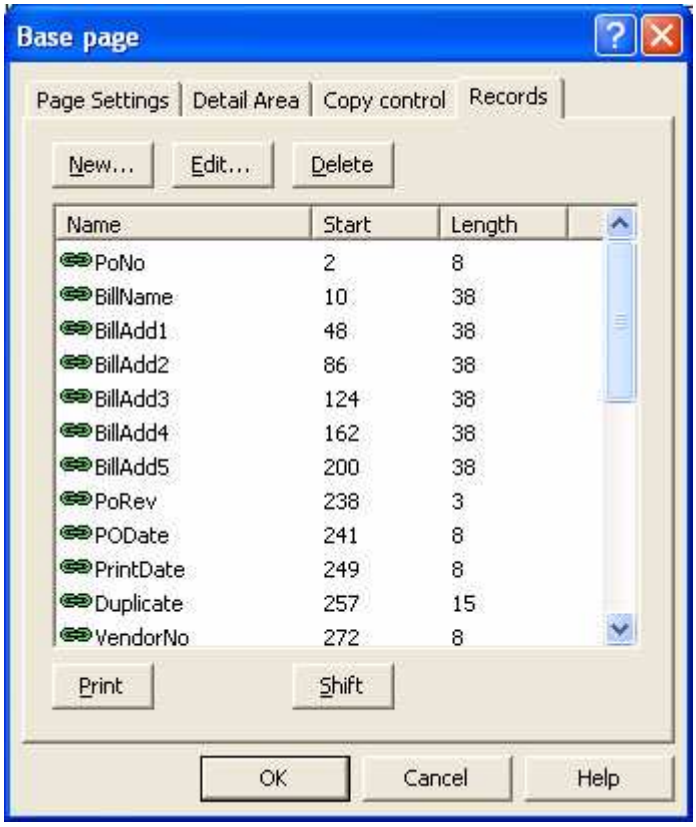
Note: A PostScript destination bin must be entered in English.



- On the ***Records*** tab, you can define the variables fields for the Base page. FormTrap can then properly extract the fields from the input file. This step is optional. Each field can also be defined as needed when the variable object is created.

For more information on Defining Variables in Print Line Mode see page 23.

For more information on Defining Variables in Records Mode see page 31.



Detail Area

The Detail Area is a bounding box surrounding the incoming variable data. A Detail Area needs to be defined as part of the Base Page if you intend to include the variable detail lines from the data file. The figure below outlines a sample Detail Area on a form.

There are two types of Detail Areas:

- ***Static*** - the Detail Area remains in the same position on each page.
- ***Floating*** - the Detail Area moves up and down the page and changes in size to provide room for Report and Page headers and footers.

Static Detail Area

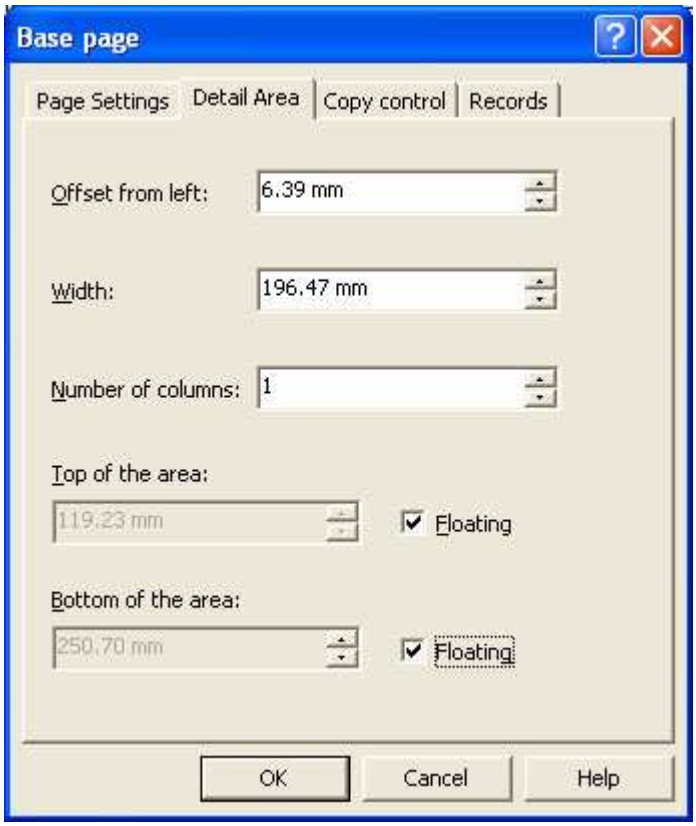
To define a static Detail Area:

- Ensure the ***Base page*** is selected on the ***Go*** menu. Select ***Properties of the Base page...*** from the ***Define*** menu.
- Set the properties of Detail Area on the Detail Area tab.
- Un-tick both ***Floating*** checkboxes of ***Top of the area*** and ***Bottom of the area***.
- Click the ***OK*** button. The Detail Area is delineated by a faint grey outline, which can be adjusted using the mouse by pulling the handles. This facility is only available when the Base page is in focus.

Floating Detail Area

To define a floating Detail Area:

- Ensure the ***Base page*** is selected on the ***Go*** menu. Select ***Properties of the Base page...*** from the ***Define*** menu.
- Set the properties of Detail Area on the Detail Area tab.
- Tick the ***Floating*** checkbox next to ***Top of the area*** to make the top edge of the Detail Area float. The top of the Detail Area moves up and down to cater for the Report and Page headers.
- Tick the ***Floating*** checkbox next to ***Bottom of the area*** to make the bottom edge of the Detail Area float. The bottom of the Detail Area moves up and down to cater for the Report and Page footers.
- Click the ***OK*** button.



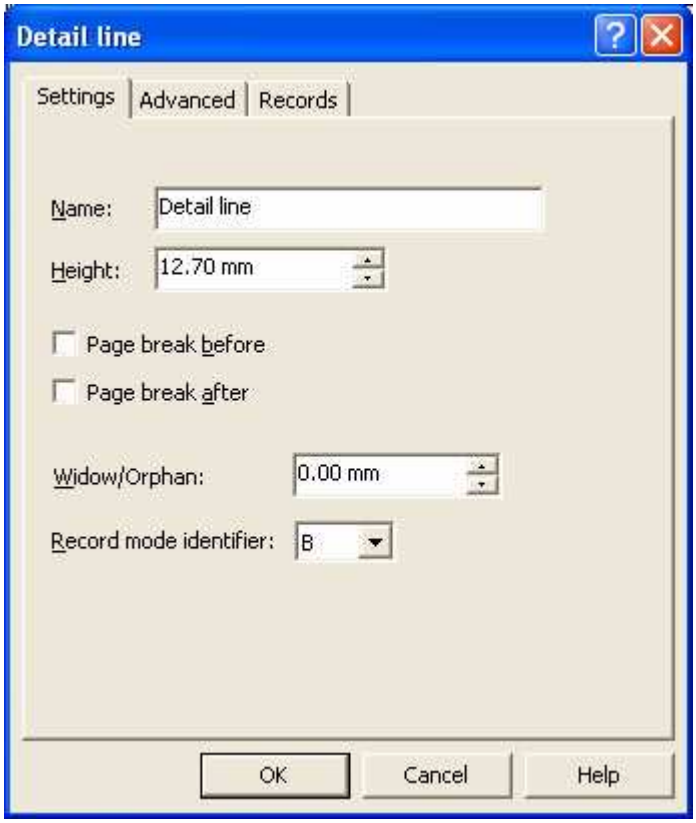
Detail Lines

Detail lines represent the repeating information in a form, which may be of different structures. In an Invoice you may have product lines, comment lines, tax lines and so on, all are detail lines.

To define a Detail Line:

- Select ***Add detail line*** from the ***Define*** menu.
- On the ***Settings*** tab set:
  - ***Name*** - the name is used as a reference for the detail line.

- ***Height*** - set the height of the detail line to accommodate the text objects that represent the detail information and any formatting objects such as extra lines or boxes.
- ***Page break before*** - a new page is generated before the detail line prints (used for internal detail-level headers within the document).
- ***Page break after*** - a new page is generated after the detail line prints (used when totals other than document totals are included within the detail lines).
- ***Widow/Orphan*** - the widow/orphan value defines the minimum amount of remaining space that must be available at run-time in the Detail Area in order for the detail line to be printed. If the available space is less than the space required by the widow/orphan value, the detail line will not be printed on this page and will instead be carried to the next page. This is used for within-detail-area structures so as not to show just a header and/or total on a page by itself.
- ***Record mode identifier*** - a letter of the alphabet (uppercase) used to uniquely identify the detail line (only applicable in Records Mode).



- On the ***Advanced*** tab:
  - ***Implicit header*** - an existing implicit header can be associated with the detail line. When the assigned detail line is first found in the data the implicit group header prints the table object for that group of detail lines, before printing the associated detail line.
  - ***Growing and Shrinking*** - detail lines can be defined to dynamically resize at run-time in order to accommodate variable text or other objects within the detail. This is most useful when text objects on the detail contain multiple

fields, which can result in paragraphs with a varying number of lines, depending on the input data.

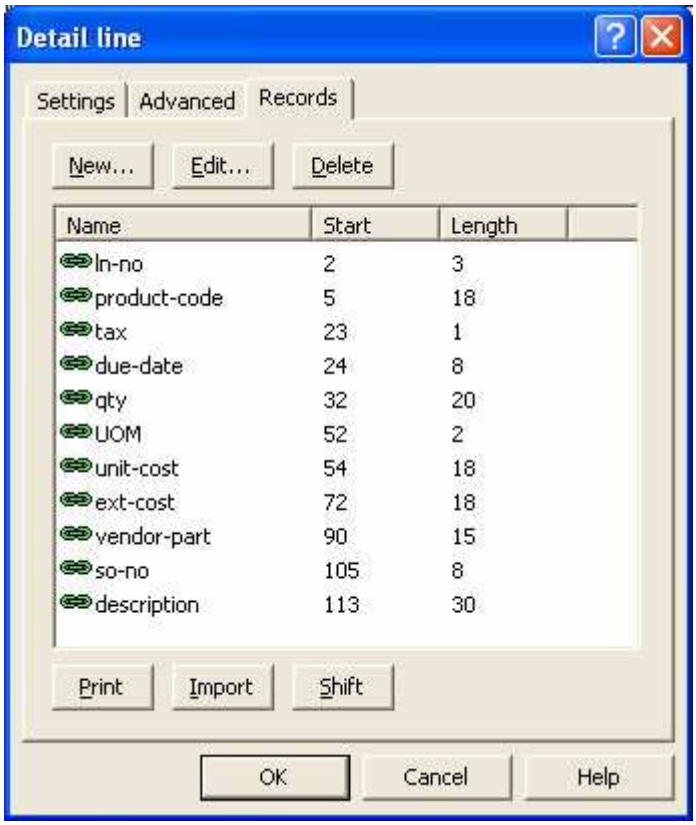
Detail lines defined as being of variable size can also have an arbitrary amount of white space set to follow the printed detail. For example, this feature ensures a consistent space between paragraphs on a letter form.

Tick the ***Variable height*** checkbox and enter a value in the ***White space*** text box. This creates a margin between the current detail line and the next detail line.

- On the ***Records*** tab, define the fields for this detail line. FormTrap can then properly extract the data from the input file.

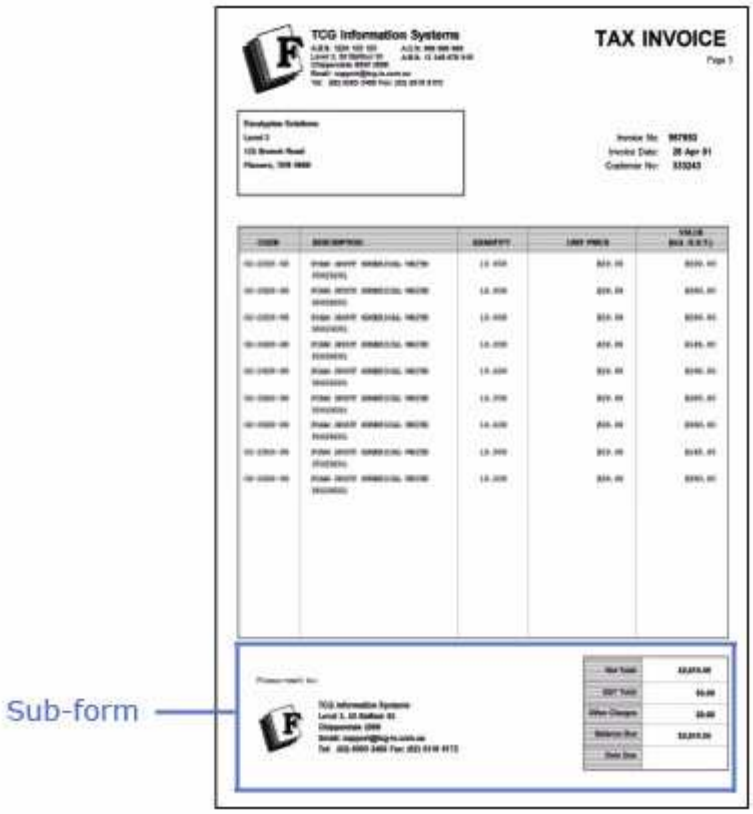
For more information on Defining Variables in Print Line Mode page 23.

For more information on Defining Variables in Records Mode see page 31.



Sub-forms

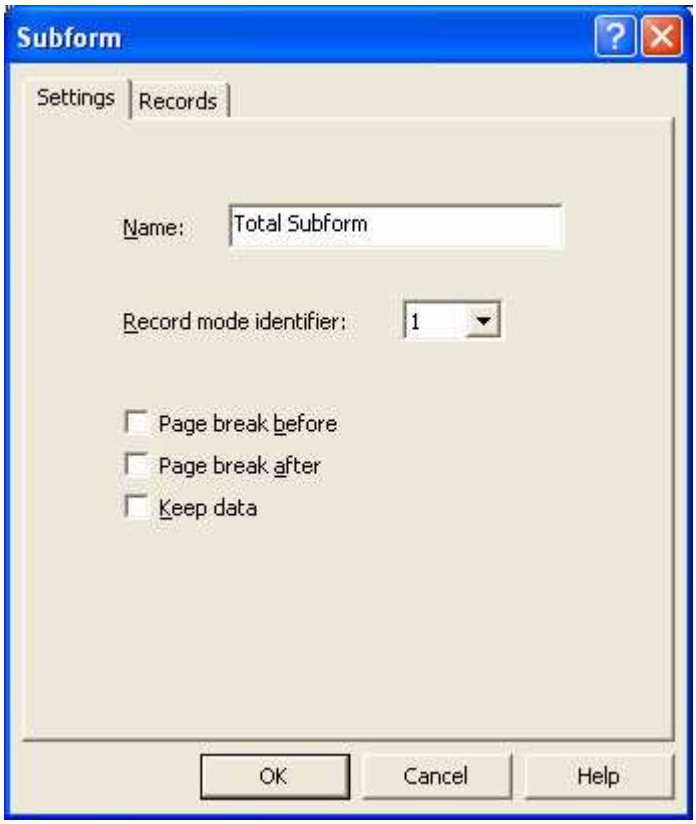
Sub-forms are used to print conditional information that may occur only once in the input file.



To add a new sub-form:

- Select ***Add sub-form*** from the ***Define*** menu.
- On the ***Settings*** tab set:
  - ***Name*** - the name is used as a reference for the sub-form.
  - ***Record mode identifier*** - a number (1 through 9) used to uniquely identify the sub-form (only applicable in Records Mode).
  - ***Page break before*** - a new page is generated before the sub-form prints.
  - ***Page break after*** - a new page is generated after the sub-form prints.
  - ***Keep data*** - when the sub-form is found in the input file, the sub-form is then repeated on subsequent pages until a new document (Base page or 0 record)

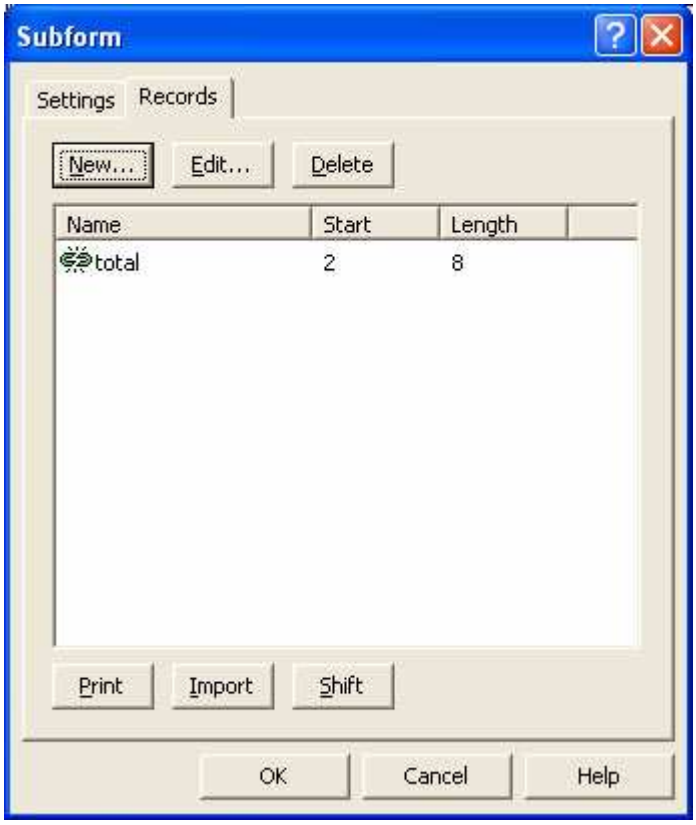
appears in the data. Often used for Ship To instructions which may be present or absent.



- On the ***Records*** tab, define the fields for the sub-form. FormTrap can then properly extract the data from the input file.

For more information on Defining Variables in Print Line Mode page 23.

For more information on Defining Variables in Records Mode page 31.



Stamp/duplex Sub-forms

Stamp/duplex sub-forms, used with the Copy control feature, allow different text or graphics to be printed on each of the multiple copies of the form.

- A ***stamp*** is printed on the front of each page. For example, create an accounts copy stamp which prints on the front of each page.
- A ***duplex*** is printed on the reverse of the page. For example, create a terms and conditions sub-form which prints on the reverse of each page.

To add a new stamp/duplex sub-form:

- Select ***Add stamp/duplex*** from the ***Define*** menu.
- On the ***Settings*** tab, define a name for this stamp/duplex sub-form.

Group Headers

Group headers print heading information that appears at the top of a group of detail lines and automatically at the top of subsequent pages for this group. There are two types of group headers:

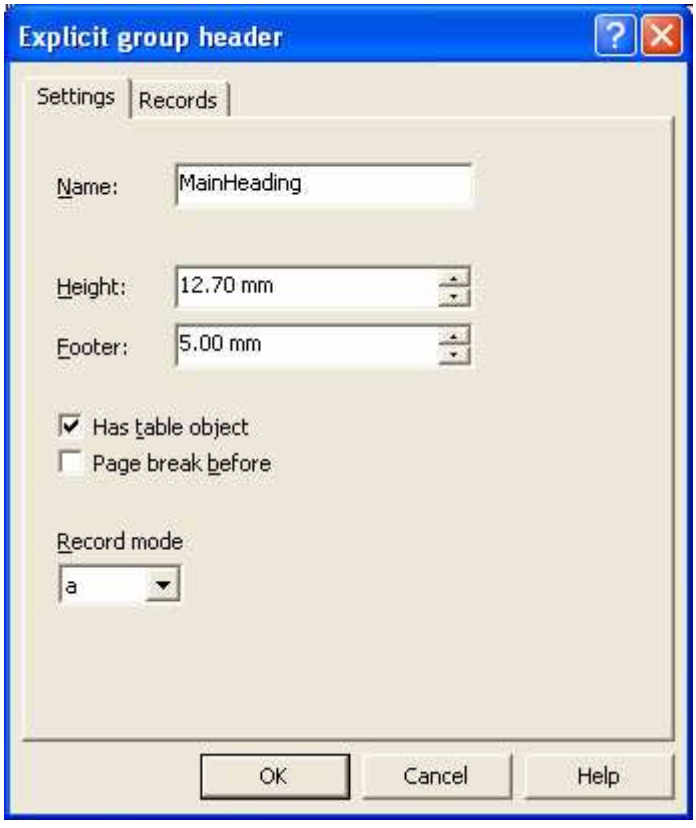
- ***Explicit group header*** - an explicit group header is found in the input file and consists of constant or variable heading information.
- ***Implicit group header*** - an implicit group header is assigned by FormTrap to a detail line and consists of constant heading information.

Explicit group header

An explicit group header is found in the input file. On a records mode form, when explicit group headers are created they are assigned a letter of the alphabet, lowercase a through j, as a unique identifier. When FormTrap sees an a - j identifier in the first column of the input file record it will print the corresponding explicit group header.

To add an explicit group header:

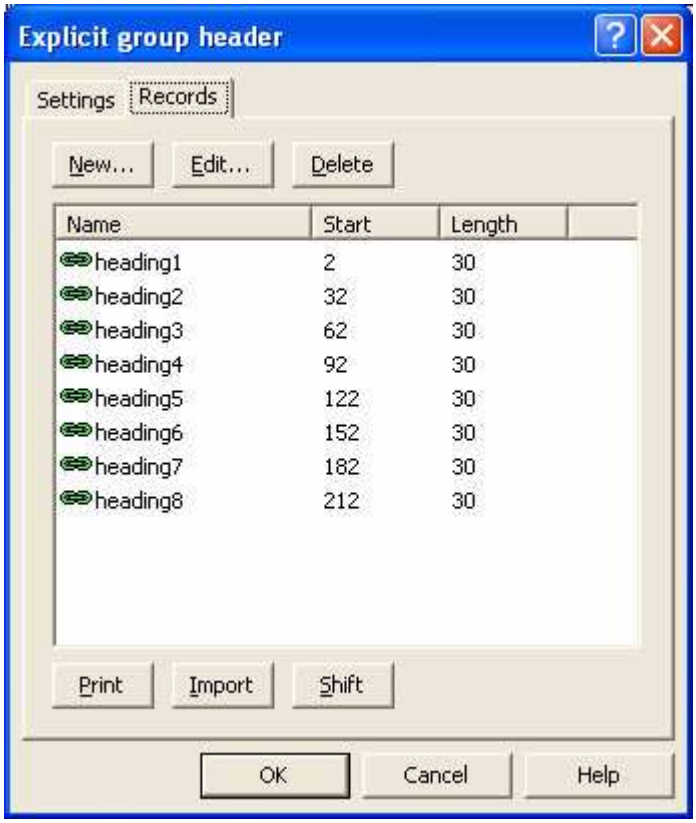
- From the ***Define*** menu, select ***Add group header*** and then ***Explicit***.
- On the ***Settings*** tab, set:
  - ***Name*** - the name is used as a reference for the group header.
  - ***Height*** - set the height of the group header to accommodate the variable or constant text objects that represent the detail information and any additional formatting objects.
  - ***Footer*** - space between the end of the current table object and the next table object.
  - ***Has table object*** - table for the current group of detail lines is printed with the group header.
  - ***Page break before*** - a new page is generated before the group header prints.
  - ***Record mode identifier*** - a letter of the alphabet (lowercase) used to uniquely identify the detail line (only applicable in Records Mode).



- On the ***Records*** tab, define the fields for the group header. FormTrap can then properly extract the fields from the input file.

For more information on Defining Variables in Print Line Mode page 23.

For more information on Defining Variables in Records Mode page 31.



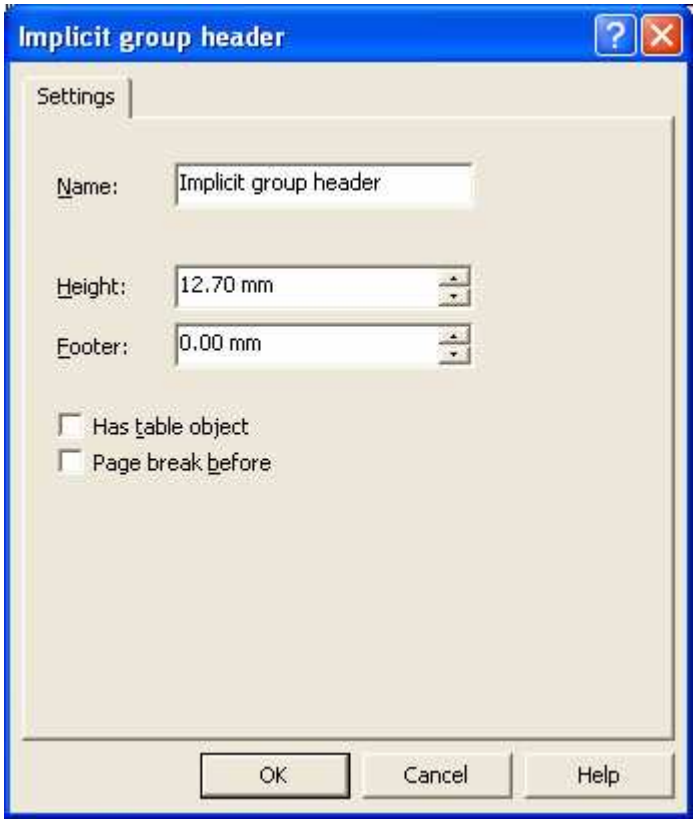
Implicit group header

An implicit group header contains constant heading information and prints at the top of a group of detail lines. The implicit group header is associated with a specific detail line or a group of detail lines. When that detail line is first found in the input file, the implicit group header will print before the detail line as a group heading.

To add an implicit group header:

- From the ***Define*** menu, select ***Add group header*** and then ***Implicit***.
- On the ***Settings*** tab, set:
  - ***Name*** - the name is used as a reference for the group header.
  - ***Height*** - set the height of the group header to accommodate the constant text objects that represent the detail information and any additional formatting objects.
  - ***Footer*** - space between the end of the current table object and the next table object.
  - ***Has table object*** - table for the current group of detail lines is printed with the group header.

- ***Page break before*** - a new page will be generated before the group header prints.

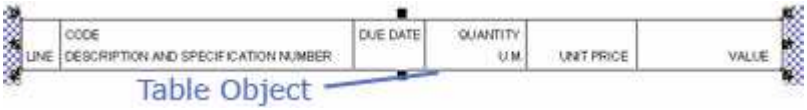


After the implicit group header is defined it is then associated with a detail line.

Has table object

If the ***Has table object box*** has been checked FormTrap will create a table using the associated explicit or implicit group header at the top of the table. The table object will create a border around the Detail Area. If a new explicit or implicit group header is called the current table object terminates and a new table object with a new header is created.

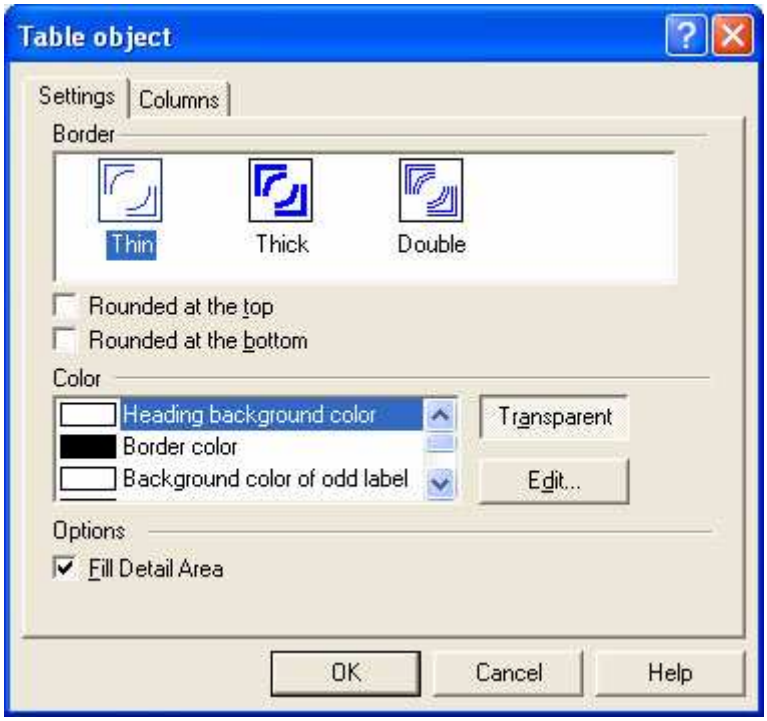
The newly created group header is outlined by a black rectangle. This black rectangle represents the table object and its properties can be edited to change the color and style of the table printed. The table object columns can also be created and positioned graphically on your form.



To edit the table object:

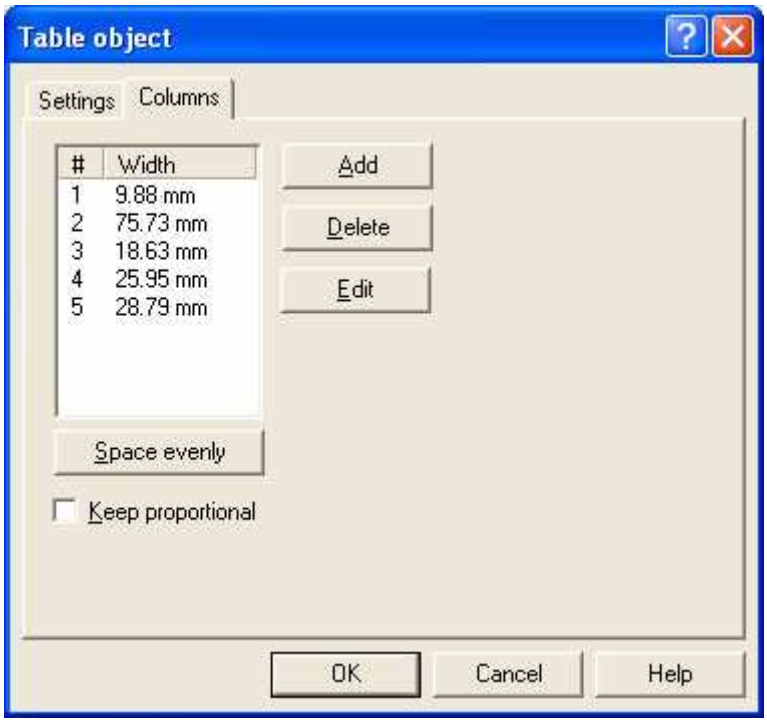
- Double click on the table object.
- On the ***Settings*** tab set:
  - ***Border*** - set the border style to ***Thin***, ***Thick*** or ***Double***.
  - ***Rounded at the top*** - check the box to give the top of the table rounded corners.
  - ***Rounded at the bottom*** - check the box to give the bottom of the table rounded corners.

- ***Colors*** - select a section of the table, e.g. border color, and then click the ***Edit...*** button to change the color of the section. Click the ***Transparent*** button to make that section of the table transparent.
- ***Fill Detail Area*** - check the box to have the table fill to the end of the Detail Area, regardless of how many detail lines are printed on the page.



- On the ***Columns*** tab, add and modify the columns for the table. You can also create and reposition column lines graphically on the form itself.
  - ***Add*** - click the ***Add*** button to add a new column and enter the column width.
  - ***Edit*** - select a column and click the ***Edit*** button to edit the column width.
  - ***Delete*** - select a column and click the ***Delete*** button to delete a column.
  - ***Space evenly*** - click the ***Space evenly*** button to make all columns an equal width.

- ***Keep proportional*** - if checked, the columns within the table object remains proportional when the object is resized.



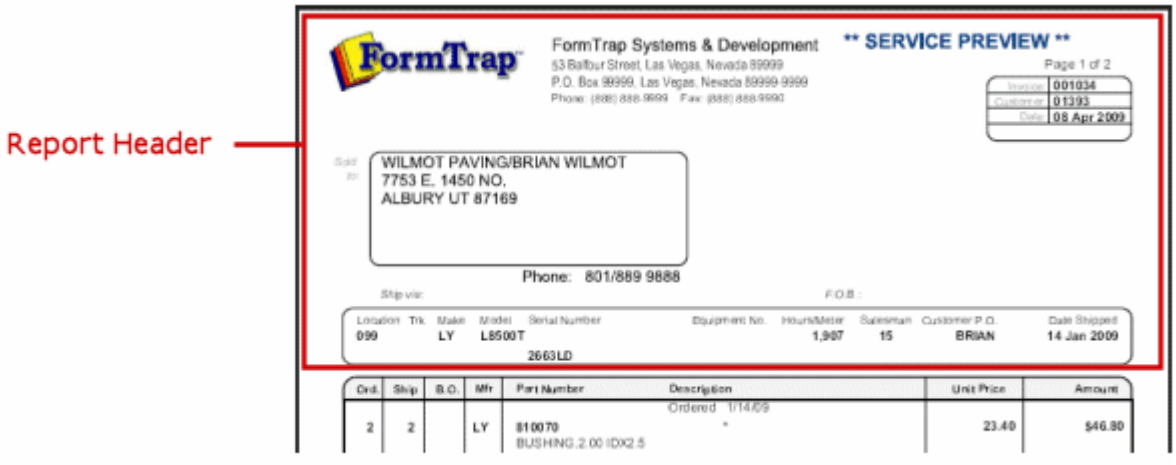
- Click the ***OK*** button.

To edit the table object columns graphically on your form:

- Right click on the table object and select ***Edit Columns*** from the dropdown menu.
- Right click and select ***Insert Columns***.
- Click within the table object to insert a new column line. Continue to insert as many column lines as you need in your table object.
- Once you have finished inserting columns, right click within the table object and select ***End Inserting Columns*** from the drop down menu. You can insert new column lines by right clicking and selecting ***Insert Columns*** from the drop down menu.
- To move a column line within the table object, click to select the column line and drag it to the desired position or use the arrow keys on your keyboard to nudge the line.
- Once you have finished editing the columns in the table object, right click within the table object and select ***Accept Changes*** to save the changes to the table object columns, or ***Cancel Changes*** to discard the changes to the table object columns.

Report Header

The Report header is used to print information which is needed only on the first page of the document. On an invoice, this may include specific document information such as the credit terms, bill of lading or sales people. The figure below outlines a sample Report header on a form.



Fields from the input file for Report Headers and Footers and for Page Headers and Footers must be defined in the Base Page first.

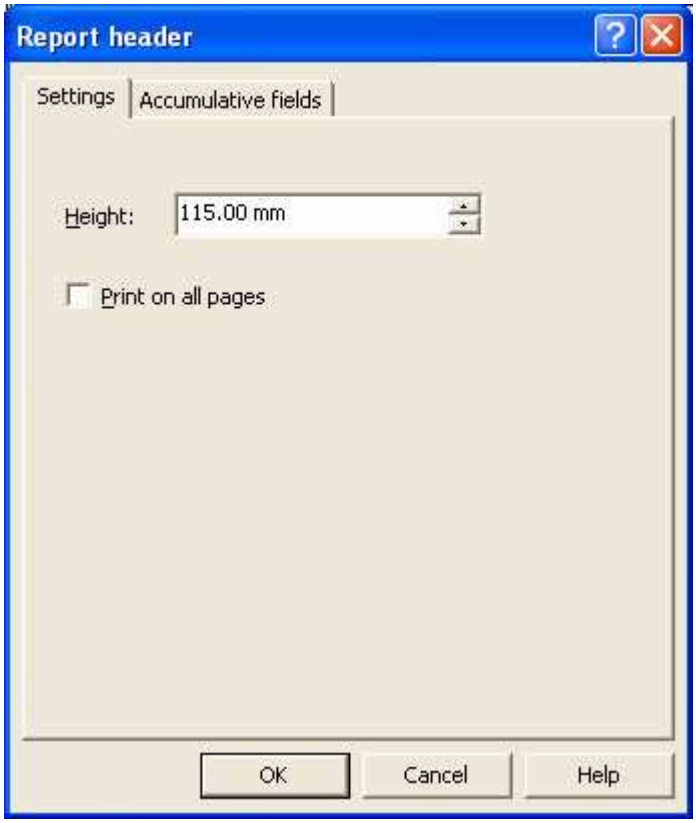
For more information on Defining Variables in Print Line Mode see page 23.

For more information on Defining Variables in Records Mode see page 31.

To create the Report header:

- Select ***Report header*** from the ***Define*** menu.
- On the ***Settings*** tab set:
  - ***Height*** - a height for the Report header.
  - ***Print on all pages*** - check this box for the Report header to print on all pages. This makes the Report header a Page header.

- On the Accumulative fields tab, define the accumulative fields ***Name***, and set the data fields to be accumulated from the page elements.



Report Footer

The Report footer is used to print information which is needed only on the last page of the document. This may include information such as the total of an invoice or a remittance advice slip. The figure below outlines a sample Report footer on a form.

To create the Report footer:

- Select ***Report footer*** from the ***Define*** menu.
- On the ***Settings*** tab set:
  - ***Height*** - height for the Report footer.
- On the Accumulative fields tab, define the accumulative fields Name, and set the data fields to be accumulated from the page elements.

Page Header

The Page header is typically smaller in size than the Report header. It is used to create extra space for details on all pages subsequent to the first page, as these pages typically do not require the same level of detail as covered by the Report header. For instance, a Page header would typically only carry basic customer and document information as well as the page number.

To create the Page header:

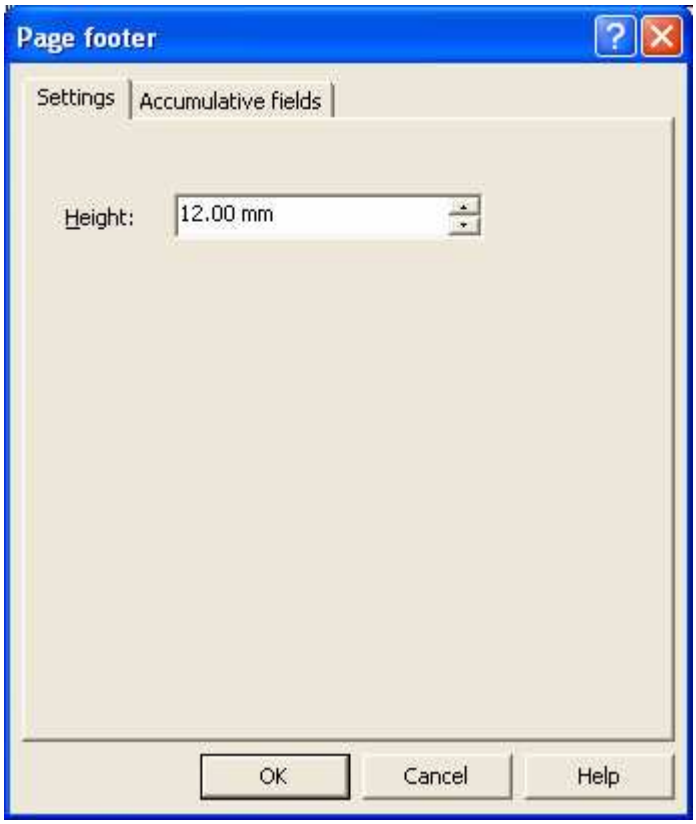
- Select ***Page header*** from the ***Define*** menu.
- On the ***Settings*** tab set:
  - ***Height*** - height for the Page header.
- On the ***Accumulative fields*** tab, create a new accumulative field if not already defined.

Page Footer

The Page footer is typically smaller in size than the Report footer. It is used to create extra space for details on all pages previous to the last page, as these pages typically do not require the same level of detail, if any, as covered by the Report footer.

To create the Page footer:

- Select ***Page footer*** from the ***Define*** menu.
- On the ***Settings*** tab set:
  - ***Height*** - height for the Page footer.
- On the ***Accumulative fields*** tab, create a new accumulative field if not already defined.

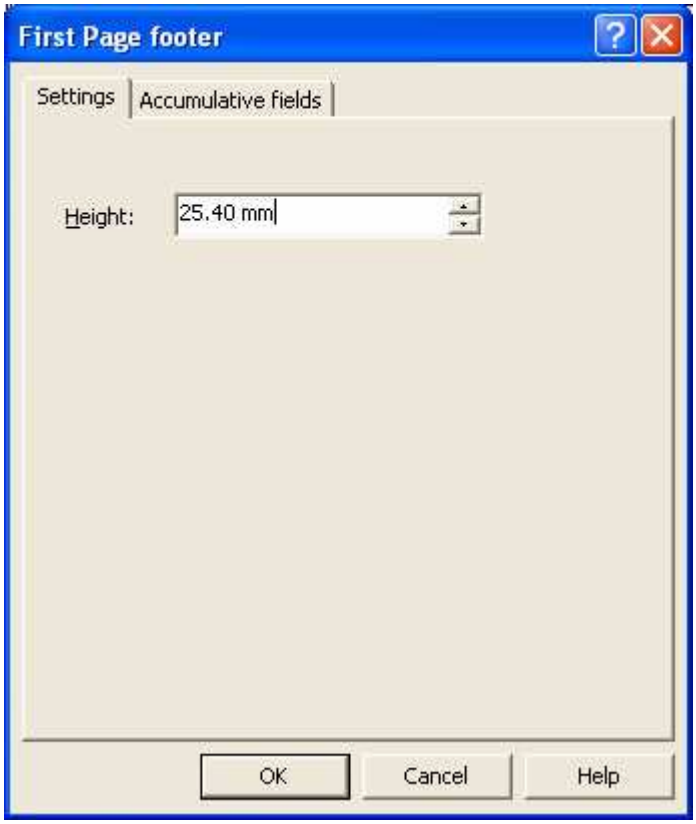


First Page Footer

The First Page footer is a special footer printed on the first page only. If defined, it replaces the Page footer on the first page and is typically used to print a check (cheque), allowing you to print the first page on check stationery and the remaining pages on plain paper. You can set different source and destination bins in ***Copy control*** for the First Page footer (only possible if a First Page footer has been defined).

To create the First Page footer:

- Select ***First Page footer*** from the ***Define*** menu.
- On the ***Settings*** tab set:
  - ***Height*** - height for the First Page footer.
- On the ***Accumulative fields*** tab, create a new accumulative field if not already defined.



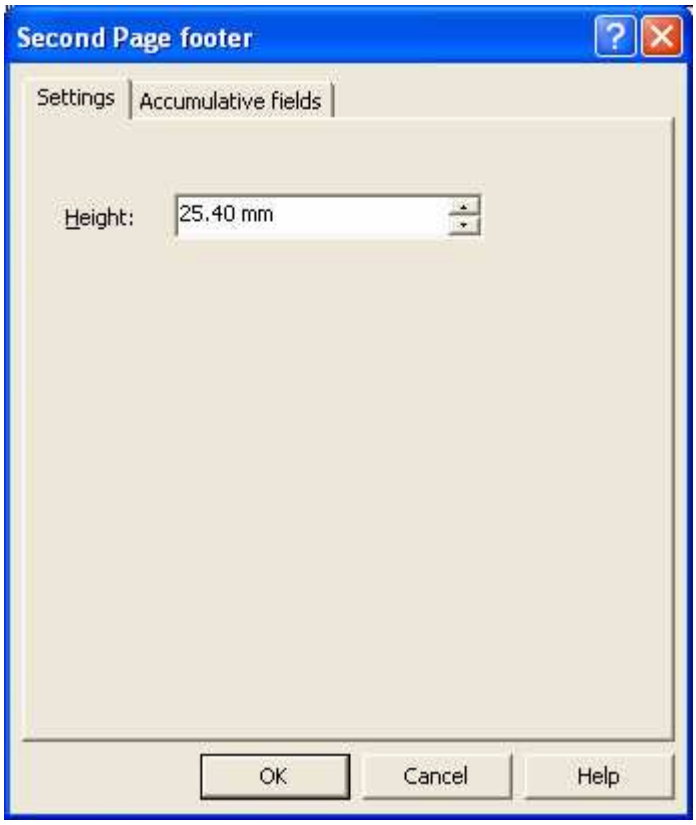
Second Page Footer

The Second Page footer is a special footer printed on the second page only. If defined, it replaces the Page footer on the second page and is typically used for duplex documents on the back of a first page footer to prevent detail lines on a tear-off remittance or check (cheque).

To define a Second Page footer:

- Select ***Second Page footer*** from the ***Define*** menu.
- On the ***Settings*** tab set:
  - ***Height*** - height for the Second Page footer.

- On the ***Accumulative fields*** tab, create a new accumulative field if not already defined.



Carried Forward

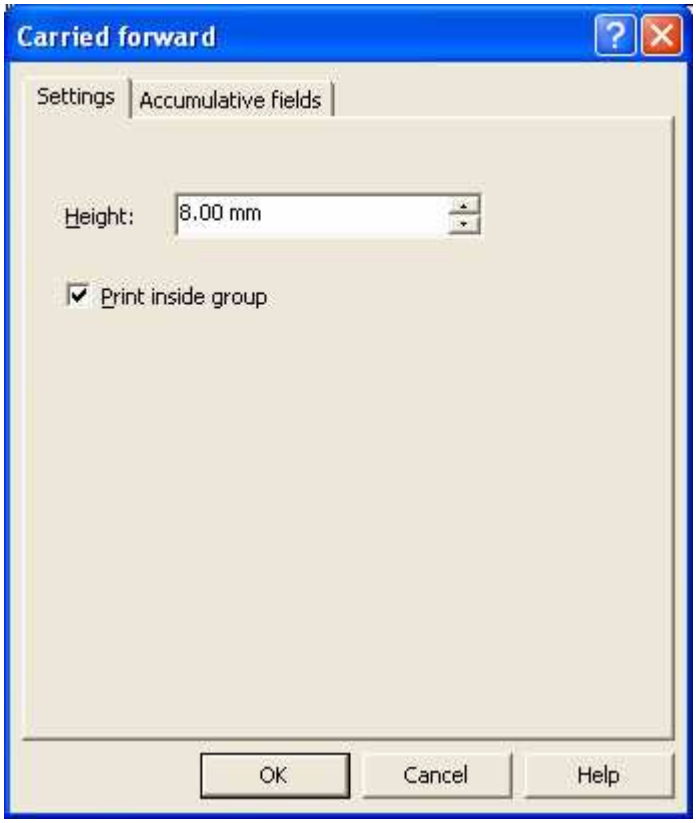
Carried forward and Brought forward page elements are optional special detail lines that are printed automatically by FormTrap. As their names suggest, these detail lines enable progressive totals across pages. While both can print constant objects, variable data can only come from the accumulative field or the Base page. A Carried forward is unusual, this information is normally shown in a Page Footer. Brought forward is common and usually contained within the detail area.

If defined, the Brought forward detail will print as the first line in the Detail Area of every page except the first. Similarly, the Carried forward detail will print as the very last line in the Detail Area of every page except the last.

To add a Carried forward detail:

- Select ***Carried forward*** from the ***Define*** menu.

- On the ***Settings*** tab, set the ***Height*** for the line. Tick the ***Print inside group*** checkbox to print the Carried forward detail inside the table object.



- On the ***Accumulative fields*** tab, create a new accumulative field if not already defined.
- Click the ***OK*** button.
- Constant objects can now be added in the same way as for other detail lines. Variable objects can be linked to existing accumulative fields.

Brought Forward

Carried forward and Brought forward page elements are optional special detail lines that are printed automatically by FormTrap. As their names suggest, these detail lines enable progressive totals across pages. While both can print constant objects, variable data can only come from the accumulative field or the Base page. A Carried forward is unusual, this information is normally shown in a Page Footer. Brought forward is common and usually contained within the detail area.

If defined, the Brought forward detail will print as the first line in the Detail Area of every page except the first. Similarly, the Carried forward detail will print as the very last line in the Detail Area of every page except the last.

To add a Brought forward detail:

- Select ***Brought forward*** from the ***Define*** menu.
- On the Settings tab, set the Height for the line. Tick the ***Print inside group*** checkbox to print the Brought forward detail inside the table object.

- On the ***Accumulative fields*** tab, create a new accumulative field if not already defined.
- Constant objects can now be added in the same way as for other detail lines. Variable objects can be linked to existing accumulative fields.

The Accumulative Field

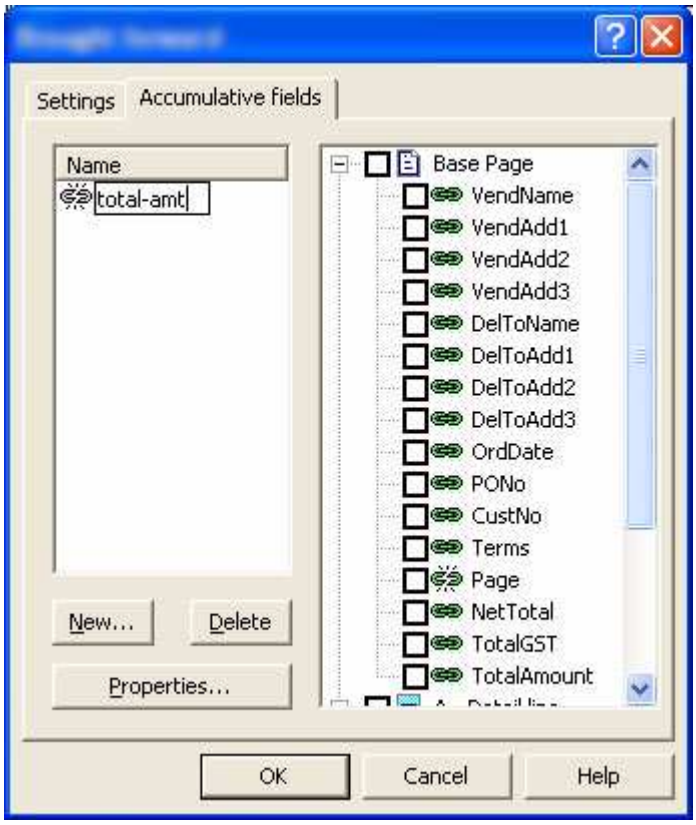
Accumulative fields progressively accumulate data from other fields on a FormTrap document. Typical use is to accumulate running totals of data from detail lines such as line amounts. Data is accumulated at the time of printing the original field, hence if a detail field prints more than once (two-up invoices for example), two versions of the data field MUST be defined, with one name used for a single accumulation.

The page elements ***Report header and footer***, ***Page header and footer***, ***Carry forward***, and ***Brought forward*** have the access to the accumulative field.

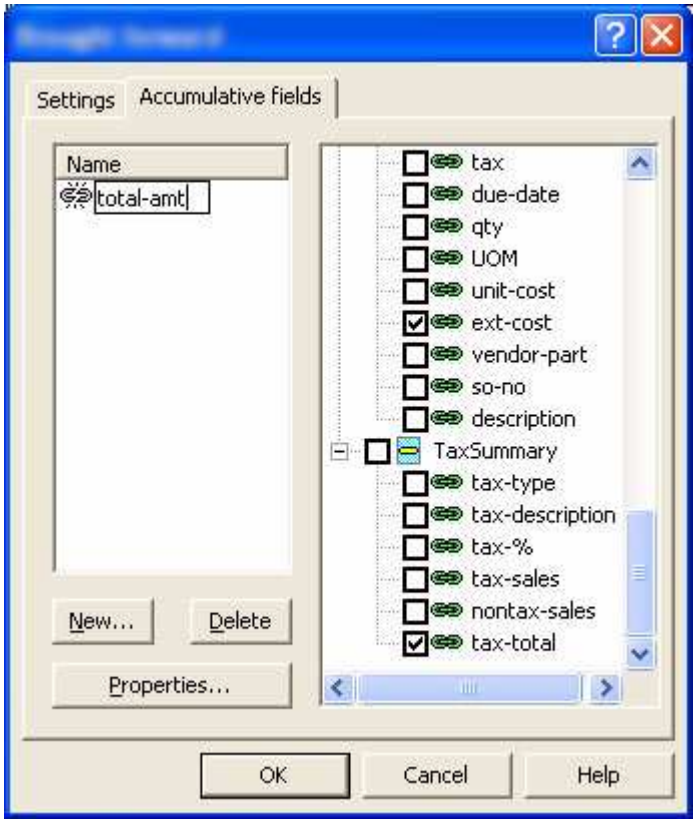
Your document can have any number of accumulative fields. The ***Report header***, ***Page header*** and ***Brought forward*** page elements will print the value of the accumulative field from the completed previous page. The ***Page footer***, ***Report footer*** and ***Carry forward*** page elements will print the value of the accumulative field as it stands upon completion of the current page.

To create an accumulative field:

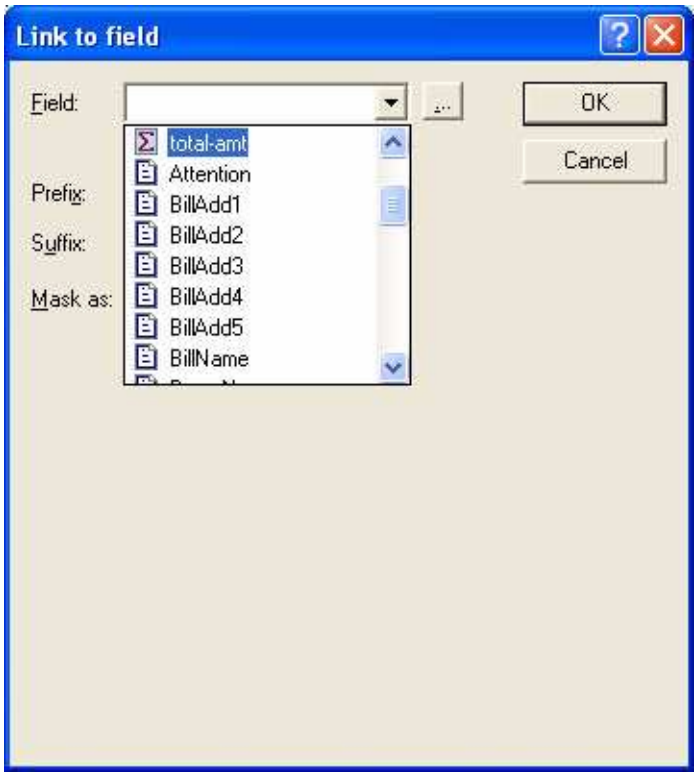
- Select the appropriate page element on the ***Go*** menu.
- Select ***Properties of...*** from the ***Define*** menu.
- On the ***Accumulative fields*** tab, click on the ***New...*** button to add a new field.
- A new field appears in the ***Name*** box. Left-click once to select and then type in a unique name.



- In the right-hand box is a list of all page elements and the data fields within each page element. Select the data field(s) that you wish to accumulate.



- The accumulative field is now available in the list of records when defining a new variable object.



- Click on the ***Properties...*** button. Rename the field, and/or change the reset attributes as required:
  - ***Reset on new page*** - the value accrued in the accumulative field resets to zero at the beginning of a new page.

Note: Accumulative fields on the Report header, Page header and Brought forward page elements print before the value is reset.

  - ***Reset on new group*** - the value accrued in the accumulative field resets when a new Group header is printed.

Deleting Page Elements

To delete a page element:

- Ensure the page element to be deleted is selected on the ***Go*** menu.
- Select ***Delete...*** from the ***Define*** menu.
- Click ***Yes*** in the confirmation pop-up.

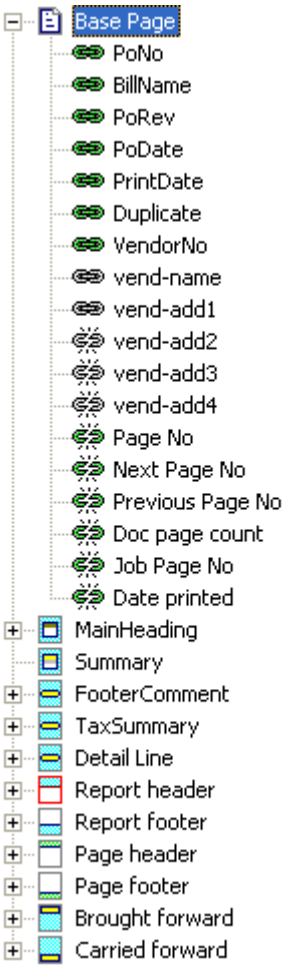
Base page is the only page element that cannot be deleted.

Note: Consider saving the form under an "old-" name before deleting a page element, as this process cannot be undone.

Arranging Page Elements

Structure Map Pane

The Structure Map Pane lists the page elements that have been created and the variables associated with that page element. The Structure Map Pane is located in the left bottom panel of your FTDesign window.



Mapped Unlinked variable - field is not linked to a variable on the form but has been mapped to a field in the data (green broken link).

Mapped Linked variable - field is linked to a variable on the form and is associated with a field in the data (green link).

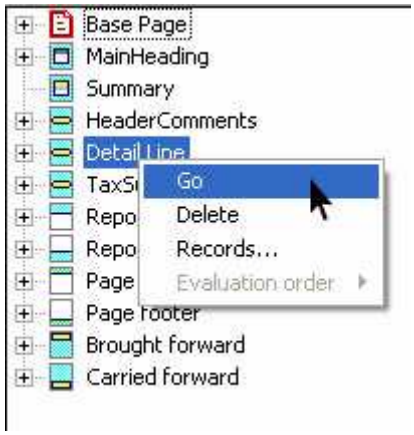
Unmapped Unlinked Variable - field is defined but not linked to a variable on the form nor mapped to a field in the data (grey broken link).

Unmapped Linked Variable - field is linked to a variable on the form but is not associated with a field in the data (grey link). This condition is flagged as an error when trying to preview a form or build a project. You must link all form variables to data prior to building the project or previewing the form.

Navigating between Page Elements

To swap between page elements:

- Select the element you wish to swap to on the Go menu.
- Alternatively, right click on the element in the Structure Map Pane and select Go from the drop down menu.



Placement and Visibility

When a form design becomes complex, some page elements may obstruct others or may even not fit on the page in the design window. FTDesign adds page elements to the page in the order you create them. If, for example, you add a group header after creating a detail line, it can be difficult to correctly align text to the appropriate header text.

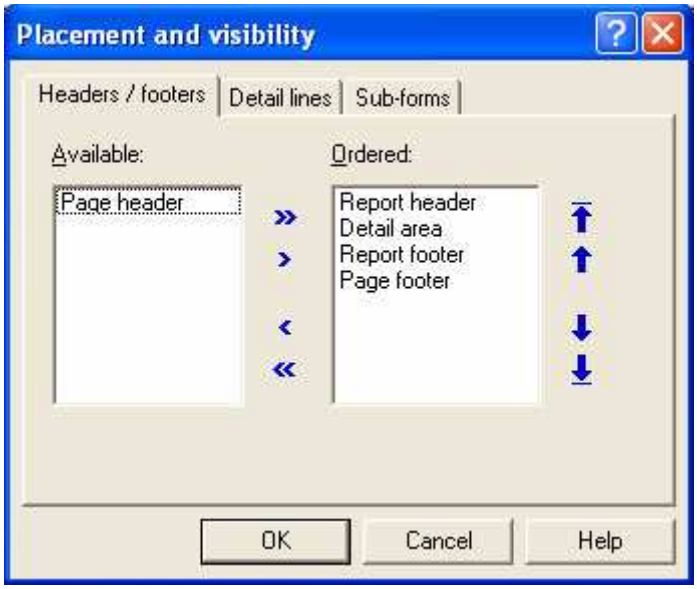
To cater for these situations, FTDesign allows you to define which page elements are currently visible on screen and in which order to place those elements. You can control this from the ***Placement and visibility*** option in the ***Define*** menu.

Note: This option has no influence on the order of page elements produced at run-time.

To adjust the Placement and visibility:

- Select ***Placement and visibility*** from the ***Define*** menu.
- On the ***Headers / footers*** tab:
  - ***Available*** - headers and footers in the ***Available*** box will not appear on the form in FTDesign. Although the headers and footers in the Available box do not appear on the form, they will still print at run-time.
  - ***Ordered*** - headers and footers in the ***Ordered*** box will appear on the form in the same sequence.
  - ***Right/Left arrows*** - use the right and left arrows to move headers and footers between the Available and Ordered boxes.

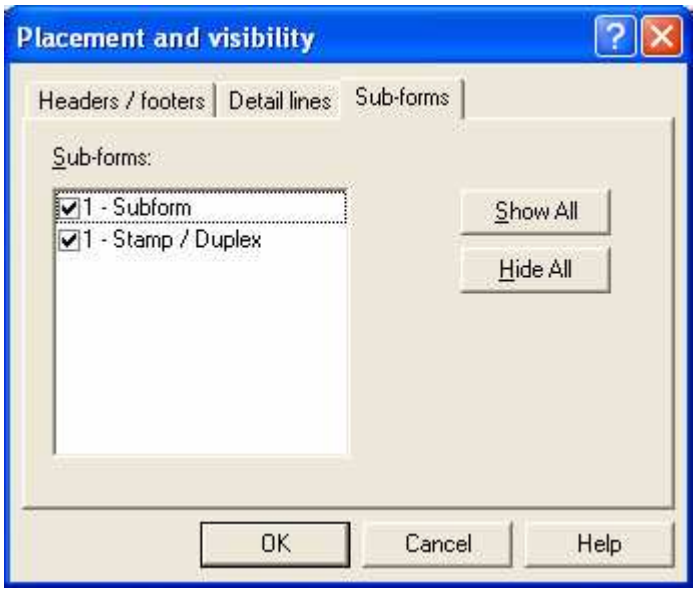
- ***Up/Down arrows*** - use the up and down arrows to change the header and footer order in the Ordered box.



- On the ***Detail lines*** tab:
  - ***Available*** - detail lines in the ***Available*** box will not appear on the form in FTDesign. Although the details lines in the Available box do not appear on the form, they will still print at run-time.
  - ***Ordered*** - detail lines in the ***Ordered*** box will appear on the form in the same sequence.
  - ***Right/Left arrows*** - use the right and left arrows to move detail lines between the ***Available*** and ***Ordered*** boxes.
  - ***Up/Down arrows*** - use the up and down arrows to change the detail line order in the ***Ordered*** box.

- On the ***Sub-forms*** tab:
  - ***Sub-forms*** - in the sub-forms box check or uncheck the check box to make the sub-form visible or not visible.

- ***Show All*** - click the ***Show All*** button to make all sub-forms on the form visible.
- ***Hide All*** - click the ***Hide All*** button to make all sub-forms on the form not visible.



Masking and Font Change

CHAPTER 5

FormTrap uses a number of special features that give you extra control over the appearance of the final document.

- ***Masking*** gives you extensive control over the formatting of output text, particularly for dates and currency.
- ***Replace fonts*** provides a function to replace fonts in your form. It is a convenient way of making global changes to fonts used in the form.

This chapter explains the two features in more depth.

Masking

Masking is the process of controlling and changing the appearance of selected variable fields. You can take a field from the data and modify its appearance to suit your own purpose. For example, you can remove leading or trailing zeros, or turn zeros into spaces.

This section covers how to mask dates, currency and how to create and apply a custom mask.

Masking Dates

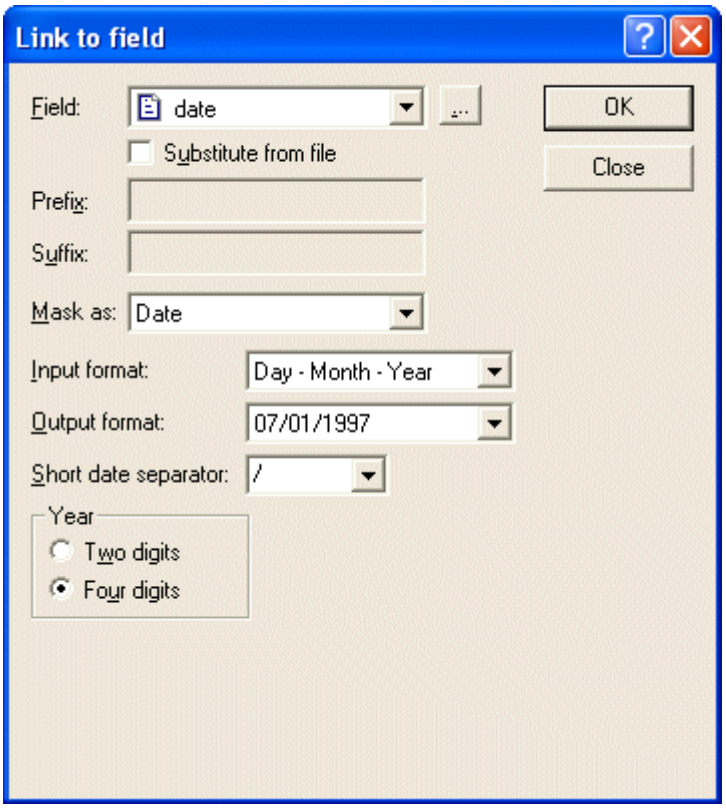
FormTrap can apply date masking to data fields of up to 10 characters.

Apply Date Mask

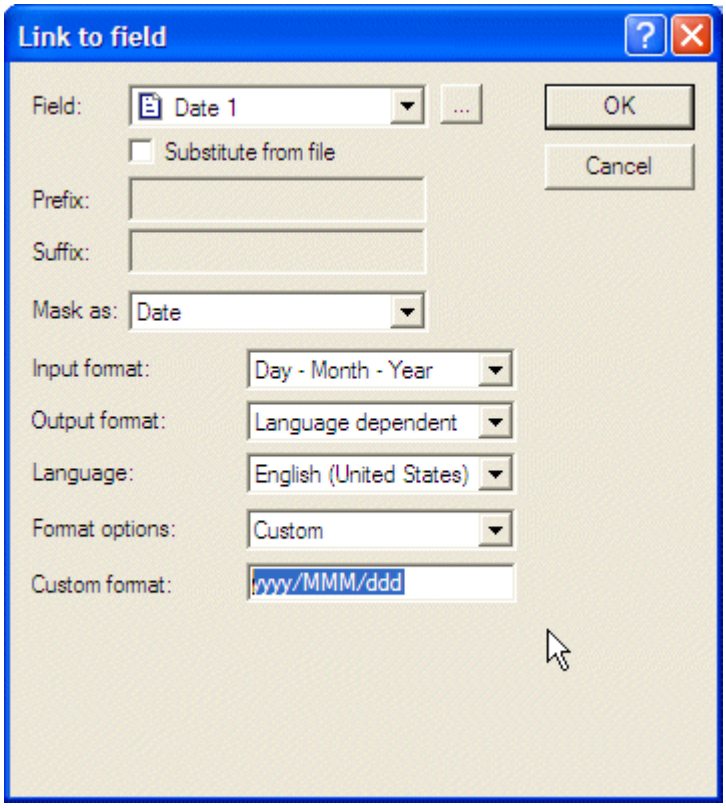
To apply date masking:

- Create a new variable text object or edit an existing variable text object.
- On the ***Link to field*** dialog box, select ***Date*** from the ***Mask as*** drop down menu.
- Select the original date type (date format in the data) from the ***Input format*** menu.
- Select the desired date type from the ***Output format*** menu.
- If you are using a an all-numeric format, select a date separator from the ***Short date separator*** menu.
- Underneath ***Year***, check either the ***Two digit*** or ***Four digit*** year option.
- Click the ***OK*** button to apply the mask to the field.

Note: It is important that the Input format chosen in FTDesign matches the format from the input data. If not, the output on the form displays an error message, such as "Invalid day: 2009", or displays the wrong date.



If you want to show the date in another format, select ***Output format*** as ***Language dependent*** and select the language required per this screen shot.



Language is the language used for alphabetic Month and Day names.

Custom must be selected to define your own version of the output date.

Various combinations of **d** (day), **M** (month - capital letter) and **y** (year) produce these results:

All defined as
Day Month Year

Language Dependant, English (US), Custom ...

	yyyy/M/d	yyyy/MM/dd	yyyy/MMM/ddd	yyyy/MMMM/dddd
1/2/10	2010/2/1	2010/02/01	2010/Feb/Mon	2010/February/Monday
1/02/10	2010/2/1	2010/02/01	2010/Feb/Mon	2010/February/Monday
31/12/2010	2010/12/31	2010/12/31	2010/Dec/Fri	2010/December/Friday
11/12/2010	2010/12/11	2010/12/11	2010/Dec/Sat	2010/December/Saturday

Masking Currency

FormTrap formats the input field according to the specified currency mask. There are a number of currency masks to choose form. These include:

Amount/Numeric - formats numeric fields into numbers or amounts, inserting currency symbol, separators and negative signs.

Price - formats numeric data fields using a price format, suitable for supermarket shelves as it shows values under $1.00 as 77 cents.

Wordy - transforms numeric data fields into words, assuming a dollar and cents format (depending on the currency format selected).

Units - transforms the first numeric character in the data field into words.

Cents - displays the cents portion of the numeric data field.

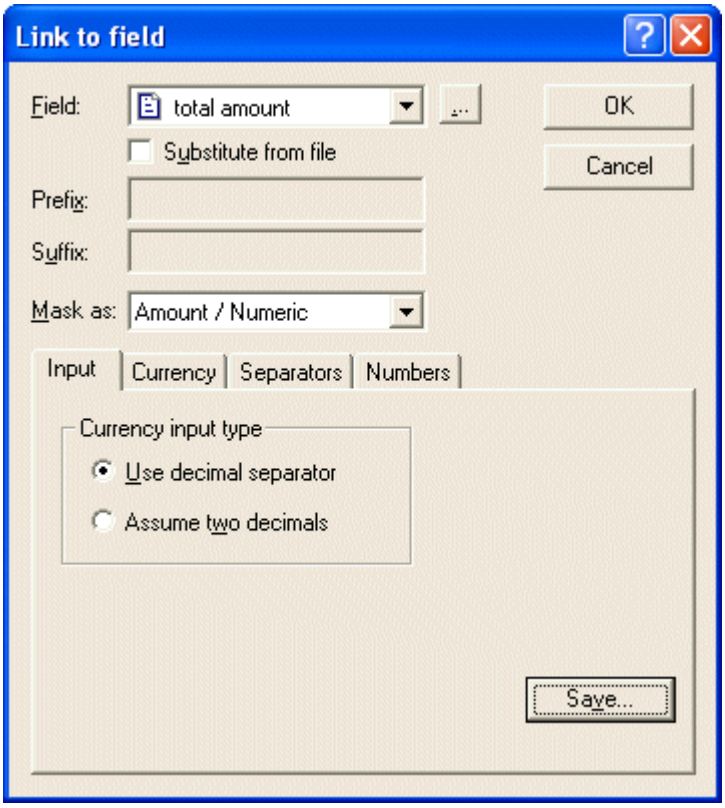
Amount/Numeric

With amount mask, FormTrap formats the data by inserting a currency symbol and separators / decimal symbols. FormTrap determines whether the data is positive or negative by searching for these characters: -, Cr, CR, Dr, DR and ( ).

To apply Amount/Numeric masking:

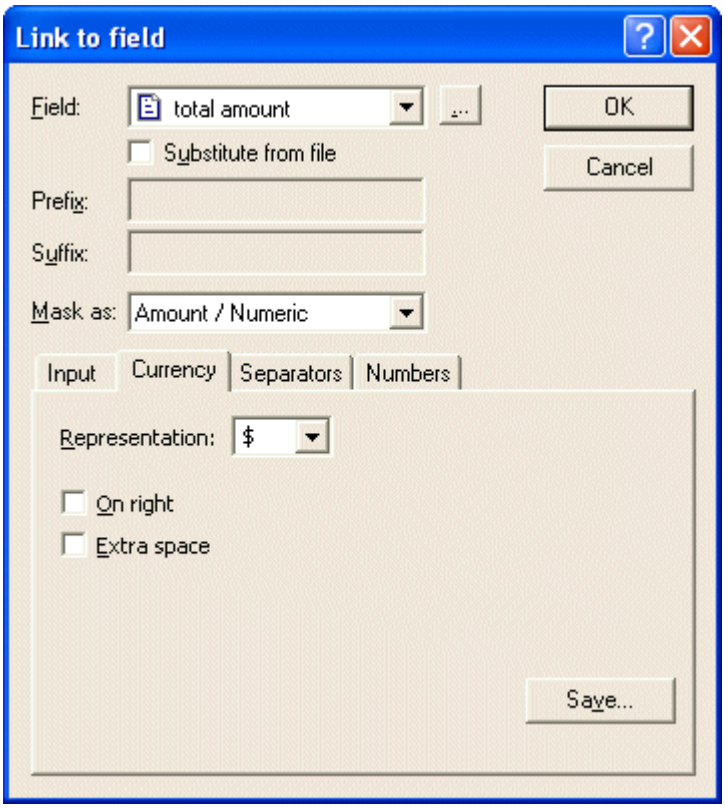
- Create a new variable test object or edit and existing variable test object.
- On the ***Link to field*** dialog box, select Amount/Numeric form the Mask as menu.
- On the ***Input*** tab, select one of the following currency input types:
  - ***Use decimal separator*** - FormTrap finds the decimal point in the field.

- ***Assume two decimals*** - the last two digits of the field are used.



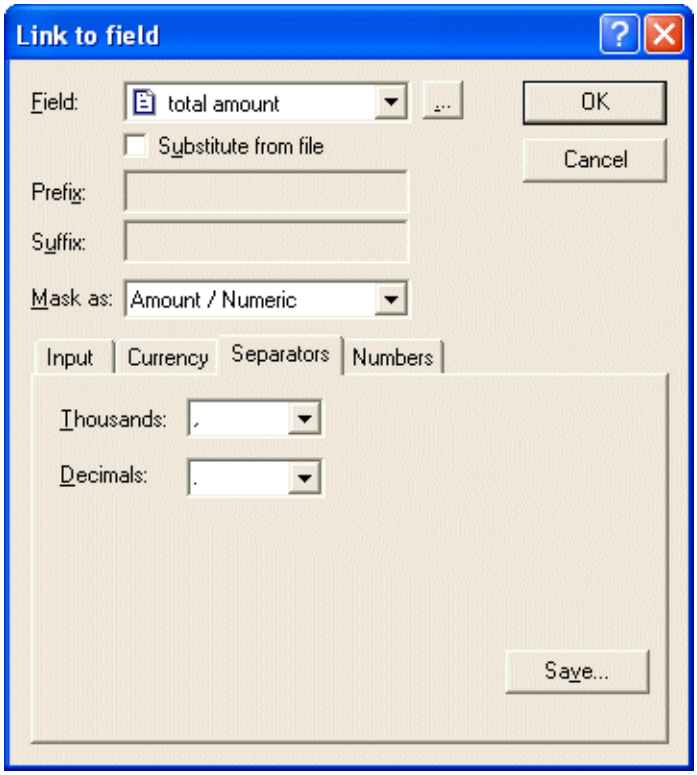
- On the ***Currency*** tab, select the currency symbol from the currency symbol from the pull down list, or press delete and key your own curency symbols(s) - e.g. SF for Swiss Francs.
  - ***On right*** - the currency symbol appears on the right of the masked value.

- ***Extra space*** - an extra space is inserted between the currency symbol and the masked value.



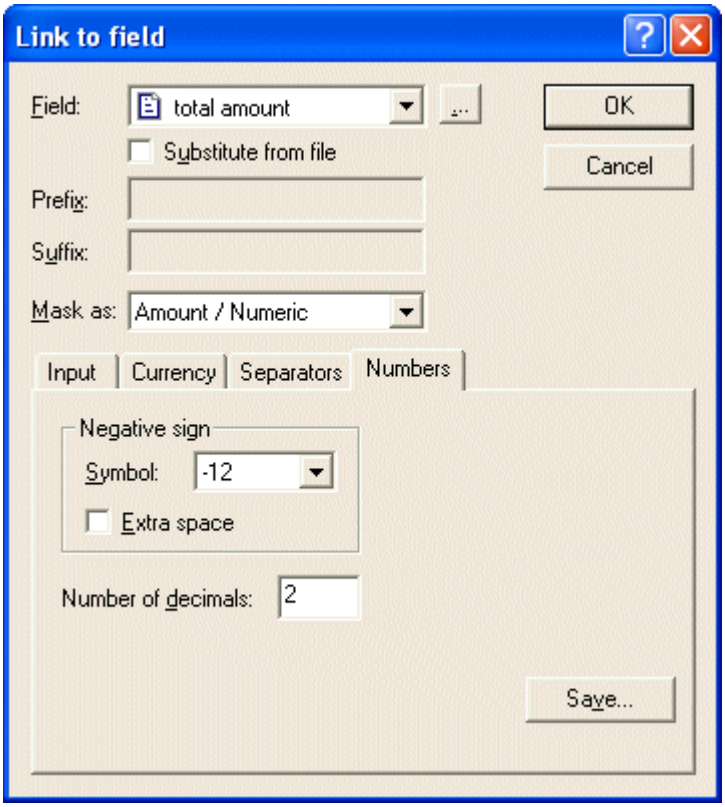
- On the ***Separators*** tab, select the separators for thousands and decimals.
  - ***Thousands*** - select from a comma, full stop, space or have nothing to signify the decimal point.

- ***Decimals*** - select from a comma, full stop, space or have nothing to signify the decimal point.



- On the ***Numbers*** tab, select the credit symbol and the number of decimals.
  - ***Symbol*** - select the symbol used to indicate whether the value is a credit.
  - ***Extra space*** - check this box to insert a space between the value and the credit symbol.

- ***Number of decimals*** - the number of decimal places used on the formatted value.



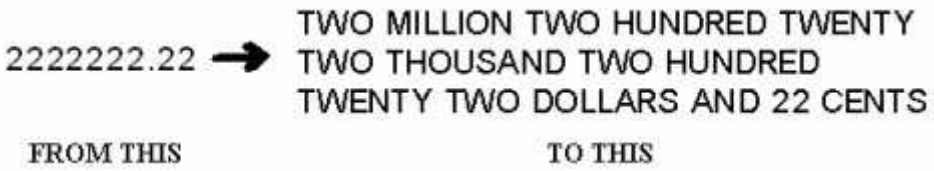
- Click the ***OK*** button to apply the mask to the field.

Price

The price mask is included for backward compatibility with the currency mask preferred.

Wordy

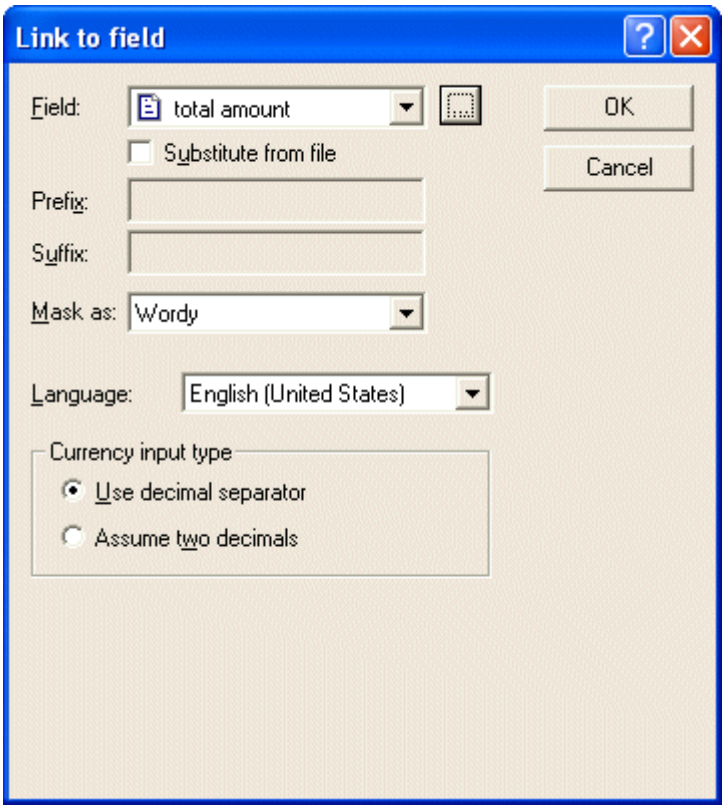
The wordy mask transforms numeric extract fields into words, assuming a dollar and cents format. This mask is used when printing check (cheque) forms.



To apply wordy masking:

- Create a new variable text object or edit an existing variable text object.
- On the ***Link to field*** dialog box, select ***Wordy*** from the ***Mask as*** menu.
- Select the appropriate language from the ***Language*** menu.
- Select one of the following currency input types:
  - ***Use decimal separator*** - FormTrap finds the decimal point in the field.
  - ***Assume two decimals*** - the last two digits of the field are used.

For more information on Word Wrap see page 53.



Units

The units mask transforms the first numeric character from the data field to words.

2 → TWO

FROM THIS TO THIS

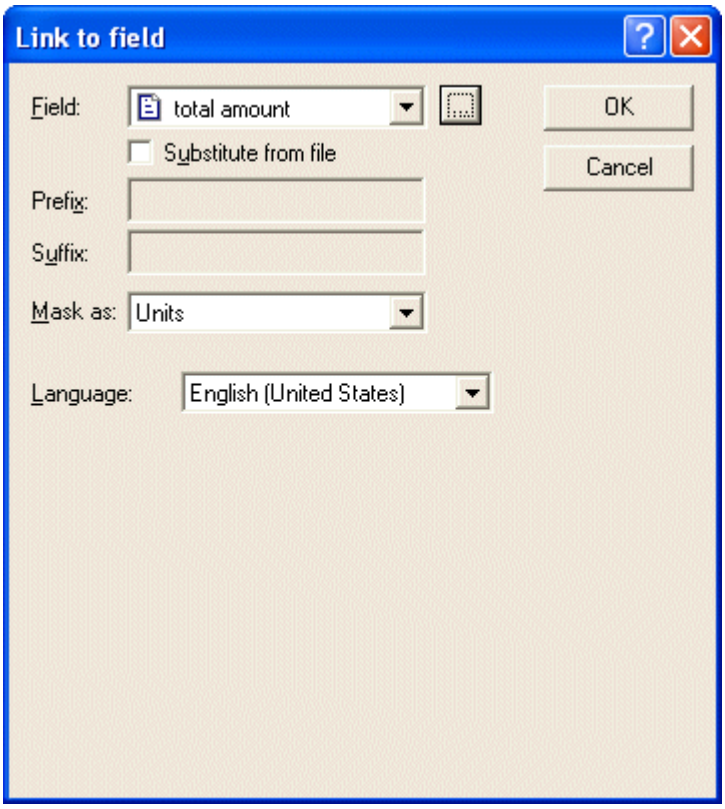
This is especially useful when creating checks (cheques) where the check amount is split into hundreds of thousands, tens of thousands and so on. In the example below, you need to define each character of the input data separately.

HUNDREDS OF THOUS.	TENS OF THOUS.	THOUS.	HUNDREDS	TENS	UNITS
TWO	TWO	TWO	TWO	TWO	TWO

To apply units masking:

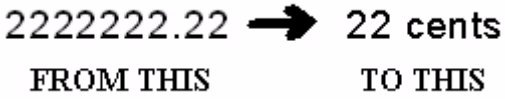
- Create a new variable text object or edit an existing variable text object.
- On the ***Link to field*** dialog box, select ***Units*** from the ***Mask as*** menu.

- Select the appropriate language form the ***Language*** menu.



Cents

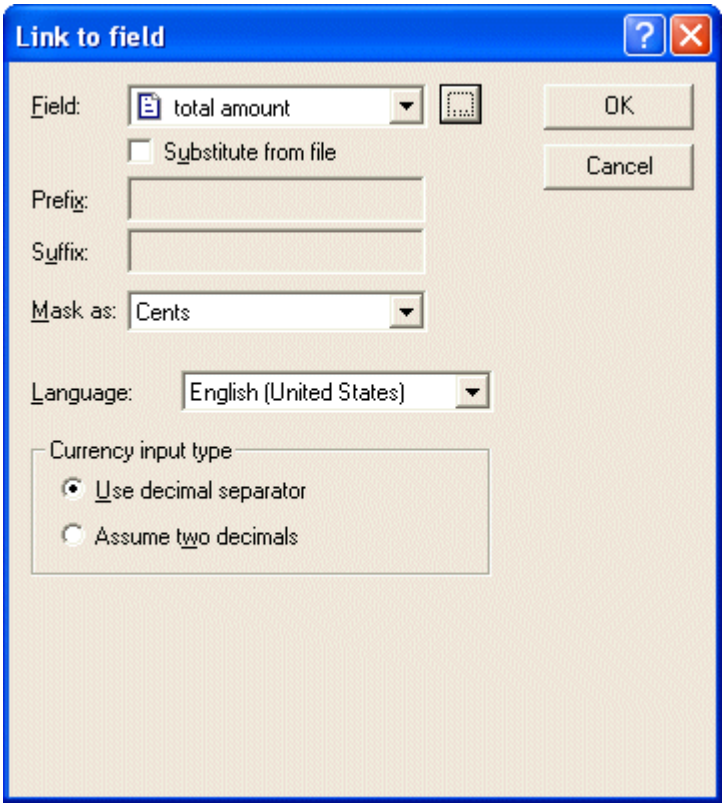
The cents mask displays only the cents portion of a numeric data field. This mask is most often used on check (cheque) forms.



To Apply cents masking:

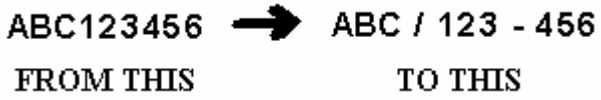
- Create a new variable text object or edit an existing variable text object.
- On the ***Link to field*** dialog box, select ***Cents*** from the ***Mask as*** menu.
- Select the appropriate language form the ***Language*** menu.
- Select one of the following currency input types:
  - ***Use decimal separator*** - FormTrap finds the decimal point in the field.

- ***Assume two decimals*** - the last two digits of the field are used.



Custom Mask

The custom mask allows you to create your own format to tailor the way information is displayed on the finished form. This function is especially useful for displaying codes, constructing special currency formats and incorporating text within variable data.

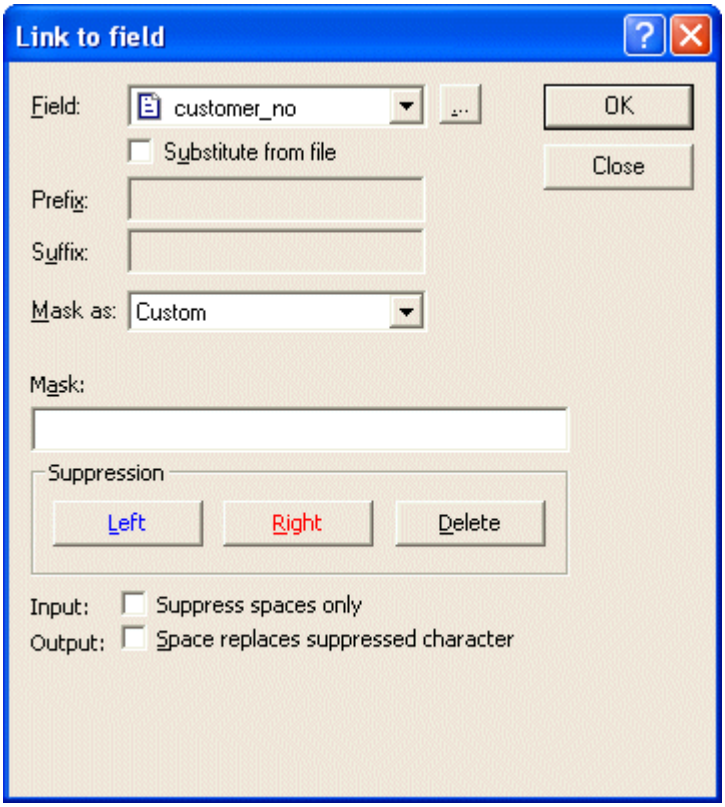


Create a custom mask

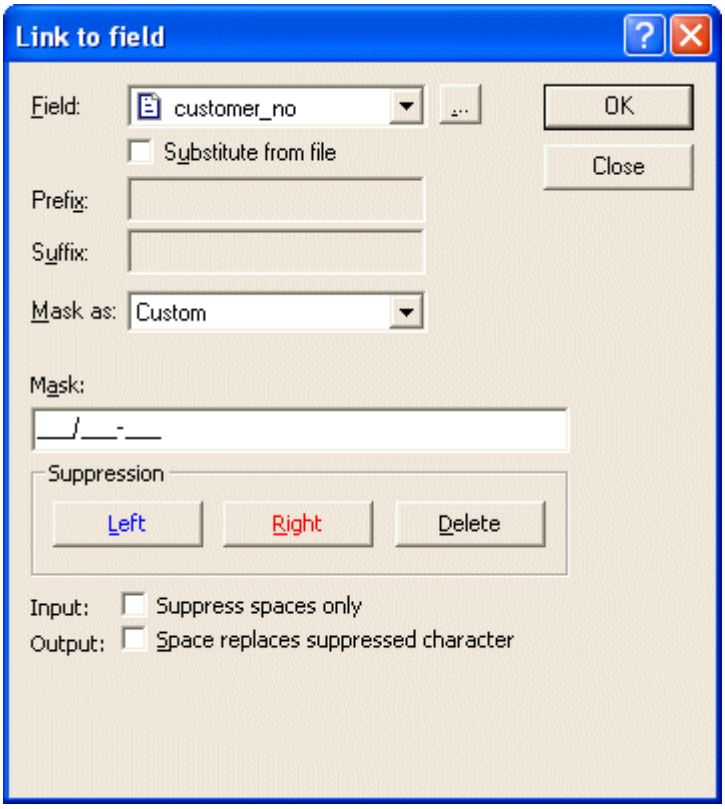
To create a custom mask:

- Create a new variable text object or edit an existing variable text object.

- On the ***Link to field*** dialog box, select ***Custom*** from the ***Mask as*** menu.



- In the Mask text box type in the mask required, using the underscore to mark the exact placement of the characters from the original field. It is important to enter enough underscores to represent the maximum field size.

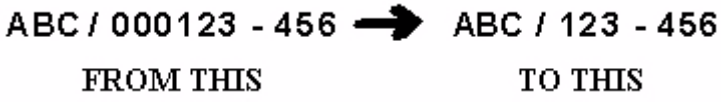


- Click the ***OK*** button to apply the mask.

Using suppression you can then remove unwanted spaces or leading zeros from your data field.

Custom mask with left suppression:

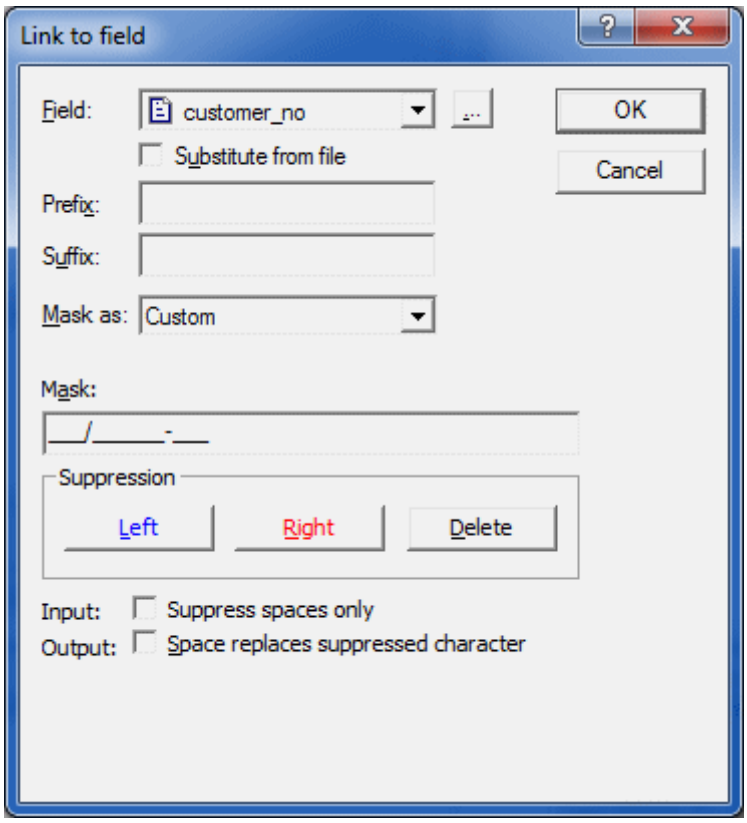
In the following example we remove leading zeros from the customer number field.



To create a Custom mask with left suppression:

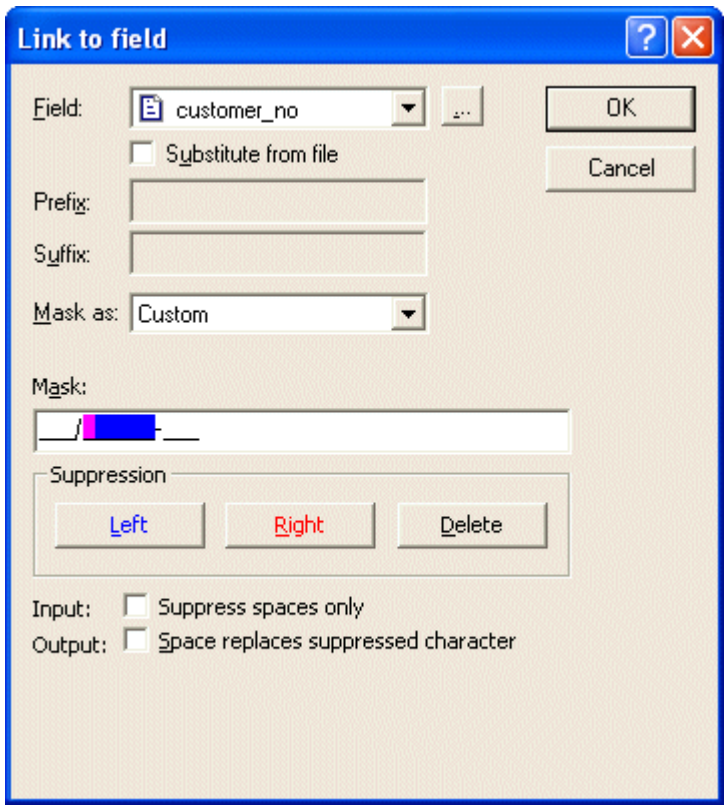
- Create a new variable text object or edit an existing variable text object.
- On the ***Link to field*** dialog box, select Custom from the ***Mask as*** menu.

- In the ***Mask*** text box, type in the mask required. Enter an underscore to represent each character in the input field. It is important to enter enough underscores to represent the maximum field size.



- In the ***Mask*** text box, highlight the area where the leading zeros or spaces will appear. Click on the ***Left*** button. The highlighted area will change color. The

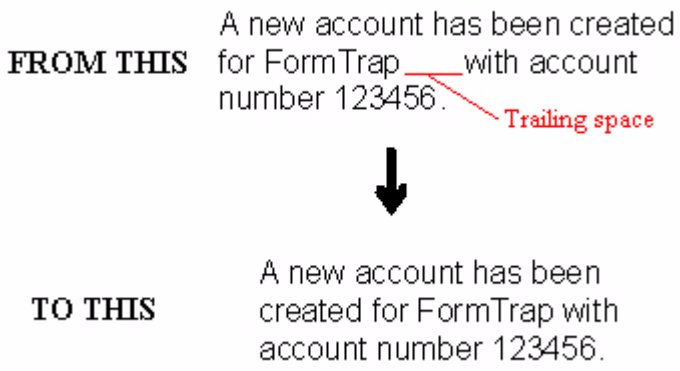
purple highlight indicates the start of the suppression and the blue highlight indicates where left suppression will occur.



- To delete the suppression, highlight the area of the suppression mask you wish to delete and click the ***Delete*** button.
- Check the ***Suppress spaces only*** if you want to suppress only leading or trailing spaces from the data field.
- Check the ***Space replace suppressed character*** if you want to replace suppressed characters with spaces. This is useful if you want to keep alignment as is.

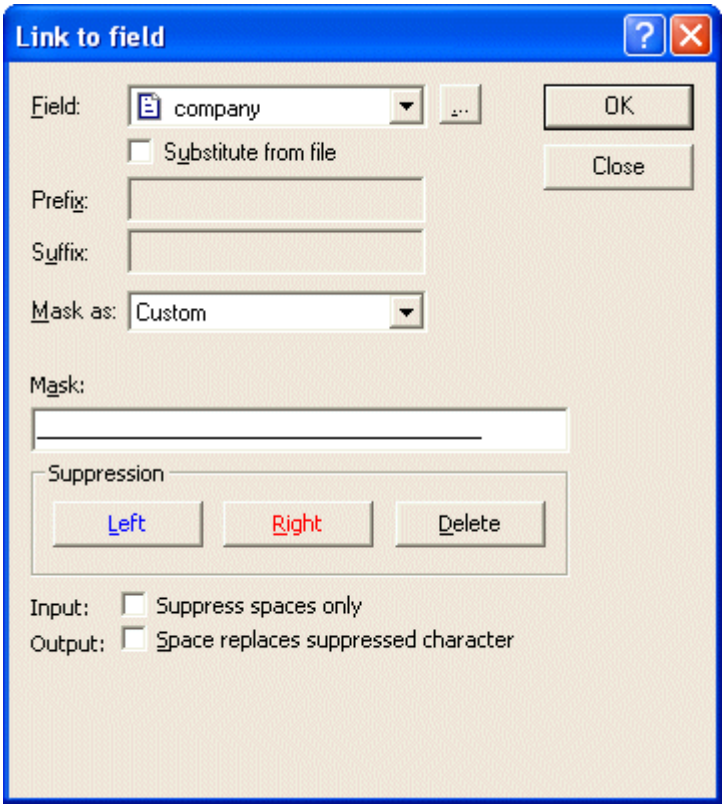
Custom mask with right suppression

In the following example we remove a trailing space from the company name variable.



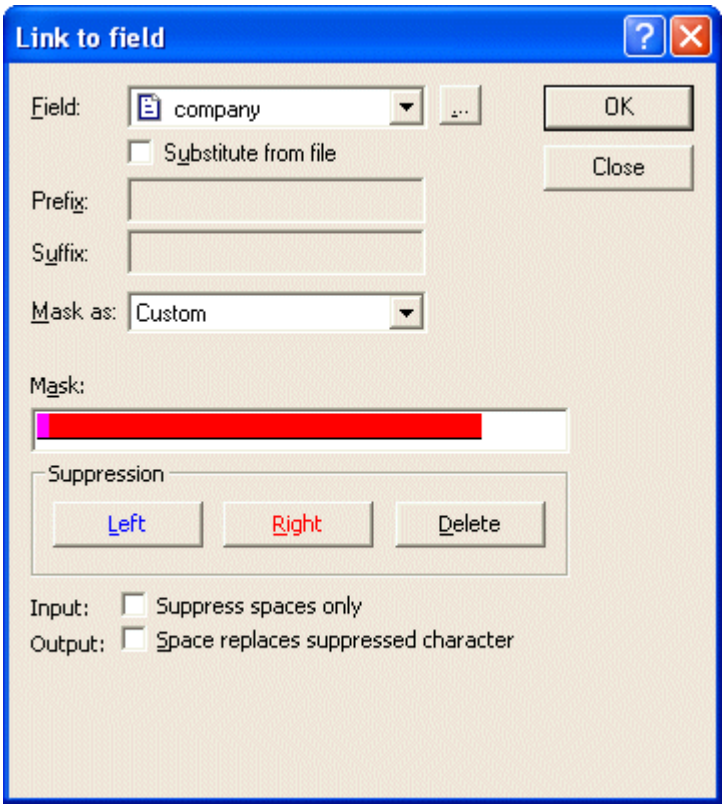
To create a custom mask with right suppression:

- Create a new variable text or object or edit and existing variable text object.
- On the ***Link to field*** dialog box, select ***Custom*** from the ***Mask as*** menu.
- In the ***Mask*** text box type in the mask required, using the underscore to mark the exact placement of the characters from the original field. It is important to enter enough underscores to represent the maximum field size.



- In the ***Mask*** text box, highlight the area where the trailing spaces will appear. Click on the ***Right*** button. The highlighted area will change color. The purple

highlight indicates the start of the suppression and the red highlight indicates where right suppression will occur.



- To delete the suppression, highlight the area of the suppression mask you wish to delete and click the ***Delete*** button.
- Check the ***Suppress spaces only*** if you want to suppress only leading or trailing spaces from the data field.
- Check the ***Space replace suppressed character*** if you want to replace suppressed characters with spaces. This is useful if you want to keep alignment as is.

Replacing Fonts

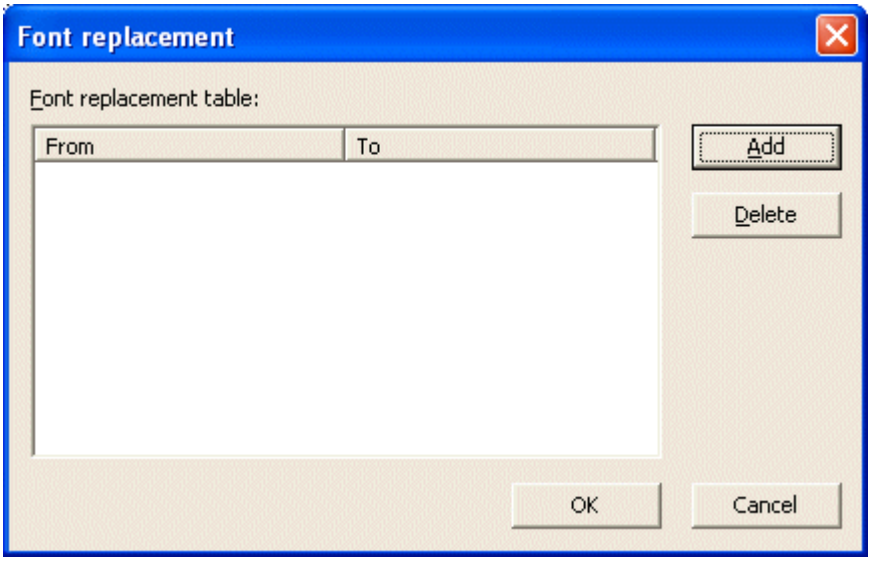
FTDesign provides the function to replace fonts used in your form. It is a convenient way of making global changes to fonts used in the form. This saves you from manually changing each instance of a font.

How to replace fonts

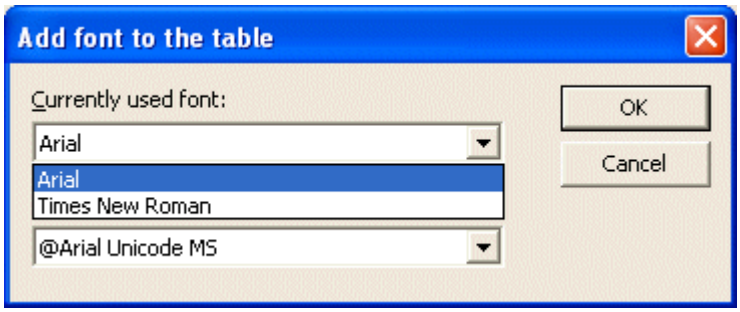
To replace fonts:

- Select ***Replace Fonts*** in the ***Tools*** menu.

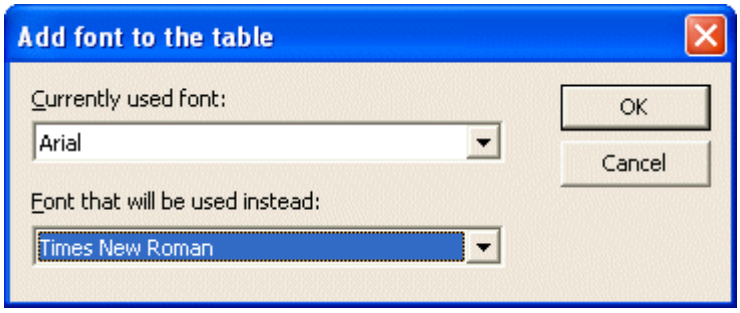
- In the ***Font replacement*** dialog box, click the ***Add*** button.



- In the ***Add fonts to table*** dialog box, choose from the ***Currently used font list the font*** to replace.

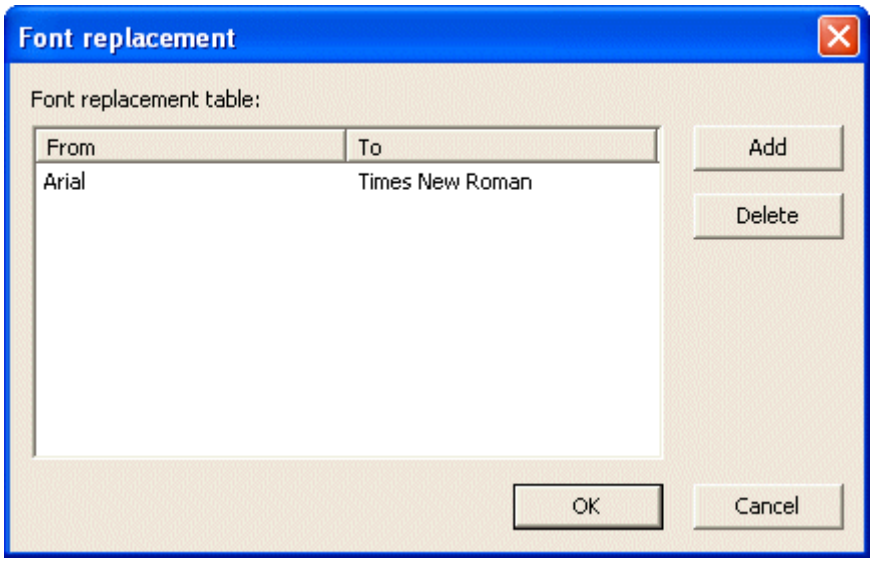


- Choose the font you with to exchange to from the Font that will be used instead list. This list contains all available fonts.



- Click the ***OK*** button to add the chosen conversion to the Font replacement table.

- Click the ***OK*** button in the Font replacement dialog box to make the changes.

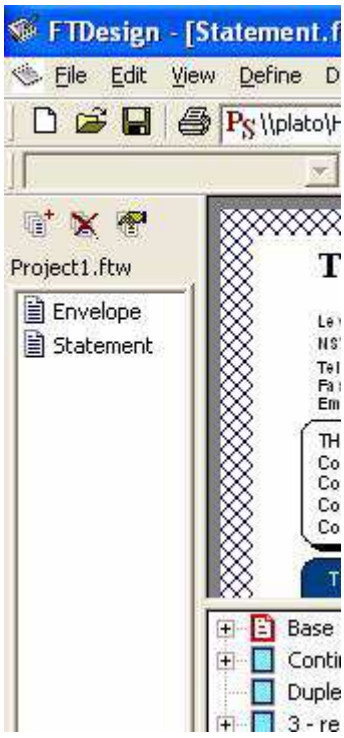


Projects

CHAPTER 6

A project is a file that carries a form or a group of forms and other indicated files (fonts, graphics) and settings. One FormTrap load (.asc) file is created from each project.

- The project window appears on the left side of the FTDesign window.
- The project name appears at the top of the project window beneath the project toolbar.
- Files in the project are listed.



You can perform the following functions using the project toolbar.

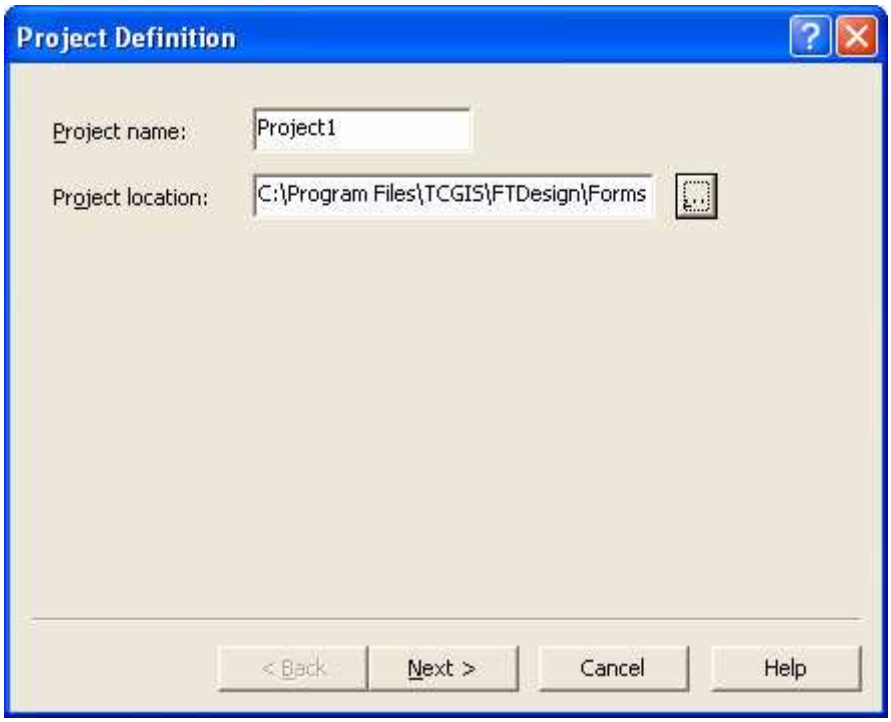
Tool	*Description*
	***Add files to project tool*** - add form(s) to the project
	***Remove files tool*** - remove a form from the project
	***Project Properties tool*** - edit the properties of the project

Creating a New Project

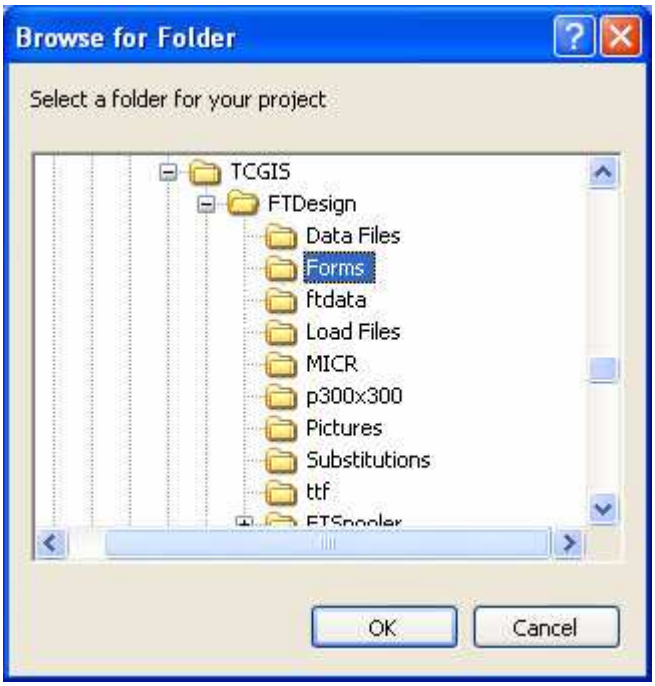
To create a new project:

- Select ***New Project*** from the ***File*** menu. ***Project Definition wizard*** is launched.

- Enter an appropriate name in the ***Project name*** text box.



- Click the browse "..." button to locate the project. The default project file location is defined in ***Design Options***, ***Folders*** tab.



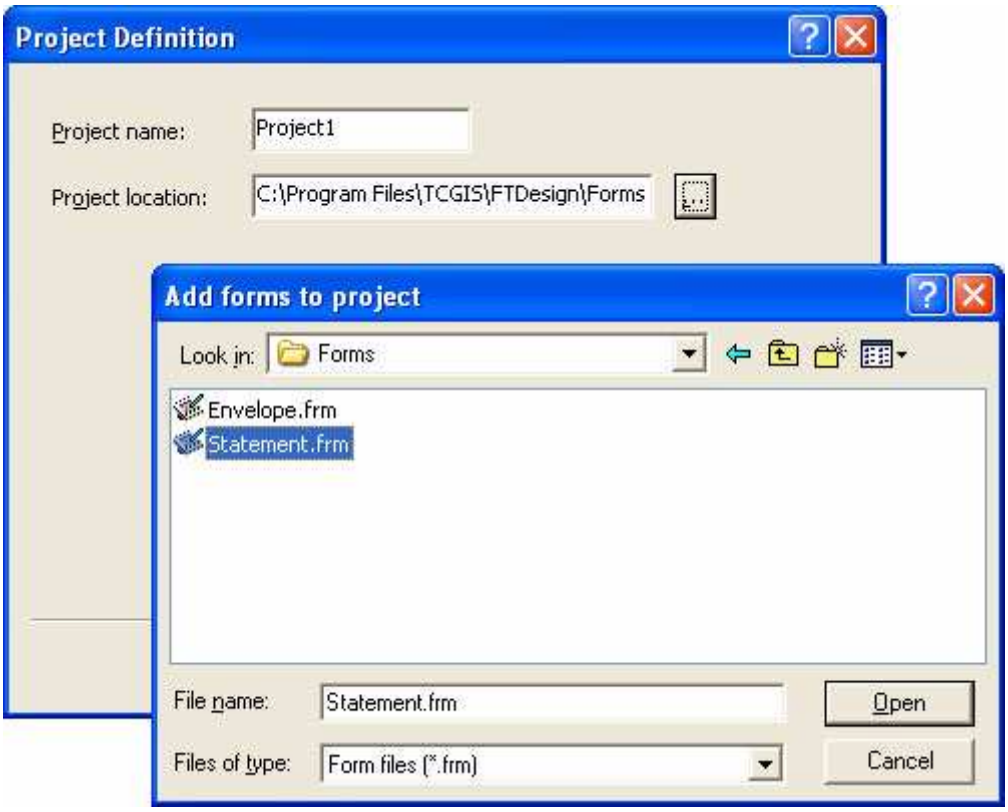
- Click the ***Next*** button to continue.

- Enter a name for the load (.asc) file in the ***Output*** text box. By default it carries the same name as your project.

- Click the browse "..." button to locate the load (.asc) files when they are created by the build process. The default load files location is defined in ***Tools***, ***Options***, ***Folders*** tab.

- To add one or more existing forms to the project:
  - Click the ***Add*** button and browse to the forms' location.

- Select the form(s) you wish to add to the project. Select multiple forms by clicking each of them while holding down the CTRL key.
- Click ***Open***.



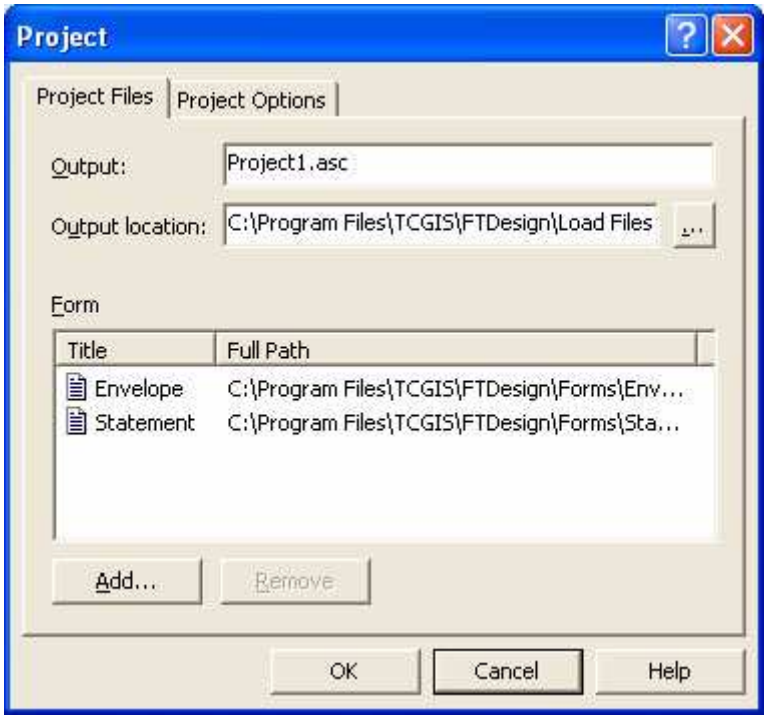
- If you have not designed any forms yet, you can skip this step and add them later.
- Click the ***Next*** button to continue.
- Configure the ***Project Options***.
- Click ***Finish*** to complete the project definition.

Project Settings

Project Files

To edit a Project:

- Choose ***Settings*** from the ***Project*** menu or click the ***Project Properties*** tool button on the project toolbar. The ***Project*** dialog box opens.



- On the ***Project*** tab:
  - Modify the name of the load (.asc) file in the ***Output*** box.
  - Modify the location of the load (.asc) file in the ***Output location*** box.
  - Click the ***Add*** button to add a form to the project. Alternatively, choose ***Add files*** from the ***Project*** menu, or click the ***Add files to project tool*** button on the project toolbar.
  - Select an unwanted form and click the ***Remove*** button to delete the form from the project. Alternatively, click the ***Remove files tool*** button on the project toolbar to delete highlighted form(s).

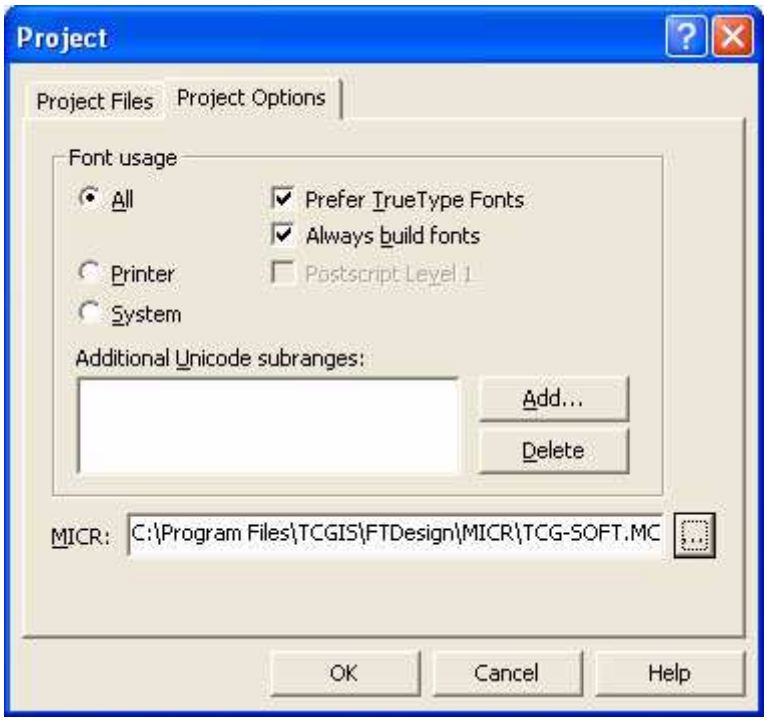
To add a new form to the project:

- Select ***New form*** from the ***Project*** menu.
- Choose the ***Extract mode*** and click ***OK***.
- On the ***Save As*** dialog box, give the new form a name and click the ***Save*** button.
- The new form is now part of the project.

Project Options

To edit the Project Options:

- Choose ***Settings*** from the ***Project*** menu or click the ***Project Properties tool*** button on the project toolbar. The ***Project*** dialog box opens.



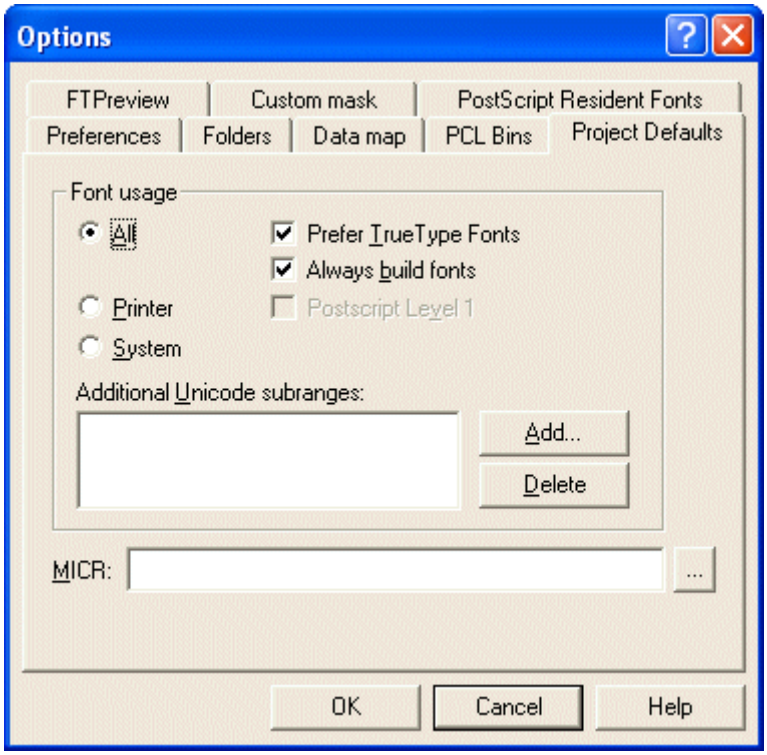
Project Defaults

Project defaults are used to initialize newly created projects and when the stand-alone form is viewed using the preview options.

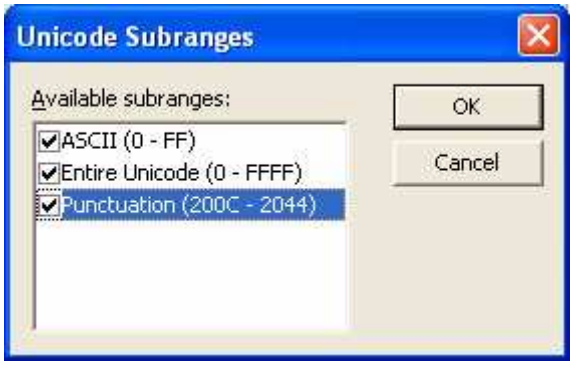
On the ***Project defaults*** tab, you can set the following Font usage and MICR options:

- ***All*** - FormTrap uses a combination of True Type fonts and printer-resident fonts when designing and building your form. Once ***All*** is selected you can then set the following options:
  - ***Prefer True Type Fonts*** - defaults to True Type fonts on all new projects. FormTrap uses True Type fonts instead of printer-resident fonts when both are present i.e. font 'Arial' exists both as a printer-resident and system based True Type font). ***Prefer True Type Fonts*** is the default option. Uncheck this box to default to printer-resident fonts on all new projects.
  - ***Always build fonts*** - when FormTrap cannot find either the True Type or printer-resident fonts it will substitute the next best fit for the missing font.

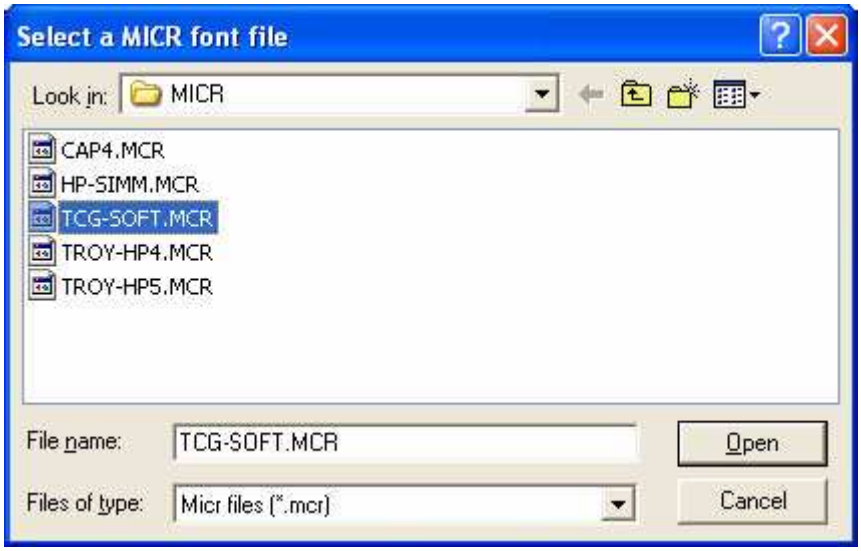
Check this box to ignore font related errors or when the exact appearance of text glyphs is irrelevant.



- ***Printer*** - FormTrap uses only printer-resident fonts when designing and building your form. Printer-resident fonts are installed on the printer. Once Printer is selected, you can then set the following option:
  - ***Post Script Level 1*** - produces Postscript Level 1 output files. This option is generally used for specific faxing solutions that require Postscript Level 1 input.
- ***System*** - FormTrap uses only True Type fonts when designing and building your form. True Type fonts are installed in your Windows font directory.
- ***Add Unicode subranges*** - this allows you to include additional ranges of character glyphs into your load (.asc) file. Subranges are supplied by TCG during the installation and on request. To add a new Unicode subrange:
  - Click the ***Add*** button. The ***Unicode subranges*** dialog box will open.
  - Select from the list of available subranges and click the ***OK*** button.



- ***MICR*** - Select a default MICR file for all new projects. The MICR box refers to the location of the MICR font file you are using to generate the MICR line on check forms. The MICR font is only available when using a PCL printer driver to design and build forms.
  - Click the browse "..." button and locate the MICR directory.
  - Select the correct MICR file and click the ***OK*** button.
  - If you are not producing checks (cheques) or you are not using the PCL printer driver you can ignore this option.



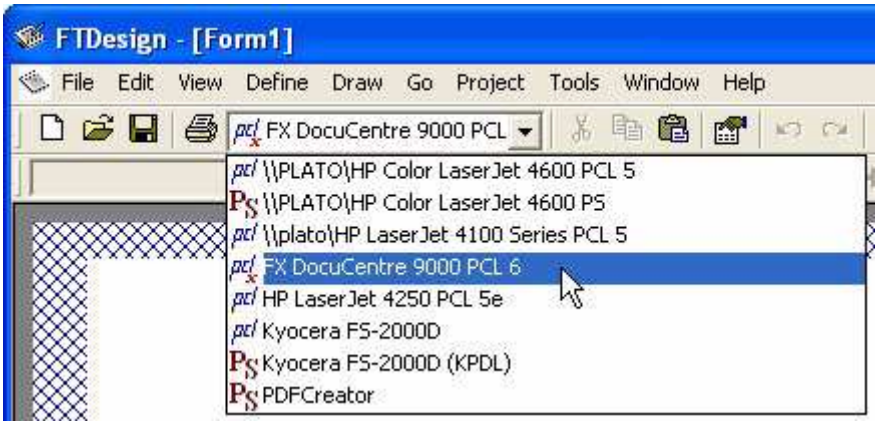
Building the Load (.asc) File

The load (.asc) file contains all the forms, settings and subsidiary files that make up the project compressed into a single file. This file can then be transferred to any production environment in which FormTrap is running, and the forms "loaded" from it as a "data file", once only.

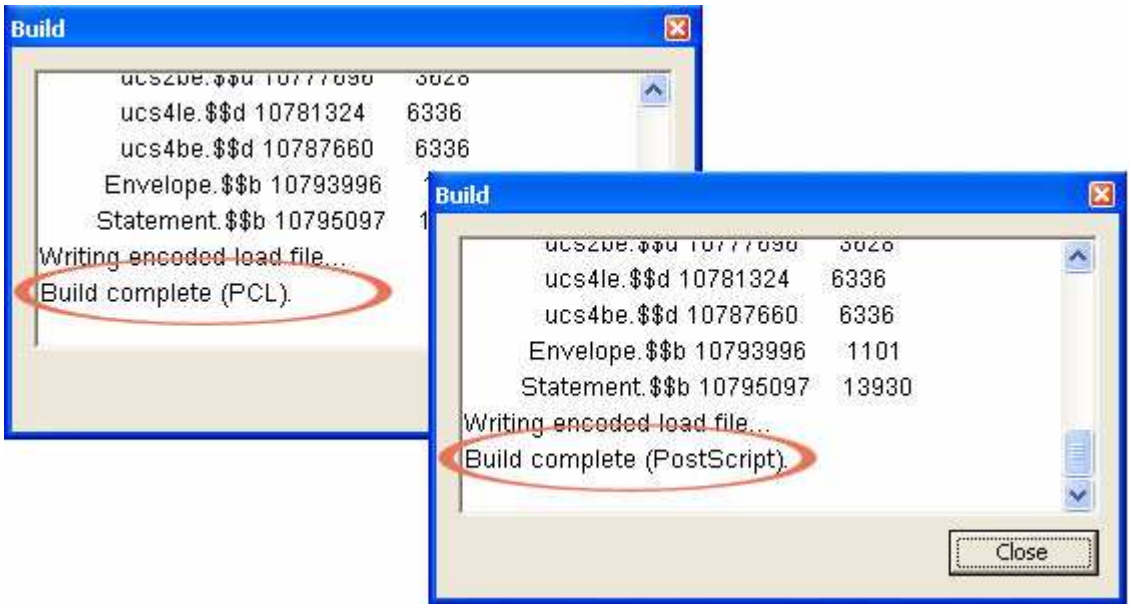
To build a load (.asc) file in FTDesign:

- Open the project you wish to build.
- Select ***Build...*** from the ***Project*** menu. Any forms that are currently open in FTDesign are automatically saved.

- It is important to note which printer driver is selected before building the forms into a load file. The type of printer driver will determine whether the load file is ***PCL or PostScript***.



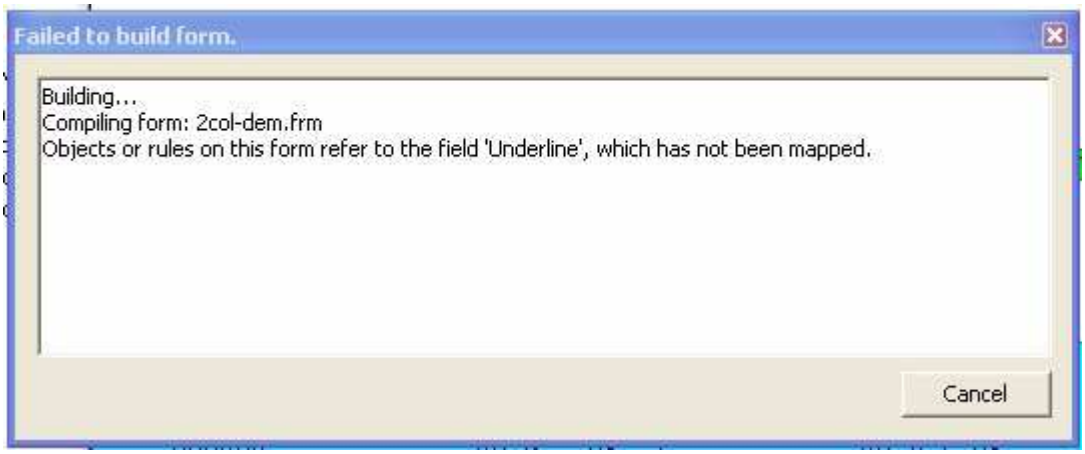
- The build dialog will appear on screen and log the build process. You can cancel the build at any time by clicking the ***Cancel*** button. When the build is finished the log will indicate whether the Load file is in PCL or PostScript format. Click ***Close*** to complete the build.
- The load (.asc) file will be written automatically to the location specified in the ***project options***.



Warnings and Errors in the Build Process

The build process may produce ***Errors*** (shown in Red) which abort the Build process. ***Warnings*** (shown in Blue) allow the process to complete. Scroll through the list to see details on completion of the build. Most warnings are about "possible" differences in internal fonts compared with True Type fonts or between different models/manufacturers and are unlikely to be true these days.

If any data fields on the form have not been mapped, the process aborts immediately with a message as shown:



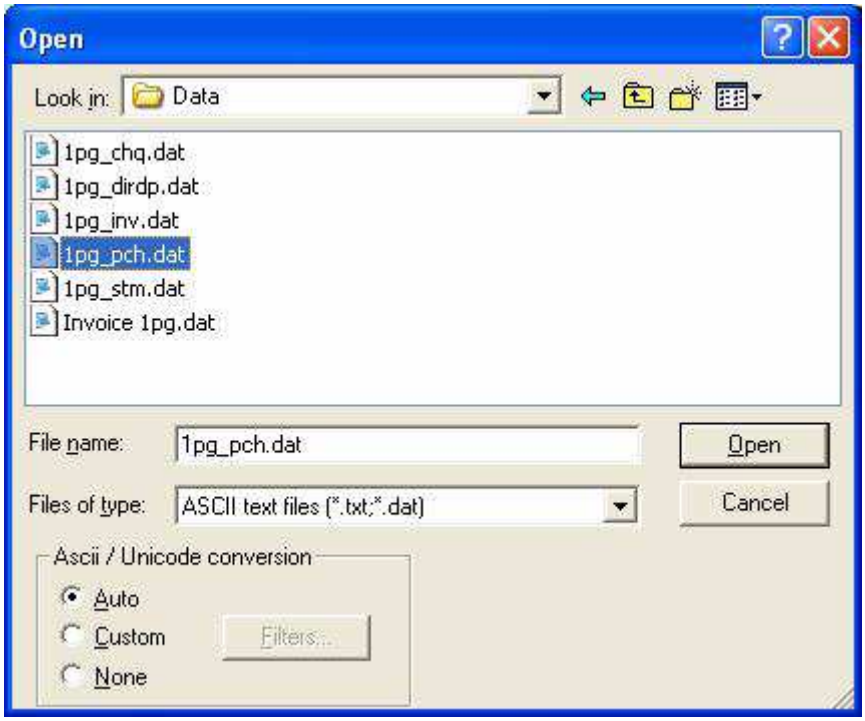
Before creating your load (.asc) file, you can test your forms using FTPreview. FTPreview simulates a production print run using the .asc file and a sample print stream.

Preview the Form

Load a Data File

To Load a Data File:

- Select ***Load data file...*** from the ***Tools*** menu.
- In the ***Open*** dialog box, select the data file you wish to use as a sample.
- Select the appropriate ***Ascii/Unicode conversion*** option:
  - ***Auto*** - If necessary, FTDesign automatically converts the selected sample data file to Unicode based on your current system locale.
  - ***Custom*** - Choose a custom filter to convert the data file. Click the ***Filters...*** button and the ***Input Filters*** dialog box will open. Click ***Add*** and select a filter to be used for conversion.
  - ***None*** - No conversion filter is used.



- Click the ***Open*** button to load the sample data file.

The choice of ***Auto*** or ***Custom*** depends on the Locale of your machine (the language it operates in) and the language of the data file. If these are the same (Simplified Chinese for example) AND you have that filter loaded, ***Auto*** will suffice. If these are different (English Locale with Korean data), then you will need to chose ***Custom*** and select the appropriate Filter for the language of the data file. The Western filter is applied for all Roman languages (English, and European languages).

Preview the Forms

To preview your form:

- Select from:**FTPreview (color, fast)...**
  or FTPreview (color, best quality pictures) ...
  or FTPreview (B&W, fast) ...
  or FTPreview (B&W, best quality pictures) ...

Image quality issues apply only to substitution images where the original image is low resolution, especially 75 dpi images. "fast" produces pixelated images from low dpi images, especially when printed in B&W from color. Where this is the case chose "best quality pictures".

- FTPreview appears with the sample data file formatted with the current form.
  - ***PCL Preview*** - if you selected a PCL5x printer, and...
  - ***PCLXL (PCL6)*** - if you selected a PCLXL (PCL6) printer. The form preview will be in color or b&w depending on your preview selection. This is a TCG-written routine and allows the option "Print to ANY Windows Printer" if you have that option installed in your FormTrap Spooler.
  - ***PostScript Preview*** - if you have selected a PostScript printer driver to preview the form, the preview will be via Adobe PDF viewer in color PDF format for ***FTPreview (color)***, or black and white PDF for ***FTPreview (b&w)***.

If a data file has not been loaded to use as sample input FormTrap will not be able to preview the form.

For more information on Configuring FTPreview in Design Options page 15.

Save the Output File

Preview files... shows details from the prior preview, meaning you can view the Log file produced by the formatting program and save the output file.

Output files are named ***out*** with extensions ***.pcl***, ***.pclxl*** (pcl6) and ***.ps.***

Repaginator

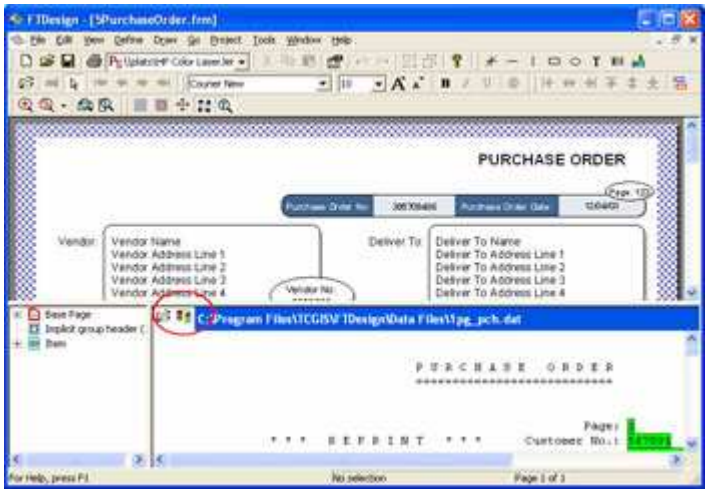
CHAPTER 8

The FormTrap Repaginator works with Print Line Extract data, rearranging and removing input print lines to produce one page of output per document with all redundant lines removed. Output from the Repaginator allows easier design of your FormTrap document, and allows you to take advantage of the more advanced features.

For more information on the Properties of the Data File see page 21.

There are two ways to launch the FormTrap Repaginator:

- To launch the Repaginator from within FormTrap:
  - Open your form and load a sample data file in FTDesign.
  - Select ***Printline repaginator*** from the ***Tools*** menu, or click the ***Repaginator tool*** button on the top left corner of the ***Printmap window***.



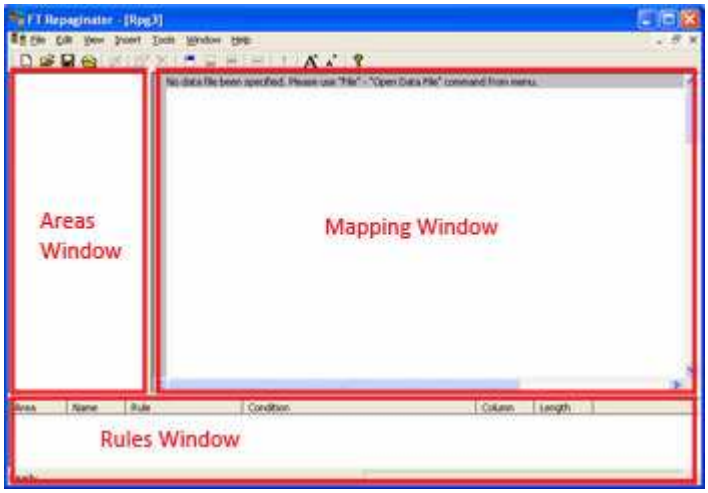
- To launch the Repaginator independently:
  - Browse to your FTDesign directory in Windows Explorer. By default, your FTDesign directory is located under C:\Program Files\TCGIS\.
  - Double click on the Repaginator executable named ***Rpg.exe*** to launch the Repaginator.

Repaginator Workspace

Repaginator consists of three windows:

- ***Areas Window*** - contains a list of the defined entries and areas.
- ***Mapping Window*** - displays the sample data, onto which you can map the areas and rules.

- ***Rules Window*** - displays the rules you have created for the selected entry.



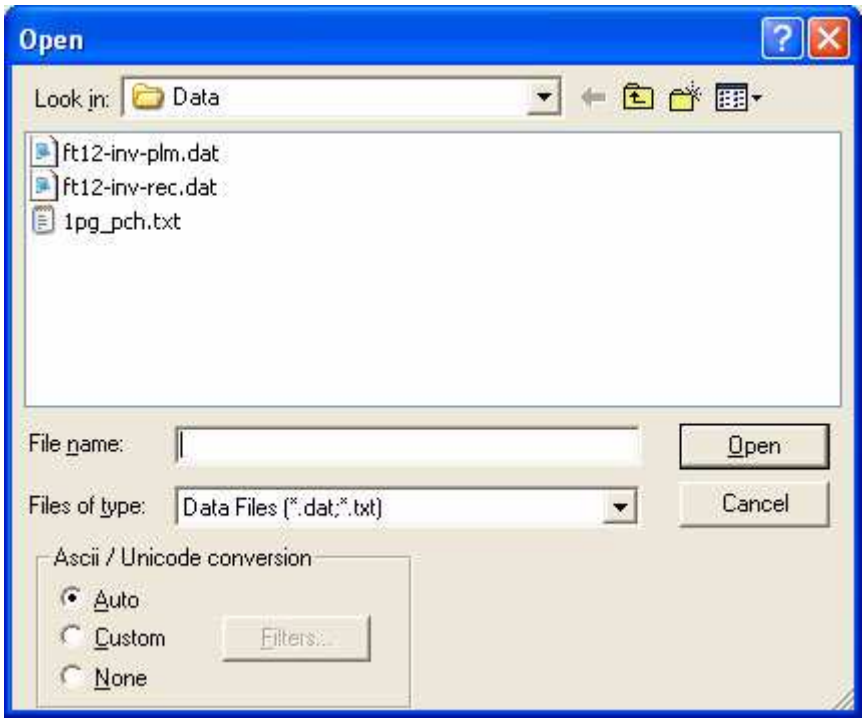
Load a Sample Data File

Before creating your repagination rules you need a sample data file open. If FTDesign had a sample data file loaded it is displayed, otherwise open a sample data file. You can change the sample data file at any time by opening a new sample data file.

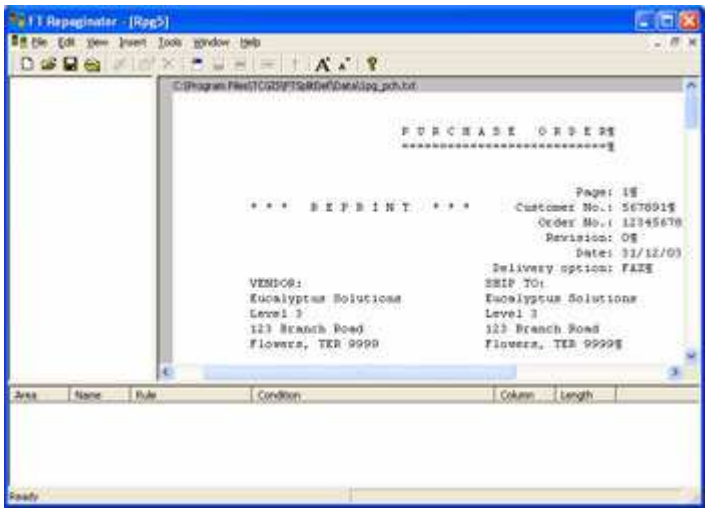
To open a sample data file to create your repagination rules with:

- Select ***Open Data File*** from the ***File*** menu or click the ***Open*** data file tool button on the toolbar.
- The ***Open*** dialog box opens. ***Browse*** and select the sample data file you wish to open.

- Select one of the ***Ascii/Unicode conversion*** options. ***Auto*** is the normal option.



- Your sample data file will now be loaded into the ***Mapping window*** of the FormTrap Repaginator.



Entry

New Entry

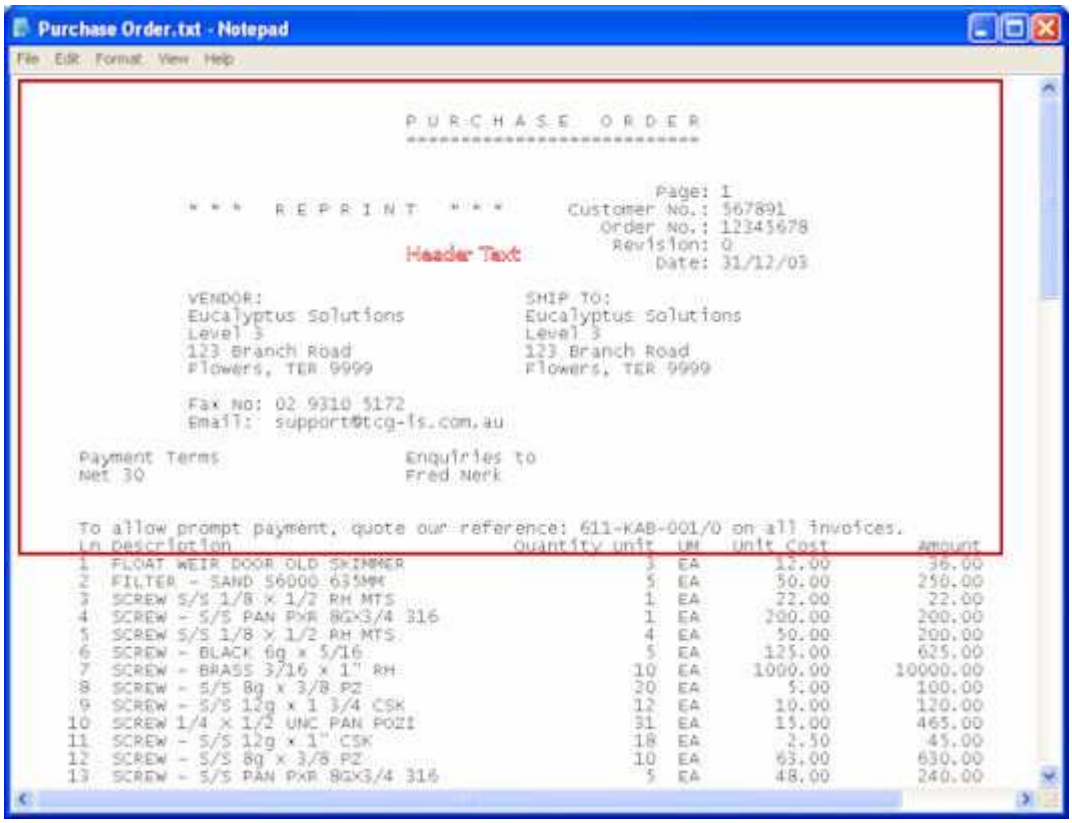
General processing for a new file is to identify these areas, in this order, per document:

- ***Header*** for the first page, including either a ***Change rule*** on the document number (eg. Invoice Number) or a rule selecting page 1 (and not page 10, 11 and so on).
- ***Footer*** (if a footer exists), including a rule to identify the footer proportion of the form.
- Unwanted ***Detail*** lines (***Properties***, ***Suppress output***) for the following, all with rules:
  - Subsequent page headers (segregated by not having the change rule or page 1 rule applying).
  - Unwanted lines such as trailer, "continued" brought forwards and so on.
- ***Detail*** lines that are not blank to capture all of the remaining data except blank lines.

Your final file should have one page of output containing Header, Trailer and relevant detail lines as one long page.

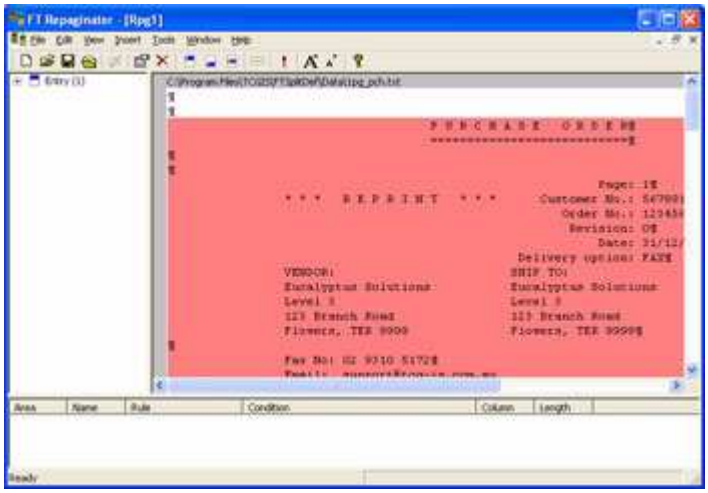
Header Area

The header area holds text that outputs at the top of your repaginated data file and should include all of the header information, down to and including any title lines. You may have a raw data file that contains two purchase orders, each purchase order spanning multiple pages. The output of the repagination process must contain two headers, one for each purchase order.



To insert a new header area and hence a new entry:

- Select ***New Entry - Header area*** from the ***Insert*** menu or click the ***Insert document header tool***  button on the toolbar.
- Highlight the area in the ***Mapping window*** that represents your document header and release the mouse button. The header area is displayed in red and your entry and header listed in the ***Areas window***.



You would now set up rules to identify the Header.

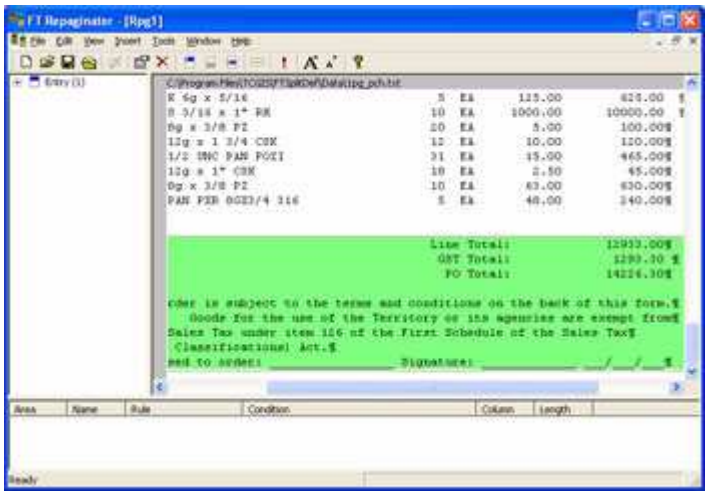
Footer Area

The footer area holds the total information for the document and is therefore optional as some documents may not have totals. The footer area is inserted directly after the header area in the output from the repagination process. This allows you to define footer fields on the Base page of your FormTrap form. It also removes the hassle of having floating totals in your data file, making forms design much simpler. You may only define one footer area.

To create a footer area for this entry:

- Select ***Footer area*** from the ***Insert*** menu or click the ***Insert document footer tool***  button on the toolbar.

- Highlight the text in the ***Mapping window*** that represents your document footer and release the mouse button. The footer area is displayed in green and your footer listed in the ***Areas window.***



You would now set up rules to identify the Footer.

Data Area

Data is generally defined by first identifying the items you do NOT want, then accepting everything else that is not blank. After creating the header and footer, you need to identify data lines that are redundant. These are the line sets to be removed:

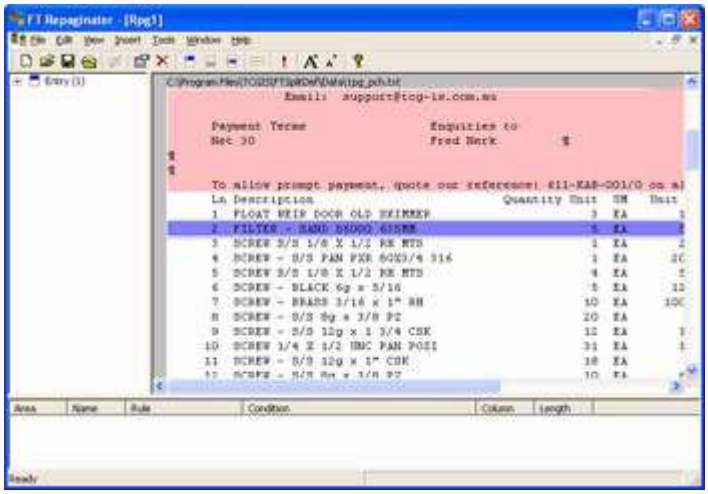
- Subsequent page headings
- Continued and Carried forward messages
- Underlines
- Total texts that are redundant

You can then accept all remaining lines with a simple "not blank" test.

To create a data area in your entry:

- Select ***Data area*** from the ***Insert*** menu or click the ***Insert document detail line tool***  button on the toolbar.

- Highlight the line(s) in the ***Mapping window*** that represent a data area and release the mouse button. The data area is displayed in purple and your data area listed in the ***Areas window***.



You would now set up rules to identify each Detail, and set all of the details you do NOT want to print (left click) ***Properties***, ***Suppress output***.

Rules

You need to define one or more rules on your header, footer and data areas so the Repaginator can identify that text as that particular type.

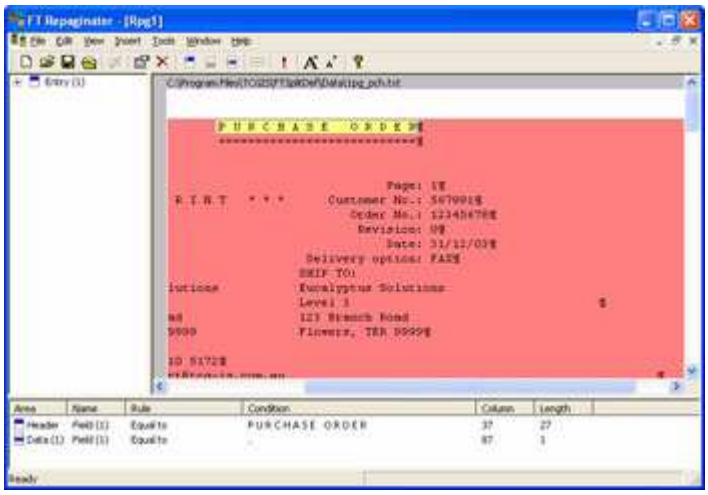
Using the Header rule as an example, you require a rule to distinguish the header as the FIRST header for this document. You do not want your header area rule to succeed for every header instance, only the first. This means looking for "Page: 1" or a change in the document number. Ensure that the rule testing for "Page: 1" does not also succeed for "Page: 10", Page: 11" and so on, as it WOULD for the example below where the page is left-aligned. In this case, use a "***Change***" value such as the Order No. Value.

To create a rule:

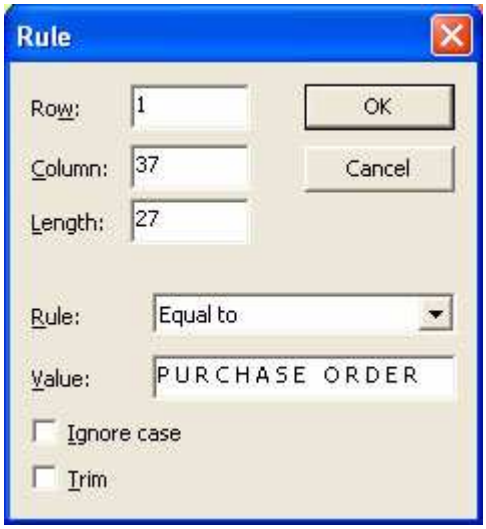
- Select the area you wish to create the rule on.

- Click the ***Insert match field tool*** button on the toolbar, or go to the ***Insert*** menu, select
  - ***Rule (match)*** - creates rules with default evaluation rule ***Equal to***.
  - ***Rule (change)*** - creates rules with default evaluation rule ***Change***.

- Highlight the text you wish to use for this rule. The rule is displayed in yellow and listed in the ***Areas window*** under the selected area.



- Select the rule and choose ***Properties*** from the ***Edit*** menu or click the ***Properties tool***  button on the toolbar.
- In the ***Rule*** dialog box, you can change the evaluation ***Rule*** from the dropdown list.
  - In the ***Value*** text box, enter the text the rule should match.
  - To ignore the case of the text, tick the ***Ignore case*** checkbox.
  - By default, the Repaginator looks for an exact string (including spaces and capitals). As a result, if the highlighted area for the rule is bigger than the text in the ***Value*** text box the rule will not succeed.
  - To trim the size of the highlighted area during run-time (i.e. to look for the text in the ***Value*** text box somewhere within the highlighted area), tick the ***Trim*** checkbox.



- Click ***OK*** to save the changes to your rule.

Properties

Once you have finished creating the areas in the entry, you can modify the entry and area properties.

Entry Properties

To modify the properties of the selected entry:

- Select the entry in the ***Areas window*** and click the ***Properties tool***  button on the toolbar, or choose ***Entry*** from the ***Edit*** menu.
- The ***Entry*** dialog box opens.
- Change the ***Name*** of the entry which should represent that being processed.
- To insert text at the beginning of each document, enter the string in the ***Prepend with text*** box.
- To insert text at the end of each document, enter the string in the ***Append with text*** box. This is used to insert ##***NEWDOC***# which resets the page number for multiple documents from one file. The next (***Form Feed***) option is not required after a ##NEWDOC# command. To insert another document behind this one use these commands (typically used to insert a one-page terms and conditions document behind an invoice or PO):
  - ##F#<form-name># where form-name is the name of the required form
  - 0 (record mode) or just some data such as "base page" (print line mode)
  - ##NEWDOC#
- To insert a form feed at the end of each document, tick the ***Form feed at the end*** checkbox.
- Click ***OK*** to save the changes.

Area Properties

Once the areas have been defined, you can modify their properties, including height and rules.

In the data area(s), you also have the option to suppress the output. This is the normal approach to repagination. Suppress all that you do NOT want, leaving all of the remaining non-blank lines as the "keepers".

To modify the properties of the selected area:

- Select the area to modify in the ***Areas window*** and click the ***Properties tool***  button on the toolbar or choose Properties from the Edit menu.
- The ***Area*** dialog opens.
- Enter the new ***Height*** (number of lines).
- Select the properties of the rules defined on the selected area:
  - ***All must succeed*** - As stated.
  - ***Any can succeed*** - At least one of the rules defined on the selected must succeed to identify this area.
- ***Suppress output*** option applies only to data areas. To suppress the output of the data area tick the ***Suppress output*** checkbox. The data area icon in the Areas window changes to show it will be suppressed in the output.
- Click ***OK*** to save the changes.

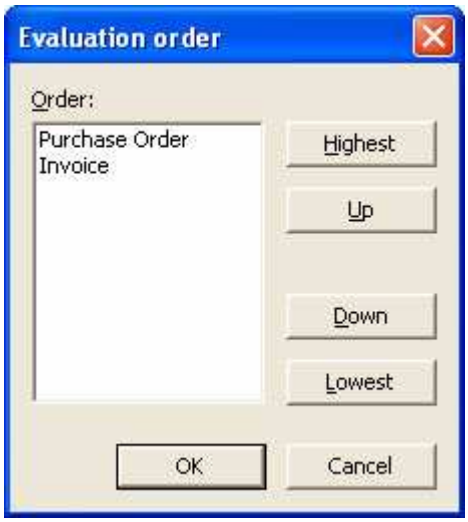
Evaluation Order of Entries

It is most unusual to have more than one entry in a Repaginator file, however it has been allowed for. If your repaginator file contains more than one entry, you can modify the order in which those entries are tested. Entries with the most precise rules on the header should be placed at the top of the list.

To modify the order of entries:

- Select ***Order of entries*** from the ***Edit*** menu. The ***Evaluation order*** dialog box opens.
- Select an entry and click an ordering button to move the entry either up or down in the ***Order*** list.
  - ***Highest*** - move the entry to the top of the list.
  - ***Up*** - move the entry up one place in the list.
  - ***Down*** - move the entry down one place in the list.

    - ***Lowest*** - move the entry to the bottom of the list.
- Click ***OK*** to save the changes.



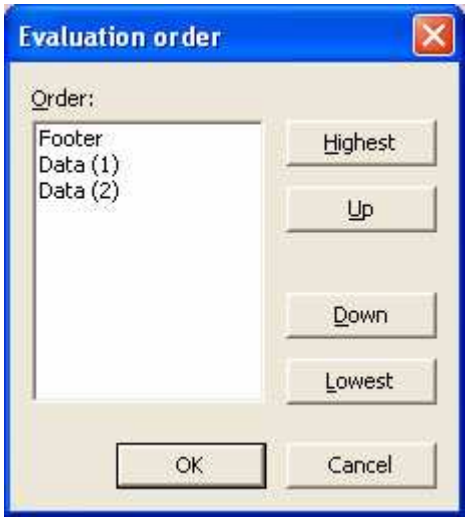
Evaluation Order of Areas

If your repaginator file contains more than one area, or if your entry includes a footer and a data area, you can modify the order in which the areas are tested. Areas with unique rules should be placed at the top of the list.

To modify the order of areas:

- Select ***Order of areas*** from the ***Edit*** menu. The ***Evaluation order*** dialog box opens.
- Select an area and click an ordering button to move the area either up or down in the ***Order*** list.
    - ***Highest*** - move the area to the top of the list.
    - ***Up*** - move the area up one place in the list.
    - ***Down*** - move the area down one place in the list.
    - ***Lowest*** - move the area to the bottom of the list.

- Click ***OK*** to save the changes.

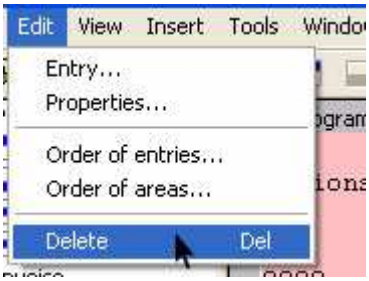


Delete an Entry, Area or Rule

Deleting an entry will erase all the areas and rules under the entry, and cannot be undone.

To delete an entry:

- Select the entry you wish to delete.
- Select ***Delete*** from the ***Edit*** menu.



To delete an area or rule:

- Select the area or rule you wish to delete on either ***Areas Window*** or ***Mapping Window***.
- Select ***Delete*** from the ***Edit*** menu, or the ***Delete tool***  button on the toolbar.

Tools

Tools - Options

You can customize the colors of your areas and rules in the Options, as well as modify other options, to help you in the design and maintenance of your Repagination rules.

To configure the Repaginator options:

- Select ***Options*** from the ***Tools*** menu.

- In the ***Options*** dialog box (recommended to tick both):
  - Check the ***Apply underlying text after move / resize*** box to change the value of the underlying string in the print stream as you move or resize the rule.
  - Check the ***Apply underlying text after create*** box to automatically populate the Value checkbox of your match rules as you create each match rule on an area.

  - To change the color of an area or rule, select the area or rule you wish to change and click ***Change***.
  - The Color dialog box will be displayed. Select a new color from ***Basic colors***, ***Custom colors***, or ***Color matrix*** and click ***OK***.
- Click the ***OK*** button to save your Repaginator options.

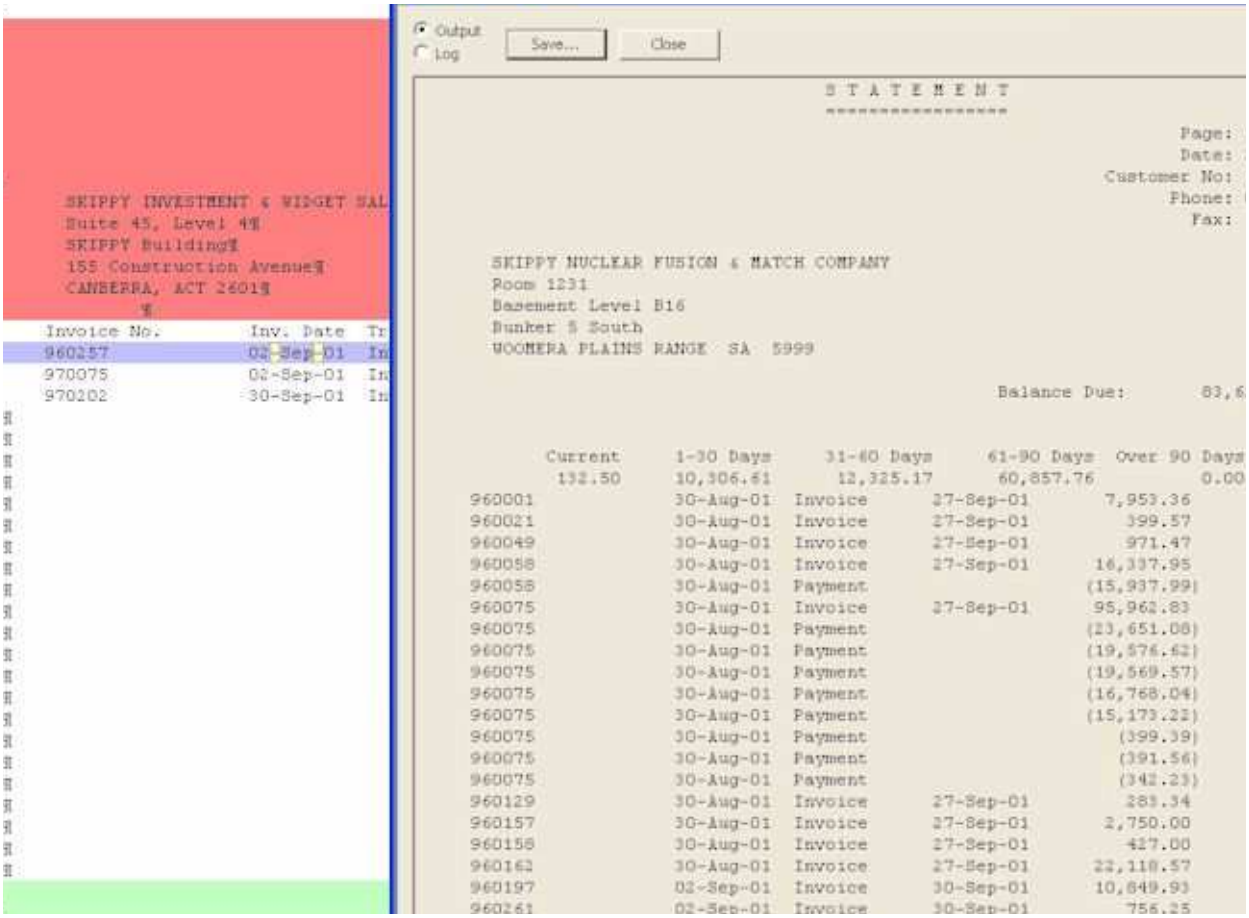
Tools - Test

When you have finished creating your entries, areas and rules, you can then test your repagination rules with the sample data file. You can return to FTDesign to continue designing your form with that repaginated output, or if the output is useful, can save the repaginated data file.

To test your rules and save the output from your test:

- Select ***Test*** from the ***Tools*** menu.
- The ***Repagination done*** window will be displayed containing the output from the repagination process according to the rules you have created. You will see your sample data has been reformatted, where:
  - ***Header*** appears at the top and only once for each document.
  - ***Footer*** appears directly under the header and only once for each document.
  - ***Data areas*** are printed continuously without header or footer information separating them. Ensure ALL required data areas appear in the output, and NO superfluous lines appear.
- Click ***Save*** to save the output from the repagination process to a location on your system.

- Click ***Close*** to close the Repagination done window and return to the FormTrap Repaginator.



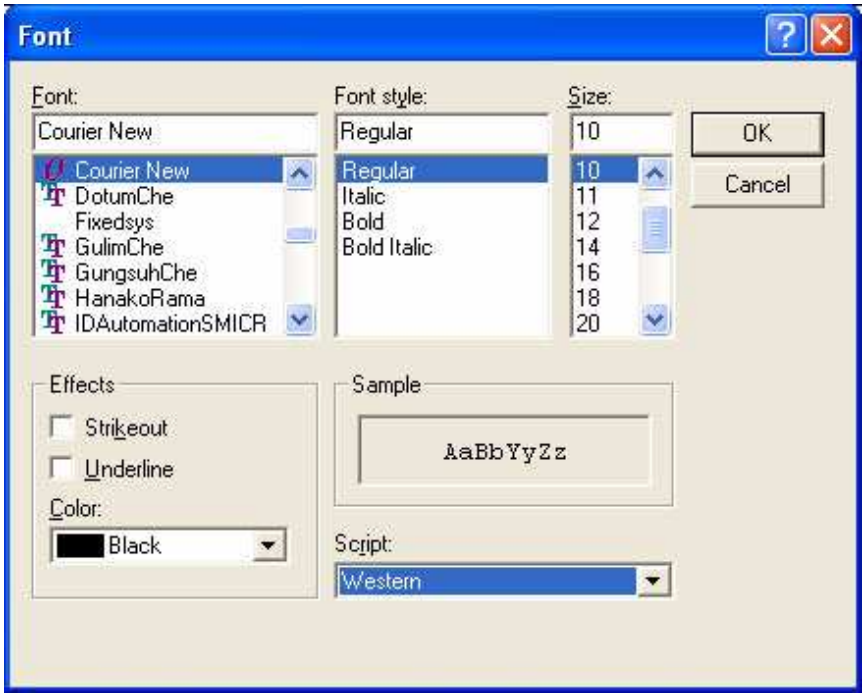
Tools - Font

The Repaginator provides the option to change the display font for the input data file and the repaginated output. You MUST use a mono-spaced font, such as Courier New or LtrGothic.

To change the font in Repaginator:

- Choose ***Font*** from the ***Tools*** menu.
- In the ***Font*** dialog box,
  - ***Font*** - select a monospaced font type.
  - ***Font Style*** - font should be Regular or Bold.
  - ***Size*** - select the size of the font. 10 or 12 point if preferable for most data files.
  - ***Effects*** - do not Underline, remove by unchecking the Underline box.
  - ***Color*** - select the color of the text.

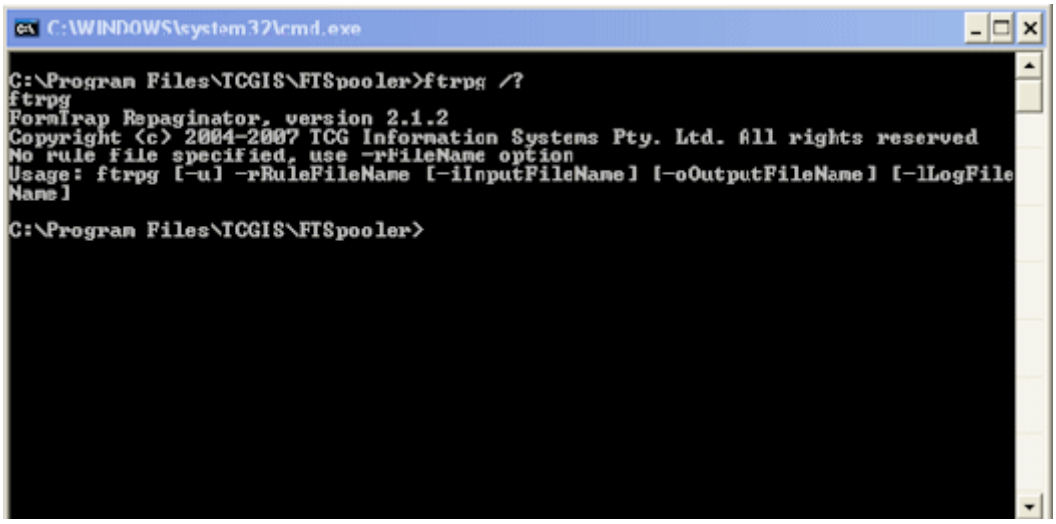
- ***Script*** - determines the writing system of the print stream in the Repaginator window. Western for English and most Roman fonts.



Running Repaginator from a Command Line

The Repaginator can be run as an input filter in the Spooler. Files where this is required are where there are two header areas, one for the total in the "running" area with detail lines, with remaining details in a report footer. The independent runs shifts one of the two header areas, with the other done in a linked repagination with the document.

The parameters for Repaginator are as below.



When running ftrpg from command line you should provide full paths. However if you are running ftrpg as a filter in FTSpooler V7 you can use the two special environment variables:

%fthome% - location of the home directory.

%ftinst% - location of the installation directory.

The command line in this case would look like this:

“%ftinst%ftrpg.exe” –r”%fthome%\Repagination Rules\payment_initial.rpg” –i”%1” –o”%2”

Or in case when standard handles are used just:

“%ftinst%ftrpg.exe” –r”%fthome%\Repagination Rules\payment_initial.rpg”

This form is preferable because it allows FTSpooler to capture error messages and store them in logs.

The optional –***u*** parameter is used only on UNIX platforms when one or more file names contain non-ascii characters. In this case the command line itself should be UTF-8 (Unicode) encoded.

FTSplitDef

CHAPTER 9

The main purpose of FTSplit is to provide and implement rules for identifying data as it is received by FTSpooler. Once identified, data can be associated with a specific form or may be redirected to another queue for further processing, typically to be formatted using a different form. Such a need is common in two situations:

- where FormTrap is being used to process a large number of varied documents, which would otherwise require the creation of multiple FTSpooler queues; and
- where the file needs splitting into individual documents that require individual delivery (email or fax).

Splitting involves two components: ***FTSplitDef*** is the design environment that allows you to create rules for identifying and splitting batch runs; and ***FTSplit*** is the run time component used by the FormTrap Spooler. FTSplit allows you to identify data, split that data into separate documents according to your user-defined rules as well as removing unwanted pages of data such as summary details from the file.

FTSplit

FTSplit operates according to three sets of rules. For each type of data file you need to define:

- ***Identification rules*** - which identify the ***Entire File*** as one type of document.
- ***Unwanted page rules*** (optional) - which identify pages in the data stream that you do not want to process.
- ***Split rules*** (optional) - which identify information that is used to split the data file into individual documents (e.g. change in document number or page one).

When FTSplit receives a file, it performs the following functions:

- FTSplit analyses the data file to determine the type of document it is working with. This is done for the first three pages only, if the first of multiple entries does not succeed it looks at the second and so on.
- If the identified document has any unwanted page rules, FTSplit removes all pages from the data that match these rules before continuing.
- If the document type has rules for splitting, then FTSplit begins writing data to file until the first split rule succeeds. The file is then closed and FTSplit begins writing a new file until the split rule again succeeds. It does this until all documents in a batch run have been re-written to separate files according to the rules for splitting.

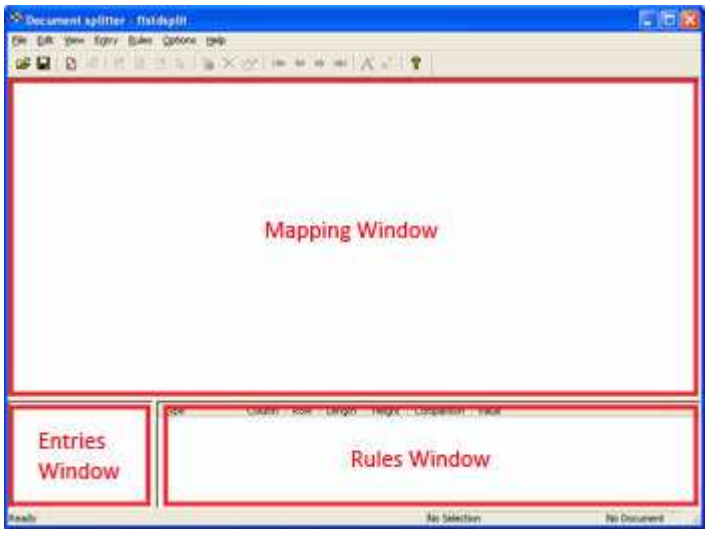
Note: Trying to split a SINGLE INPUT FILE into two or more alternate outputs CANNOT BE DONE. Each file is recognized ONCE ONLY, against ONE ONLY of the entries.

See the example on page 190 for emailing (or faxing) individual documents.

FTSplitDef

Using FTSplitDef, you load a sample data file and create the rules to identify the data, remove unwanted pages and split the data file into individual documents. This information is saved into a rule file for use with FTSplit.

- ***Entries Window*** - contains a list of the defined entries.
- ***Mapping Window*** - displays the sample data file, onto which you can map the rules.
- ***Rules Window*** - displays the rules you have created for the selected entry.



Loading a Data File

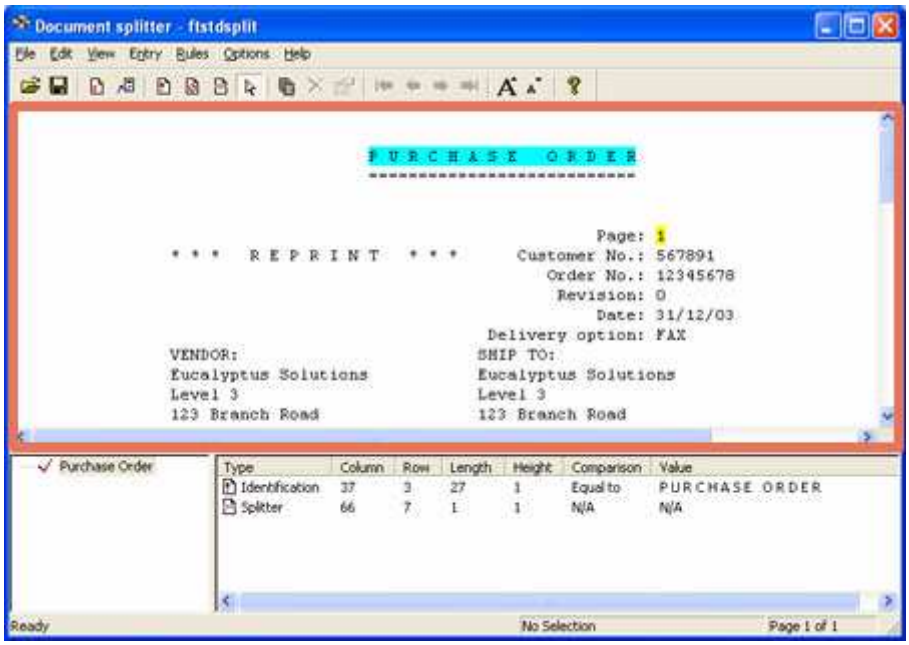
Before starting on the rule file, a sample data file is loaded as a test case. The sample data must contain multiple pages or multiple documents as it is the variation across input pages that identifies the rules.

To load the sample data file:

- Select ***Load Data File*** from the ***File*** menu.

- Select the appropriate test data file in the ***Open*** dialog box.
- Ensure ***Ascii / Unicode conversion*** is ***Auto***.
- Click the ***Open*** button.

The test data file appears in the main window of your FTSplitDef screen.



If you see an empty page, press ➡ (the first page may be just a carriage return). You will need to identify an "empty" page as "***Unwanted page***" .

If you are splitting a Records Mode file, press ***Entry***, ***Properties*** and adjust ***Maximum lines per page*** to ***1*** (one).

If the second page (press ➡) is not at the same distance from the top of the screen, then you have an unformatted file with no carriage returns in it. Press ***Entry***, ***Properties*** and adjust ***Maximum lines per page*** to ***60*** and recheck using ➡. Adjust ***Maximum lines per page*** until pages line up using ➡ and ⬅.

Entry

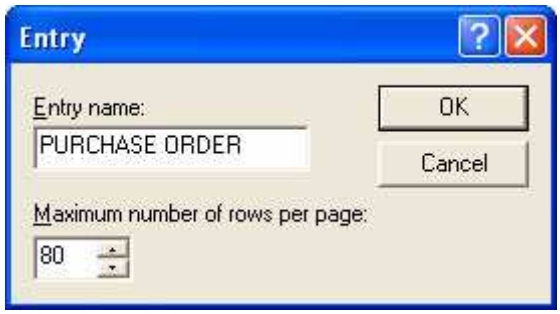
Creating a New Entry

A new entry must be created for each different type of document that will be recognized. For each entry, the identification, unwanted page and split rules can then be configured.

Entries and rules are created differently for Records mode data/forms, see example here.

To create a new entry:

- Select ***New*** from the ***Entry*** menu or click the ***Add new entry*** button.
- The ***Entry*** dialog opens. In the ***Entry Name*** text box type in the name of the entry. The entry should have a meaningful name, usually the document type.
- ***Maximum number of rows per page*** defaults to 80 - in excess of most pages that are terminated by a Carriage Return.
  - If the input file is Records Mode, set this to 1 (one).
  - If the file comes from Unix Systems it may have a carriage return at the start (effectively an empty page) which will show here. Press ➡ to see the first page. Likewise there may be no Carriage Return at the end of the page. Try setting ***Maximum number of rows per page*** to 60 and press ➡ to see if the next page is at the same position on the page. Adjust ***Maximum number of rows per page*** until all pages are at the same position after ➡ and ⬅.



- Click on the ***OK*** button.

The new entry appears in the bottom left hand corner of your FTSplitDef screen. You can now load a sample data file and start adding rules in.

Deleting an Entry

Deleting an entry erases all the rules under the entry, and cannot be undone.

To delete an entry:

- Select the entry you wish to delete.
- Select ***Delete*** from the ***Entry*** menu.

Loading an Entry

To load an entry:

- Select ***Load*** from the ***Entry*** menu.
- The ***Load Entry*** dialog box opens.

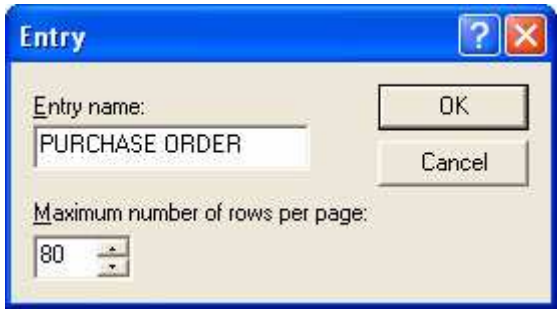
- Choose the entry to be loaded, and click the ***OK*** button.
- All the rules of the selected entry are loaded.

Editing the Entry Properties

If the application generating the data file does not automatically insert form feed codes, but pads out the rest of the page with blank lines, set the maximum number of rows a page contains and FTSplit will paginate the data file accordingly.

To change these settings:

- Select ***Properties*** from the ***Entry*** menu.



- Modify the ***Maximum number of rows per page*** if required.
- Click the ***OK*** button to accept the changes.

To confirm that you have set the correct page size, use the arrow keys to progress through the pages. The data should be in the same location on each page.

Evaluation Order

To process more than one type of document, you must create an entry for each type of document in your rule file, and you may change the document Evaluation Order.

To set the Evaluation Order:

- Select ***Evaluation Order*** from the ***Entry*** menu.

- Move those entries with more specific identification rules to the top using the up arrow button.
- Click on ***OK*** to accept the changes.

For example you may have an entry for Invoice and a separate entry for Invoice Reprint. The rules for these entries will be very similar with both entries using the heading ***INVOICE*** as an identification rule. However, the Invoice Reprint entry will require an additional rule which will identify the ***REPRINT*** string. The Invoice Reprint entry will need to be evaluated before Invoice Entry as it has less ambiguous identification rules.

Creating Rules

Once an entry is created, and there is data file to work with, the rules used to identify and split the data file are created. Some important points to note:

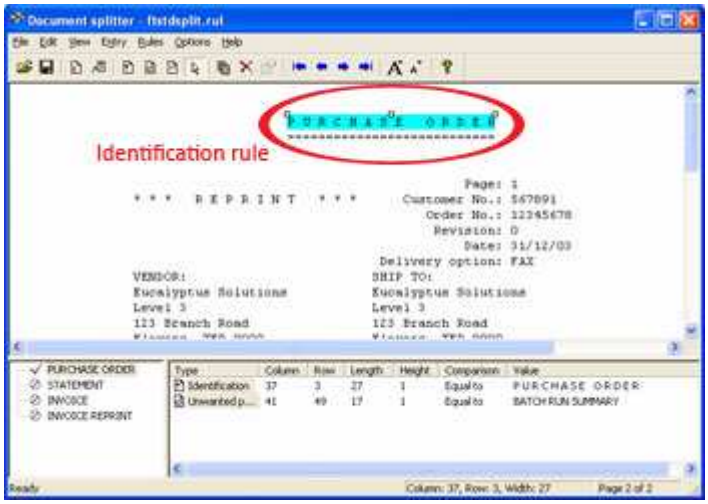
- A rule consists of a particular area on the page and a text string.
- The area for a rule can be of any size and FTSplit will search the entire area for the text.
- Each entry MUST have at least ONE identification rule.

Creating Identification Rules

The identification rules in each entry are the first to be tested by FTSplit when it receives a data file. For each entry in the rule file, FTSplit evaluates the identification rules and if the identification rule is positive, FTSplit selects that entry and uses its rules. Each entry MUST contain at least ONE identification rule.

To create an Identification rule:

- Select the ***Identification rule*** button .
- Highlight the text that will be used to identify the document.



- The type of rule, its location and the text used to evaluate the rule is then added to the rules window.

A good place to find identification text is in the heading of each document. In the above example the heading P U R C H A S E O R D E R has been used.

You can create as many identification rules as are needed to identify a document, and then choose whether FTSplit will match either all the identification rules, or at least one, before identifying a document. It is important to note that the identification rule is only ever applied to the first two pages of the data file. All pages following the second page are assumed to be of the same type of document. This has implications if:

- The data used for the actual identification appears later in the data; or
- Not all of the data file is of the same document type.

To resolve either of these situations, it may be necessary to produce multiple rule files and use the queue redirection facilities in FTSpooler to correctly split the entire data file appropriately. Visit www.formtrap.com for more information.

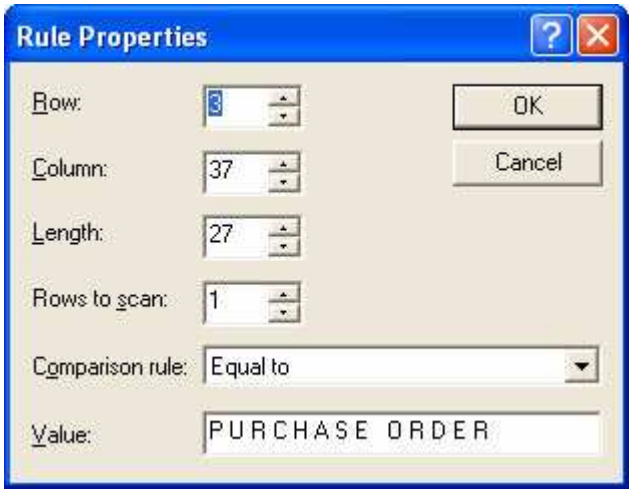
Comparison Rules

A number of comparison options have been defined to assist in the identification of documents. The default comparison rule is ***Equal to***. This means FTSplit will compare the data in the field on each page to the value or string specified in the rule file. The following comparison options are available:

Comparison Rule	*Description*
Equal to	Field must be equal to the specified text string or value.
Not equal to	Field must not be equal to the specified text string or value.
Greater than	Field must be greater than a specified value.
Greater or equal to	Field must be greater than or equal to a specified value.
Less than	Field must be less than a specified value.
Less or equal to	Field must be less than or equal to a specified value.
Empty	Area must be blank
Not empty	Area must not be blank

To modify a comparison rule:

- Click on the ***Select*** tool button  .
- Double click on the appropriate rule.
- The ***Rule Properties*** dialog opens. In the ***Comparison rule*** drop down menu, select the relevant option.



- The new comparison rule will appear in the rules window.

Comparison Logic

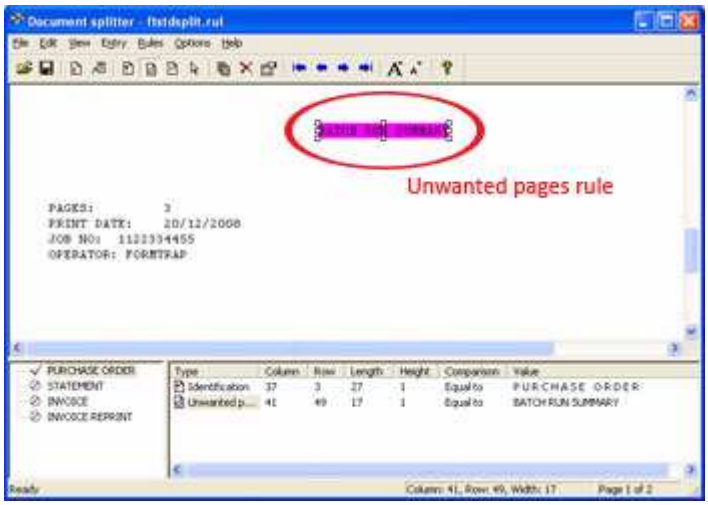
The comparison made is shorter length of the string itself (in ***Rule Properties***, ***Value***) or the field (in ***Rule Properties***, ***Length***). Where the field cover multiple rows or the ***Length*** is greater, Splitter compares all available positions for the ***Value***. When the ***Length*** is shortened, the ***Value*** is shortened to comply. Where the creation of the field includes leading blanks, these are NOT included into ***Value***.

Creating Unwanted Pages Rules

If the data file contains pages which you do not want to print, you can create unwanted pages rules which will filter these pages out of the data file. These "unwanted pages" may include batch job summary pages or network banners. Like identification rules, unwanted pages rules look for specific text at a specific location. If the rule evaluates as positive, the entire page will be discarded.

To create an unwanted pages rule:

- Select the ***Unwanted pages*** rule button .
- Highlight the text that you want to evaluate.
- The type of rule, its location and the text used to evaluate the rule is then added to the rules window.
- The words BATCH RUN SUMMARY are used in the example below to identify the pages that will not print.



Creating Split Rules

Once FTSplit has used the identification rules to determine which entry in the rule file to use, it uses the split and unwanted page rules in that entry to split the batch run into individual documents and remove any unwanted pages from the data file.

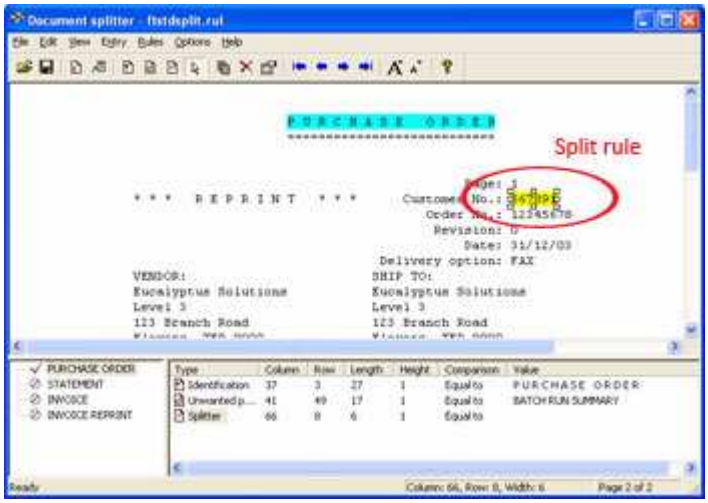
Like identification rules, split rules look for a text string in a particular location on the page. For greater flexibility split rules evaluate the text in two different ways.

You can configure FTSplit to check if the string MATCHES a specific value or to check if a string has CHANGED value. When the split rule is evaluated as positive, FTSplit determines that page to be the first page of a new document.

To create a split rule:

- Select the ***Split rule*** button .
- Highlight the text that you want FTSplit to evaluate.
- The type of rule, its location and the text used to evaluate the rule is then added to the rules window.
- A ***Split on Change*** rule has been used in the example below. Here FTSplit will examine the customer number from page to page and split documents when a different customer number appears.

For more information on Evaluation Rules page 181.



Editing Rule Properties

Once you have created a rule, you can change its properties either by moving the rule location with the mouse or by manually specifying its new location and text.

To move the rule location using the mouse:

- Click on the ***Select*** tool button .
- Click on the rule to select it.
- Drag the rule to a new location or resize it using the white handles.

To manually specify the new location:

- Click on the ***Select*** tool button .

- Double click on the rule or select ***Properties*** from the Rule menu.

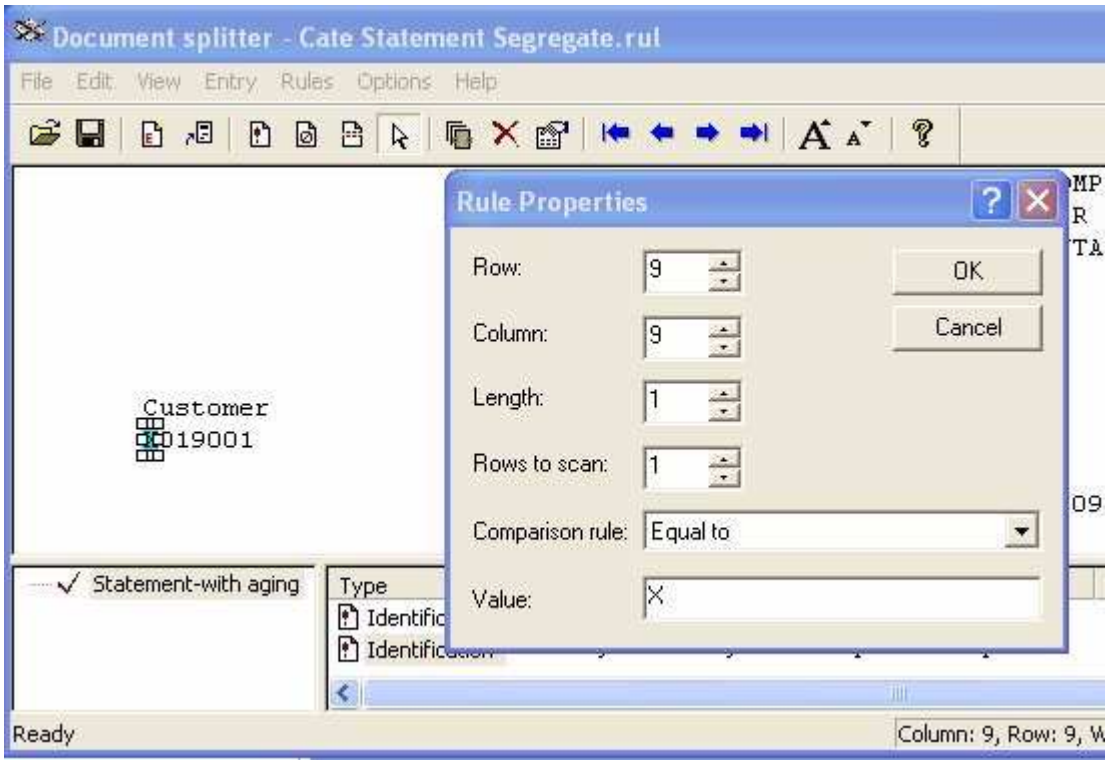
- Here you can specify the rule location and the text used to evaluate the rule, regardless of what text appears at the rule location on the current page.

Within Area Matching

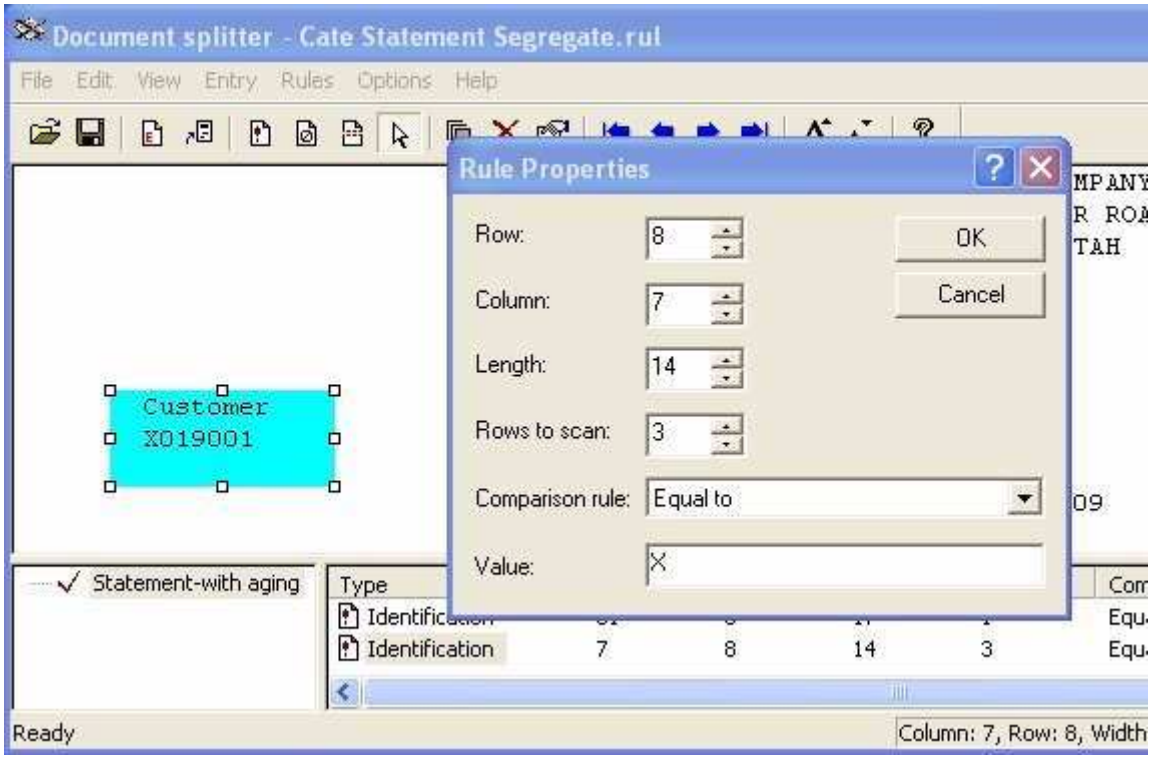
You can match "within an area" if you are not certain where the target is going to occur. This normally happens with literals in comment lines or when the originating program is inconsistent.

To match "within an area":

- Put in an exact match - normally "Equal to" for the required character (s), "***X***" in the example.



- Use the pointer to expand the area looked at. If the character(s) occur anywhere in this area, a "success" is recorded.



Evaluation Rules

After the identification, unwanted and split rules have been defined it is important to configure the rule evaluation for each entry in the rule file. The evaluation method of each type of rule (identification, unwanted and split) can be set so that either all rules must match or any rule must match.

In some instances you may need to create a combination of rules to successfully split/identify your data. For instance, you would need more than one evaluation rule to determine the difference between an invoice and a reprinted invoice. FTSplitDef will allow you to define how multiple rules are handled by the FTSplit in two ways:

- ***All must match to qualify*** - as stated.

- ***Any one matched to qualify*** - one or more rules must match for success.

Split rules can be further controlled. Split rules can be set to:

- ***Split on match*** - meaning that the rule must exactly match to succeed. For example, a split rule using the page number would split the document when the page number was equal to, or "matched" the value 1. Use leading and trailing spaces to avoid splitting on page numbers 10, 11, 12, 100, 101, 102 etc.
- ***Split on change*** - meaning that if the text in the rule changes the rule succeeds. For instance, a split rule on a change in the customer number splits when a new customer number was present.

To configure the rule evaluation for each entry:

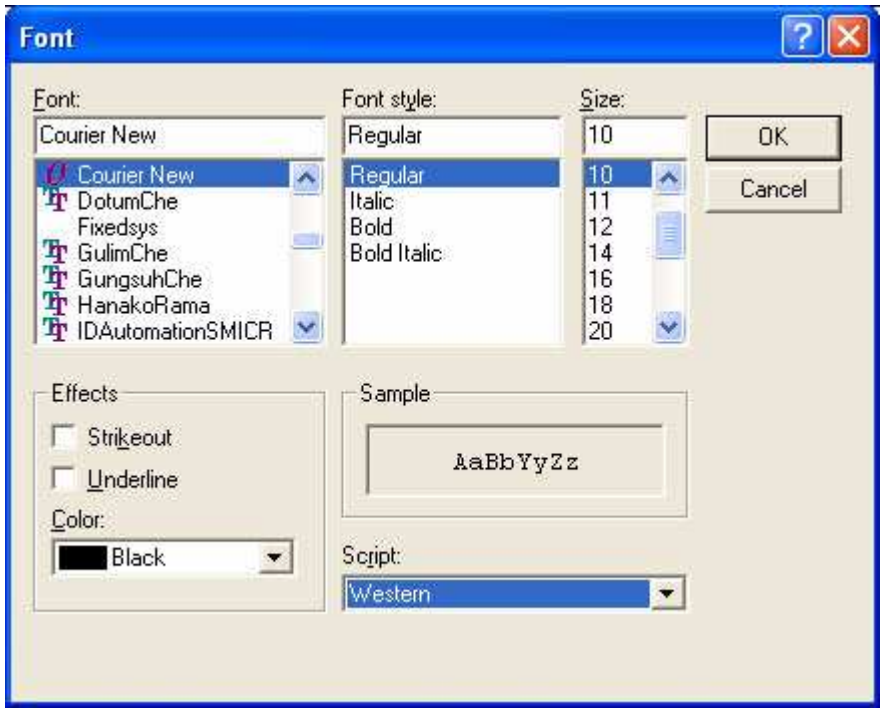
- Select ***Evaluation Rules*** from the ***Rules*** menu.
- For each rule type, set whether all rules or at least one rule must be satisfied before the action occurs.
- On the ***Split*** tab, select the correct ***Split on*** option.
- Click on the ***OK*** button.

Options

Font Options

The attributes of the font used for the sample data file is set in the Font Options.

- Choose ***Font*** from the ***Options*** menu. Only fixed width fonts are shown.
- In the ***Font*** dialog box,
  - ***Font*** - select the font type. ***Courier New*** is ideal.
  - ***Font Style*** - select Regular (Bold, Italic and Bold Italic are unsuitable).
  - ***Size*** - select the size of the font.
  - ***Effects*** - leave as not Underlined.
  - ***Color*** - select the color of the text.
  - ***Script*** - select Western from FTDesign version 6.4 forward (Unicode).



Preferences

To configure the Preferences of FTSplitDef:

- Choose ***Preferences*** from the ***Options*** menu.
- In the ***Preferences*** dialog box,
  - Check the ***Show dialog after rule creation*** box enables the ***Rule Properties*** window to pop up at the time of creating the rule.
  - Check the ***Apply underlying text after move/ resize*** box to change the value of the underlying string in the data file as you move or resize the rule.

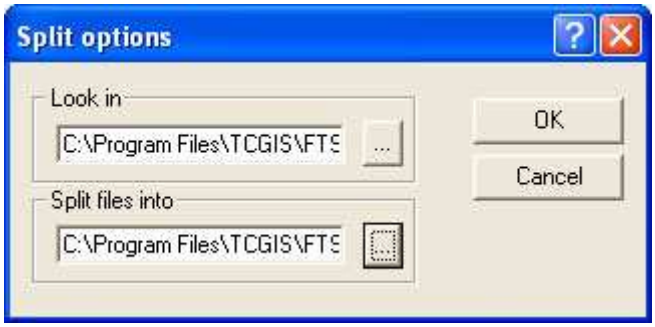
- ***Rule Colors*** - define the colors for ***Identification***, ***Unwanted pages***, and ***Split*** rules respectively.

Split Options

The default folders that FTSplitDef locates the input and output files are specified in ***Split Options***.

To configure the ***Split options*** of FTSplitDef:

- Choose ***Splitting*** from the ***Options*** menu.
- In the ***Split options*** dialog box, click the browse "..." button to select the default locations for input and output files.
  - ***Look in*** - the default location of raw data files.
  - ***Split files into*** - the default location of output files.



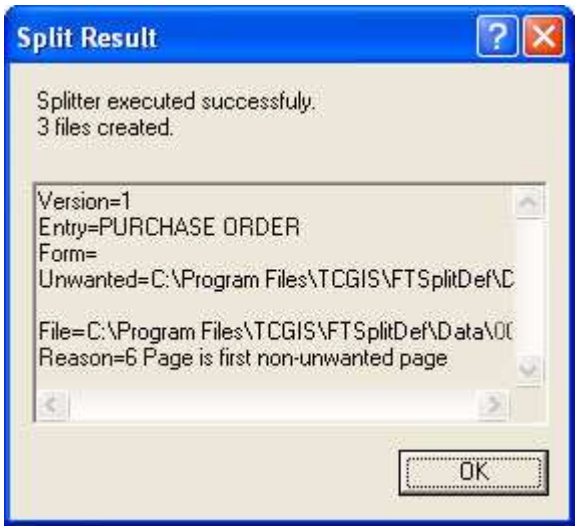
Splitting

Before going to production, the split rule file needs to be tested. The locations of splitting input and output files are defined in Split Options.

To test the rule file:

- Select ***Split*** from the ***File*** menu.
- Select a test data file.
- Click the ***Open*** button.

- The ***Split Result*** dialog opens.



- Click the ***OK*** button.

To ensure the rules are identifying and separating the documents correctly, browse the documents with a text editor. The first file created by FTSplit contains all the unwanted pages. This file is always created, even if there is no unwanted page data.

Examples

Here are two examples showing the split operation in both Print Line and Records mode.

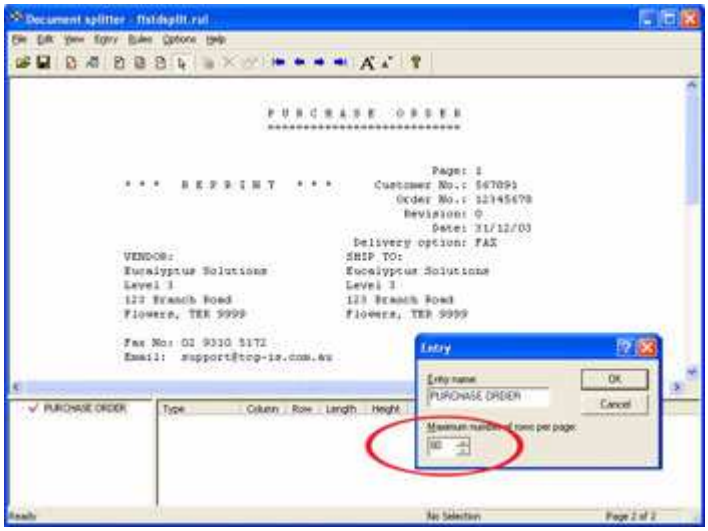
FTSplitDef and Print Line mode

In the example below, the rule file is configured to distinguish between purchase order and invoice data, and to split on a change to the customer numbers.

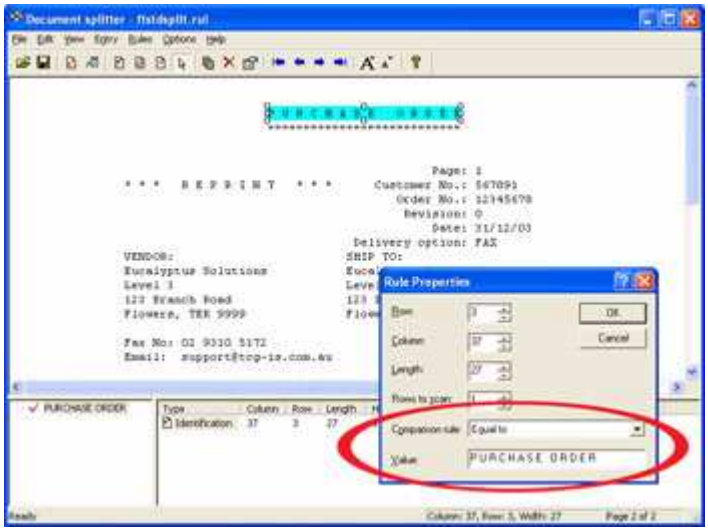
To configure a rule file:

- Define the ***Entry*** for purchase order and set the maximum number of rows per page of your sample data.

- ***Load*** a sample purchase order data.

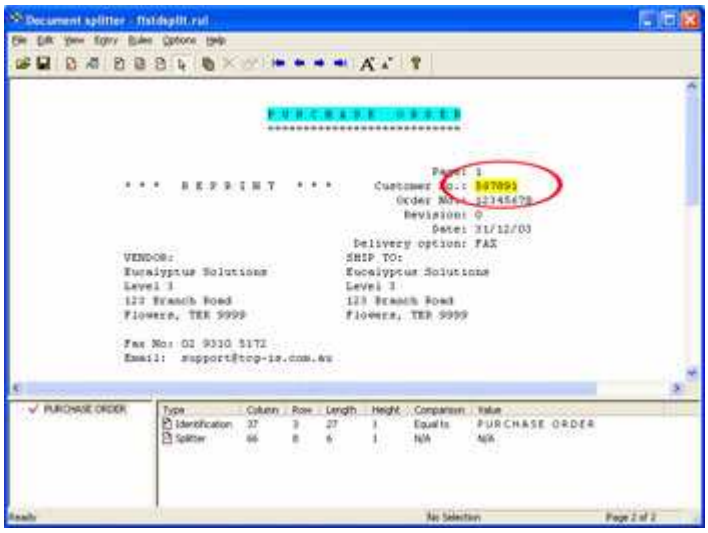


- Define the Identification rule, Equal to P U R C H A S E O R D E R in the example below.

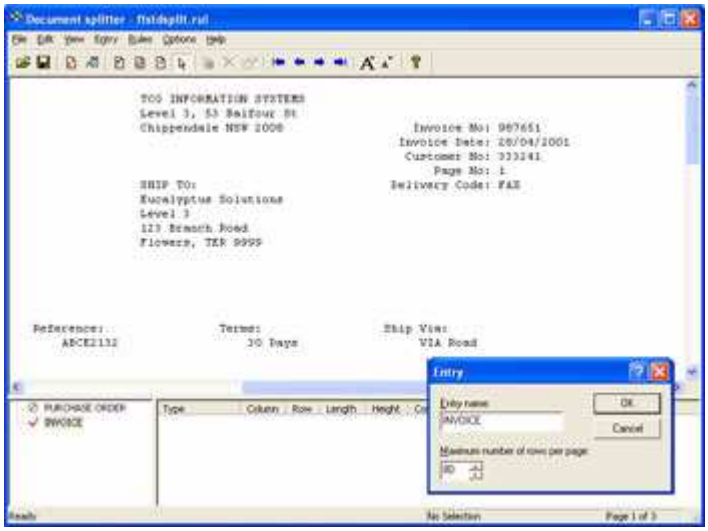


- Define the Split rule by highlighting the customer number 56789.

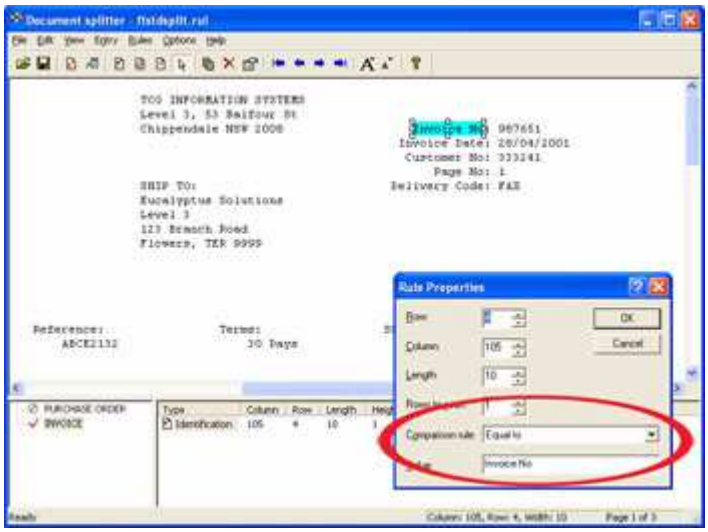
- Select Evaluation Rules from the Rules menu. On the Split tab, choose Split on Change.



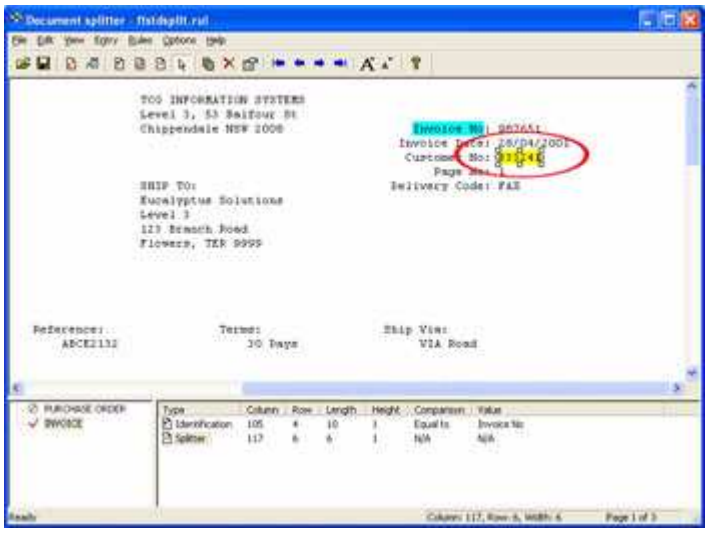
- Define the Entry for invoice and set the maximum number of rows per page of your sample data.
- Load the sample invoice data.



- Define the Identification rule, Equal to Invoice No in the example below.



- Define the Split rule by highlighting the customer number 333241.
- Select Evaluation Rules from the Rules menu. On the Split tab, choose Split on Change.



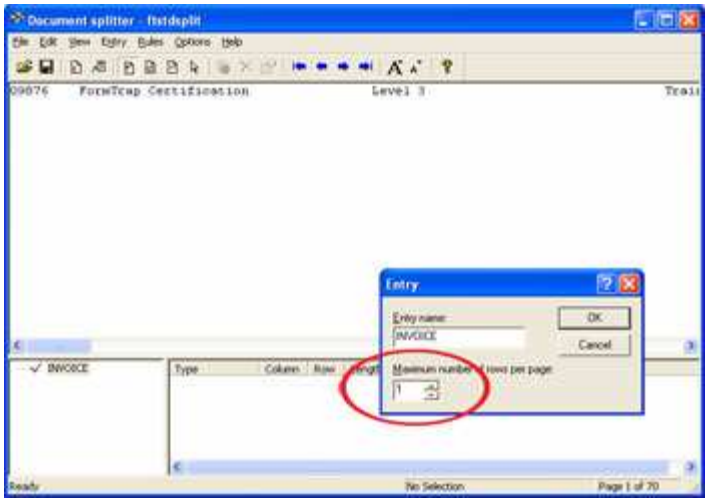
- Test the splitting results by clicking the Split option from the File menu.

FTSplitDef and Records mode

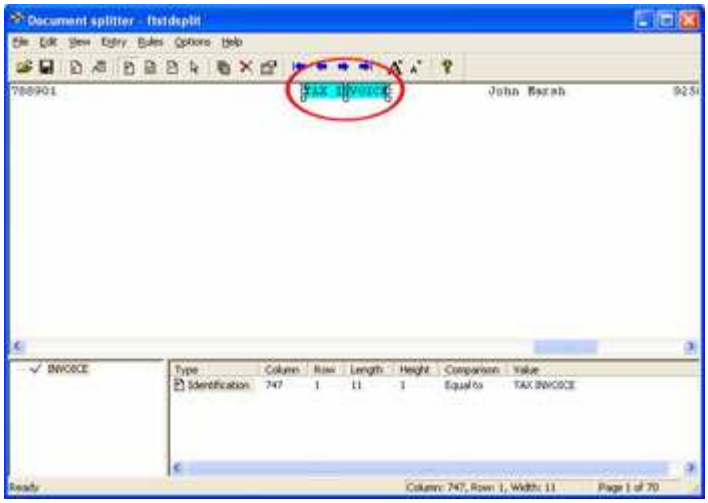
Entries and rules are created differently for Records mode data. The example below explains how to handle Records mode data.

To configure a rule file for records mode data:

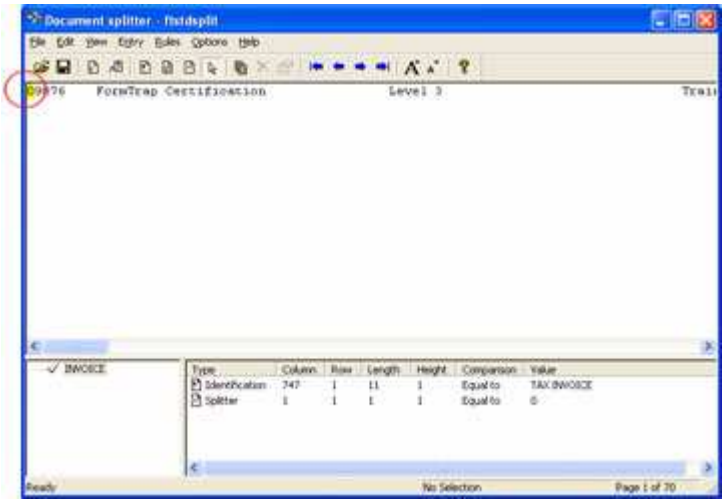
Define each Entry as ONE line (i.e. one record long).



Create your identification rule in record 0: Base page. The base page record should contain a field that can be used to uniquely identify the data.



Define the split rule (if required) as the 0: Base page character. The identifier 0: Base Page record indicates the beginning of a new document.



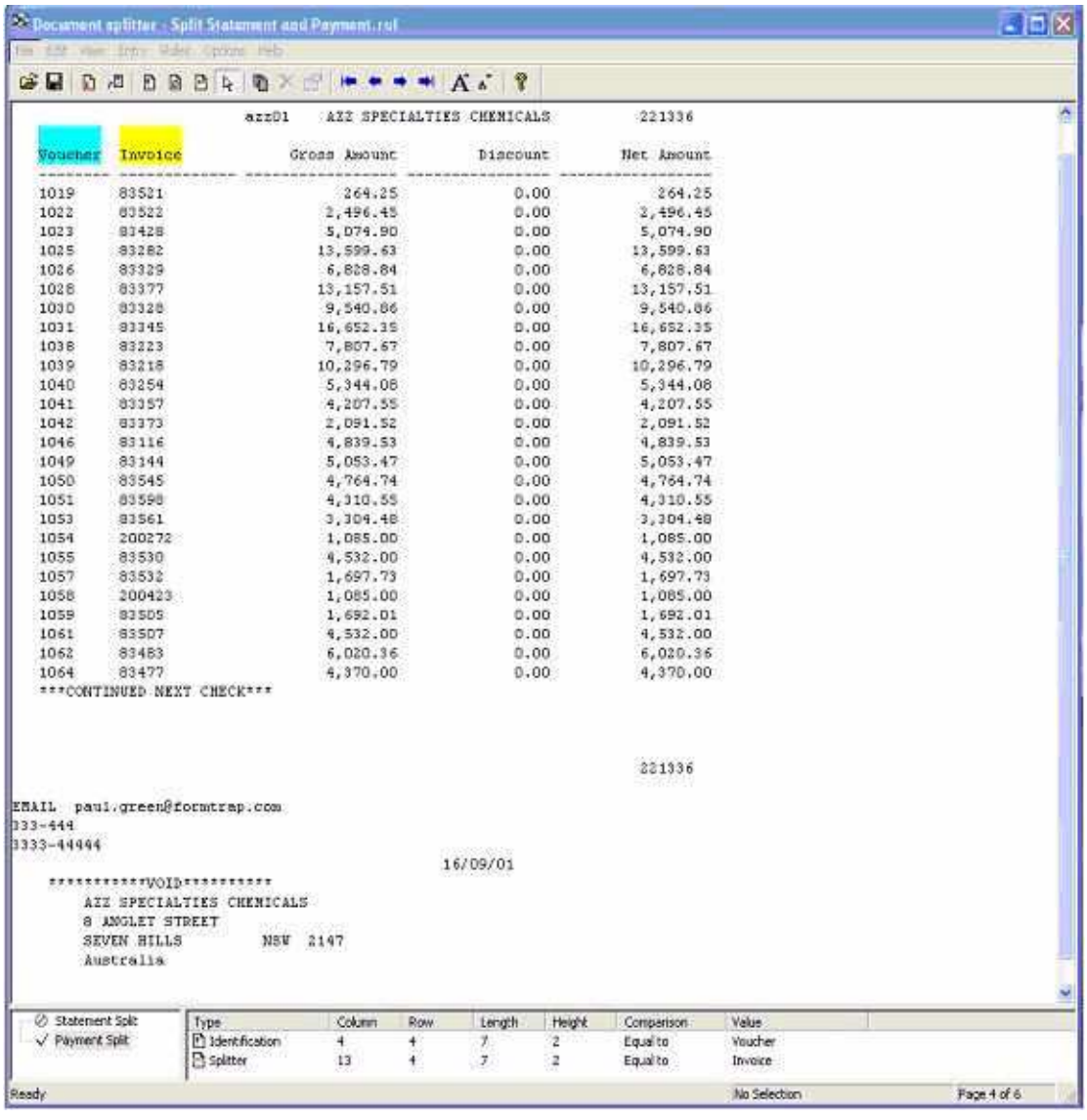
The Unwanted Page rule only removes specific records from the data, not whole pages and is generally not required in Records mode.

Splitting Files to Email (or Fax) Documents

To deliver according to conditions in a document you MUST be processing just the ONE document. This means you'll need to split incoming files into individual documents BEFORE testing for the delivery condition. The Splitter treats entire FILES the same way, if you are attempting to identify DOCUMENTS in a multi-document file you'll get the ENTIRE FILE as the first case recognized. This is the correct procedure for emailing individual documents:

Queue 1

Split the file into individual documents:



Deliver ALL individual documents to Queue 2 "process" queue.

Queue 2 - Process Queue

In the Process queue, apply the "EMAIL" test and allow all other documents to go to "Print".

Installing .reg files under a 64-bit operating system

FormTrap comprises a 32-bit FTDesign module and a 32-bit (normal) or 64-bit (additional cost) Production System.

For the 32-bit versions, you may be running on either a 32-bit or 64-bit machine.

We will occasionally send out Registry Updates to either FTDesign or to the Production Systems (Enterprise or SBE Spoolers), you will need to select the correct version of regedit.exe to install those updates.

32-bit program on 32-bit operating system or run the .reg file sent to you

64-bit program on 64-bit operating system

save the registry.zip file sent to you to the machine running that program, also save it where you saved your original InstallShield program uploaded from the web site that represents your current installation

stop the program or service

double-click the registry.zip file

click the .reg file shown to update your registry

restart the program or service

32-bit program run on 64-bit operating system - you must select the correct version of regedit. The 32-bit version is in folder **..\Windows\syswow64** Do the following:

unzip the registry.zip file sent to you and save the file on the machine to be updated, also save it where you saved your original InstallShield program uploaded from the web site that represents your current installation

stop the program or service

connect to the **..\Windows\syswow64** folder

right-click on the Windows icon at screen left, Properties, open the Windows Command Processor at the top of the list for a CMD line (DOS Command)

key in the command **regedit.exe <registry.reg>**

restart the program or service

Special Forms

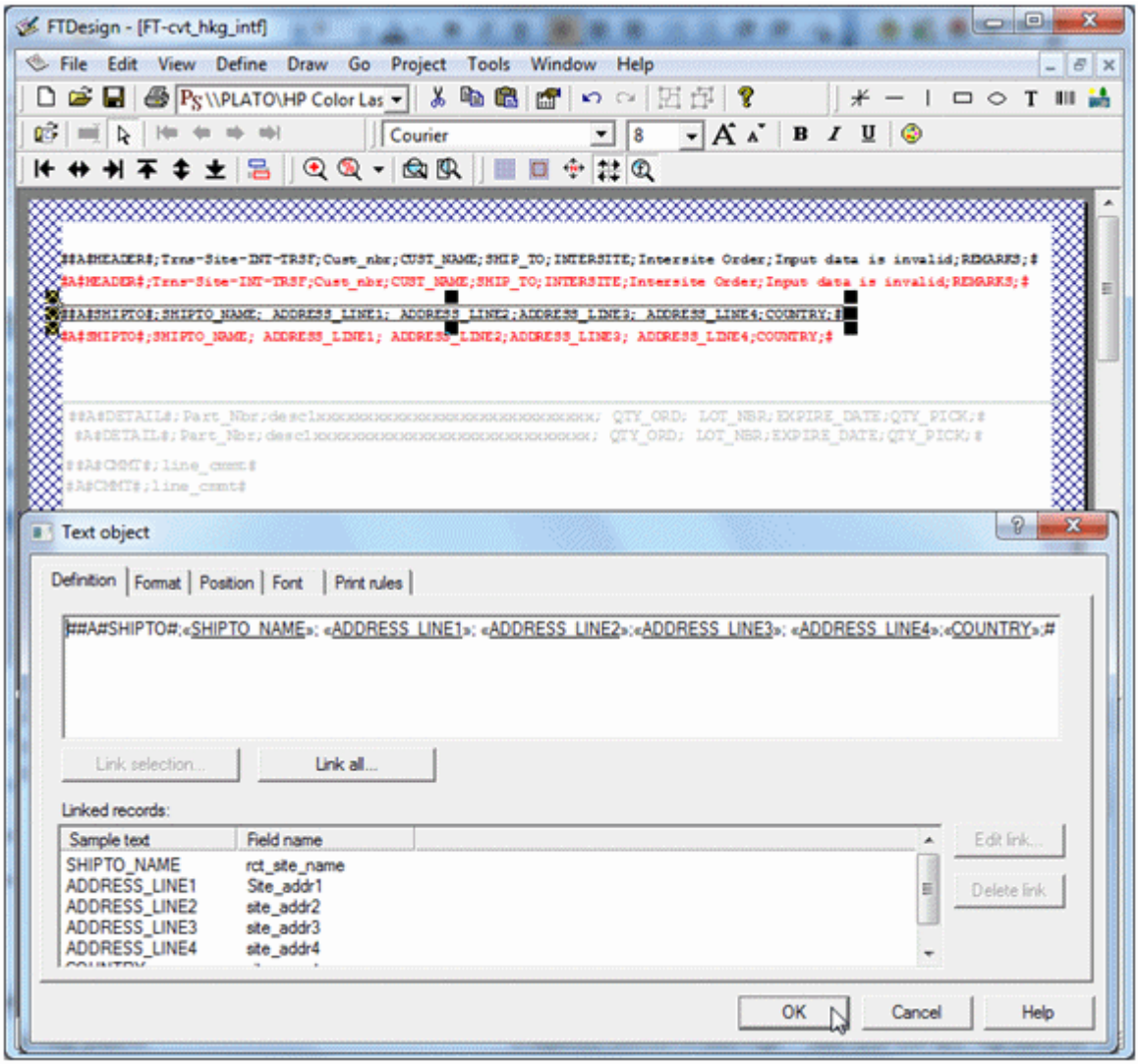
This section gathers a number of article previously published in the Knowledge Base on the website (www.FormTrap.com).

The articles describe and provide examples of special forms and documents that FormTrap can handle.

CSV Output File

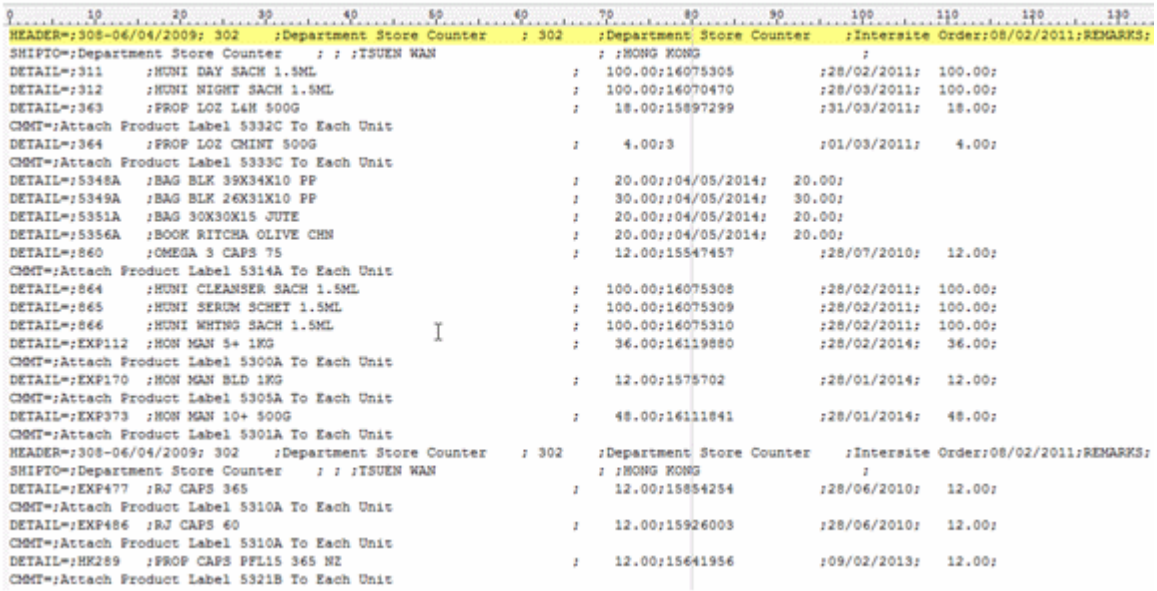
Comvita (NZ Medical Honey company) use a third party fulfillment system in Hong Kong to fill orders and required an automated way to get the data from their QAD picking/invoicing systems to the third party. After discussion with TCG we designed a form to pass the data to the third party computer fulfillment system using Separated Files produced from FormTrap.

You can output a CSV file using the Associated File command, like this:



Here we construct Associated File lines with all of the fields required, starting with the ; (semi-colon) separator (so this is strictly a semi-colon separated file). The same is done for the initial "Header" portion and for each of the Detail and Comment lines as well. The Red items are missing the initial #, hence print and are used for checking the output during testing. These are taken out for production (subsequent provision in FTDesign to look at the Associated File now makes the red lines redundant).

This is the output.



```
HEADER=;308-06/04/2009; 302    ;Department Store Counter    ; 302    ;Department Store Counter    ;Intersite Order;08/02/2011;REMARKS;
SHIPTO=;Department Store Counter    ; ; ;TSUEN WAN                    ; ;HONG KONG                  ;
DETAIL=;311     ;HUNI DAY SACH 1.5ML                          ;   100.00;16075305          ;28/02/2011;  100.00;
DETAIL=;312     ;HUNI NIGHT SACH 1.5ML                        ;   100.00;16070470          ;28/03/2011;  100.00;
DETAIL=;363     ;PROP LOZ L&M 500G                            ;    18.00;15897299          ;31/03/2011;   18.00;
CMMT=;Attach Product Label 5332C To Each Unit
DETAIL=;364     ;PROP LOZ CMINT 500G                          ;     4.00;3                 ;01/03/2011;    4.00;
CMMT=;Attach Product Label 5333C To Each Unit
DETAIL=;5348A   ;BAG BLK 39X34X10 PP                          ;    20.00;;04/05/2014;   20.00;
DETAIL=;5349A   ;BAG BLK 26X31X10 PP                          ;    30.00;;04/05/2014;   30.00;
DETAIL=;5351A   ;BAG 30X30X15 JUTE                            ;    20.00;;04/05/2014;   20.00;
DETAIL=;5356A   ;BOOK RITCHA OLIVE CHN                        ;    20.00;;04/05/2014;   20.00;
DETAIL=;860     ;OMEGA 3 CAPS 75                              ;    12.00;15547457          ;28/07/2010;   12.00;
CMMT=;Attach Product Label 5314A To Each Unit
DETAIL=;864     ;HUNI CLEANSER SACH 1.5ML                     ;   100.00;16075308          ;28/02/2011;  100.00;
DETAIL=;865     ;HUNI SERUM SCHET 1.5ML                       ;   100.00;16075309          ;28/02/2011;  100.00;
DETAIL=;866     ;HUNI WHTNG SACH 1.5ML                        ;   100.00;16075310          ;28/02/2011;  100.00;
DETAIL=;EXP112  ;HON MAN 5+ 1KG                               ;    36.00;16119880          ;28/02/2014;   36.00;
CMMT=;Attach Product Label 5300A To Each Unit
DETAIL=;EXP170  ;HON MAN BLD 1KG                              ;    12.00;1575702           ;28/01/2014;   12.00;
CMMT=;Attach Product Label 5305A To Each Unit
DETAIL=;EXP373  ;HON MAN 10+ 500G                             ;    48.00;16111841          ;28/01/2014;   48.00;
CMMT=;Attach Product Label 5301A To Each Unit
HEADER=;308-06/04/2009; 302    ;Department Store Counter    ; 302    ;Department Store Counter    ;Intersite Order;08/02/2011;REMARKS;
SHIPTO=;Department Store Counter    ; ; ;TSUEN WAN                    ; ;HONG KONG                  ;
DETAIL=;EXP477  ;RJ CAPS 365                                  ;    12.00;15854254          ;28/06/2010;   12.00;
CMMT=;Attach Product Label 5310A To Each Unit
DETAIL=;EXP486  ;RJ CAPS 60                                   ;    12.00;15926003          ;28/06/2010;   12.00;
CMMT=;Attach Product Label 5310A To Each Unit
DETAIL=;HK289   ;PROP CAPS PFL15 365 NZ                       ;    12.00;15641956          ;09/02/2013;   12.00;
CMMT=;Attach Product Label 5321B To Each Unit
```

Spaces etc, can be removed if required by masking and there is no “maximum length” on the output.

Please note these two items:

1. Headings are best done on the Trailer label (i.e. you get one record per input document). Details will be produced as they occur so are in sequence. This document has no "trailer" so the Associated File records for Header and Trailer are duplicated further down.
2. The first character in the “detail” section must be the separator.

Follow-up via Email from Customer, one month later:

Headers on a CSV file, only 1 required.

Hi Paul,

How do I prevent the HEADER from repeating if there are more than 1 pages?

We should only get the HEADER on top of page 1.

Cheers

Comvita

==========

From: paul [mailto:paul.green@formtrap.com]

Hi Comvita,

Use Print Rules to do this only for "Page: 1" (on both Header fields).

==========

Hi Paul,

Job done!

That was so easy thank you very much.

Cheers

Comvita

QAD Forms in Chinese

This covers implementation of a form in Chinese for a Western company with a Chinese manufacturing branch, wanting to place orders on other Chinese companies in Chinese. The example used was Australian company AUSTRAL GROUP who have kindly allowed their example to be used in this tutorial.

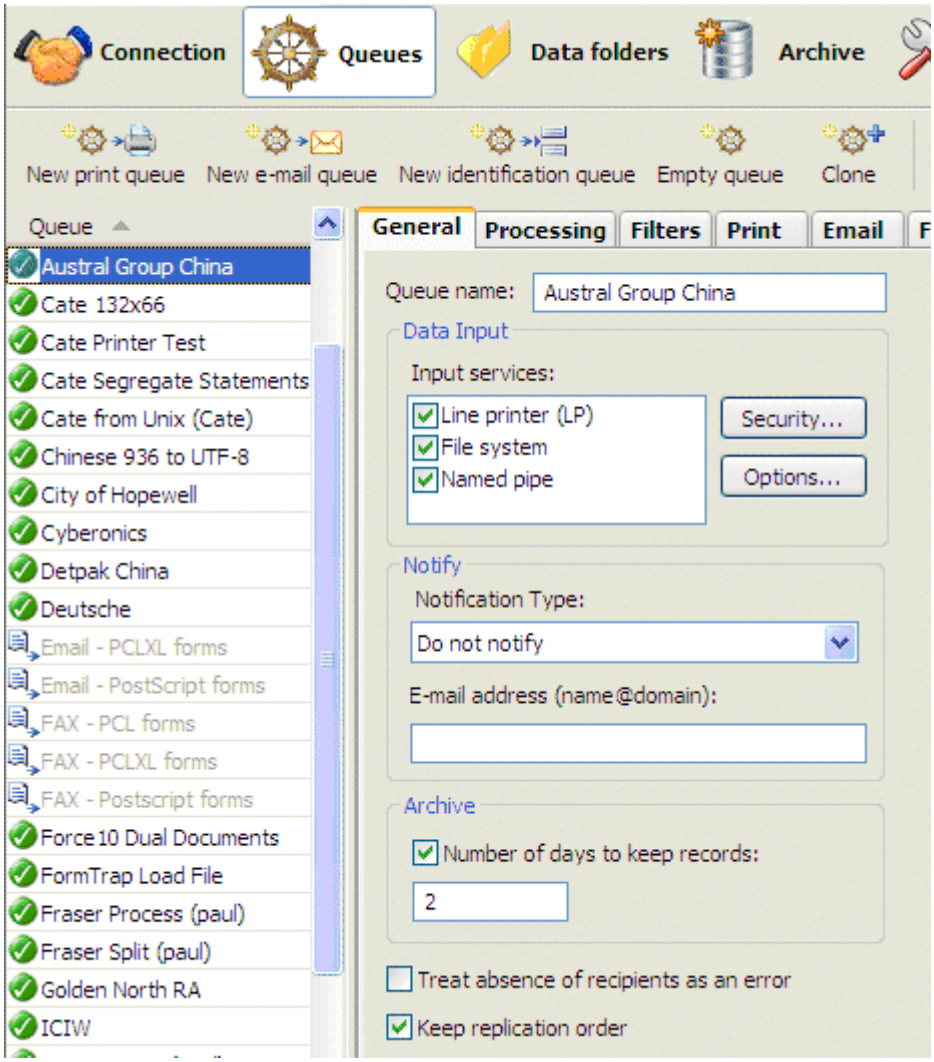
The 鬼佬 (Gweilo – Google it) designing the form does not understand Chinese but has someone who does that he can refer to for a final validation.

Preparatory Work

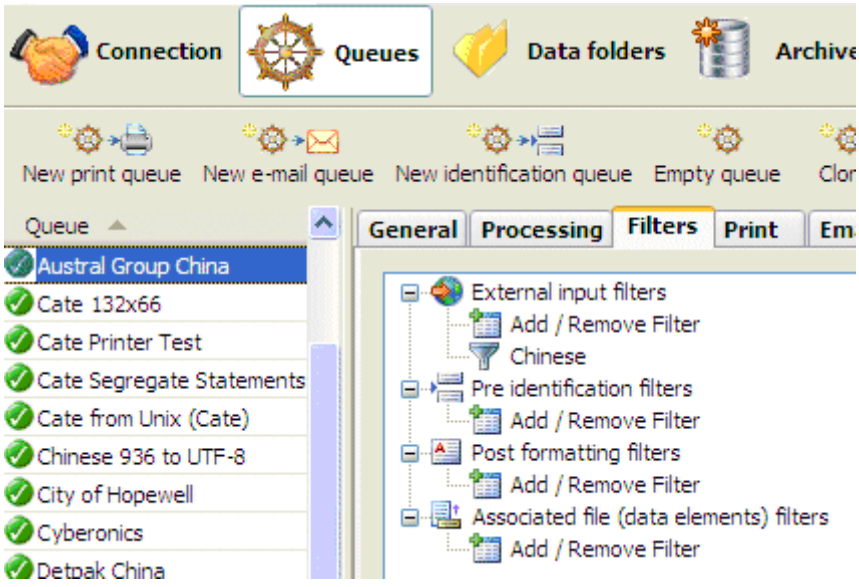
You require two identical data files, produced using a "locale Chinese", one with English and one with Chinese literals. These are output by the QAD "standard report writer" with items below the line turned off (i.e. without any PCL or other printer language inserts). The files are run through the Spooler, with the Input Filter "Chinese (936)" applied, then saved back into a folder as "**filenameC UTF-8.txt**" (Chinese) and "**filenameE UTF-8.txt**" (English).

All form design is done on an English locale machine. The original English file is used to recognize data, with **filenameC UTF-8.txt** used to copy literals. Most sites will require both a Chinese and English version of the form. This is the Spooler setup for UTF-8 conversion:

General tab, **Archive** and **Treat absence of recipients as an error**:

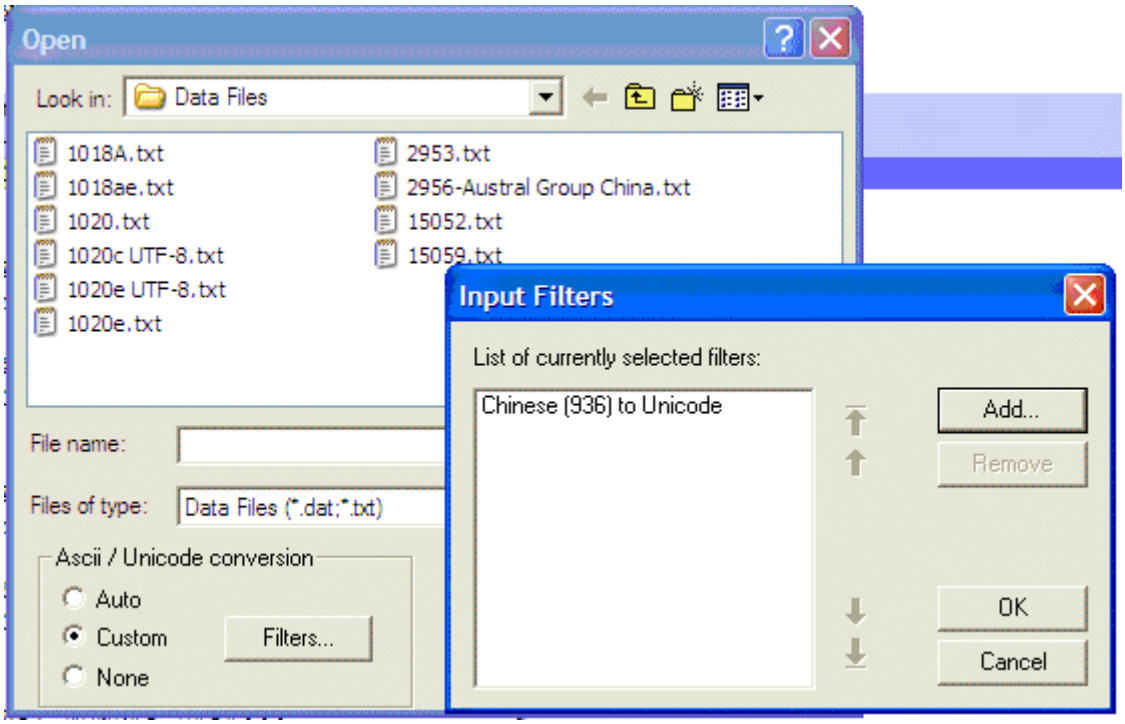


and the Filters tab:

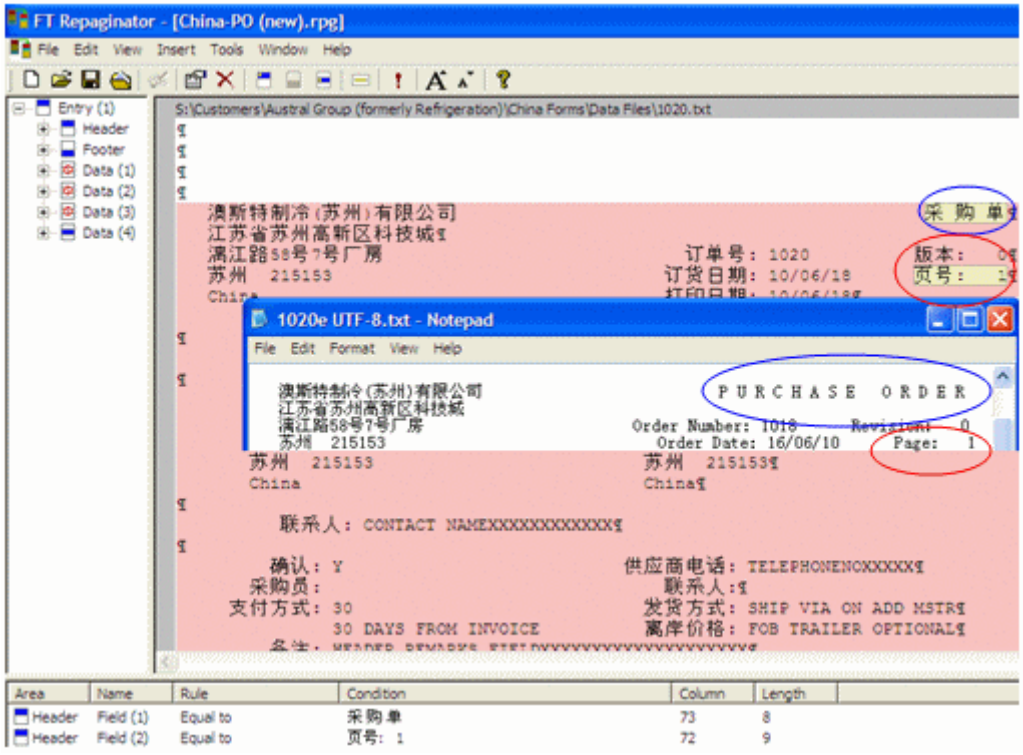


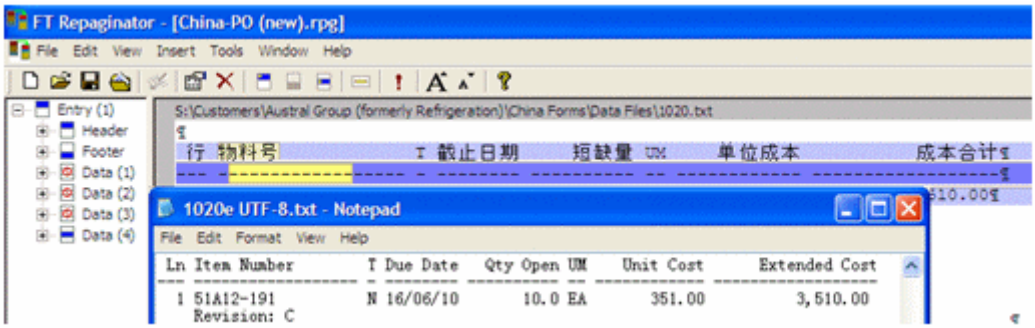
Repagination

In FTDesign, load the original Chinese file (**Tools**, **Load data file ...**) with **Custom**, Filters... and select **Chinese (936) to Unicode** as the load parameters:



Repaginate by comparing to the Notepad view of the English UTF-8 file. Results are shown below:

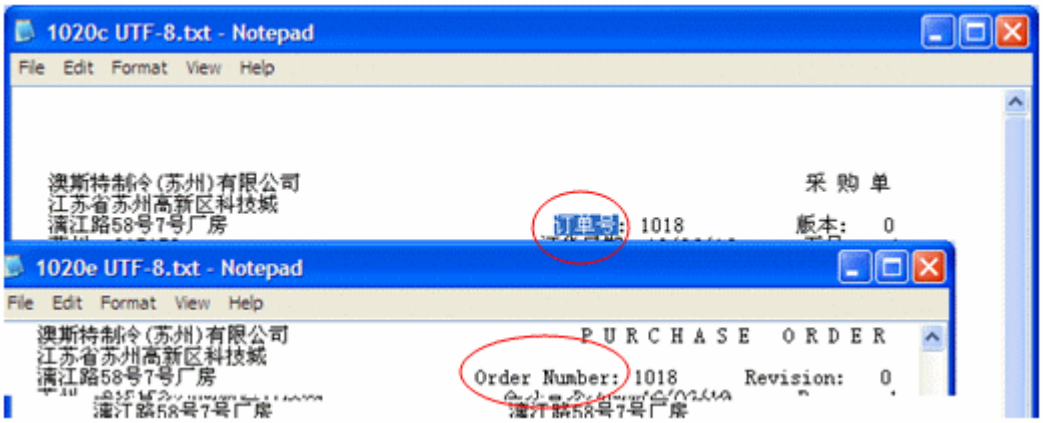




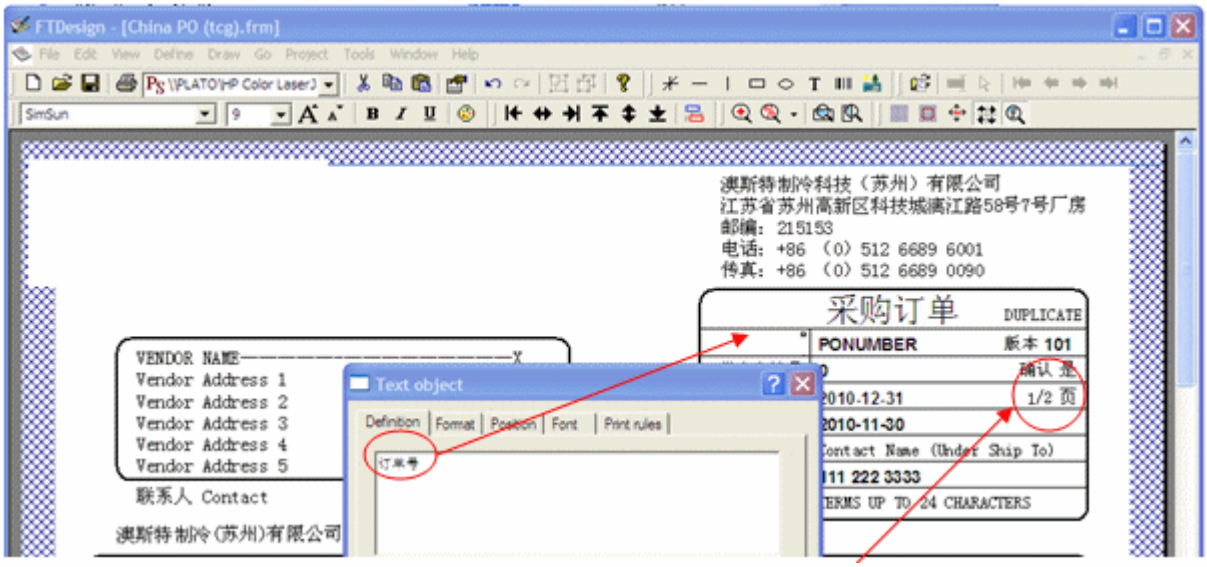
Form Constants

Take these from the same position on the report via Copy from the Notepad Chinese version and paste via Ctrl+V into the literal on the FormTrap form. See below for illustration:

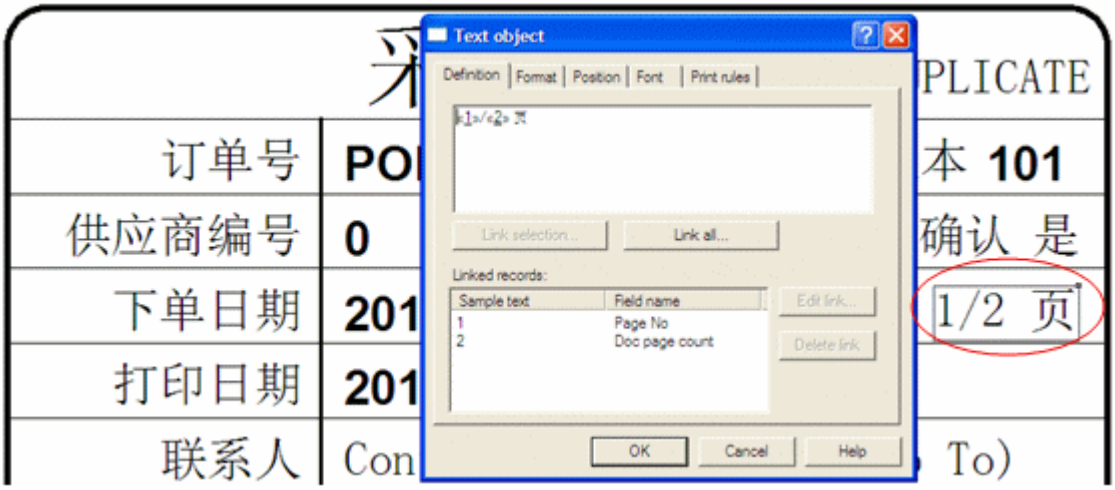
Notepad, cutting the literal "Order Number" in Chinese:



FormTrap, copying "Order Number" in Chinese (use Ctrl+V):



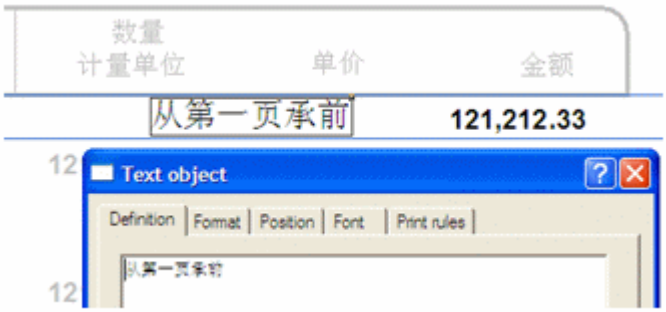
Special characters and strings, such as page number are shown here, this field is shown below:



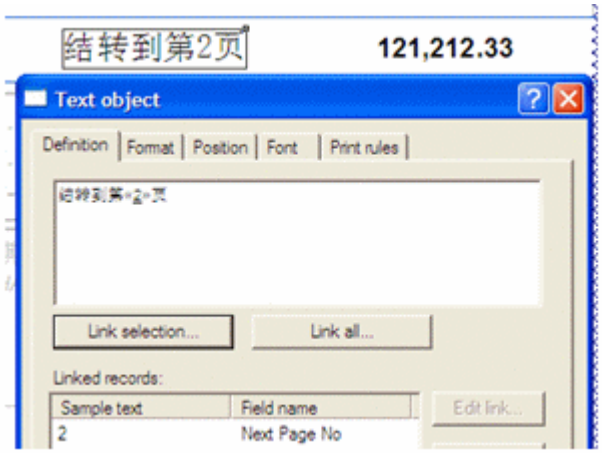
This is "accepted" format for Chinese equivalent of "Page 1 of 2" in English.

These are other "constants" you may require in the finished output:

"Brought forward"



"Carried forward to Page 2"

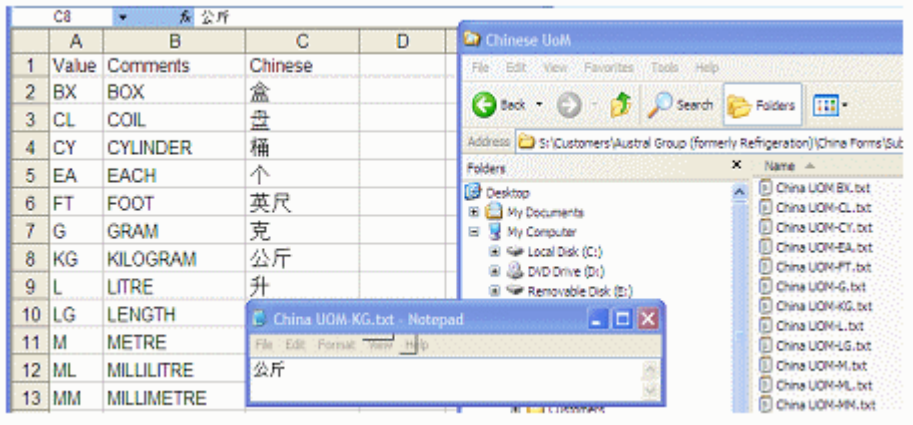


Other can be taken from the PDF but please ensure the finished form is checked carefully by a person educated in China.

Other "Substitution" Translations:

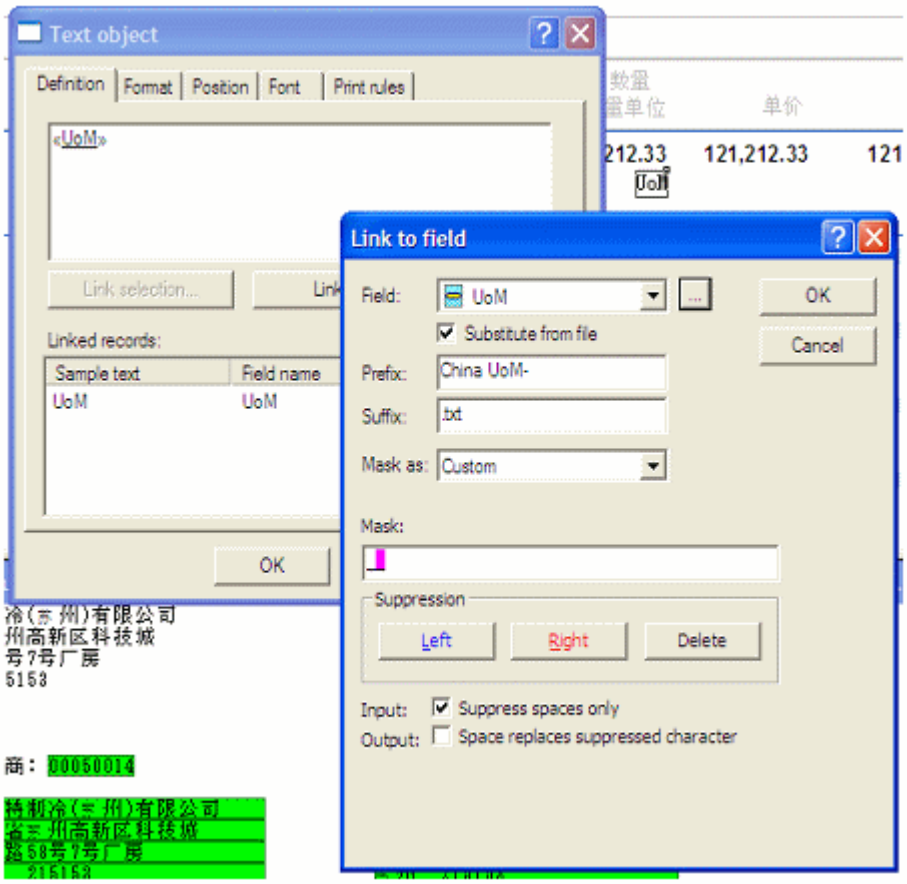
This form had a number of literals, for which Chinese translation was required. These include Units of Measure, Final (and while not done in this instance) Terms and Freight Terms.

Literals for "Units of Measure" (UoM) were supplied in Spread Sheet format, see below, and Cut and Pasted into individual .txt files for use as substitutions. See the screen shots following for details.



	A	B	C	D
1	Value	Comments	Chinese	
2	BX	BOX	盒	
3	CL	COIL	盘	
4	CY	CYLINDER	桶	
5	EA	EACH	个	
6	FT	FOOT	英尺	
7	G	GRAM	克	
8	KG	KILOGRAM	公斤	
9	L	LITRE	升	
10	LG	LENGTH		
11	M	METRE		
12	ML	MILLILITRE		
13	MM	MILLIMETRE		

In the form, substitution of the literals from the Substitution .txt files is shown in this screen shot:



Multi-Page Forms

FormTrap is capable of generating contracts using either sub-forms to move between pages or using detail lines to move between pages. Note that FormTrap was not designed to operate in this way, but does a great job provided the bulk of the contents do not vary by more than a few lines for each page. If you are inserting long blocks of text from data then you may end up with "short" pages.

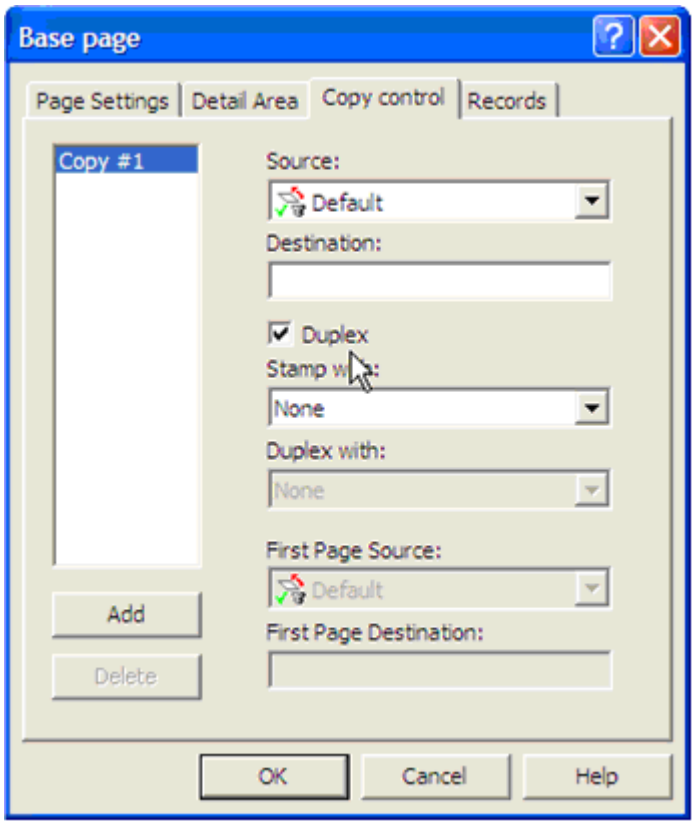
We supply better products, including Forms-on-Demand which is designed to allow form design as well as "filling-in" on computer, saving both the data and a PDF of the document. Form-on- Demand allows for logic within the form and is specifically for manual computer data entry, whereas FormTrap is designed for automated operations.

Using Sub-Forms as Pages

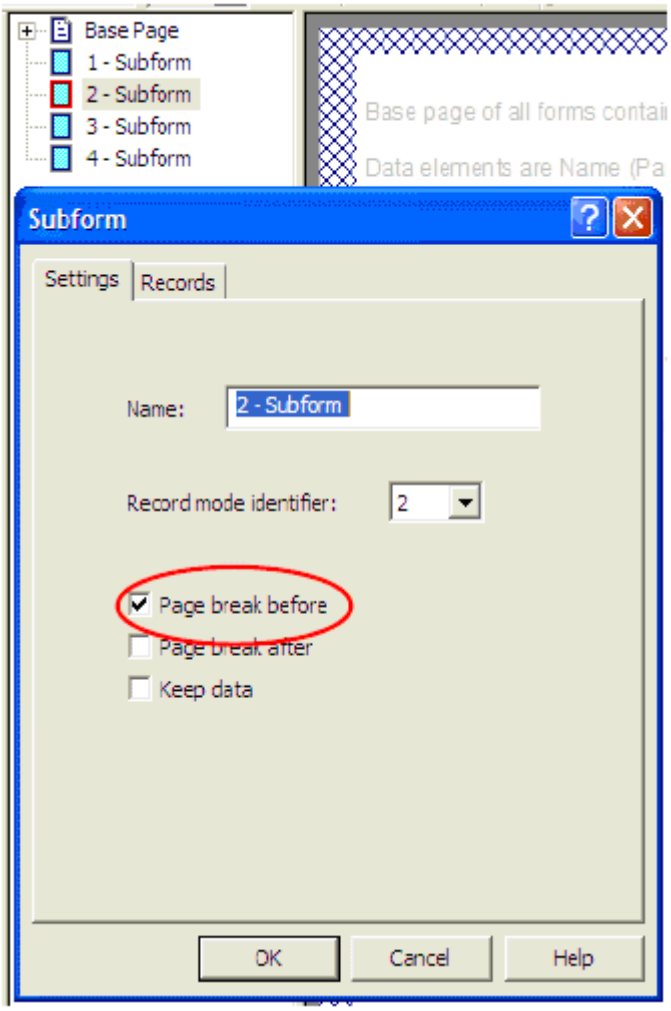
These are the recommendations for sub-forms as pages, with a limit of 9 pages (one for each of the available sub-form letters, plus the Base Page).

Please look at example files by downloading the "Multi-page Subforms.zip" file, unzip it and open documents and read along with this, starting with Multi-page Subform.frm. Note that this used Records Mode, but that the same thing is possible (a little more difficult) using Print Line Extract.

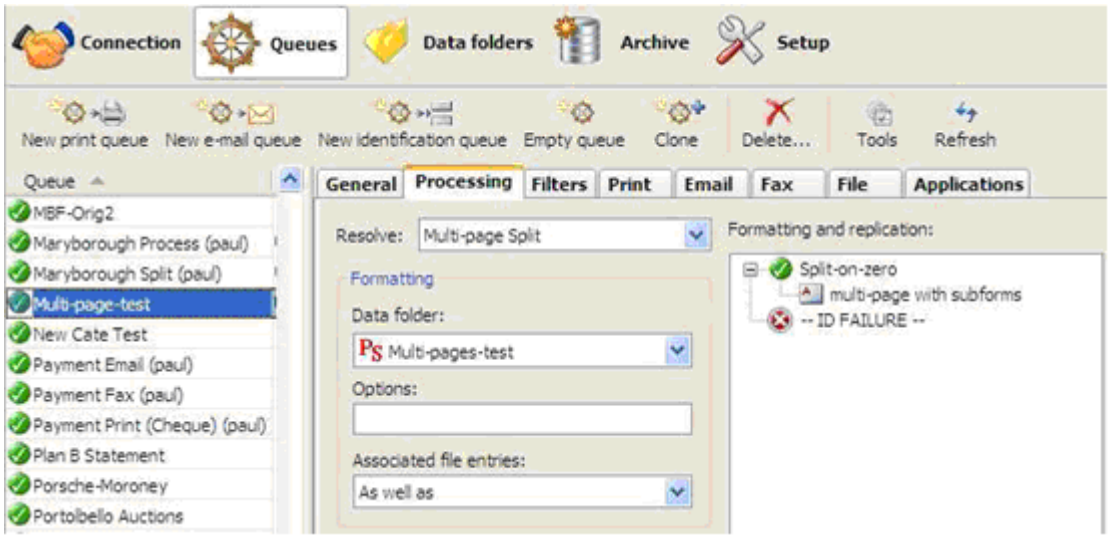
1. All data is carried in the Base Page record - we've shown it on the form in red, but for most contacts you will not want to have a Base Page for a contract. Typical data elements are compnay names, abbreviations, person names and titles, addresses, dates, products and amounts.
2. Base Page with Copy Control as shown for duplex contracts.



3. Each sub-form fills one page and (apart from the first) has these attributes:



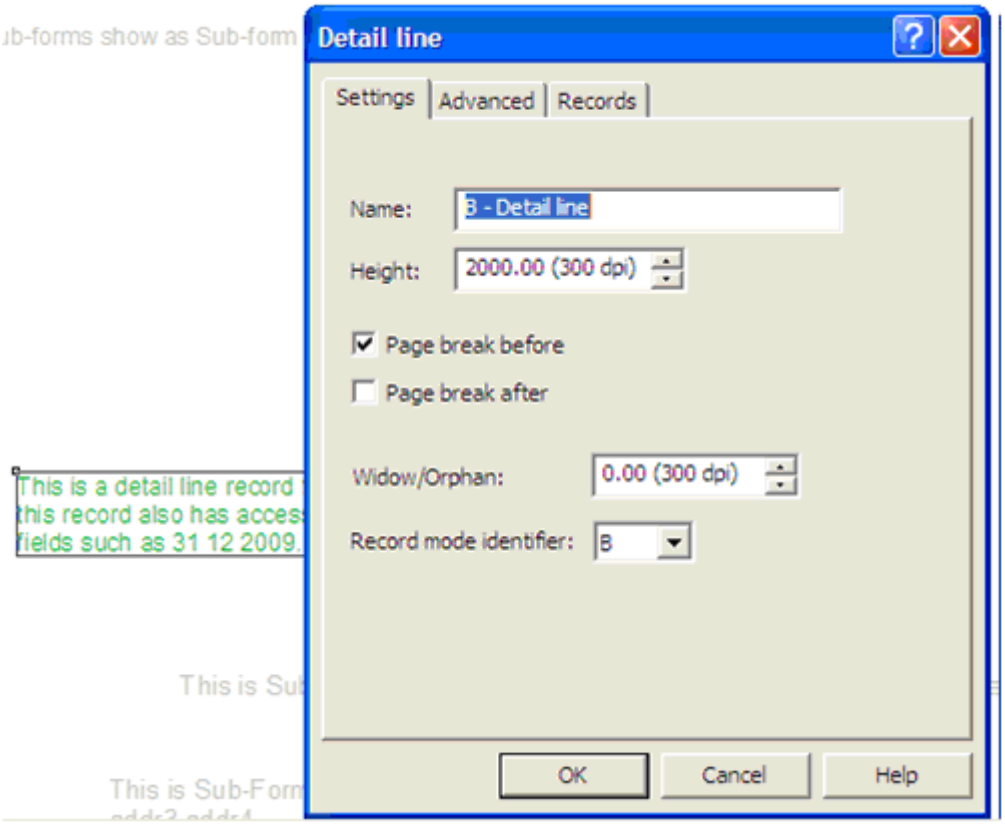
4. Your Document Maximum Pages with this approach is 9 pages. To see the results, please load the supplied .asc file into your spooler, set the queue up like this and view the archive to see results:



Using Detail Lines as Pages

The same approach can be used with detail lines if you require a document beyond 9 pages, giving a maximum of 35 pages (9 sub-forms plus 26 detail lines).

You would adopt the same approach, with this as the detail:



In Records Mode, details and sub-forms can be mixed and appear in the order of the file. Please Load and look at the second set of form and data with the name "Multi-page Subforms and Details" for an example.

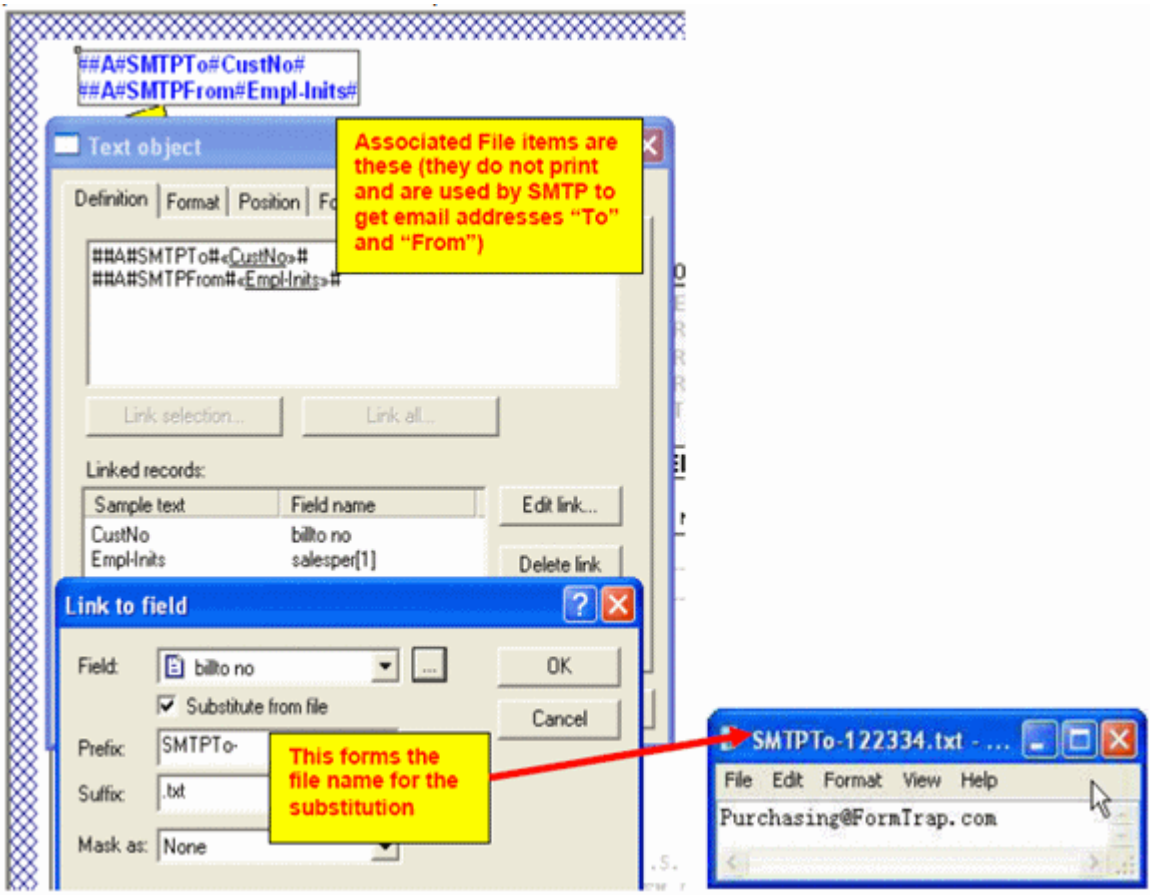
Personal Emails

Klinger wanted their Order Acknowledgements to be immediately directed back to customers via a PDF Email, and wanted the person responsible for the order to be the “From” email address. Klinger believes this both enhances communication as well as keeping the Klinger staff members “in the loop” with their clients.

In FormTrap this is simple, PROVIDED two pieces of data are present in the incoming data. These are:

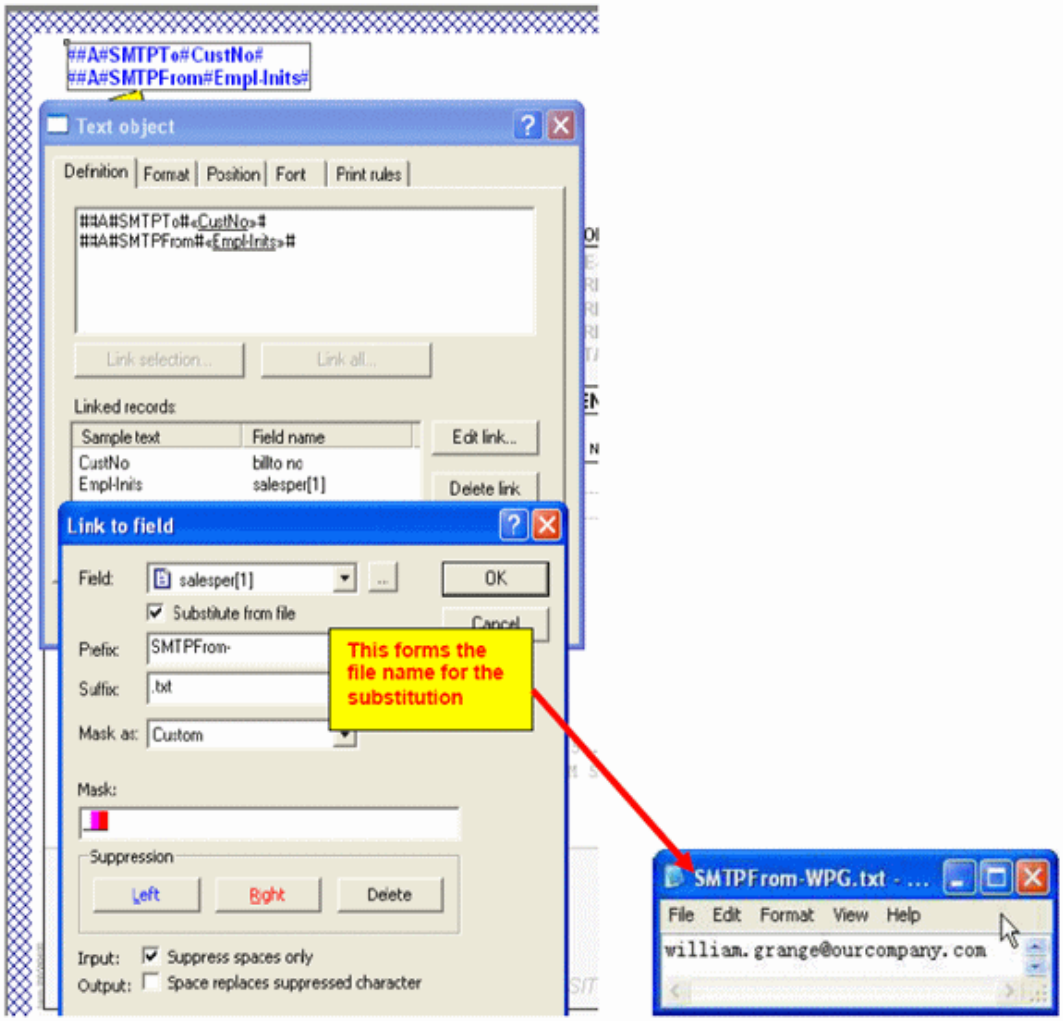
either the Client Email address or the **Client Number** (see below) to select the email address for the client;

and the Klinger Employee email address or **Employee Identification** (see below) to select the From email address. In Klinger's case this is the employee initials. Substitution uses known data to access and insert other data (identified by the known data). In this case Client Email is identified by the Client Number and Sender Email is identified by Employee Initials. These are typical examples, showing the actual screen shots from the FormTrap Developer's Kit that provides the data source to FormTrap:



"billto no" is inserted between prefix and suffix to give file name: SMTPTo-122334.txt (for Customer 122334), content is the email address of the client.

Similarly, Employee Initials are used to form a file name containing the correct Email Address for SMTPFrom as shown below:



"salesper[1]" is inserted between prefix and suffix giving this as the file name: SMTPFrom WPG.txt (from WPG as sales person's initials).

Populating the required substitution files for both the client email addresses and the Klinger staff email addresses completes the exercise. Email address are simple .txt files and can be automatically transferred from other systems.

The result for Klinger is a personalized email, from their sales staff, member, produced and sent within seconds of completing the order. This provides better customer service, early detection of errors and their correction and better intercompany communications – and all **fully automatic** under FormTrap's control.

Poster Printing

FormTrap is ideal for poster printing as you can manipulate the image sizes, overlay them and produce a high quality resulting document combining text and graphics. The resulting image can be attached to other documents (for example, to emailed invoices showing specials for this month) and sent at no cost to all people receiving emailed invoices.

Similarly, direct emails to prospects can be quickly organized in-house and distributed via FormTrap given a "data file" containing their email addresses - or you could split and send similar or related materials to their last purchase.

The poster attached represents a typical PDF document, with finished size around the 850Kb mark which delivers a high quality output document, either printed or visual.

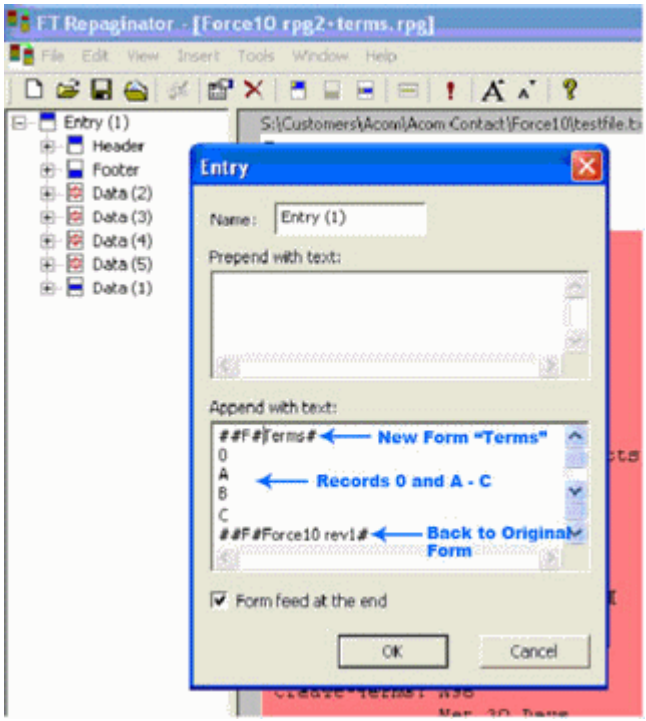
Contracts and Other Documents

This description is based on a requirement to send a contract with every PO sent to suppliers. The contract terms and conditions is in two columns and does not vary.

We used the Repaginator to append controls for a new document called “Terms” behind each PO document, then reverting to the original form for the next document, and so on.

Repaginator

This is **Append with Text** set to initiate the new form. What the controls represent is shown by the blue arrows:

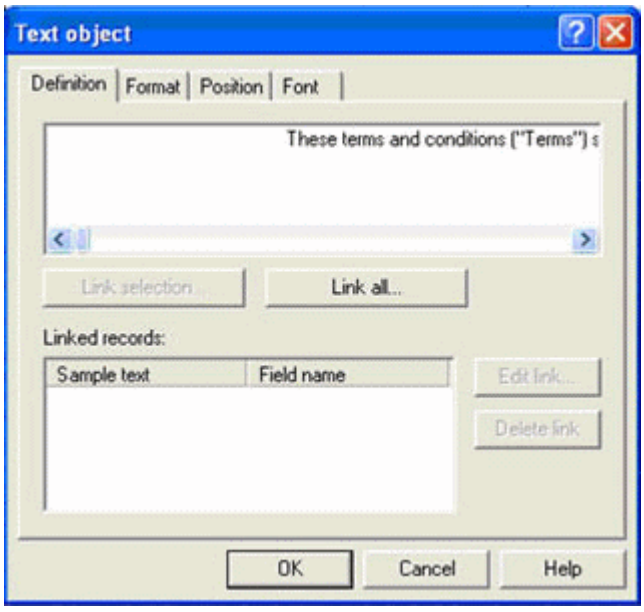


Note: The **Append with Text** set must NOT be used when testing the form as these will cause the PDF creator to crash. The form can be tested individually but the entire set of forms can only be tested using the production system.

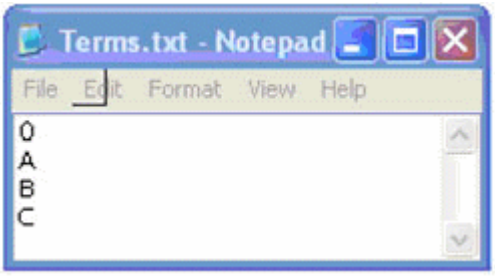
Terms Form

The “Terms” form is set up as attached. In this case the Base Page contains just the heading and footers, while EACH SIDE is set up as one Detail Record. I have shown the first Detail-A page, with the numbered terms split into two columns, and the bolded headings set up as separate objects. The first line of text for each section starts after the terms heading which is bold, and must be spaced past the heading “by eye”.

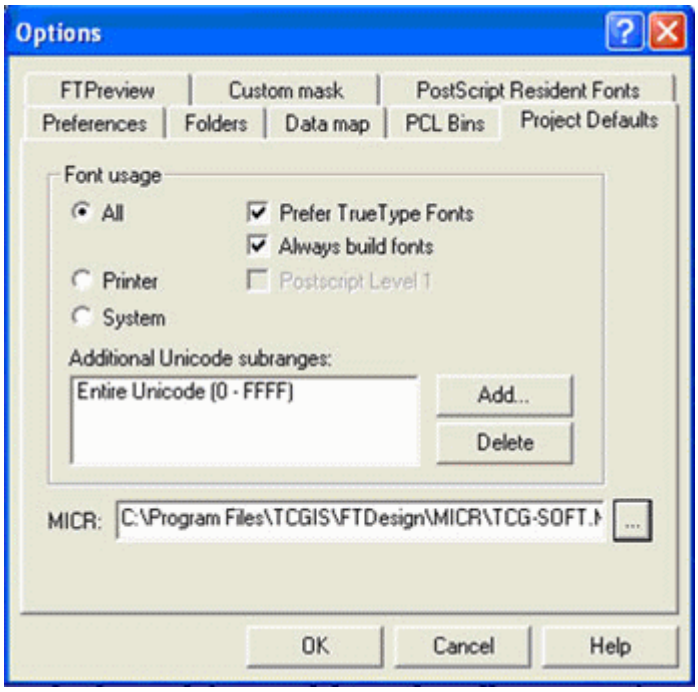
This is the text for the first paragraph, with the initial spaces enough to clear the bolded heading:



You will need this as a .txt file to test the term form:



You MUST also set up this as shown in Tools, Options:

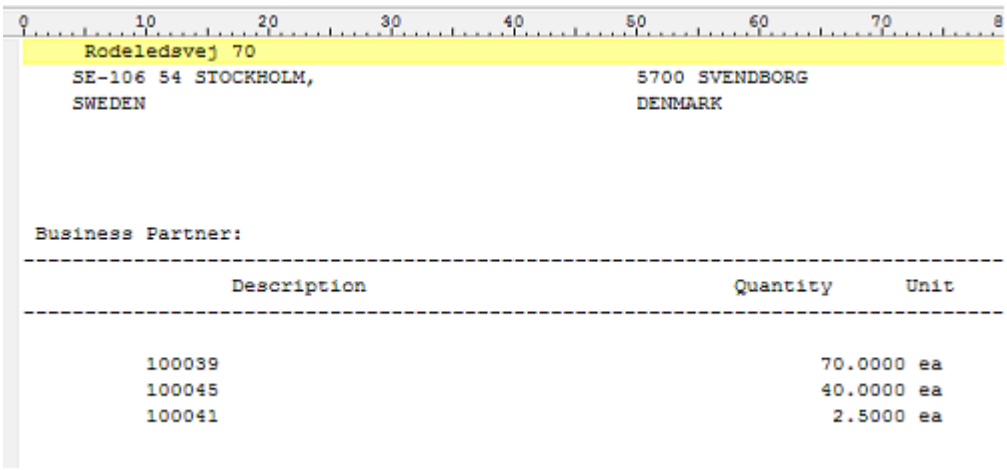


To test the entire set:

1. Insert the Append with text lines as above.
2. Build the project with Project Settings quoting the above Unicode subrange.
3. Load the forms into FTSpooler and test the entire set(s) there.

Quantity Masking - Whole or Decimal

This question comes up occasionally, particularly with ERP systems where the excess decimals are there to cover all bases and are rarely used by most of the FormTrap customers. This particular data file has four decimals of quantity. Most quantity data is whole numbers, with the bulk of the remainder having two or less decimals. Four decimals occurs usually where the quantity involves "1/3rd" and "2/3rd" type values where expression in decimal is recurring and the additional precision is not useful.



```
0        10        20        30        40        50        60        70        8
     Rodeledsvej 70
   SE-106 54 STOCKHOLM,                          5700 SVENDBORG
   SWEDEN                                        DENMARK



 Business Partner:
-------------------------------------------------------------------------------
                Description                              Quantity      Unit
-------------------------------------------------------------------------------

         100039                                                70.0000 ea
         100045                                                40.0000 ea
         100041                                                 2.5000 ea
```

This example form prints the detail lines only, showing whole numbers without decimals, and decimals to their last non-zero digit (the better alternative is to round to two decimals).

This is how you do it:

1. Define three fields:

   Entire field

   Decimal portion only (incl. the decimal point)

   Whole Number portion only
2. Make your value in the Definition Tab over 1,000 so we can align with the next field (in red in the example).

   Use conditional printing to print Whole Numbers, aligned right. The Print Test is Decimal Portion Equal to (text) ".0000".

   Masking for this is Amount/Numeric.
3. Make your value (Definition tab) a number that includes the same value as the above for alignment (blue in the example).

Use conditional printing to print the entire field, aligned decimal. The Print Test is Decimal Portion Not Equal to (text) ".0000".

   Masking is "Custom", and comprises a field of the same length as the original, ie 14 underscores, with two trailing decimal positions masked right, thousand separator commas inserted for alignment, and the first 8 underscores masked left (this leaves "0.12 as the minimum value printed).

   (Alternative is to use Amount/Numeric and define the field as "Use input separator", with two output decimals which rounds the decimal portion).
4. Finally and at high magnification, align the whole numbers on top of each other, using the arrow keys and Nudge distance of 1 for final alignment.

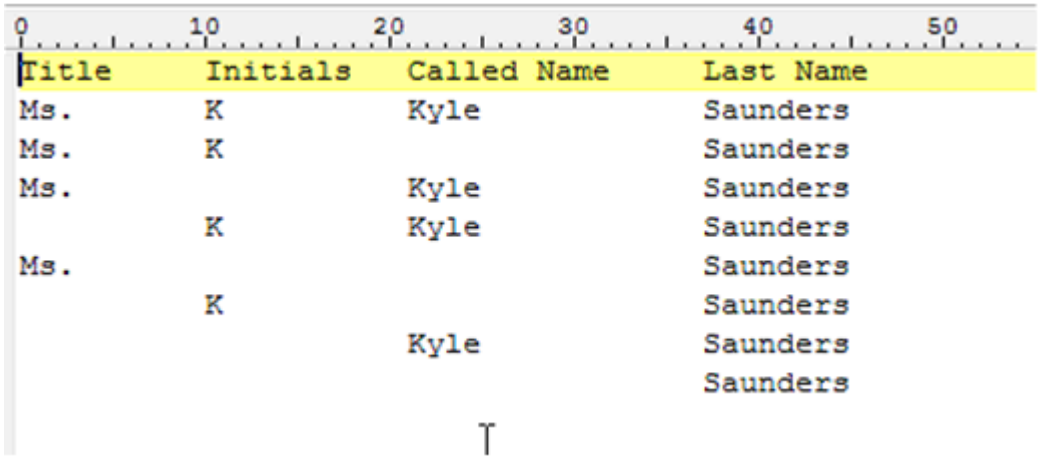
A PDF from the example form and data file shows below:

This question was put by Scholle Corporation who uses FormTrap globally and have policy decisions on "rationalization" of their computer outputs - such as this one.

Salutation Masking

Salutation masking from generic files with Last Name and optionally containing Title, Initials and First Name presents problems for the user, especially if the local "rules" are intended to provide the most "acceptable" salutation for the addressee.

This is the data file we'll use, it contains all of the possible variations for a total of 8 different combinations.



Title	Initials	Called Name	Last Name
Ms.	K	Kyle	Saunders
Ms.	K		Saunders
Ms.		Kyle	Saunders
	K	Kyle	Saunders
Ms.			Saunders
	K		Saunders
		Kyle	Saunders
			Saunders

We'll use Conditional Processing to identify the different combinations, and to provide the "best fit" salutation from the available data. Note that unless we have no Title, the II LastName format is least preferred.

The Form Definition is attached, and the required output is shown below, with its original data. You will need to look at the Conditional Processing rules (Print Rules tab) for each of the objects, which are overlapped and shown in different colors.

	Title	Initials	Called Name	Last Name
Dear Ms. Kyle Saunders,	Ms.	K	Kyle	Saunders
Dear Ms. Saunders,	Ms.	K		Saunders
Dear Ms. Kyle Saunders,	Ms.		Kyle	Saunders
Dear Kyle Saunders,		K	Kyle	Saunders
Dear Ms. Saunders,	Ms.			Saunders
Dear K. Saunders,		K		Saunders
Dear Kyle Saunders,			Kyle	Saunders
Dear Mr. or Ms. Saunders,				Saunders

Widow/Orphan Size

The **Widow/Orphan** size element of a label can be used to check for enough room to print the trailer information on the last page. For instance, if we want the detail box to extend to the bottom of every page, except the last page where the trailer information will print at the bottom of the page.

To do this we need to have a test label. The test label is the last label called and is used to check for sufficient room at the bottom of the page for the trailer information to print. If there is not enough room, FormTrap breaks to a new page and will print any remaining information on the next page.

To do this we:

1. Select **Add Label** from the **Define** menu.
2. Give the Label a **Name**, **Layer ID** and **Height**.
3. Set the **Widow/Orphan** size to the size that the Totals information occupies.
4. Click on the **OK** button.

Writing Letters

Dunning and follow-up letters are a key part of managing your financial exposure, especially in hard times like right now. FormTrap is an effective and excellent letter writing tool, allowing a variety of letters of different tones from a very simple data file.

This is how it's done:

Data Extract from your DB

For most letters, this is all of the information you'll require, printed as a small document or as a records mode file in the Base Page record:

Company Name and Address
Person being written to (or a standard title like "The Accountant")
Amount outstanding
Date of last action
Date of next action
Employee Number

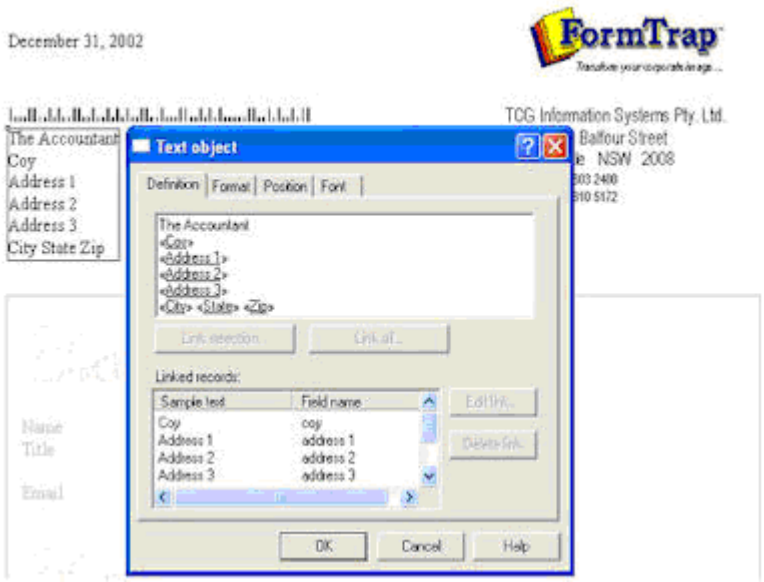
In addition, you'll require these two indictors (for Records Mode make them additional one-character records):

Letter Type – indicates the text required and variables to be inserted – done in Form Design rather than here as part of the record/variable.

Closure type – allow for a signature, Name and Title only format, plus the above with an Email address. Again, done in the form design, with just an indicator/record letter here.

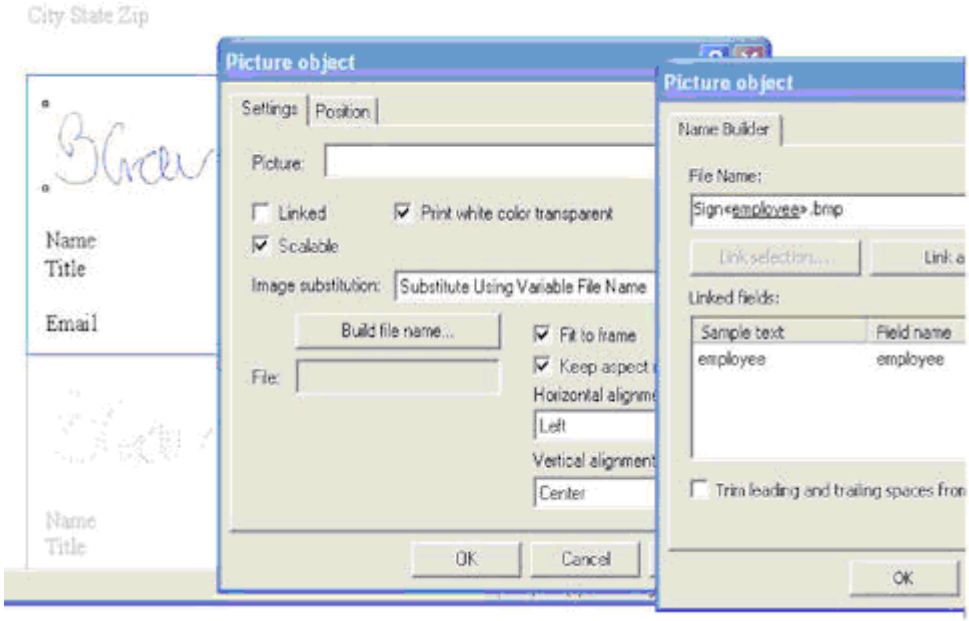
Form Design

There are two simple design elements, being the Base Page and the one or two Closure Detail Records. Base page contains the date and customer address and looks as below:

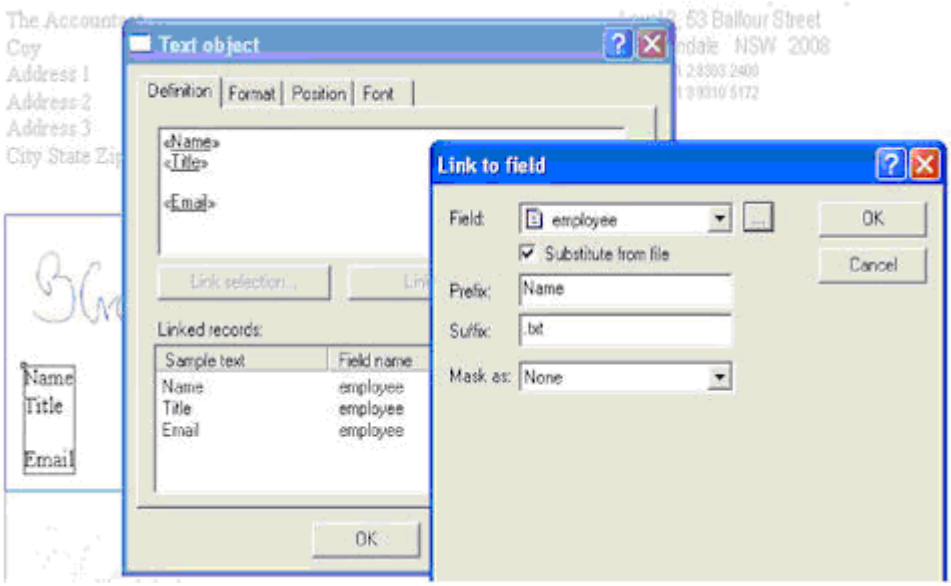


The “Closure” Detail Lines contain just the Employee field and get their data from substitution files, where you can set up new employees without changing the FormTrap form, or even set up “dummies” for certain letter events – like the threat to pass their details to a credit agency.

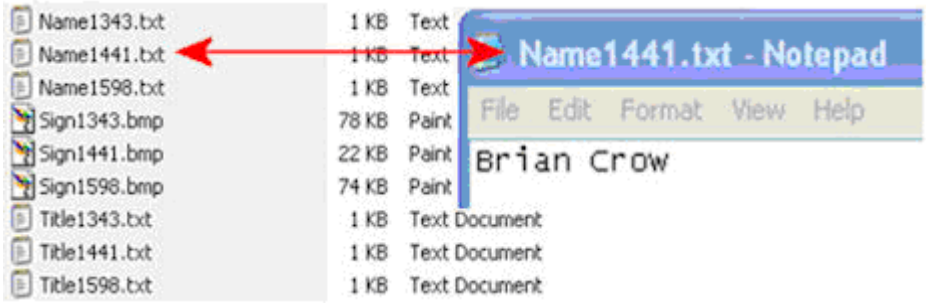
This is a typical “Closure” Detail Line:



All of the information (in the above, the signature and below, employee details), are Substitutions based on Employee, here are the text substitutions:

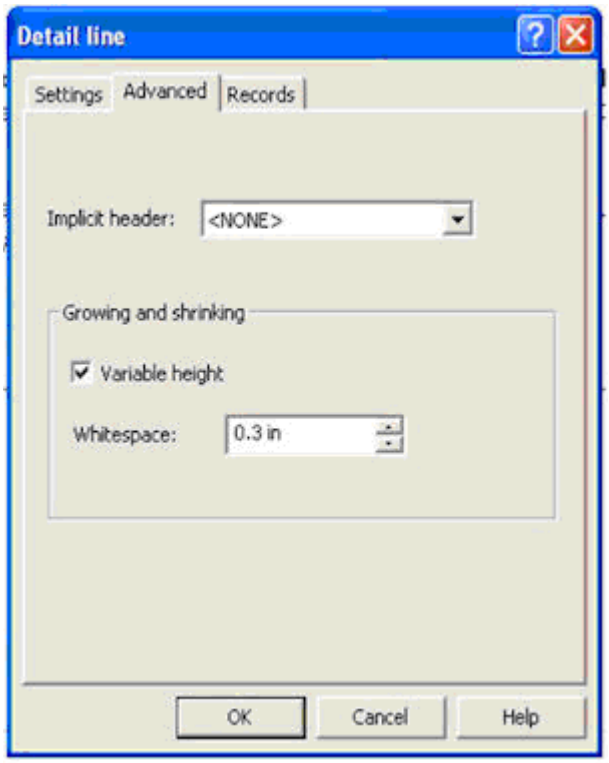


The above produces the file name "**NameXXXX.txt**" with employee number replacing the XXXX. The **data** from the matching file name in the Substitutions folder is inserted. These are a few of the substitution files with an example:

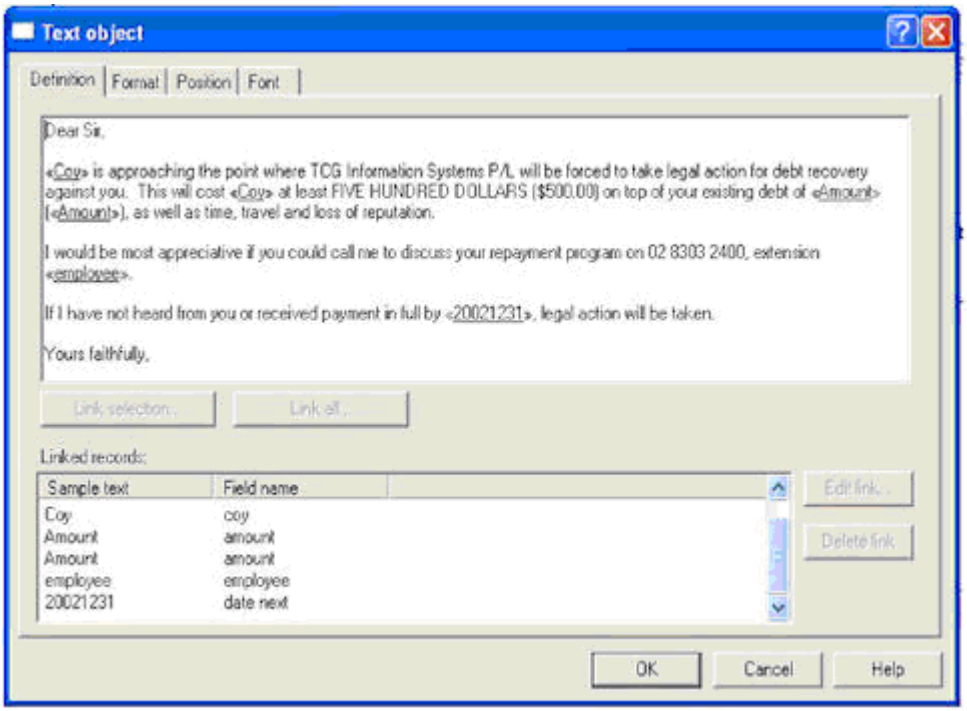


Letter Texts:

These are again just detail lines, which can incorporate data and use the special **Advanced** tab to define themselves as **Variable height** and to allow **Whitespace** after the final line.



Data from the Base page is incorporated into the letter text as are required substitutions (see «**employee**» used to substitute this person's extension number).



Your Data Extract program then simply needs to provide for the correct letter type and closure to print a large variety of letters. Financial institutions can use this to direct personalized and sophisticated letters from a simple “extract” source to provide letters that look individually written and can direct their replies to a person or function within the company.

This document is available (Version 7) with appropriate substitutions and data file from Downloads, Tutorials.

Samples follow:

May 1, 2009

FormTrap

TCG Information Systems Pty. Ltd.
Level 3, 53 Balfour Street
Chippendale NSW 2008
Tel: +61 2 8303 2400
Fax: +61 3 9310 5172

The Accountant
Dullard and Slow, Inc.
555 Smith street
Suite 100
Amnityville MN 22222 3333 44

Dear Sir,

Dullard and Slow, Inc. is approaching the point where TCG Information Systems P/L will be forced to take legal action for debt recovery against you. This will cost Dullard and Slow, Inc. at least FIVE HUNDRED DOLLARS ($500.00) on top of your existing debt of THREE THOUSAND DOLLARS ONLY ($3,000.00), as well as time, travel and loss of reputation.

I would be most appreciative if you could call me to discuss your repayment program on 02 8303 2400, extension 139.

If I have not heard from you or received payment in full by May 31, 2009, legal action will be taken.

Yours faithfully,

Bruce M. Matheson
Credit Manager, AR

Bruce.Matheson@FormTrap.com

May 1, 2009

TCG Information Systems Pty. Ltd.
Level 3, 53 Balfour Street
Chippendale NSW 2008
Tel: +61 2 8303 2400
Fax: +61 3 9310 5172

The Accountant
Aardvark Associates Inc.
13451 Main Street
Suite 200
Anytown CA 12345 6789 12

Dear Sir,

Aardvark Associates Inc. has ignored our last request dated March 31, 2009 and as a consequence TCG Information Systems P/L will pass this account to a debt collection agency effective the start of next month if we have not been contacted by you before that date.

The amount outstanding is ONE HUNDRED FIFTEEN DOLLARS AND 41 CENTS ($115.41) and will increase by court costs of at least another FIVE HUNDRED Dollars. In addition, TCG Information Systems Pty. Ltd. will place you on a national list of poor payers and your company may find difficulty in obtaining credit for a number of years thereafter.

Again, I would be most appreciative if you could call me to discuss your situation on 02 8303 2400, extension 120.

This is your last opportunity to deal with TCG Information Systems Pty. Ltd. instead of a collection agency who are much less polite than we have been.

Yours faithfully,

Brian Crow
Chief Accountant

Brian.Crow@FormTrap.com

May 1, 2009

TCG Information Systems Pty. Ltd.
Level 3, 53 Balfour Street
Chippendale NSW 2008
Tel: +61 2 8003 2400
Fax: +61 3 9310 5172

The Accountant
Trans Tasman Railway Company
53 Balfour Street
Chippendale NSW

Dear Sir,

TCG Information Systems P/L has handed your debt to a debt collection agency and will deal with Trans Tasman Railway Company only on a cash with order basis.

Trans Tasman Railway Company has been included on a number of data bases used by credit controllers to vet companies prior to the issuance of credit facilities.

Yours faithfully,

Geraldine A. Hungerford
Credit Supervisor

Fax from your ERP System

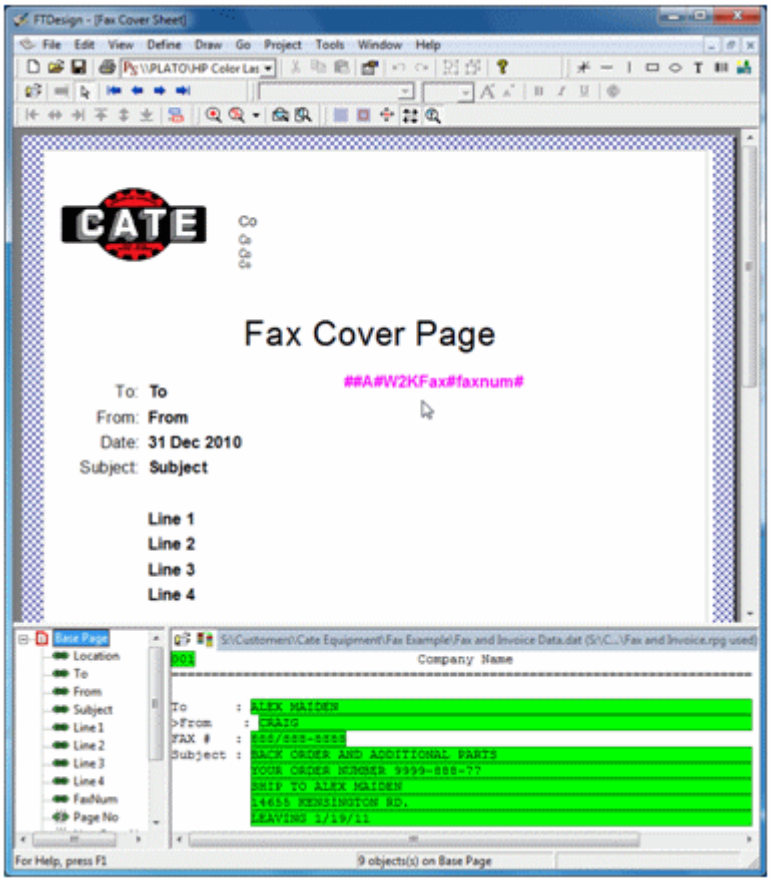
Most Unix ERP systems have methods to present faxes as the normal document, with preceding cover page. In the NDS ERP system, this appears as shown below (Invoice with preceding fax cover sheet).

```
------------------------------------------------------------------------------
001                              Company Name
------------------------------------------------------------------------------

To      : ALEX MAIDEN
>From    : CRAIG
FAX #   : 888/888-8888
Subject : BACK ORDER AND ADDITIONAL PARTS
          YOUR ORDER NUMBER 9999-888-77
          SHIP TO ALEX MAIDEN
          14655 KENSINGTON RD.
          LEAVING 1/19/11

------------------------------------------------------------------------------
                              Company Name
------------------------------------------------------------------------------
(new page here)
        Customer              I N V O I C E              Invoice          Pg
        HAGL001                                          C99998           1

                                                          1/19/11


                 Sold To                          Ship To
        HAGLIEF CITY                     ALEX MAIDEN
        ACCOUNTING DEPT.                 HAGLIEF CITY
        14655 KENSINGTON RD.             ACCOUNTING DEPT.
        HAGLIEF WA 99999                 14655 KENSINGTON RD.
                                         HAGLIEF WA 99999


      888/888-9999                       888/888-8888
Ship Via DELIVERED              FOB SEATTLE WASHINGTON
------------------------------------------------------------------------------
Br Trk Make   Model       Serial      Equipment    Meter   Sls  Customer P.O.
------------------------------------------------------------------------------
001                                                        MP   9999-888-77

------------------------------------------------------------------------------
 Ordr  Ship   B/O          Description          List      Each       Amount
------------------------------------------------------------------------------
       Taken By   MARK PADURIS                 Opened   12/14/10
                                               Shipped   1/19/11

                  Please See Backorder Document C99999

    1     0     1 TB 89891A                     78.48       .00         .00
                    REDUCER - 8"" TO 4
   50    50       KA 89988B                     8.76       8.76      438.00
                    4"" ABRASION BLOCK
    4     4       KA POWDERLOCK4                15.00      15.00       60.00
                    4"" POWDER LOCK
                  TOTAL PARTS                                          498.00

                  HAGLIEF CTY WA 9.25%                                  46.07



                  --< THANK YOU FOR YOUR BUSINESS >--

------------------------------------------------------------------------------
                                                          Total        544.07
------------------------------------------------------------------------------
```

From this output we require the normal invoice but with it's preceding cover sheet, in the same file, for conversion to TIFF format and faxing. For this case, we'll create a Cover Sheet Form, with company substitutions operating in exactly the same way, based on the Location. This is how it is done, identifying the points at which changes are required to your FormTrap processing.

New Fax Cover Sheet Form

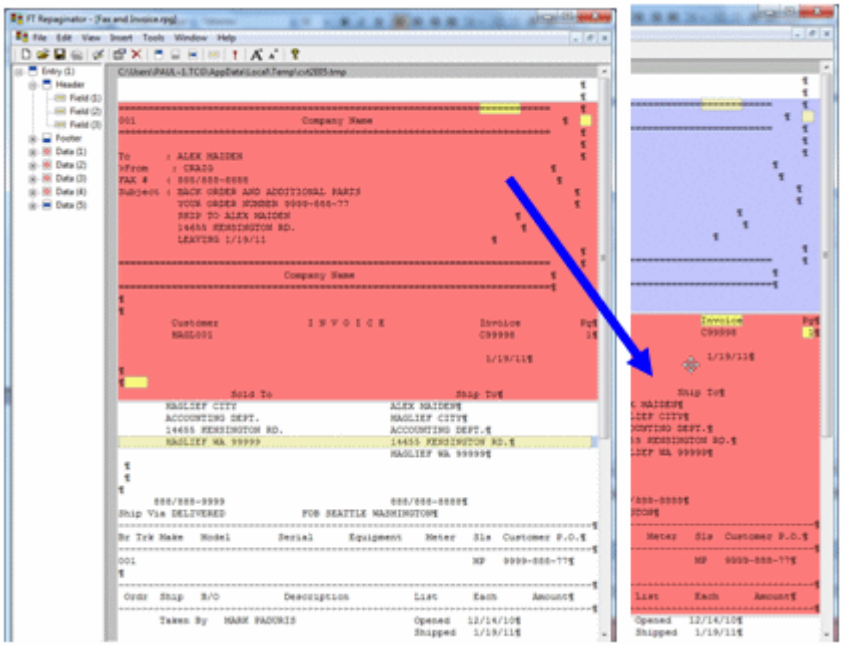
This form is a simple one, comprising Base Page fields only, with the "WK2Fax" associated File line to direct the output fax. This is how it's defined (see later for the print version).



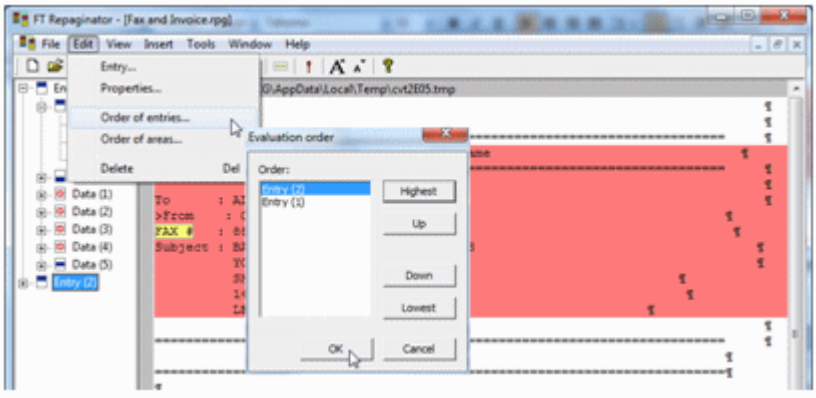
Repagination for the Fax Form

This needs to be added to the normal repagination, in this case the Invoice Form. This is how it's done:

1. Load the Invoice repagination, but with the Fax plus Invoice data. It will be "out of whack" on the first page and you'll need to move the Header and Detail portions down as shown to repaginate correctly.

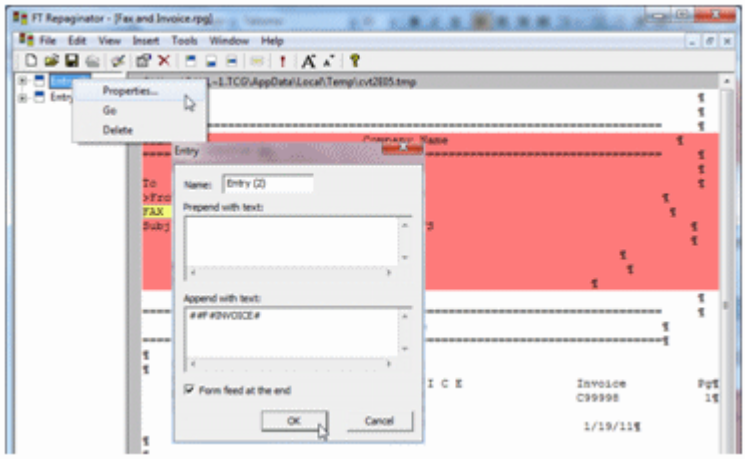


2. (After moving all other areas down), add a new entry (**Insert**, **Entry** ...), and define the entire Fax as the header. Now go to **Edit**, **Order of entries ...** and move **Entry (2)** to **Highest**.

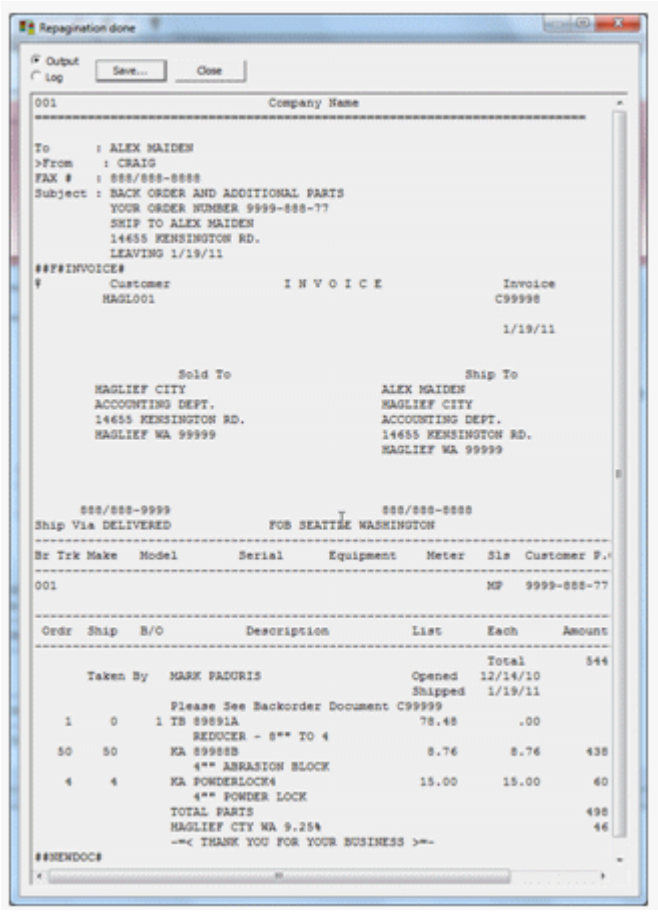


3. For Entry (2), select **Properties ...** and replace **Append with text:** with this line: ##F#formname# - this starts a new form once the first form has finished, in this case

enter **##F#INVOICE#**. Tick **Form feed at the end**.

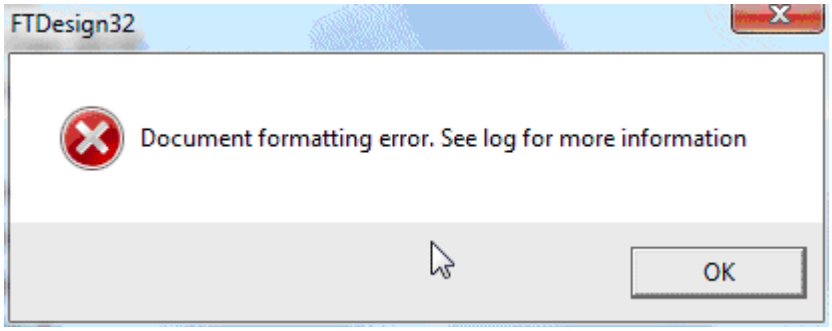


4. Finally test the Repaginator, where output should look like this:



Testing the Fax Form

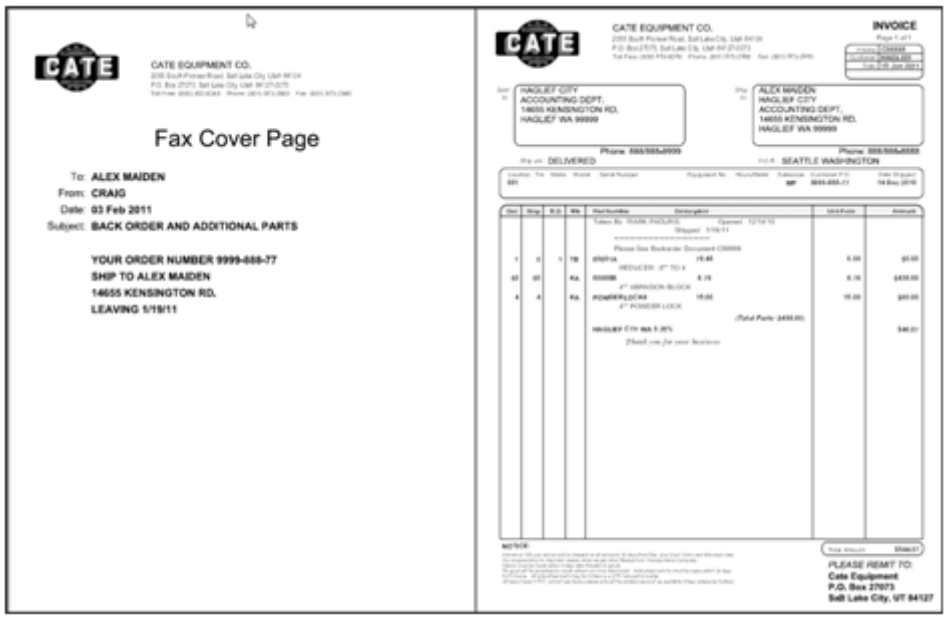
When running **Tools**, **Preview (b&w)** you will get this message from FTDesign indicating the INVOICE form definition cannot be found.




```
Error: fopen: No such file or directory
Error: Cannot open form file 'C:\Users\PAUL~1.TCG\AppData\Local\Temp\FTDesign\F7C84E7C_files\FTData\invoice.$$b'
Error: Cannot load form 'invoice': named form was not found
System time: Thu Feb 03 08:58:39 2011
Error: FormTrap error code 5: named form was not found
```

However you can view the Fax form via **Tools**, **Preview files** and look at **out**.

This is the final output from FormTrap run through the Production System:



Production System Changes

You will initially need to split to a Fax queue (as individual documents as each requires it's individual delivery) in which you then identify by the following document type and invoke the correct version of the Fax form with different repagination for each of their associated documents. The best way is to repeat the fax form with different repaginations and name them (eg Fax-Invoice form). Do this for all faxed documents, in the same queue. For these forms and example data files, etc., please download by clicking here.

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