



Ship & Mail
Mailing Software

Relay Unify uCompose

User Guide

US English Edition
January 2025

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Implementation Summary

Relay Unify uCompose is the program used to design the document layout and map the data onto the output. The data types that can be natively used to build a map (document layout) are PDF, text, form feed, delimited, and XML data. Other types can be used but require a pre-processing script. Regardless of the data type, this is the entry point of data being processed by Relay™ Unify, Powered by Transformations. All data that needs to be in the system for searching on the web, creating print jobs, naming files etc. will need to be defined within the map.

Steps:

1. Start a new map.
2. Set the preferences for the program/map.
3. Load in the Datafile.
4. Save the map so the map history is saved, and no changes are lost as the map is built.
5. Set up the Input Page.
6. Set up the document definition.
7. Define the Fields and Variables.
8. Set up the Output Page definition.
9. General Mapping such as images and RTFs.
10. Define Detail Section.
11. Detail Mapping.

Control Buttons

Map File Bar Buttons

-  Click to start a New map.
-  Click to Save the map file.
-  Click to access the Preference options.
-  Click to load in a map file (.nmp file).

Data File Window

-  Click to load in a data file.
-  Click to access the Input Page Setup (Define Input Page command settings).
-  Click to Parse or re-parse the Data file.
-  Click to define or edit the Sync Field definitions.

Map Commands Window

-  Click to Add a new command. This will yield a different command selection window depending on if selected from the Document, Display, or Detail tab within the window.
-  Click to Copy the selected command. Once this button is clicked an edit of the selected command is displayed. Any of the parameters of the command may be changed before saving. The command will be added before/after the selected command, depending on the preferences set.
-  Click to Edit the selected command.



Click to Load in a group of commands previously saved as a file using the save button. This will ask for the name and location of the group being loaded.



Click to Delete the selected command.



Click to Align mapping commands. The Align button only works on commands in a group. You select the Group begin and it will allow you to align all the commands in the Group. The commands that will be aligned are Field Mappings, Variable Mappings, Barcode Mappings, Append Image, Drawing Objects, Graph Objects, OMR, Word Wrap Paragraph, Line Mappings. It does not align RTF paragraphs.



Click to Save a group of commands as a file. This will display a group save selection window of the groups in the map. The group will not contain the Group begin or Group end commands; Only the commands between the begin and end will be saved. This group of commands can be loaded into any map using the Load button.



Click to Disable a selected command or group.



Click to Lock or Unlock a selected command. The command is outlined in green if unlocked and red if locked.



Click this to highlight the PDF input data area for a previously selected field definition.



Click to Move the selected command Up one line.



Click to Move the selected command Down one line.



Click to Move the selected command Out one level, such as with a group or conditional.



Click to Move the selected command In one level, such as with a group or conditional.

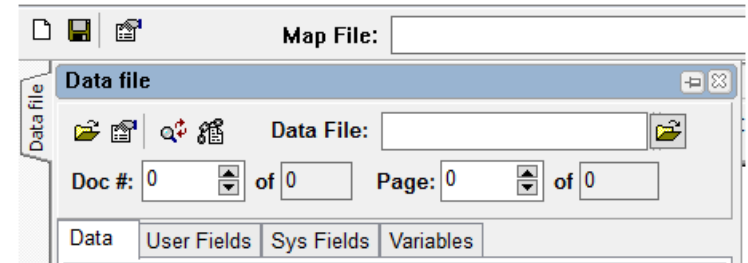
All Windows



Click to pin the window to the left-hand side. Clicking the tab that was pinned will display the window. The window can then be re-pinned but clicking the sideways pin or remain accessible from the tab. Resetting the forms will undo the pin to the left-hand side tab.



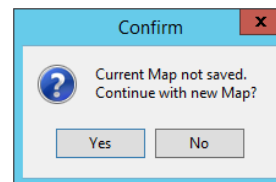
Click to close the window.



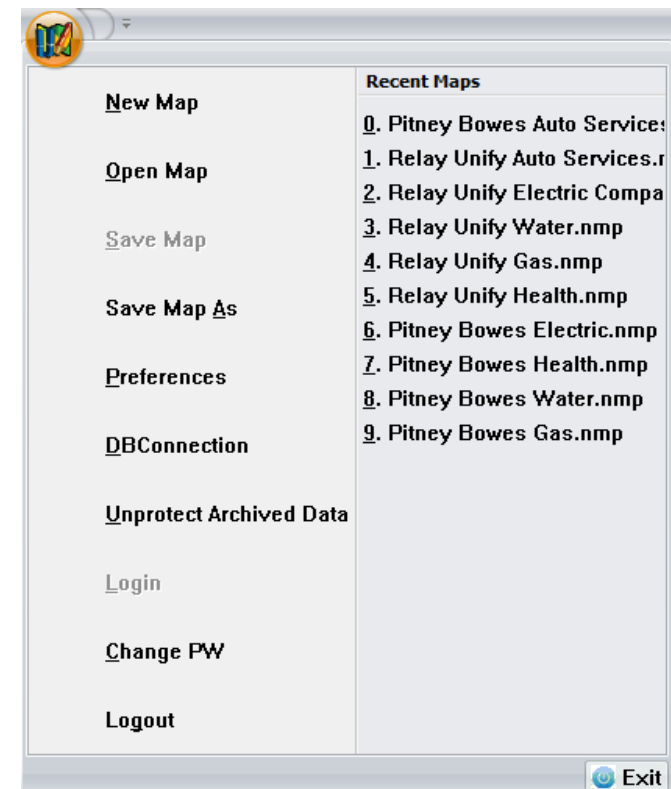
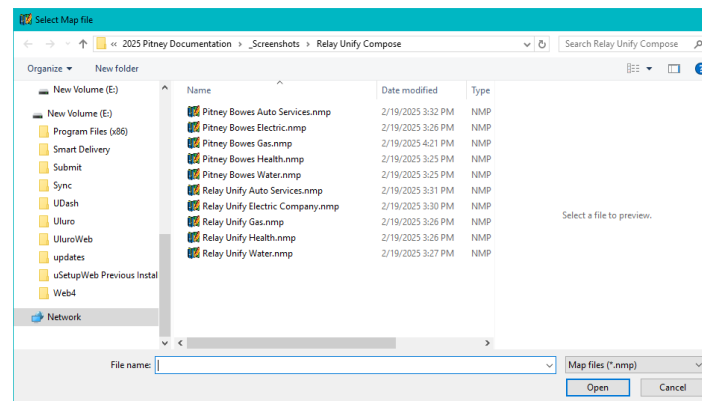
Relay Unify uCompose Quick Access Menu

This menu, accessible by clicking the Relay Unify uCompose circular icon in the upper-left corner, is like a File type menu in many other programs. Several of the options in this menu are also accessible from the Maps Ribbon bar.

New Map – This will start a new map. The user will be asked to continue if the existing map has not been saved.

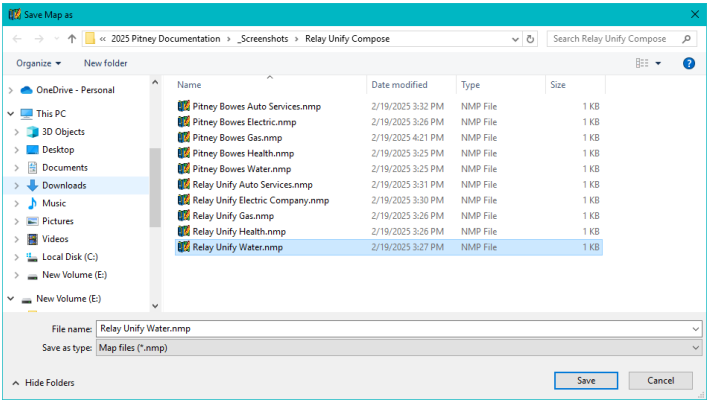


Open Map – This will allow the user to open a saved map. Map extensions are .nmp files. This will open a select Map file dialog for locating an existing map. Locate the file, select the file and click the open button.



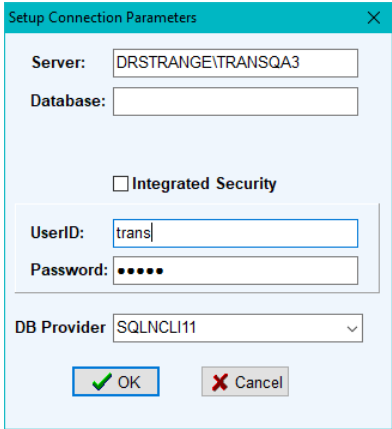
Save Map – This will save the existing map. The system will rename the existing file to include a “_NNNNN” extension. The number of saved maps is controlled by the History Map Count preferences.

Save Map As – This will display a Save Map selection dialog box. Navigate to the location where the map is to be saved and enter the new map name. Click the Save button.



Preferences – This will give the user access to the Preference options. These are set at a global level and apply to all maps the user opens.

DB Connection – This opens the connection parameters for the database. Users can change the server and database the program is connecting to from here.



The 'Setup Connection Parameters' dialog box contains the following fields and options:

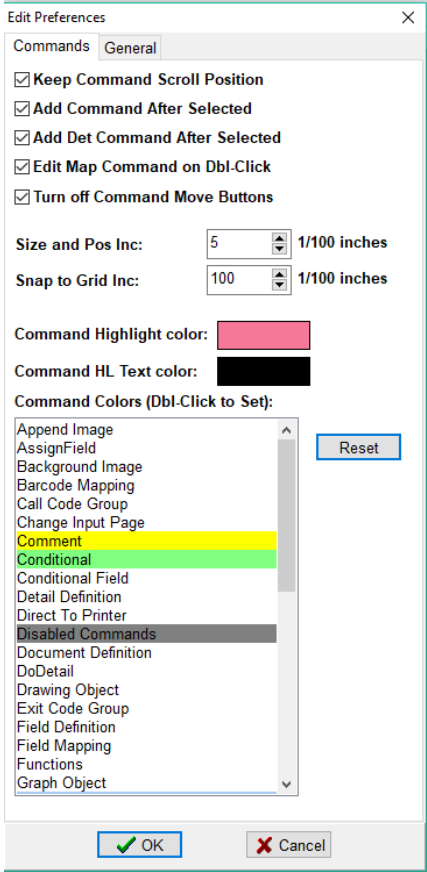
- Server: DRSTRANGE\TRANSQA3
- Database: (empty)
- ☐ Integrated Security
- UserID: trans
- Password: (masked with dots)
- DB Provider: SQLNCLI11
- Buttons: OK, Cancel

Login – If a user is logged out, this option is available. It will display the user login form to log into the program.

Logout – This will log the user out of the program. If the map is not saved, there will be a confirmation message to continue.

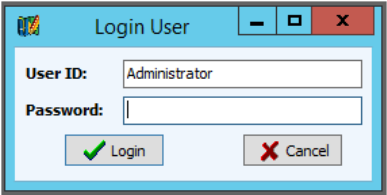
Recent Maps – This will show a list of the last ten maps the user has opened. Click on a map in the list to easily open a recent map.

Exit – This immediately closes the program. This is different from using the 'X' in the upper right-hand corner of the program in that there is no warning or confirmation if the map changes have not been saved. Using the exit button will lose all changes that have not been saved.



The 'Edit Preferences' dialog box, General tab, contains the following settings:

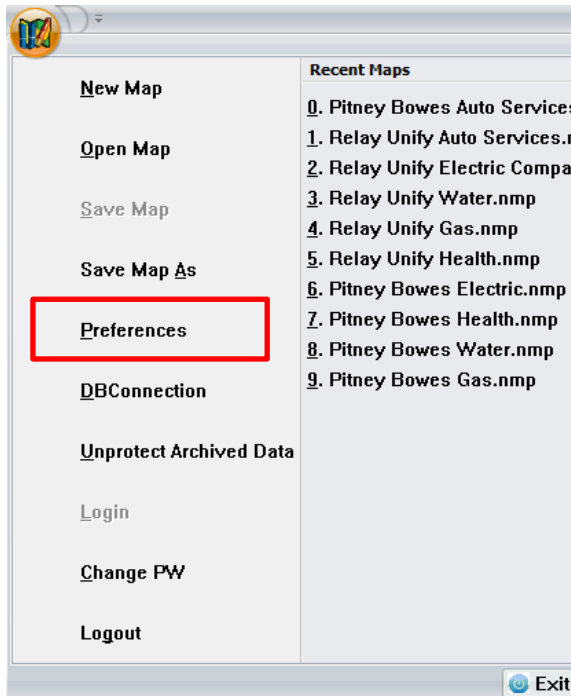
- Commands: General
- ☒ Keep Command Scroll Position
- ☒ Add Command After Selected
- ☒ Add Det Command After Selected
- ☒ Edit Map Command on Dbl-Click
- ☒ Turn off Command Move Buttons
- Size and Pos Inc: 5 / 1/100 inches
- Snap to Grid Inc: 100 / 1/100 inches
- Command Highlight color: (pink)
- Command HL Text color: (black)
- Command Colors (Dbl-Click to Set): (list of commands with 'Comment' and 'Conditional' highlighted)
- Buttons: OK, Cancel, Reset



The 'Login User' dialog box contains the following fields and options:

- User ID: Administrator
- Password: (empty)
- Buttons: Login, Cancel

Preferences

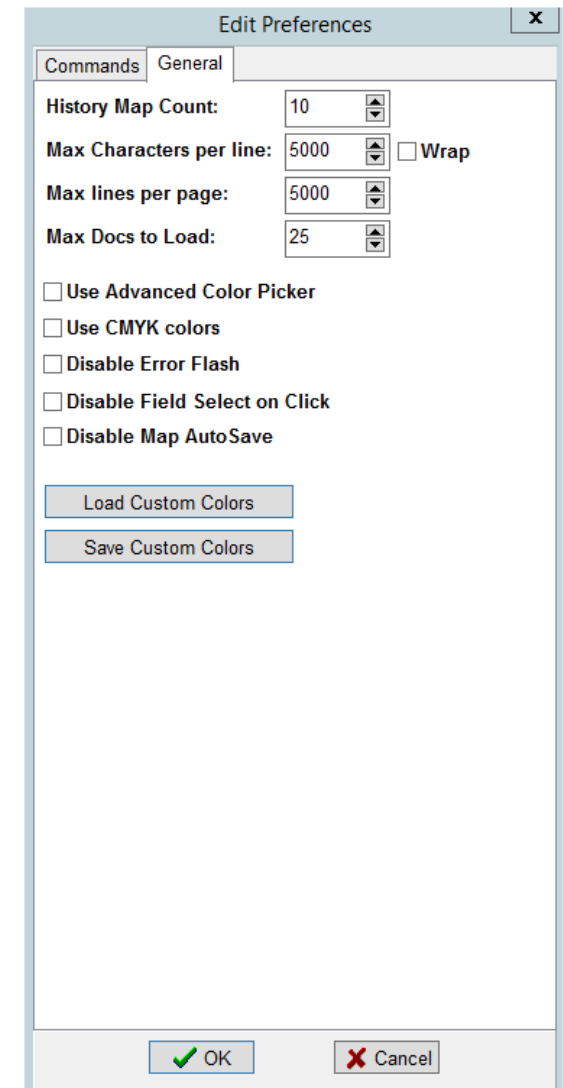
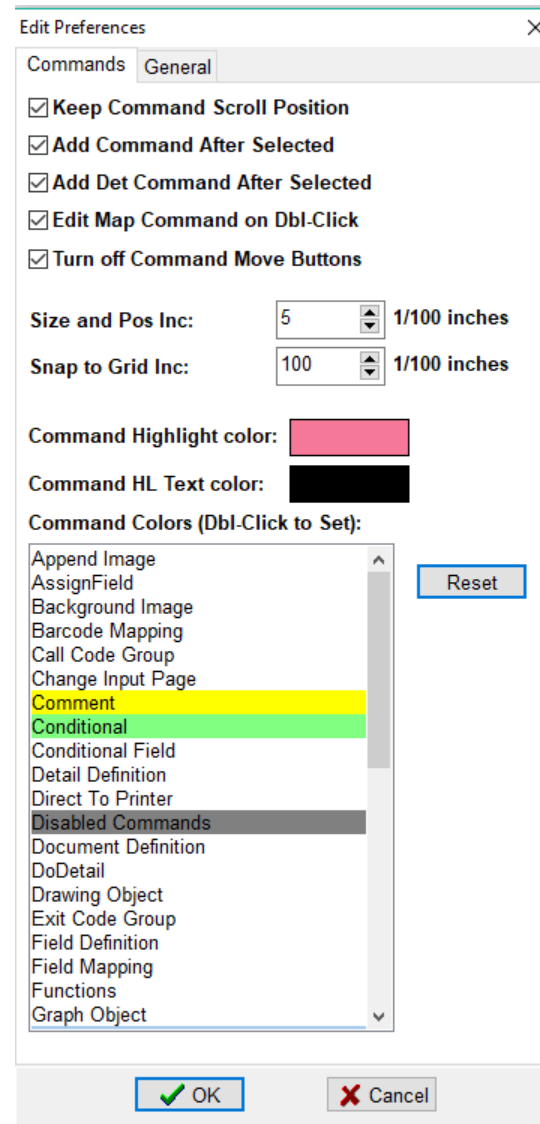


These settings will apply to all maps within the program.

Commands Tab

Keep Command Scroll Position – This will keep the currently selected command in the command window.

Add Command After Selected – When this is checked the non-detail commands are added after the currently selected non-detail command. When unchecked, the non-detail commands are added before the currently selected command. The exception is the insert of a Conditional. The Conditional Command is always inserted before the currently selected command.



Add Det Command After Selected – When this is checked the detail commands are added after the currently selected detail command. When unchecked, the detail commands are added before the currently selected command. The exception is the insert of a Conditional. The Conditional Command is always inserted before the currently selected command.

Edit Map Command on Dbl-Click – If checked, this will enable the editing of a selected mapping command by double-clicking on the command from the output window. If this is unchecked, the user can still double click the command in the map commands window to edit the command.

Turn off Command Move Buttons – This will remove the up, down, left, and right arrow movement buttons that are displayed in the Map commands window. Commands can be moved using drag and drop functionality if these buttons are removed using this option.

Size and Pos Inc – This will set the incremental size and position change that occurs when moving and resizing using the keyboard (hold Shift while using the Arrow Keys). This does not affect changes made using the cursor. The increment is made in 1/100 of an inch.

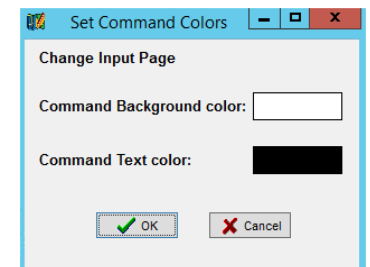
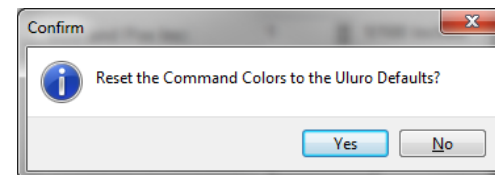
Snap to Grid Inc – This will set the size of the grid when Snap to Grid is enabled in the Output ribbon bar. When the setting in the Output ribbon bar is enabled, this will cause objects on the Output window moved with the cursor to snap to specific grid points. This does not affect the moving of objects with the keyboard. The grid points can be made visible by checking Display Grid under the options ribbon bar.

Command Highlight Color – This will show the Command Highlight color that has been set. This will be the background color of the selected command in the map commands window. Click on the color box to change this color. The Color selection form will depend on the Selection for Use Advanced Color Picker or Use CMYK colors set on the General tab of Preferences.

Command HL Text Color – This will show the Command Highlight Text color. This will be the text color of the selected command. Click on the color box to change this color. The Color selection form will depend on the Selection for Use Advanced Color Picker or Use CMYK colors set on the General tab of Preferences.

Command Colors (Dbl-Click to Set) – This will show the colors for all the commands. To change a command color, select the command in the list and double-click. This will display the set Command Colors window.

Reset – This will reset the command colors to the Relay Unify Defaults. Select Yes to reset the colors.



OK will save the changes to the Preferences and reparse the data with the new settings. **Cancel** will cancel all changes.

General Tab

History Map Count – This is the number of History Map files to save. The system will rename the existing file to include a “_NNNNN” extension each time the map is saved up to the number entered for History Map Count. The map name that ends with a ~ is the most recent version of the map that hasn’t yet been saved. If a map is open and being edited, this is like an autosave version the user can revert to if needed. The map is autosaved each time a command is changed.

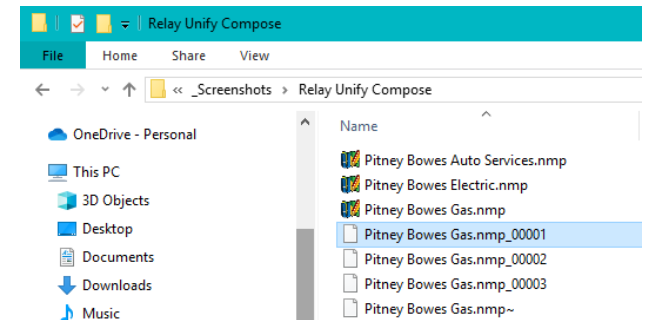
Max Characters per line is the maximum number of characters per line in the input data. If the input data does not contain a line feed, then the system will generate an Error. This must be in the range of 10 to 50,000. With the Wrap setting checked, the system will assume a line feed so all input lines will be the max number of characters. Best practice is to set this to a large number for any and all data files.

Max lines per page – This is the maximum number of lines per page in the input data. If the input data does not contain a form feed, then the system will assume a form feed after the number of lines entered here. This must be in the range of 1 and 5,000,000. Best practice is to set this to a large number for any and all data files.

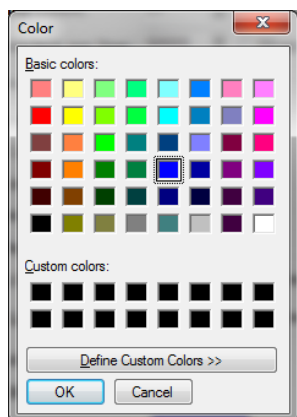
Max Docs to Load – This is the maximum number of documents to load and parse in U-Compose. This has no effect in the Print System. U-Compose will parse the input data and stop after the given number of documents are encountered. This must be in the range of 1 and 10,000.

Use Advanced Color Picker – If this is unchecked, the Default Basic color picker will be used. If this is checked, the Advanced Color Picker will be used.

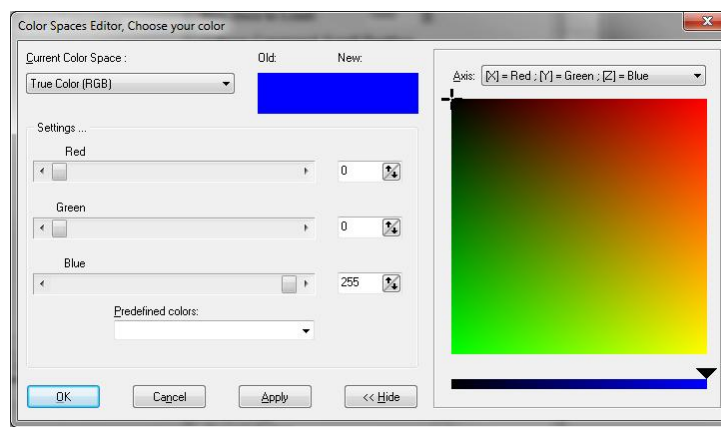
Use CMYK colors – This will enable CMYK color selection. CMYK will be used in Native Relay Unify PDF outputs and will be used by the Print system if the Printer Driver will output CMYK.



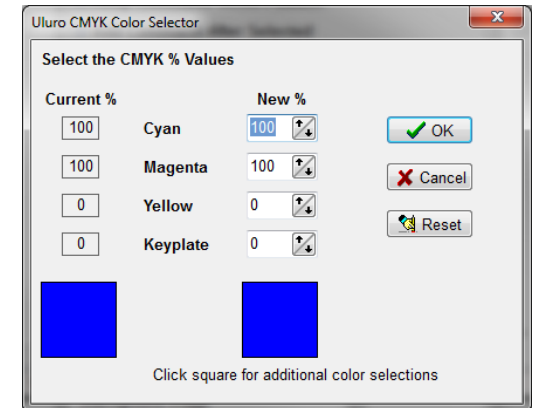
The Basic Color Picker



Advanced Color Picker



CMYK Color Picker



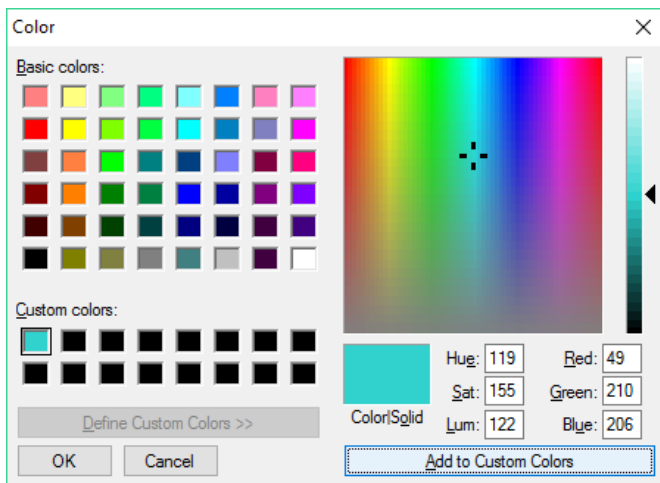
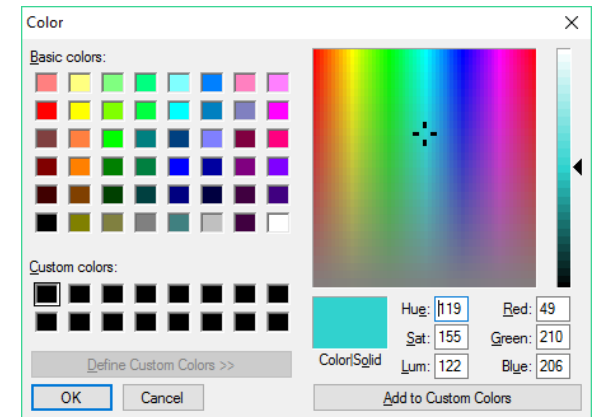
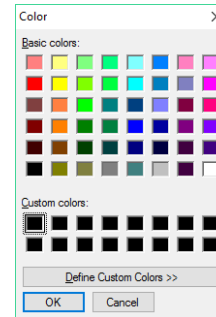
Relay Unify uCompose will retain the custom colors set up in the Basic Color Picker. The Custom Colors will be saved with the map. The Custom colors in a Map can be loaded or saved to file. This only works if the Basic Color Picker is being used.

When the Basic Color Picker dialog is displayed click on a Custom Color Square.

Click Define Custom Colors >>

Change the Color to the Desired Color by clicking in the Color rainbow and the intensity slider or setting the color values manually.

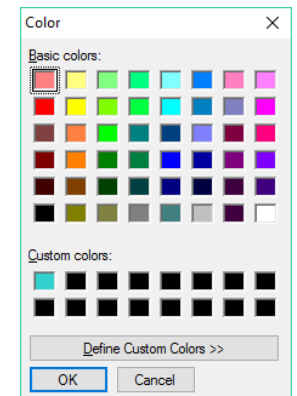
Click Add to Custom Colors.



Click OK. This color will be maintained in the Map. Go to another command and display the Color Dialog. The Color is retained and can be selected.

The color is saved in the Map in a tab separated line that begins with CCol

CCol ColorA=CED231 ColorB=FFFFFFFF ColorC=FFFFFFFF



Disable Error Flash – If this is checked, the circle on the error tab in the data window will not flash red. If this is unchecked, the circle on the error tab will flash red.

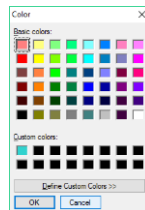
Disable Field Select on Click – If this is checked the field selected on the user fields tab in the data file window, the command defining the field in the map commands window will not be highlighted. If this is unchecked, as the user field is selected, the corresponding field definition in the map commands window will also be highlighted.

Disable Map AutoSave – If this is unchecked, the ~ version of the .nmp file that is being edited will not be saved periodically, only saving the map to create the history map count. If this is checked, the map file that ends with a ~ will be the most recent version of the map that hasn't yet been saved. If a map is open and being edited, this is like an autosave version the user can revert to if needed. The map is autosaved each time a command is changed.

Load Custom Colors – Click this to load in custom colors from a saved file.

After a Map is loaded go to Preferences General tab click the Load Custom Colors button. This will overwrite the Existing Custom Colors for the map. There is a confirmation box. Click Yes to continue. Select the Previously saved custom colors.

The Colors have been loaded.

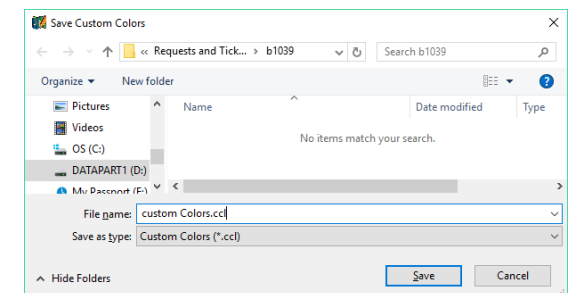
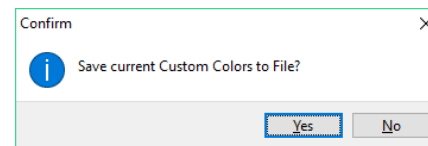
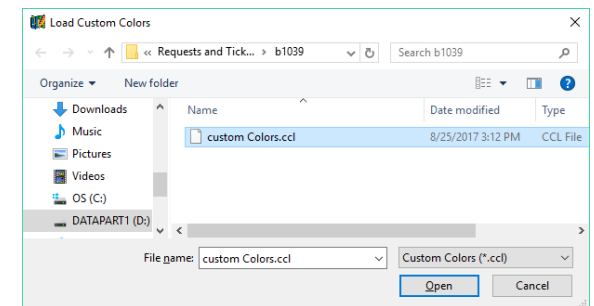
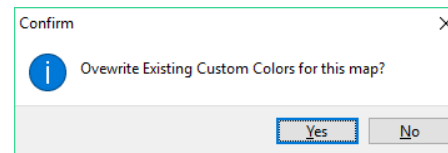
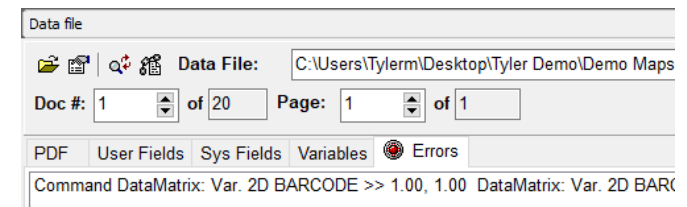


Save Custom Colors – Click this to save your custom colors to a file. There is a confirmation box. Click Yes to continue.

Navigate to the location desired and enter the color name. Click Save.

The CCL file will only contain ColorA through ColorP with Values. Click Save.

```
ColorA=CED231
ColorB=FFFFFFF
ColorC=FFFFFFF
ColorD=FFFFFFF
ColorE=FFFFFFF
ColorF=FFFFFFF
ColorG=FFFFFFF
ColorH=FFFFFFF
ColorI=FFFFFFF
ColorJ=FFFFFFF
ColorK=FFFFFFF
ColorL=FFFFFFF
ColorM=FFFFFFF
ColorN=FFFFFFF
ColorO=FFFFFFF
ColorP=FFFFFFF
```



OK will save the changes to the Preferences and reparse the data with the new settings. **Cancel** will cancel all changes.

DB Connection

The first time logging in to Relay Unify uCompose, or any other Relay Unify Module, the connection parameters will need to be set up. This can be changed at any time by selecting Connection in the Database menu.

Server: This is the SQL server name.

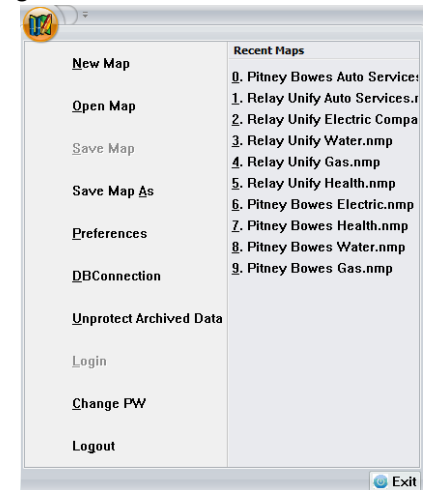
Database: This should always be Relay Unify.

User ID – This is typically trans, or whatever the SQL database connection login is, which is not stored anywhere.

Password – This is typically trans, or whatever the password for the SQL server login is, which is also not stored anywhere.

Integrated Security (Windows) – If this is checked, then the Windows domain user login for the SQL server will be used for UserID/PW. (this is not recommended)

DB Provider – If TLS is not being used select SQLOLEDB. If using TLS 1.2 select either SQLNCLI11 or MSOLEDBSQL.



Setup Connection Parameters

Server: DRSTRANGE\TRANSQA3

Database:

☐ Integrated Security

UserID: trans

Password: •••••

DB Provider: SQLNCLI11

OK Cancel

Setup Connection Parameters

Server: DRSTRANGE\TRANSQA3

Database:

☒ Integrated Security

DB Provider: SQLNCLI11

OK Cancel

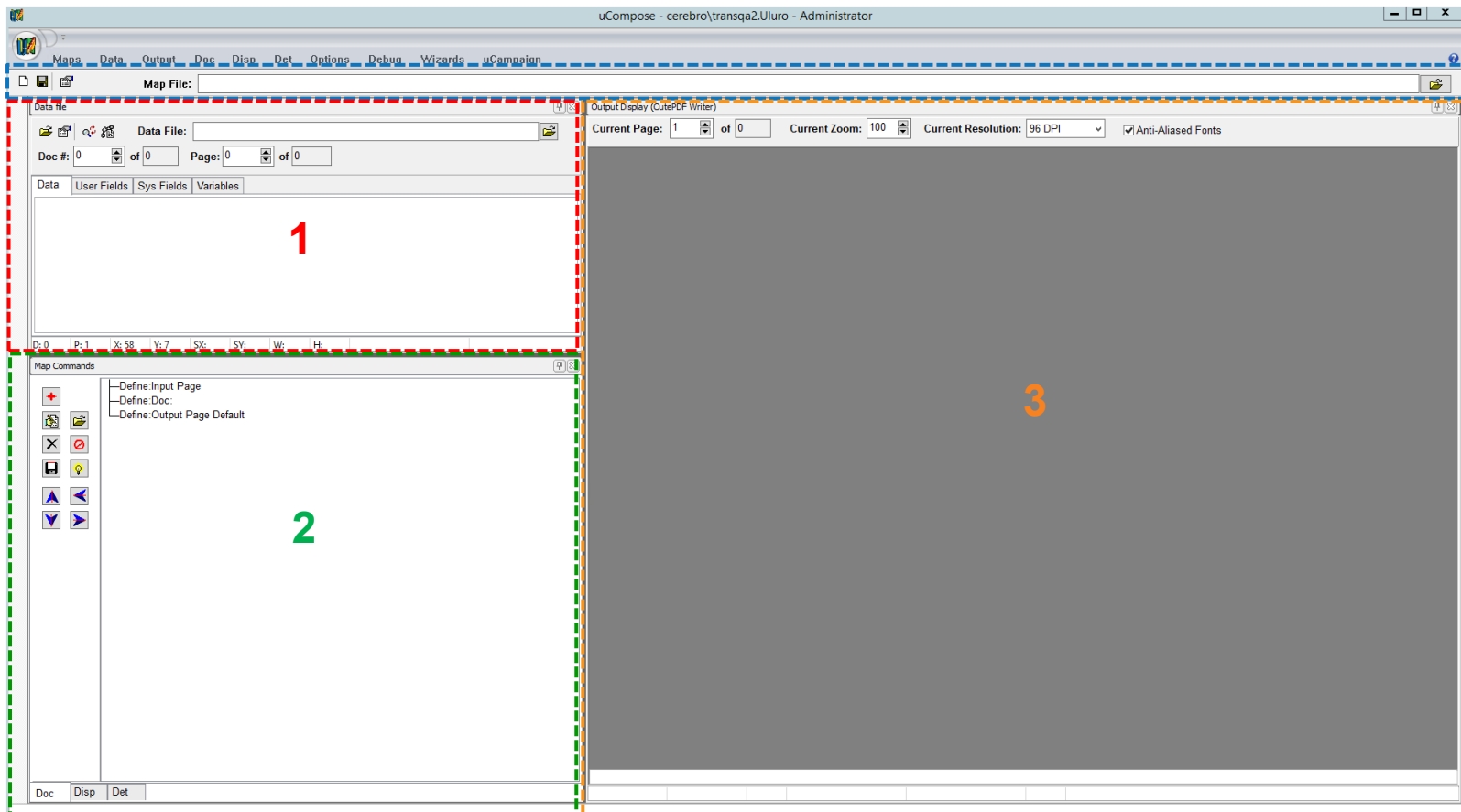
Overview of Relay Unify uCompose Layout

The Map file bar allows the user to see the map file that has been loaded in that is currently being edited.



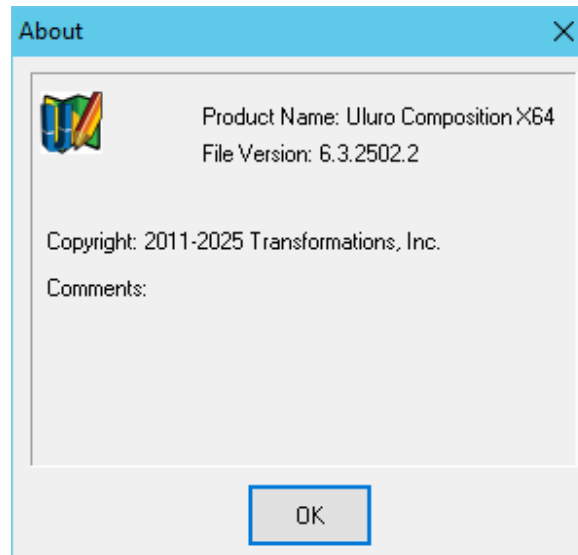
There are also three windows:

1. The Data file window that shows the data input and the fields/variables defined from the data.
2. The Map Commands window that lists the commands resulting in the definition of the pages/document as well as the layout and design of the output.
3. The Output Display window that shows the output in real time of the data being executed using the map commands.



Version of the Program

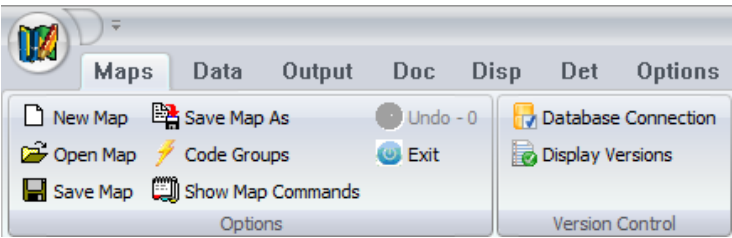
Click on the  button in the upper-right hand area of the program to see the version of the program.



Relay Unify uCompose Ribbon Bar

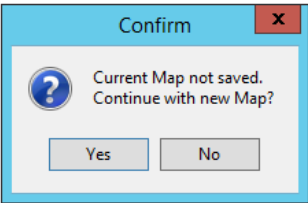
Maps Ribbon

This bar provides the user with options for the maps in general. Several of these options are also accessible from the Relay Unify uCompose Ribbon Application Menu.



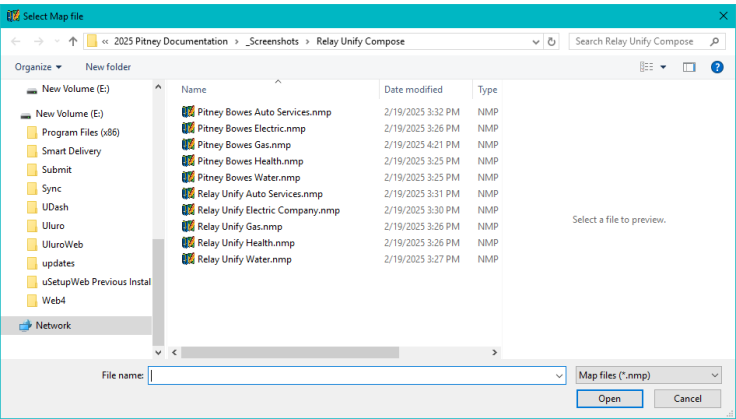
New Map

This will start a new map. The user will be asked to continue if the existing map has not been saved.



Open Map

This will allow the user to open a saved map. Map extensions are .nmp files. This will open a select Map file dialog for locating an existing map. Locate the file, select the file and click the open button.

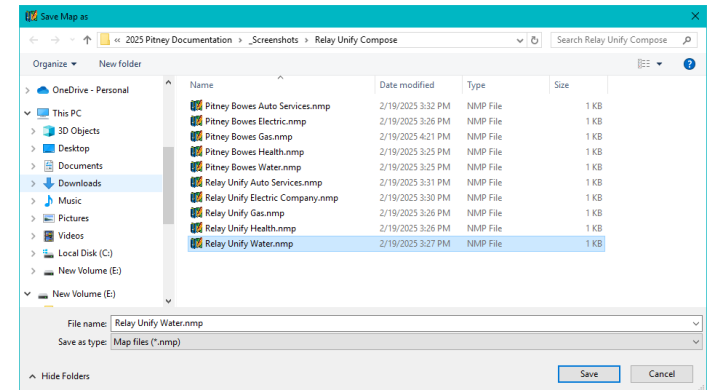


Save Map

This will save the existing map. The system will rename the existing file to include a “_NNNNN” extension. The number of saved maps is controlled by the History Map Count preferences.

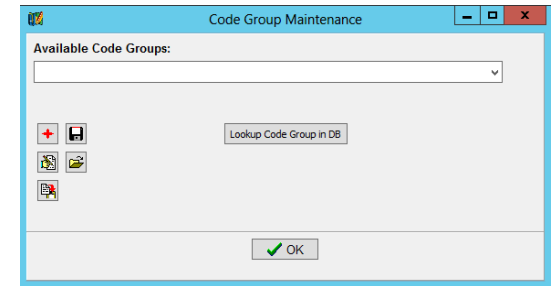
Save Map As

This will display a Save Map selection dialog box. Navigate to the location where the map is to be saved and enter the new map name. Click the Save button.



Code Groups

This will display the Code Group Maintenance form. From here the user can add, edit, copy, save, load, or look up code groups.



Show Map Commands

This will display the map commands window if it has been closed. If the Map Commands form is detached from the Main form, it will be re-attached to the Main form.

Undo

This will undo the last change. The number represents the number of commands that can be undone. The maximum is 30.

The user can also use Control-Z in Relay Unify uCompose to undo changes to commands. This has the same effect as selecting the map undo selection. Each Control-Z will remove a single change. The map will be reprocessed after each call to control-Z.

Exit

This will exit Relay Unify uCompose. It is the same effect as clicking the X in the upper right corner. There is a warning if the map changes have not been saved.

Database Connection

This opens the connection parameters for the database. Users can change the server and database the program is connecting to from here.

Setup Connection Parameters

Server: DRSTRANGE\TRANSQA3

Database:

☐ Integrated Security

UserID: trans

Password:

DB Provider: SQLNCLI11

OKCancel

Display Versions

Once Relay Unify uCompose is connected to the database the Display Versions item will be available.

The File menu has an entry to Close the form.

The Client drop down allows changing the Client for Map Version display. Once changed the Submission Type drop down will be populated with all the Submission types for the selected Client. Typing the Client ID will move the Client drop down to the client ID.

Changing the Submission Type Drop down will change the Map versions displayed.

The Top Grid shows the Map Versions ordered by the most recent map version at the top. Grid rows in Blue indicate the MD5sum (file unique ID) of the Map Version is the same as currently loaded Map. This means the currently loaded Map and the Map Version are identical in content. The Map version in Green is the Map Version that has been designated as the current map for the Submission Type.

The lower grid is the Transaction Record for the Map version. Transactions include Check In, Check Out, and Current. All transactions require a comment and are marked with the IP address of the computer performing the transaction, Date and time of the transaction, User performing the transaction, and the transaction code.

Map Versions

File

Client: 107: Relay Unify [Active] ☒ Active Only

Submission Type: 214: HFH Letter Campaign [Active]

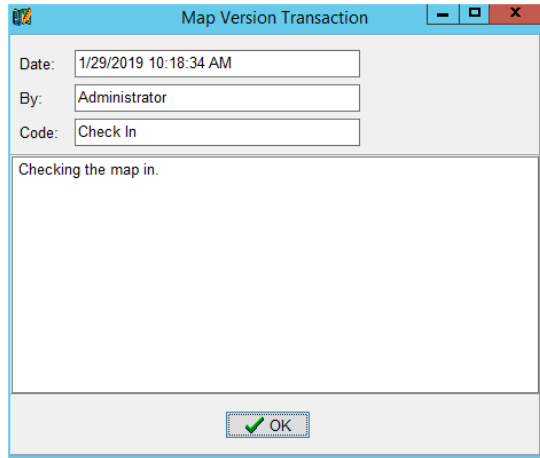
	Is Current	Date	By	Name
☒	Y	11/13/2024 2:05:07 PM	Administrator	Letter_CM_Portrait_8.5x11_Fresh
☐	N	11/13/2024 2:05:07 PM	Administrator	Letter_CM_Portrait_8.5x11_Fresh

Current

☒

	Date	By	Code	Comment	IPAddress
☒	11/13/2024 2:05:07 PM	Administrator	Current	Set to Current	192.168.1.204
☐	11/13/2024 2:05:07 PM	Administrator	Check In	Checkin Exit	192.168.1.204

Double Click on the Transaction row to see all the Comment lines.



A screenshot of a Windows-style dialog box titled "Map Version Transaction". It has a light blue header bar with standard window controls (minimize, maximize, close). The main area is white and contains three input fields: "Date:" with the value "1/29/2019 10:18:34 AM", "By:" with the value "Administrator", and "Code:" with the value "Check In". Below these fields is a large white text area containing the text "Checking the map in.". At the bottom of the dialog is a grey bar containing a single button with a green checkmark icon and the text "OK".

The Buttons along the Side are



Check the loaded map into Version control.



Check the selected Map out of version control to the file system.



Make the selected Map the Current Map for the Submission Type.



Click to load the current map for the submission type from the file system.

Placing the cursor over the button will display a hint about what the button does.

If the Buttons are not available, the icons will change to:



Check-in is not available. A Map may not be loaded in Relay Unify uCompose. The Loaded Map needs to be saved to the File System. No Submission type is selected.



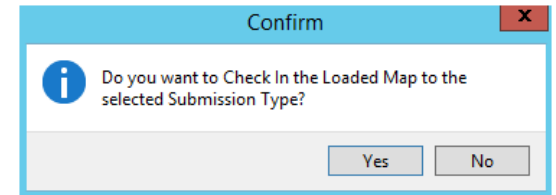
Check Out is not available. There is no currently selected Map Version.



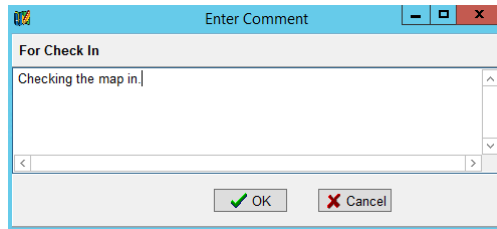
Make Current not available. There is no currently selected Map Version.

Check In

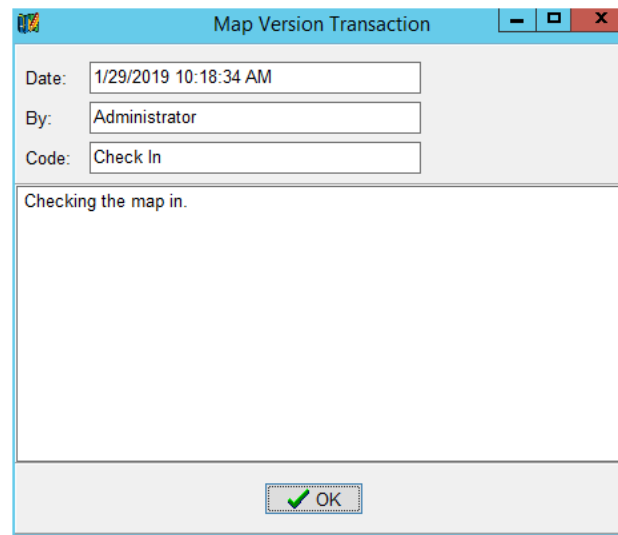
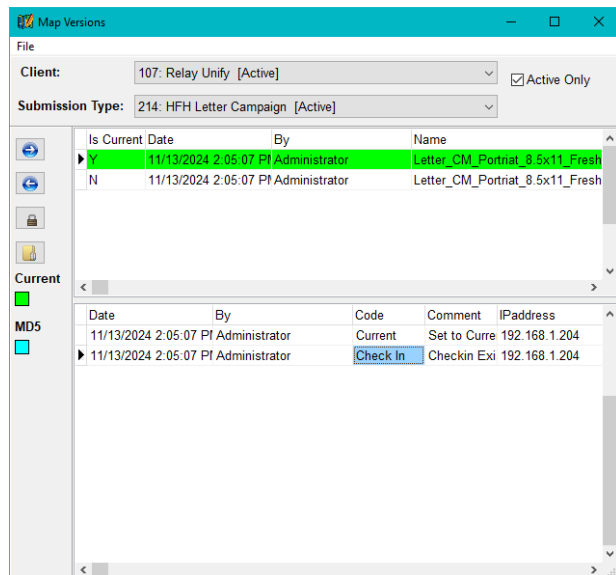
To check In the map loaded in Relay Unify uCompose, click the Check In Button. A Confirmation window will be displayed.



Enter the Comment for Check In. A Comment is required.



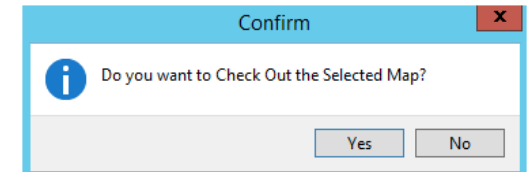
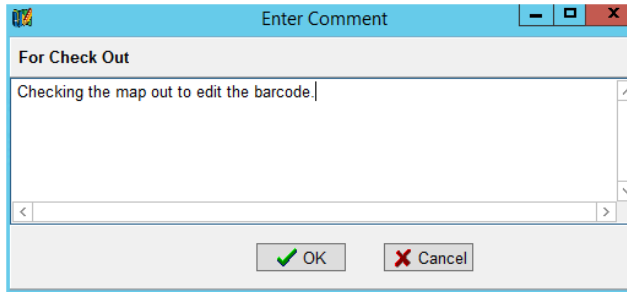
The newly Checked In map version is at the top of the upper Grid. The Lower grid shows the Transaction. Double-click to see the full comment.



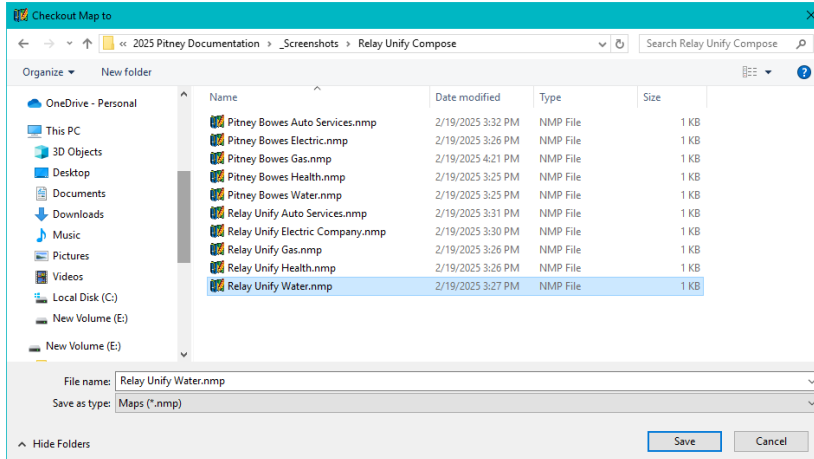
Check Out

To check out the selected map version to the file system click the Check Out Button. A Confirmation window will be displayed.

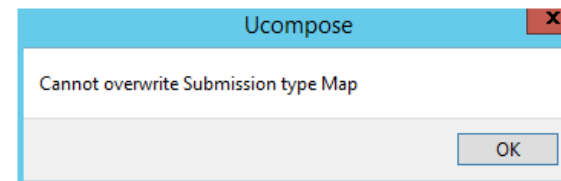
Enter the Comments for the Check out.



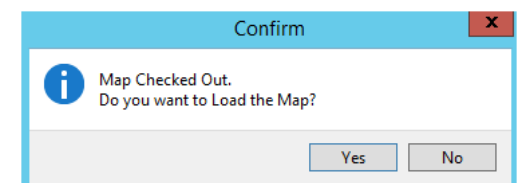
Select the Path for the Map.



A map that is being used for a submission type cannot be overwritten. If attempting to overwrite a map that is currently used, the user will receive this message:



The edit must be for a map with a path and name that is not used by any submission types. Once the Map is checked out the user will be asked to load the map. Select yes to open the map.



Make Current

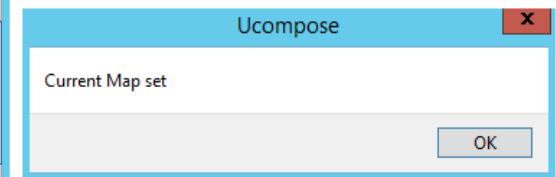
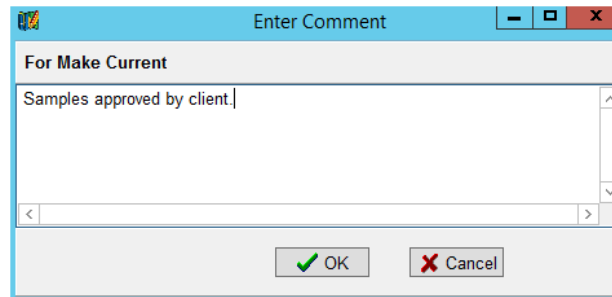
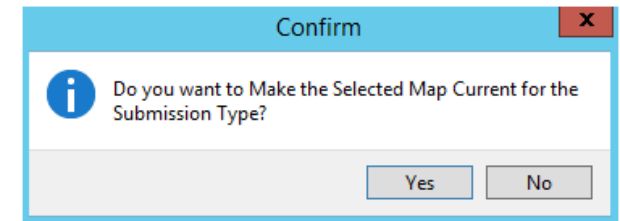
The Make Current button allows the selected map to replace the existing map for the selected submission type. The Selected map version contents replace (overwrites) the map file in the Submit directory for the submission type.

The user must have access to the Map directory in order to use the Make Current functionality.

Click the Make Current button. A confirmation screen is displayed.

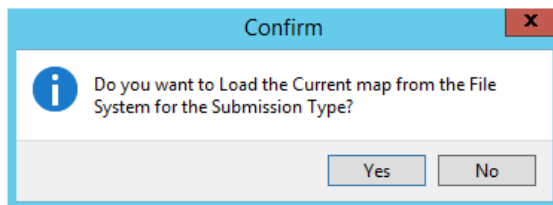
Enter the Comments for the Make Current Transaction.

If the Current file system map has not been checked in it will automatically be checked in before the map is replaced.



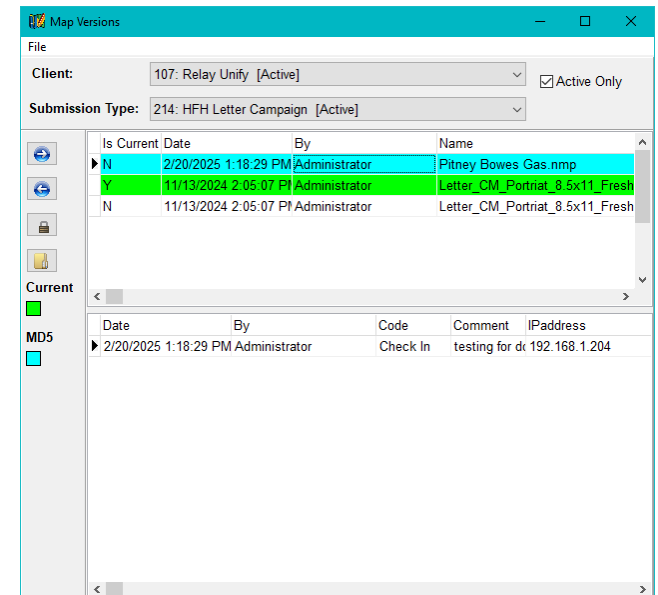
Load from File System

The Load from File System button will load the map current for the submission type from the file system. Click to display the Load from File System confirmation form.



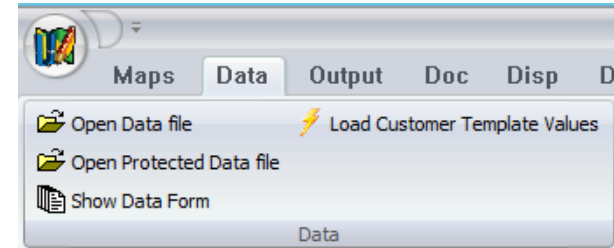
Click Yes to load the current map for the Submission type into Relay Unify uCompose.

The Map Version form can be closed by clicking the X in the Upper Right corner of the File-Close menu.



Data Ribbon

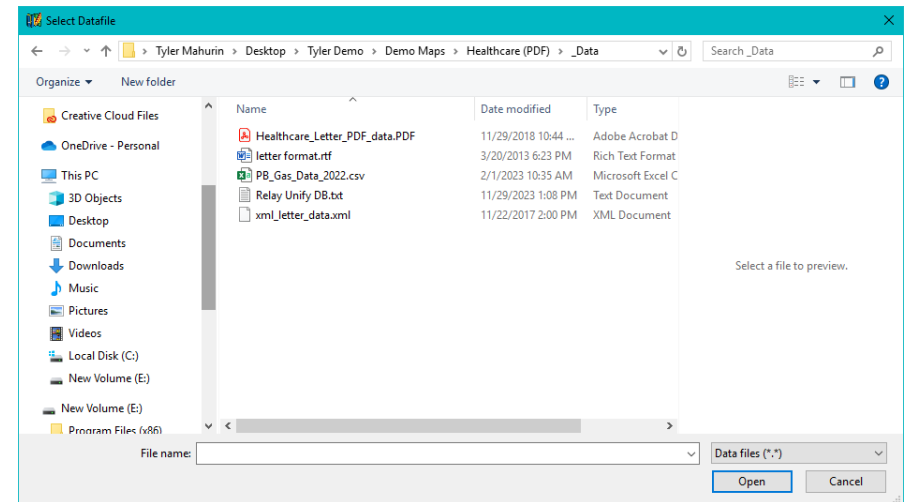
This bar provides the user with general options pertaining to the incoming data.



Open Data File

This displays a Select Datafile dialog. Any file can be selected for the data file.

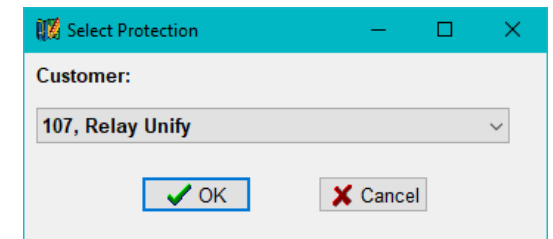
Select the desired file and click the open button. The file will be opened, and the data parsed using the current commands.



Open Protected Data File

This allows opening of a Data file protected by uProtect.exe and not processed into a Submission. When selected this will ask for the Customer that protected the file.

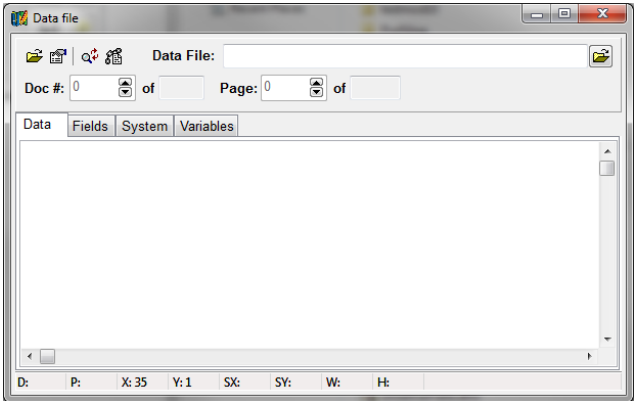
Then a select datafile dialog will be displayed. Select the datafile to open. The protected file will be opened. If it was protected by the Customer, then it will be displayed unprotected.



Show Data Form

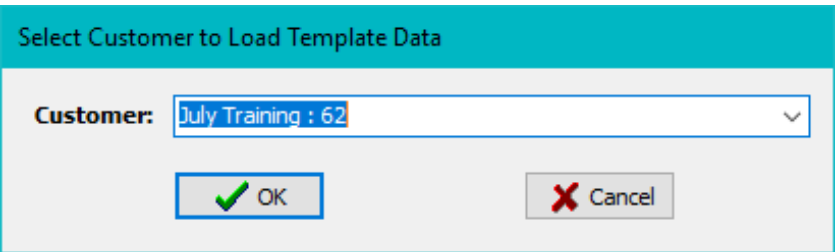
This will display the data window if it has been closed. If the Data form is detached from the Main form, it will be re-attached to the Main form.

The Data Form allows selection of the data file, setting parameters for the file, changing documents, changing pages, selecting data and viewing information about the data file.

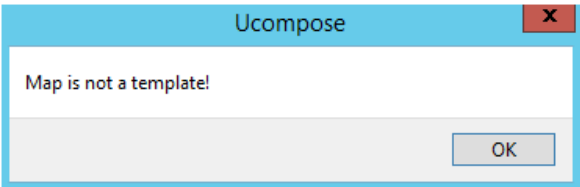


Load Customer Template Values

This will allow the user to pull in a specific customers template fields, that were previously set in uSetup. The customer dropdown will list all customers with set template field values; this will not necessarily be a complete list of every customer in uSetup.

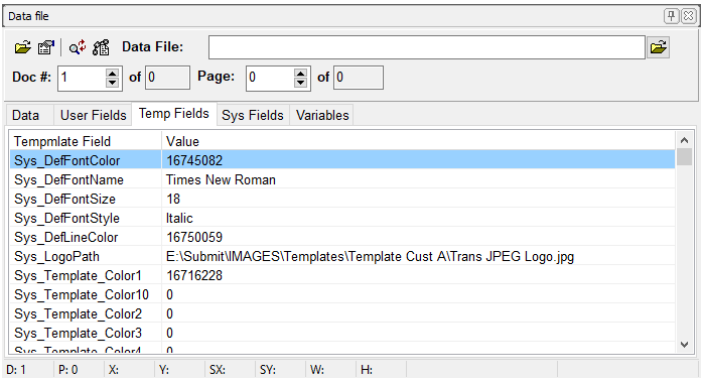


This is for use with template maps. If the map is not defined as a template in the document definition, there will be an error, and the user will not be able to select a customer.



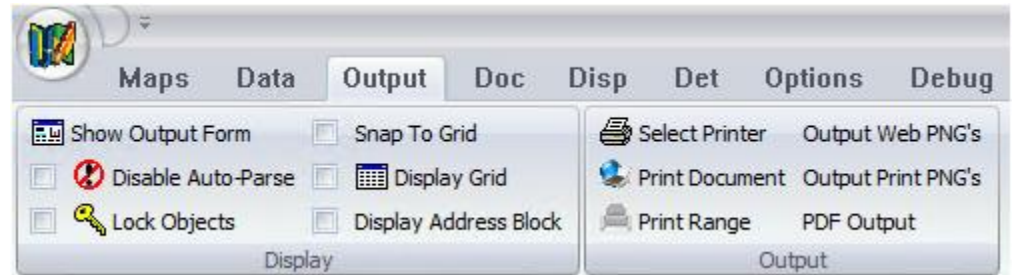
Once the customer is selected, the template fields that have been defined in uSetup will be in their own tab in the data window. These values can then be used in various commands.

See the section on Templates for additional information.



Output Ribbon

This bar provides the user with general options pertaining to the output display window and/or the output in general.



Show Output Form

This will display the output display window if it has been closed. If the Output form is detached from the Main form, it will be re-attached to the Main form.

The Output Display is the area that contains the output of the Mapping of the Input Data using the Map commands. In a New Map the Output Display will be blank and remain blank until the output page command is defined.

Disable Auto-Parse

When checked, this disables the automatic Parsing of the data after commands are modified. Every time a command is added or changes that might affect the values of Fields or number of pages in a document the system will parse the data. Checking this box will disable the parsing. This can be useful if many changes are being made, and it is not necessary to know how the changes affect the documents until after all the changes are finished. When finished with the changes, uncheck or manually parse the data.

Lock Objects

This will lock the position of objects on the Output Display window. The user will not be able to move objects by using the cursor to click and drag when this is selected. When selected this will have a check next to it. The commands can still be moved by the keyboard (holding down SHIFT then using the arrow keys).

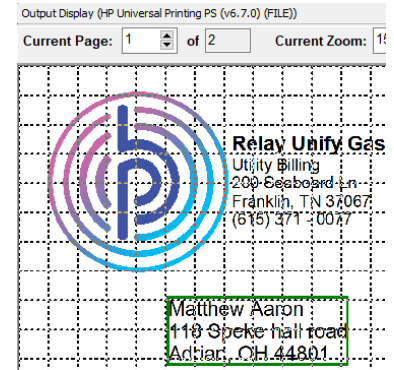
Select again to uncheck and remove the lock on the objects.

Snap to Grid

When checked, this will cause objects on the Output Display window moved with the cursor to snap to specific grid points. The objects will move according to the increment set by 'Snap to Grid Inc' under Preferences. This does not affect moving of objects with the keyboard. The grid points can be made visible by checking Display Grid under the options ribbon bar.

Display Grid

Checking this setting will display the grid lines on the Output Display window. The Grid Line Size is based on resolution. When the resolution is high the width of the Grid lines is increased to maintain visibility. The increment for the grid lines is set by 'Snap to Grid Inc' under Preferences. When selected this will have a check next to it. Select again to uncheck. The grid will not print.



Display Address Block

When checked this will display a red box around the address block, if the map has been published for a campaign (requiring Relay Unify Customize).

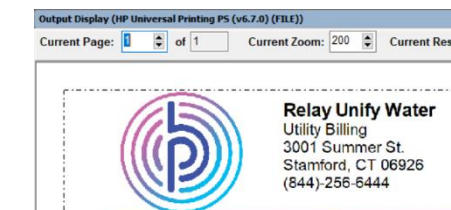
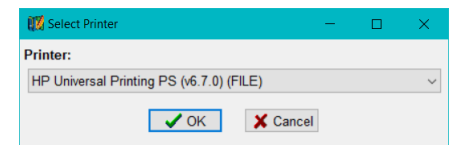


Select Printer

This allows selecting the Printer for the map. The printers displayed are local to the system. Select the desired printer and click the OK button.

Selecting a printer allows the output to be designed for a specific printer. The printer specifications are retrieved from the printer driver. This will include current printer resolution, Input Paper Trays, Paper Types, etc.

The Printer driver used must match the printer that will be used for the final print. If it does not match, then the printed output may not match the display.



After a printer is selected, the Current printer is displayed in Title of the Output Display window. The printable area will be shown as a dot-dash line.

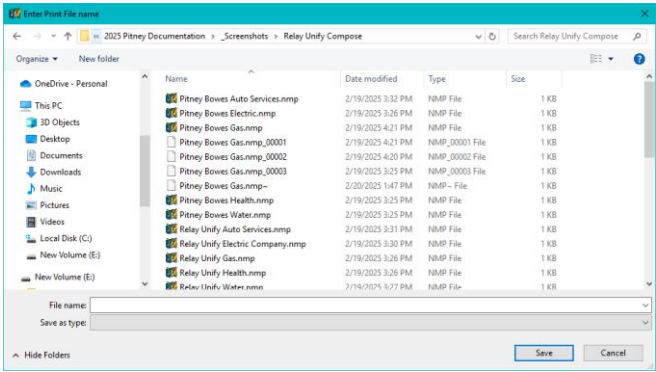
Print Document

Select this to print the currently displayed document to the selected printer. If the printer is a file printer the user will be asked for the Print file name.

If the file is a protected file, the user will be asked if they are sure they want to print the document. If the document is printed a transaction record will be created indicating the document was printed.

Save will create the print file, and Cancel will cancel the print.

Relay Unify uCompose will notify the user when Print is complete.



Print Range

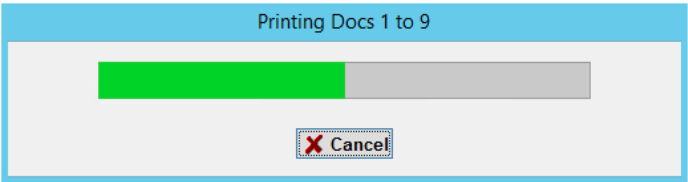
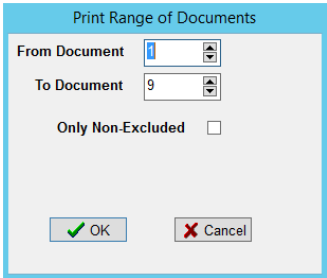
This will display a Print Range of Documents dialog box. Select the From and To document and click Ok. The possible values are 1 to the number of documents currently loaded in Relay Unify uCompose. This will print the selected documents to the currently selected printer.

If the printer selected is a file printer (the print driver set to print to file) the user will be asked for a file name during the print process. Then the Print Range of Documents dialog box will appear.

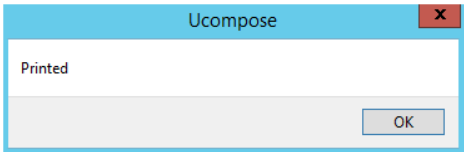
Protected files cannot be printed using the Print Range function.

Select OK to print the Range of Documents or Cancel to cancel.

Relay Unify uCompose will present a progress window while printing. Click Cancel to cancel the print. The window will close when the print is finished.



Relay Unify uCompose will notify the user when Print is complete.

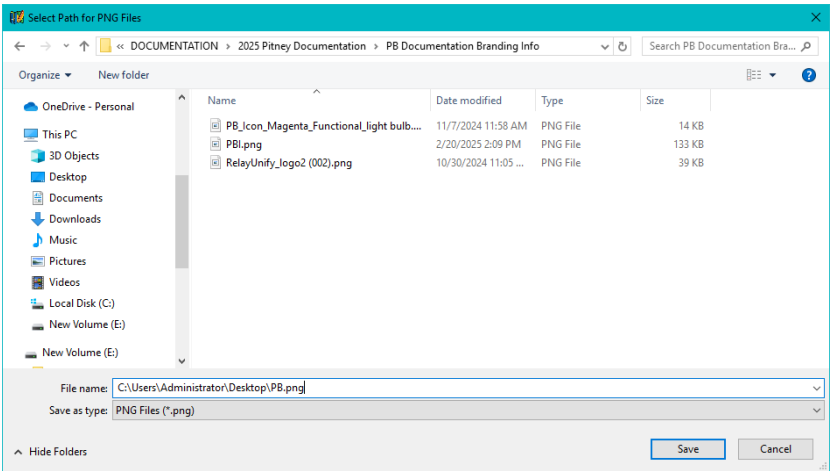


Output Web PNG's

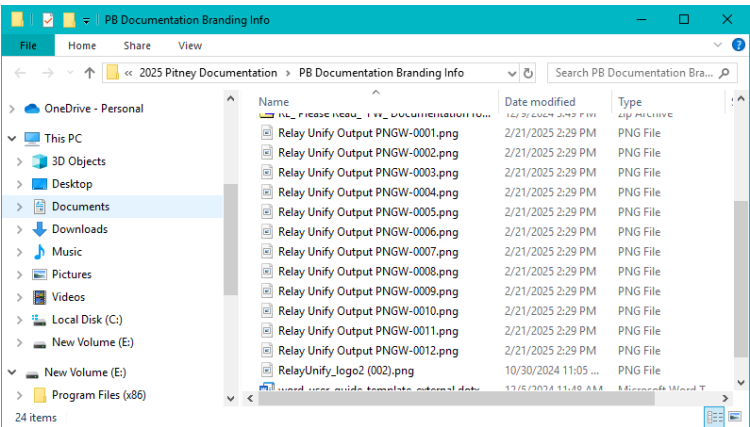
This will output the PNG for the currently viewed document in Relay Unify uCompose. The output will be as it would appear for the Web; Items that are not marked for Display on the Web will not be displayed. Protected files cannot have PNG's created.

When selected the user will be asked for the Name of the PNG files.

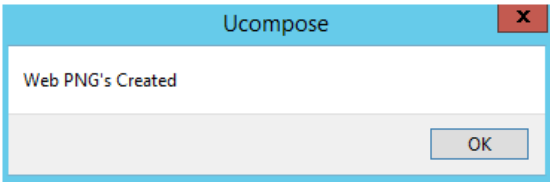
Select the Path and name for the PNG files.



The output file names will have W-0001,W -0002 etc to indicate the page numbers.



Relay Unify uCompose will present a progress window while generating the PNG's. Click Cancel to cancel the PNG's. The window will close when the PNG's are finished. Relay Unify uCompose will notify the user when the PNG's are complete

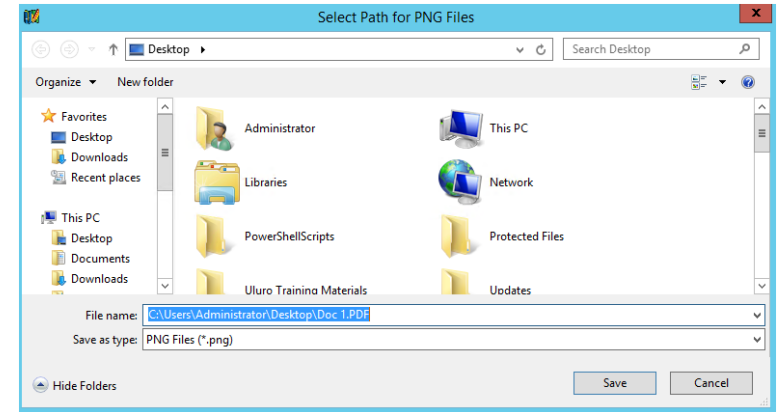
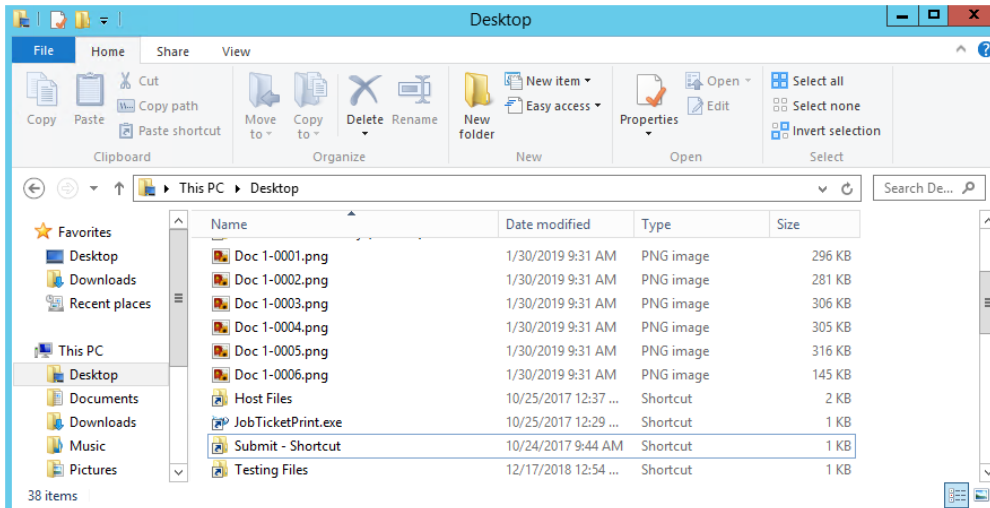


Output Print PNG's

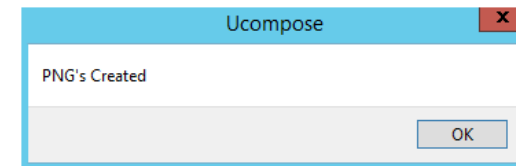
This will output the PNG of the pages of the current document exactly as displayed. When selected, the user will be asked for the Name of the PNG files. Protected files cannot have PNG's created.

Select the Path and name for the PNG files.

The output file names will have -0001, -0002 etc to indicate the page numbers.



Relay Unify uCompose will present a progress window while generating the PNG. Click Cancel to cancel the PNG. The window will close when the PNG is finished. Relay Unify uCompose will notify the user when the PNG's are complete.



PDF Output

This allows a range of documents to be output to the Relay Unify Native PDF output.

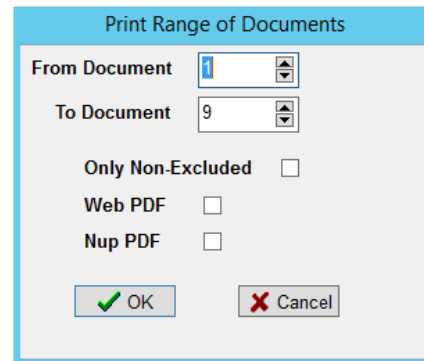
Protected files cannot have PDF's created.

Select the Path and Name for the PDF. Click Save to continue or Cancel to cancel.

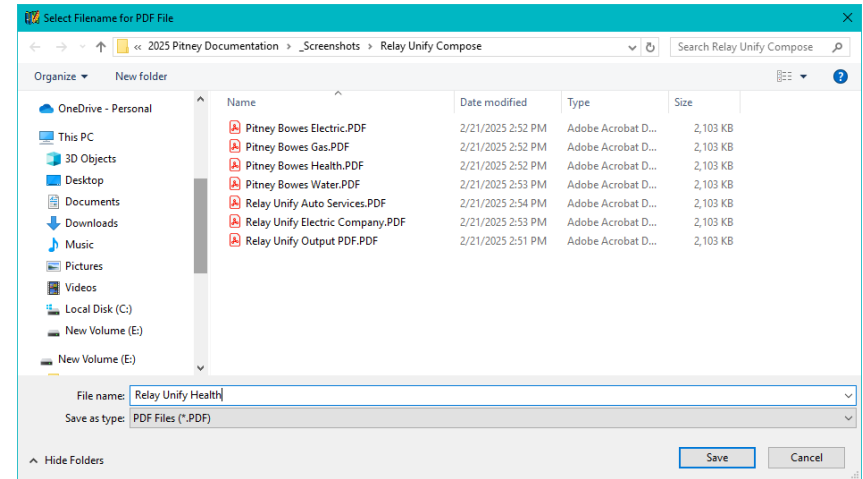
The user must then enter the range of documents to output.

The possible values are 1 to the number of documents currently loaded in Relay Unify uCompose.

Select OK to print the Range of Documents or Cancel to cancel.



A dialog box titled "Print Range of Documents" with a light blue border. It contains two spinners for "From Document" (set to 1) and "To Document" (set to 9). Below these are three checkboxes: "Only Non-Excluded" (unchecked), "Web PDF" (unchecked), and "Nup PDF" (unchecked). At the bottom are "OK" and "Cancel" buttons with green and red checkmarks respectively.



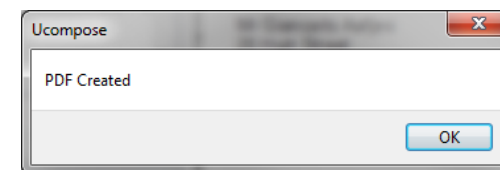
Mapping commands can be output for Print or Web or both. By default, when nothing is checked, it will generate the PDF as a PDF based on Printing.

Checking the **Only Non-Excluded** checkbox will generate a PDF of all documents that are **NOT** marked as No Mail, Omit, or Exclude.

Checking the **Web PDF** checkbox will generate the PDF with only items marked for Web. Web PDF's may Include mappings that represent pre-printed forms or additional mappings that identify the PDF as created for the Web.

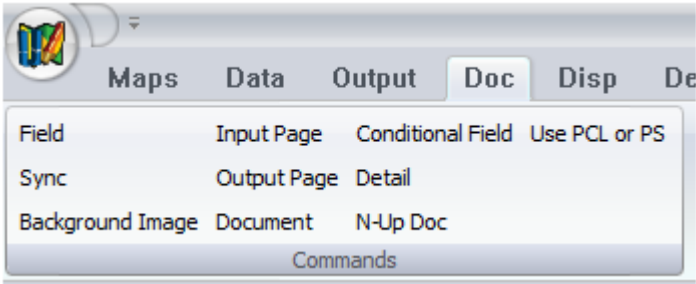
Checking the **Nup PDF** checkbox will generate the PDF of the Nup documents.

Relay Unify uCompose will notify the user when PDF is complete.



Doc Ribbon

This bar contains some of the commands that will appear in the Doc Tab of the Map Commands form.



Field

This will allow the user to define a field. This is the same command that is found by Clicking the red plus sign on the Map Commands Doc tab and selecting [Field Definition](#).

Edit Fields

Occurrence

☒ First

☐ Last

☐ Page

FieldName:

Value Type

☒ Text

☐ Real

☐ Date

☐ Integer

☐ Currency

☐ Boolean

Function:

System Field Link:

Define

Error Handling

Field Type

☐ Position

☐ Test

☐ Delimited

☐ Fixed

☐ XML

☒ Not Assigned

Save to DB

☐

This Field is not assigned

For Case Insensitive, surround Regular Expression with /.../i

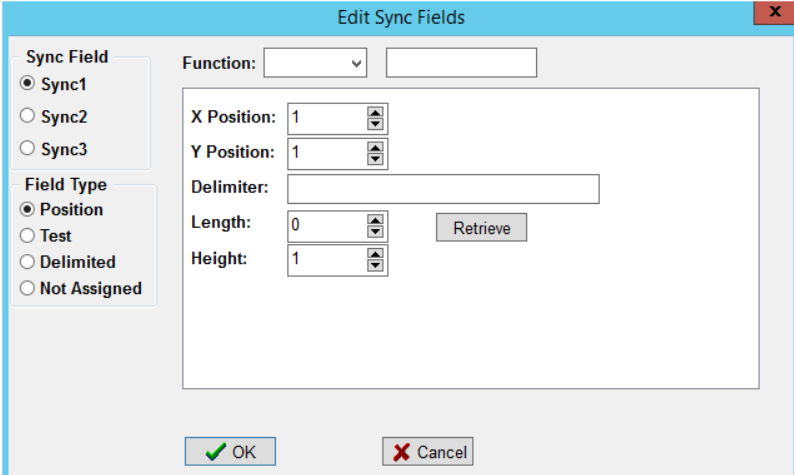
OK

Cancel

Sync

This will allow the Definition of Sync Fields for the Document. Sync fields are fields that can define the Boundaries of a document.

This is the same command that is found by Clicking the red plus sign on the Map Commands Doc tab and selecting [Sync Definition](#).

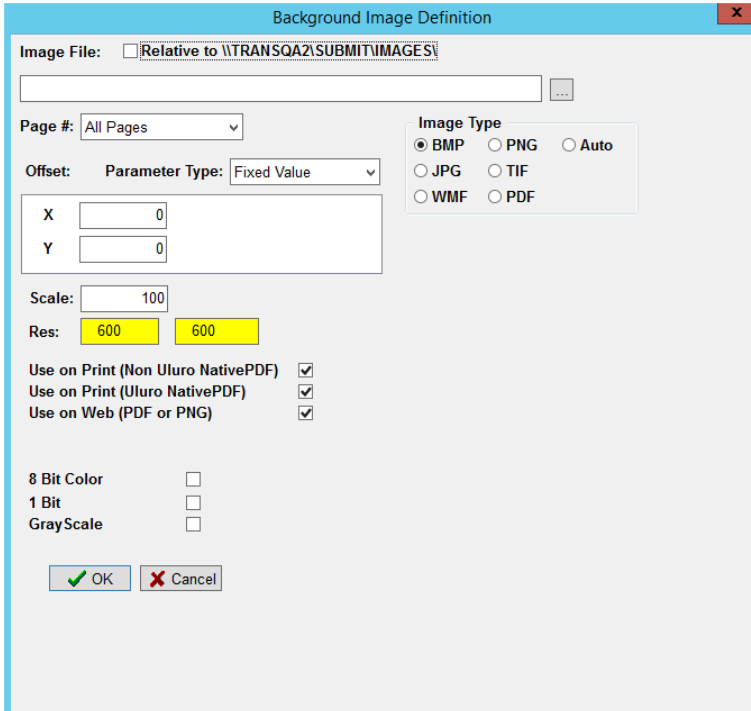


The 'Edit Sync Fields' dialog box is used to define sync fields. It features a left sidebar with 'Sync Field' (radio buttons for Sync1, Sync2, Sync3) and 'Field Type' (radio buttons for Position, Test, Delimited, Not Assigned). The main area includes a 'Function' dropdown, 'X Position' and 'Y Position' spinners (both set to 1), a 'Delimiter' text box, 'Length' and 'Height' spinners (both set to 0 and 1 respectively), and a 'Retrieve' button. At the bottom are 'OK' and 'Cancel' buttons.

Background Image

This allows defining a Background image for a page. This is useful if the background image can be set based on output page number. If the background image is based on other criteria, it is better to use the Append Image command.

This is the same command that is found by Clicking the red plus sign on the Map Commands Doc tab and selecting [Background Image Definition](#).



The 'Background Image Definition' dialog box is used to define background images. It includes an 'Image File' field with a 'Relative to' checkbox and a file path. Below is a 'Page #' dropdown (set to 'All Pages') and an 'Offset' section with 'Parameter Type' (Fixed Value) and 'X'/'Y' spinners (both set to 0). The 'Image Type' section has radio buttons for BMP (selected), PNG, Auto, JPG, TIF, WMF, and PDF. The 'Scale' is set to 100, and 'Res' is set to 600. There are checkboxes for 'Use on Print (Non Uluro NativePDF)', 'Use on Print (Uluro NativePDF)', and 'Use on Web (PDF or PNG)', all of which are checked. At the bottom are 'OK' and 'Cancel' buttons.

Input Page

This allows the defining of the input pages from the data, including identifying the type of data.

This is the same command that is found by Clicking the red plus sign on the Map Commands Doc tab and selecting [Input Page Definition](#).

The **Output Page Definition** dialog box is shown. It has a title bar with standard window controls. The main area is divided into several sections:

- Page #:** A dropdown menu showing "001".
- Name:** An empty text field.
- Paper:** A section with a "Condition" tab and a "Paper:" dropdown menu set to "Letter".
- Page Size:** Fields for "Width" (8.5000) and "Height" (11.0000) in "Inches".
- Type of Tray:** A dropdown menu set to "Automatically Select".
- Duplex Mode:** Radio buttons for "Simplex" (selected), "Duplex Long Edge", and "Duplex Short Edge".
- Orientation:** Radio buttons for "Portrait" (selected) and "Landscape".
- Force Side:** Radio buttons for "None" (selected), "Front", and "Back".
- Default Font:** Fields for "Name:" (Arial), "Size:" (10), "Color:" (black), and "Style:" (empty). There is a "Font" button and a "Transparent" checkbox.
- Printer Supports JPG:** A checkbox.

At the bottom right are "OK" and "Cancel" buttons.

Output Page

This allows defining how an output page will be generated.

This is the same command that is found by Clicking the red plus sign on the Map Commands Doc tab and selecting [Output Page Definition](#).

The **Input Page Setup** dialog box is shown. It has a title bar with standard window controls. The main area is divided into several sections:

- Page Type:** Radio buttons for "Form Feed", "Fixed Length", "Page Test" (selected), "XML", and "PDF".
- Page defined by Test String:** A section with a "Test String Regular Expression:" text field containing "A1" and a "Y Offset:" spinner set to "-1".
- Concatenate Lines on page:** A checkbox.
- Lone CR as End of Line:** A checkbox.
- Skip:** Radio buttons for "None", "Blank Pages", "Fixed Lines and Pages" (selected), "Conditional Lines", and "Conditional Pages".
- Skip Fixed Lines then Fixed Pages from Beginning:** A section with checkboxes for "Skip first" (checked) and "Skip first" (unchecked), with corresponding "Lines" and "Pages" spinner fields.
- Send JPG images as JPG if printer accepts JPG:** A checked checkbox.

At the bottom are "OK" and "Cancel" buttons.

Document

This allows setting the Definition of a Document.

This is the same command that is found by Clicking the red plus sign on the Map Commands Doc tab and selecting [Document Definition](#).

The 'Edit Conditional Fields' dialog box is used for defining conditional fields. It includes the following sections:

- Occurrence:** A dropdown menu set to 'First'.
- FieldName:** A text input field.
- Field Value Type:** A dropdown menu set to 'Text'.
- Find Value Type:** A dropdown menu set to 'Position'.
- X Position:** A spinner box set to 1.
- Y Position:** A spinner box set to 1.
- Length:** A spinner box set to 1.
- Delimiter:** A text input field.
- Retrieve:** A button.
- For Case Insensitive, surround Regular Expression with /.../i:** A checkbox.
- After the Value is found compare using:** A section with a dropdown menu, a 'Parameter' dropdown set to 'Fixed Value', a text input field, and a 'Value Type' dropdown.
- Set Values:** A large text area with a vertical toolbar containing a red plus sign, a red X, and four blue arrows (up, down, left, right).
- Function:** A dropdown menu.
- System Field Link:** A dropdown menu.
- Save to DB:** A checkbox.
- OK/Cancel:** Buttons at the bottom.

The 'Document Definition' dialog box is used for defining document settings. It includes the following sections:

- Doc Type:** Radio buttons for 'Same Sync', 'Sync on Page' (selected), 'Page Count', 'PDF Bookmark', and 'Sync on Last'.
- Doc Defined by Sync on Page:** A spinner box set to 1.
- Pages:** A spinner box set to 50.
- Force Exception:** A checked checkbox.
- Disable Incremental Character Positioning:** A checkbox.
- Use CMYK Color in Output PDF:** A checkbox.
- Template:** A checkbox.
- Disable PDF-A in Output PDF:** A checkbox.
- Use Default Resolution for RTF:** A checkbox.
- Override Global Reusable RTF in PDF:** A checkbox.
- Disable Reusable RTF in PDF:** A checkbox.
- Use Type 3 fonts in PDF Output to Reduce PDF Size:** A checkbox.
- Disable Auto creation of Type 3 fonts in PDF:** A checkbox.
- Use Detail Section Flow correction (7-2020):** A checked checkbox.
- Re-Enable keep Last Y correction:** A checkbox.
- Do not reset global variables for new files on print job:** A checkbox.
- Delimited Data Parsing Options:** A section with a note 'Unless set below, delimited parser V1 will be used before 7/1/2023' and checkboxes for 'Force V1 Parser', 'Force Parser V2 (overrides date setting)', 'Mapper Parser test date' (set to 2/19/2025), and 'Auto Trim Delimited Data by V2 Parser'.
- Default Auto Trim has not been set.**
- OK/Cancel:** Buttons.
- Reusable RTFs in PDF are not Globally Disabled:** A note at the bottom.

Conditional Field

This allows defining a Field based on conditions in the data. Before the Assign Field command, it was the only way to conditionally set a field. The Assign Field now makes the definition of conditional fields easier. Using the Conditional field, the user will select data and then compare the data and set the final field value based on the results of the comparisons.

This is the same command that is found by Clicking the red plus sign on the Map Commands Doc tab and selecting [Conditional Field](#).

Detail

This defines the Details for the document.

This is the same command that is found by Clicking the red plus sign on the Map Commands Doc tab and selecting [Detail Definition](#).

The screenshot shows the 'Detail Definition #1' dialog box. It has a title bar with a standard window icon and a close button. Below the title bar is a tabbed interface with tabs for 'Input Data', 'Options', 'Columns', 'Output Display', 'Font', 'Increments', 'Sort', and 'Output Order'. The 'Input Data' tab is selected. Inside the dialog, there are two main sections: 'Start' and 'End'. Each section contains a large empty rectangular area on the left, a set of navigation buttons (red plus, black X, blue left arrow, blue up arrow, blue down arrow, blue right arrow) in the middle, and a configuration area on the right. The configuration area includes a 'Page' field with a value of 0, a 'Type' dropdown menu set to 'Fixed Position', and a 'Y Position' field with a value of 1. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

The screenshot shows the 'N-Up Docs Definition' dialog box. It has a title bar with a standard window icon and a close button. The dialog is divided into several sections. At the top, there are 'Across' and 'Down' fields, both set to 1. Below these are 'Duplex Mode' options: 'Simplex' (selected), 'Duplex Long', and 'Duplex Short'. To the right are 'Page Gutter' and 'Page Margin' settings, all set to 0.0000. Below these are 'Sheet Dimensions' and 'Doc Dimensions' fields, all set to 8.5000 width and 11.0000 height. A 'Calculate' button is located to the right of the dimensions. The main area of the dialog is divided into 'Stack based' and 'Roll based' tabs. The 'Stack based' tab is selected. It contains a 'Start Position' section with a 'Validate' button and a 'Stack' dropdown menu set to 'Upper'. Below this are 'Page' settings with a grid of checkboxes for 'TL', 'TR', 'BL', and 'BR'. To the right of this is a 'Doc' field with a value of '1:1' and an 'Edit Sheet Commands' button. At the bottom, there are '1st Sort', '2nd Sort', and '3rd Sort' dropdown menus, all set to 'Upper-Lower', 'Left-Right', and 'Top-Bottom' respectively. A 'Print in Reverse order' checkbox is also present. At the very bottom are 'OK' and 'Cancel' buttons.

N-Up Doc

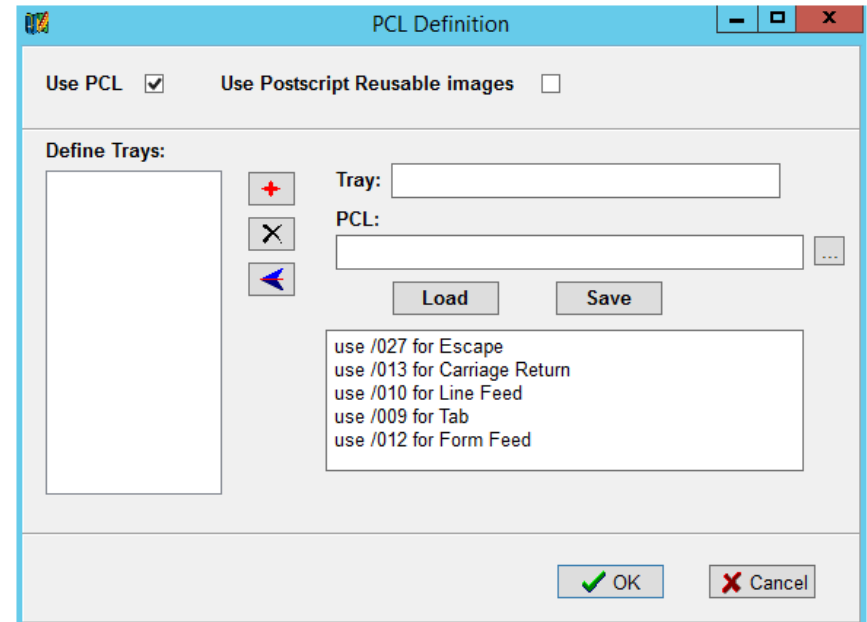
The N-up command will allow setting up a document with multiple output pages on each sheet of paper.

This is the same command that is found by Clicking the red plus sign on the Map Commands Doc tab and selecting [N-Up Documents](#).

Use PCL or PS

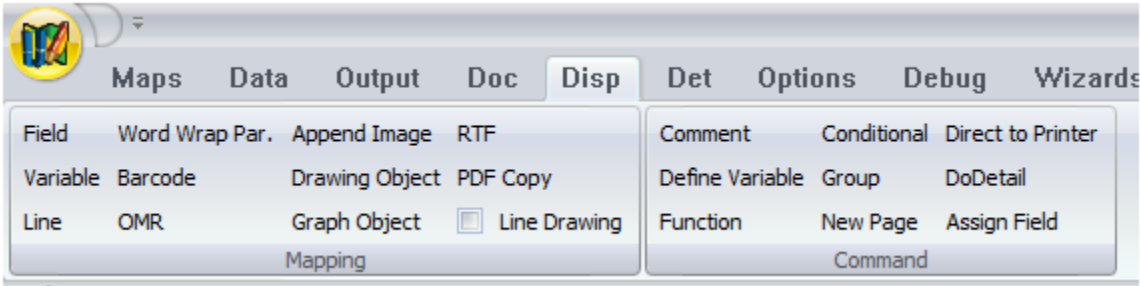
This forces the System to use PCL or Post Script. When PCL is selected Tray Pulls are defined, and images can be sent as Macro Files.

This is the same command that is found by Clicking the red plus sign on the Map Commands Doc tab and selecting [Use PCL Macros or Postscript Images](#).



Disp Ribbon

This bar contains some of the commands that will appear in the Display Tab of the Map Commands form.



Field

This allows the user to map a field value onto the output.

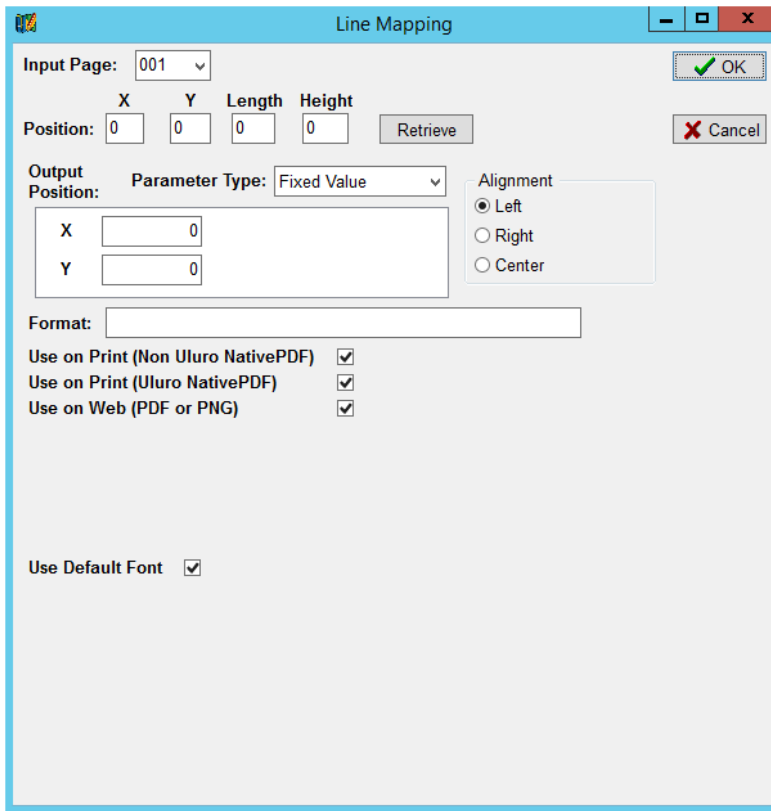
This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Field Mapping](#).

A screenshot of the 'Field Mapping' dialog box. The dialog has a title bar with a red icon and the text 'Field Mapping'. It contains several fields and options. At the top, there is a 'Field:' dropdown menu with 'NAME' selected and a 'Text' label. To the right are 'OK' and 'Cancel' buttons. Below this is a 'Position:' label and a 'Parameter Type:' dropdown menu with 'Fixed Value' selected. There are two input fields for 'X' and 'Y', both containing the value '0'. To the right of these fields is an 'Alignment' section with four radio buttons: 'Left' (selected), 'Center', 'Right', and 'Decimal'. Below the alignment section is a 'Format:' text field. Further down are three checkboxes: 'Use on Print (Non Uluro NativePDF)' (checked), 'Use on Print (Uluro NativePDF)' (checked), and 'Use on Web (PDF or PNG)' (checked). At the bottom, there is an 'HTML Link:' text field with a yellow background and a small icon to its right. Below the link field is a 'Use Default Font' checkbox (checked).

Variable

This allows the user to map a variable value onto the output.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Variable Mapping](#).

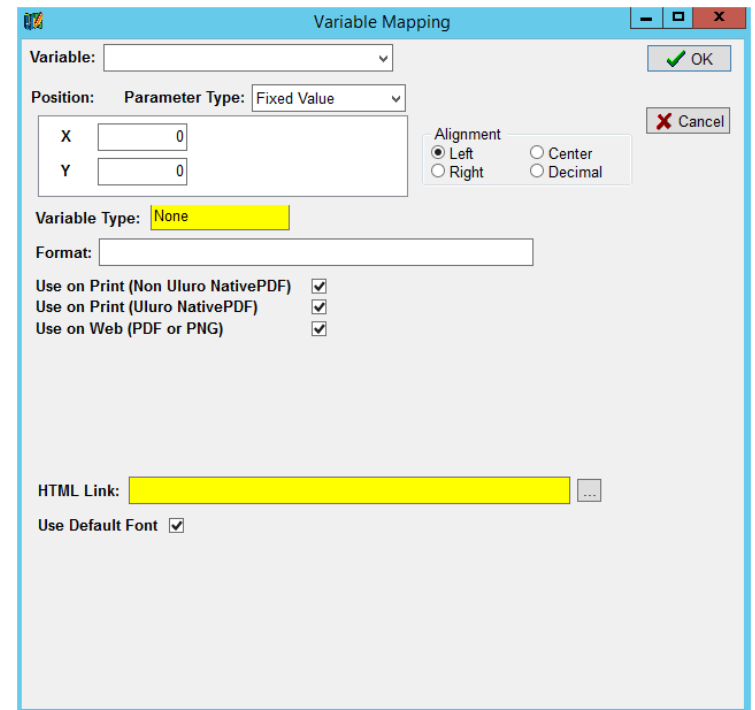


The Line Mapping dialog box is used to map input data to the output. It features a blue title bar with the text "Line Mapping". The main area includes an "Input Page" dropdown set to "001", a "Position" section with "X", "Y", "Length", and "Height" fields (all set to 0), and a "Retrieve" button. Below this is an "Output" section with a "Position" dropdown set to "Fixed Value", "X" and "Y" fields (both set to 0), and an "Alignment" section with radio buttons for "Left" (selected), "Right", and "Center". A "Format" text field is also present. At the bottom, there are three checkboxes: "Use on Print (Non Uluro NativePDF)" (checked), "Use on Print (Uluro NativePDF)" (checked), and "Use on Web (PDF or PNG)" (checked). A "Use Default Font" checkbox is also checked. "OK" and "Cancel" buttons are in the top right corner.

Line

This allows input data to be directly mapped to the output.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Line Mapping](#).



The Variable Mapping dialog box is used to map a variable value to the output. It has a blue title bar with the text "Variable Mapping". The "Variable" dropdown is empty. The "Position" dropdown is set to "Fixed Value". Below this are "X" and "Y" fields (both set to 0). An "Alignment" section has radio buttons for "Left" (selected), "Right", "Center", and "Decimal". The "Variable Type" dropdown is set to "None". A "Format" text field is empty. There are three checkboxes: "Use on Print (Non Uluro NativePDF)" (checked), "Use on Print (Uluro NativePDF)" (checked), and "Use on Web (PDF or PNG)" (checked). An "HTML Link" text field is highlighted in yellow. A "Use Default Font" checkbox is checked. "OK" and "Cancel" buttons are in the top right corner.

Word Wrap Par.

The Word Wrap Paragraph allows text to be formatted into a paragraph area with the text wrapped. The Rich Text Format (RTF) paragraph has replaced this and contains many more options than Word Wrap paragraph. The Word Wrap Paragraph is useful for defining a fixed area, and the size of the text adjusting to fit the area.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Word Wrap Para.](#)

The 'Word Wrap Paragraph edit' dialog box features a 'Name' field, a 'Parameter Type' dropdown set to 'Fixed Value', and a 'Fixed value' input field. It includes 'OK' and 'Cancel' buttons. The 'Output Position' section contains 'X' and 'Y' coordinates, both set to 0, with a 'Parameter Type' dropdown set to 'Fixed Value'. A 'Width' field is set to 1.0000, and a 'Height' field is also present. Checkboxes for 'Use on Print (Non Uluro NativePDF)', 'Use on Print (Uluro NativePDF)', and 'Use on Web (PDF or PNG)' are all checked. A section for 'If All Text Does Not Fit Generate' includes 'Warning' and 'Exception' checkboxes. The 'Use Default Font' checkbox is also checked.

Barcode

This allows the user to output a barcode.

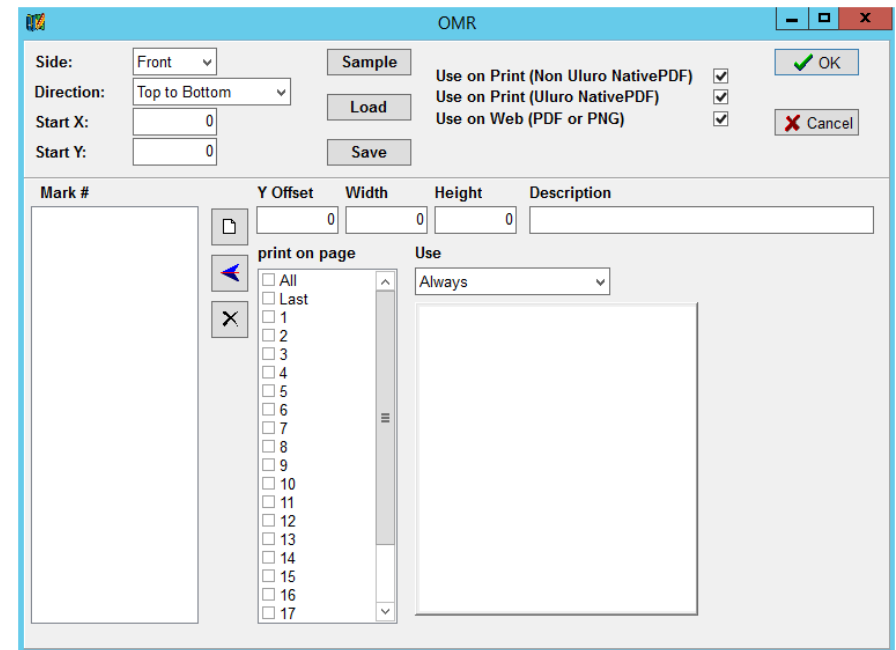
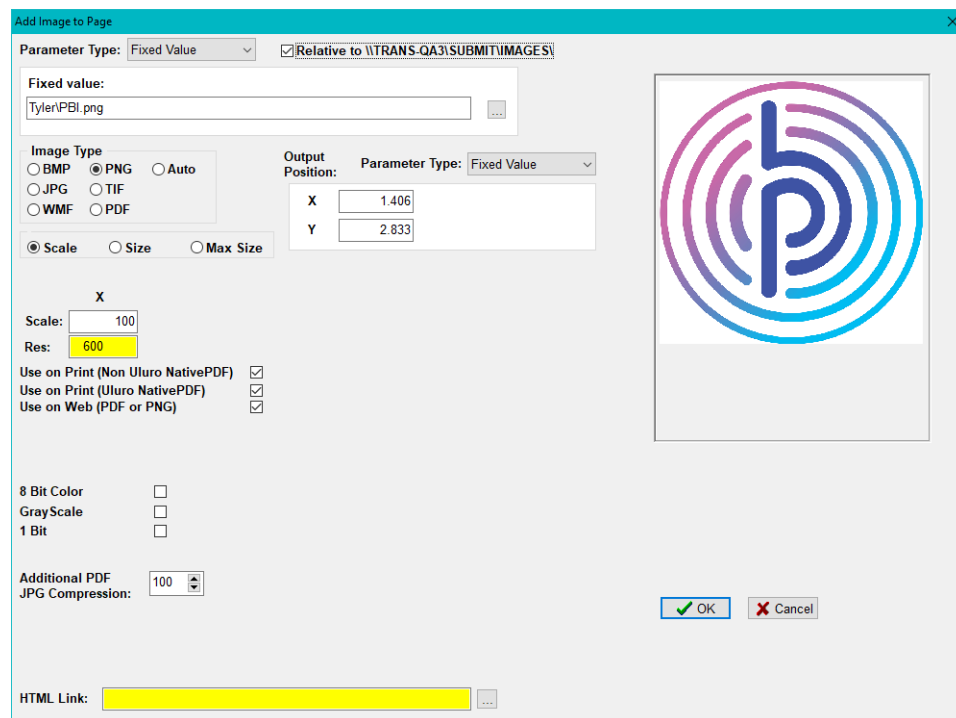
This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Barcode.](#)

The 'Barcode Mapping' dialog box includes a 'Parameter Type' dropdown set to 'Fixed Value' and an 'OK' button. It has a 'Fixed value' input field and a 'Cancel' button. The 'Output Position' section shows 'X' and 'Y' coordinates set to 0, with a 'Parameter Type' dropdown set to 'Fixed Value'. A 'Size' field is set to 0, and a 'Rotation' field is set to 0. The 'Barcode Type' dropdown is set to 'Ean 8', with a note '8 digits (7 digits + 1 check digit)'. The 'Background Color' section has a 'Param Type' dropdown set to 'Fixed Value' and a 'Transparent' checkbox. The 'Barcode Color' section has a 'Param Type' dropdown set to 'Fixed Value'. Checkboxes for 'Use on Print (Non Uluro NativePDF)', 'Use on Print (Uluro NativePDF)', and 'Use on Web (PDF or PNG)' are all checked.

OMR

This allows for the display of OMR Marks for a Document.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [OMR](#).



Append Image

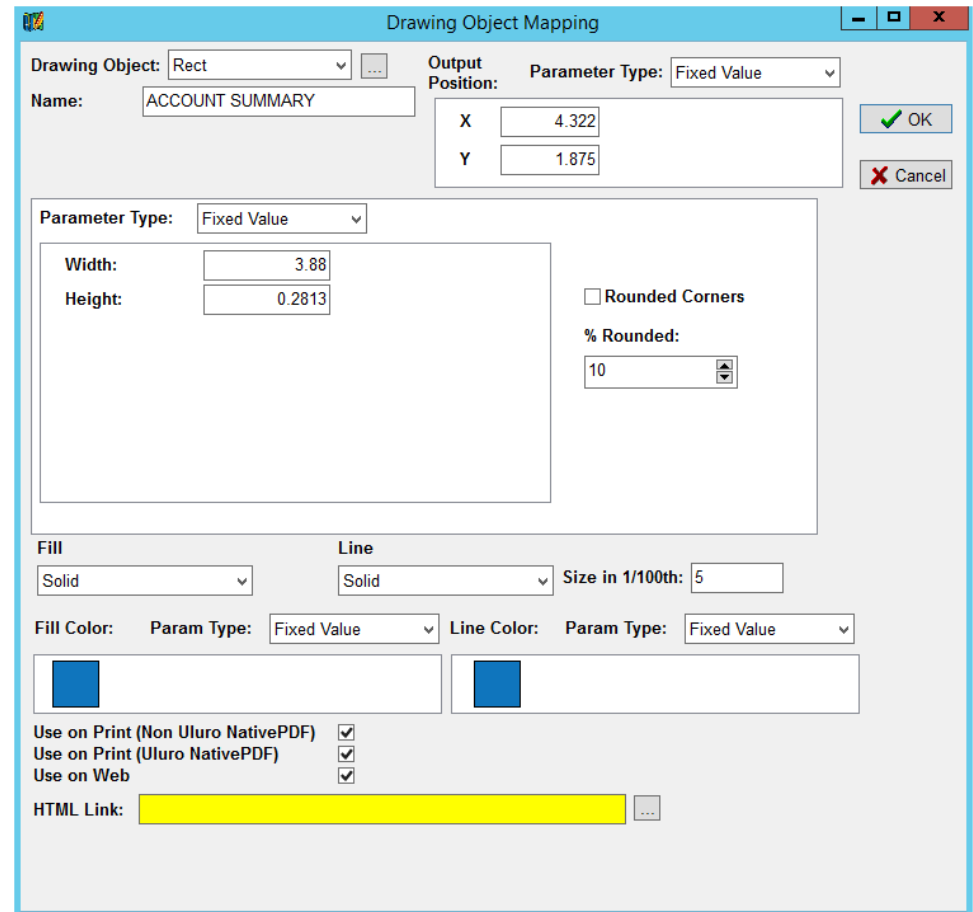
This allows defining of an image to output.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Append Image](#).

Drawing Object

This command allows simple drawing of arcs, polygons, rectangles, circles, and lines.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Drawing Object](#).



The image shows a software dialog box titled "Drawing Object Mapping". It contains various settings for creating a drawing object. At the top, "Drawing Object" is set to "Rect" and "Name" is "ACCOUNT SUMMARY". The "Output Position" section shows X as 4.322 and Y as 1.875. Below this, a larger section for "Parameter Type" (set to "Fixed Value") includes "Width" (3.88) and "Height" (0.2813). To the right of these are checkboxes for "Rounded Corners" (unchecked) and a "% Rounded" spinner set to 10. The "Fill" and "Line" sections both show "Solid" as the style. "Fill Color" and "Line Color" are both set to a blue color. At the bottom, there are three checked checkboxes: "Use on Print (Non Uluro NativePDF)", "Use on Print (Uluro NativePDF)", and "Use on Web". An "HTML Link" field is present and highlighted in yellow.

Property	Value
Drawing Object	Rect
Name	ACCOUNT SUMMARY
Output Position X	4.322
Output Position Y	1.875
Parameter Type	Fixed Value
Width	3.88
Height	0.2813
Rounded Corners	☐
% Rounded	10
Fill Style	Solid
Line Style	Solid
Fill Color	Blue
Line Color	Blue
Use on Print (Non Uluro NativePDF)	☒
Use on Print (Uluro NativePDF)	☒
Use on Web	☒
HTML Link	[Yellow Highlighted Field]

Graph Object

This allows the user to create a graph(s) on the output.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Graph Object](#).

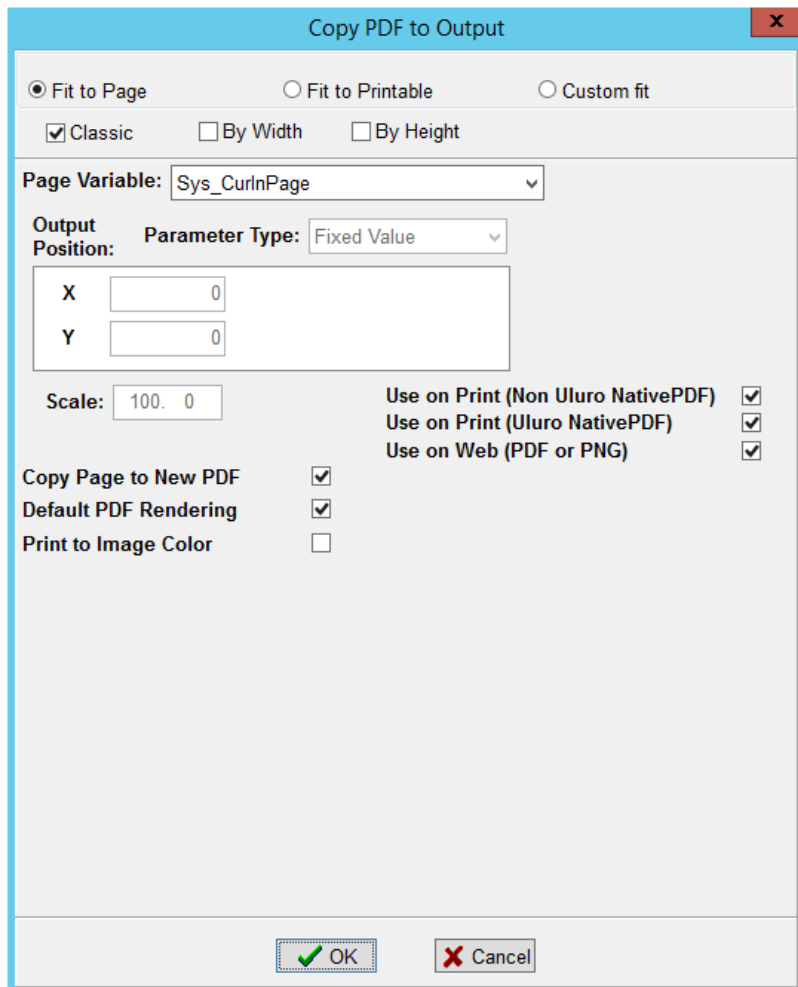
The image shows the 'Graph Object Maintenance' dialog box. It has a title bar with standard window controls. The main area is divided into several sections:

- Name:** A text field containing 'vertical bar graph'.
- Output Position:** A dropdown menu set to 'Fixed Value'.
- Width/Height:** Two text fields. 'Width' is empty, and 'Height' contains '3.6979'.
- Param Type:** A dropdown menu set to 'Fixed Value'.
- Use on Print:** Three checkboxes: 'Use on Print (Non Uluro NativePDF)', 'Use on Print (Uluro NativePDF)', and 'Use on Web (PDF or PNG)', all of which are checked.
- HTML Link:** A yellow text field with a small '...' button to its right.
- OK/Cancel:** Two buttons on the right side.
- Graphs:** A list box on the left containing 'TOTAL USAGE'. To its right are three buttons: a red plus sign, a red X, and a small icon.
- Chart Preview:** A bar chart titled 'TOTAL USAGE' showing data for the months of January through July. The y-axis ranges from 0 to 200. The bars are blue.
- General Tab:** The bottom section of the dialog, containing:
 - Chart Title:** A text field with 'Fixed:TOTAL USAGE'.
 - Font:** A button next to the chart title field.
 - Transparent:** A checked checkbox.
 - Shadow:** An unchecked checkbox with a black square icon.
 - Border:** An unchecked checkbox with a black square icon.
 - Line Style:** A group box containing four radio buttons and four line style icons (solid, dashed, dotted, and dash-dot).
 - Size:** A spinner box set to '1'.
 - Round:** A spinner box set to '0'.

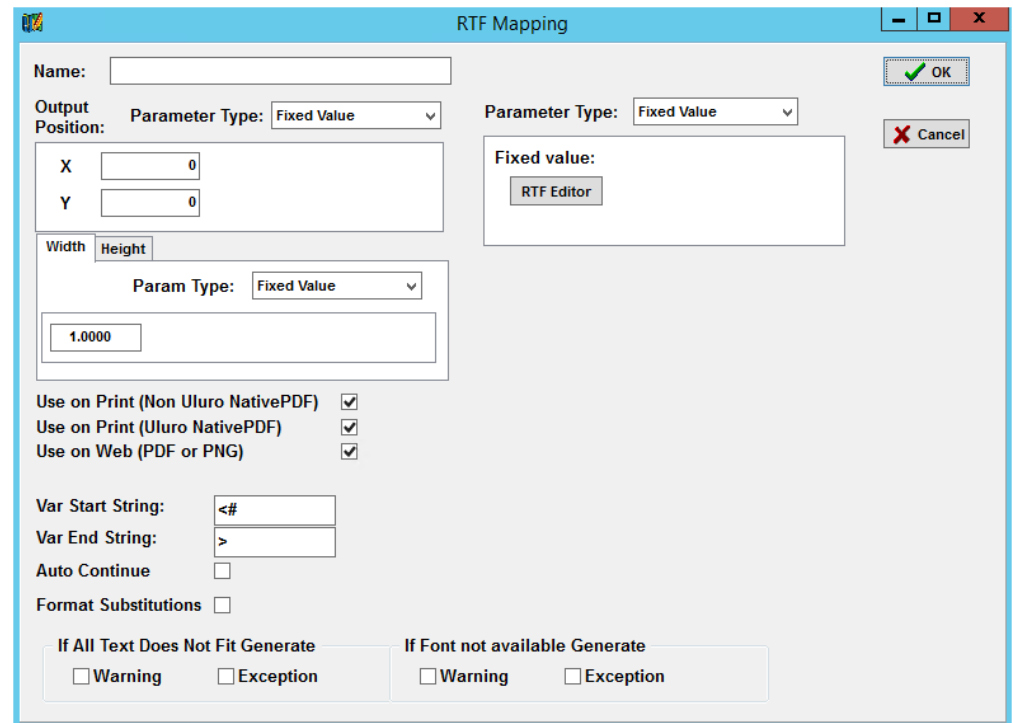
RTF

The RTF Command allows defining of a Rich Text Format paragraph to output.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Rich Text Para](#).



The "Copy PDF to Output" dialog box has a title bar with a close button. It contains three radio buttons for "Fit to Page" (selected), "Fit to Printable", and "Custom fit". Below these are three checkboxes: "Classic" (checked), "By Width", and "By Height". A "Page Variable" dropdown menu is set to "Sys_CurlnPage". The "Output Position" section has a "Parameter Type" dropdown set to "Fixed Value" and two input fields for "X" and "Y", both containing "0". A "Scale" input field contains "100.0". On the right, there are three checked checkboxes: "Use on Print (Non Uluro NativePDF)", "Use on Print (Uluro NativePDF)", and "Use on Web (PDF or PNG)". At the bottom left, there are three checkboxes: "Copy Page to New PDF" (checked), "Default PDF Rendering" (checked), and "Print to Image Color" (unchecked). At the bottom right, there are "OK" and "Cancel" buttons.



The "RTF Mapping" dialog box has a title bar with standard window controls. It features a "Name:" input field. The "Output Position" section has a "Parameter Type" dropdown set to "Fixed Value" and two input fields for "X" and "Y", both containing "0". Below this is a "Width" and "Height" section with a "Param Type" dropdown set to "Fixed Value" and an input field containing "1.0000". On the right, there is a "Fixed value:" section with an "RTF Editor" button. At the bottom right, there are "OK" and "Cancel" buttons. The "Use on Print" section has three checked checkboxes: "Use on Print (Non Uluro NativePDF)", "Use on Print (Uluro NativePDF)", and "Use on Web (PDF or PNG)". The "Var Start String" input field contains "<#", and the "Var End String" input field contains ">". There are checkboxes for "Auto Continue" and "Format Substitutions", both of which are unchecked. At the bottom, there are two groups of checkboxes: "If All Text Does Not Fit Generate" (Warning and Exception) and "If Font not available Generate" (Warning and Exception), all of which are unchecked.

PDF Copy

The PDF Copy Command allows the copy an input PDF page to output.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [PDF Copy](#).

Line Drawing

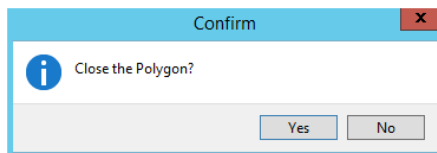
The Line Drawing Command allows the use of the cursor to draw lines to output.

This command can be accessed in two ways. The first is to check the Line Drawing checkbox from the Ribbon bar Disp. The 2nd is to right-click on the Output and selecting the Line Drawing from the Pop-up menu.

Once the box has been checked, or Line Drawing is selected from the Pop-up box, the cursor will change from a normal select arrow to a precision select.

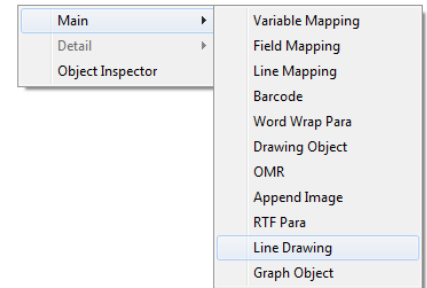
The next step depends on whether a single line is desired or a multi-line drawing. For a single Line drawing position the cursor on the output page and left click. This will start the line. Holding the Left mouse button down drag to the end point. When the Mouse button is released the line will be drawn.

For a multiline drawing hold the Shift key and position the cursor on the output page and click the left mouse button. This will start the drawing. Let the left mouse button up and move to the next point (with the Shift key still down). Click on the next point position. Continue clicking until all the points are selected. This will draw a line from point to point. Before the Last point release the Shift key. When the Last point is selected a confirmation window will be displayed.



Select yes to draw a line from the last point to the first point. Select no to leave the points unconnected.

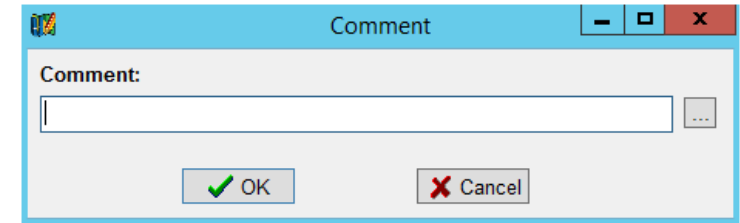
Once completed the Drawing can be edited using the Drawing Object Mapping edit form.

A large dialog box titled 'Drawing Object Mapping' with a blue header bar. It contains several sections for configuring a drawing object. At the top, 'Drawing Object' is set to 'Polygon' and 'Name' is 'POLY DRAWING'. Below this, 'Output Position' shows X: 0.948 and Y: 4.729. A 'Points' list contains four fixed values: 'Fixed: 0.0000; 0.0000', 'Fixed: 2.1458; 0.5487', 'Fixed: 1.4461; 1.6458', and 'Fixed: 0.0466; 0.0196'. To the right of the points list are navigation buttons (up, down, left, right, and a cross). Below the points list, 'Fill' is set to 'Clear' and 'Line' is set to 'Solid'. 'Fill Color' and 'Line Color' are both set to 'Fixed Value'. At the bottom, there are checkboxes for 'Use on Print (Non Uluro NativePDF)', 'Use on Print (Uluro NativePDF)', and 'Use on Web', all of which are checked. An 'HTML Link' field is also present.

Comment

This allows the user to add a comment into the command window. Comments do not display or print; they are for organization and clarifying the map commands.

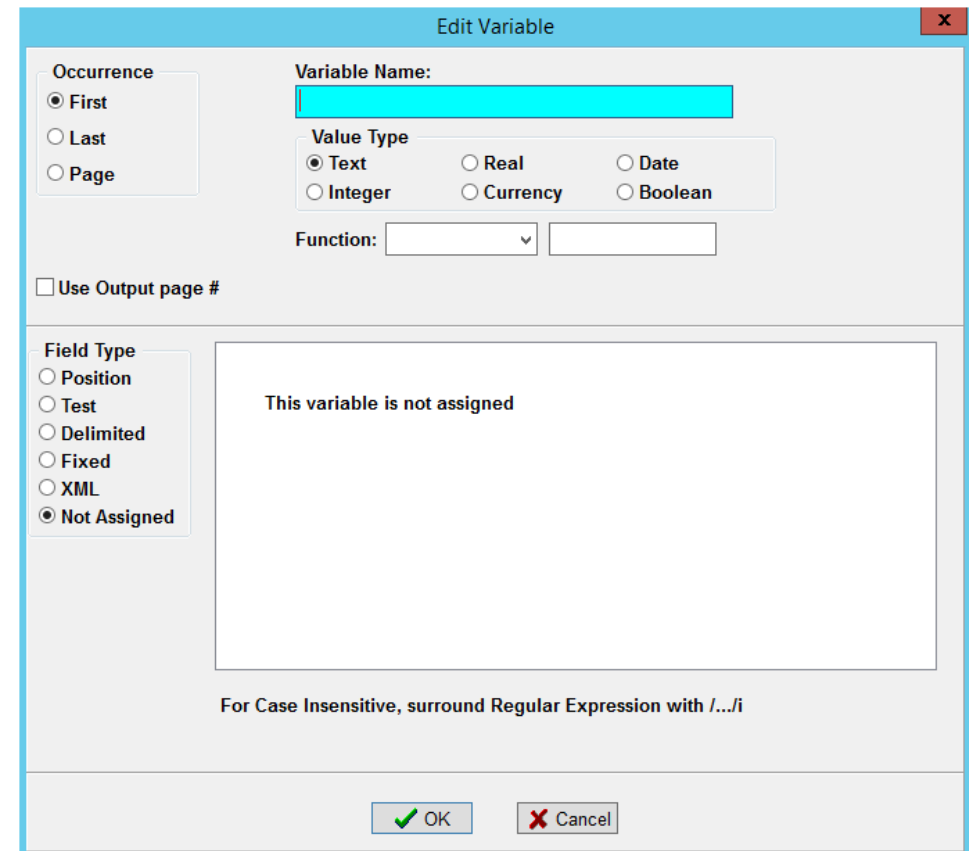
This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Comment](#).

A screenshot of a dialog box titled "Comment". It has a light blue header bar with a small icon on the left and standard window controls (minimize, maximize, close) on the right. The main area contains a text input field with a placeholder "Comment:" and a small "..." button to its right. At the bottom, there are two buttons: "OK" with a green checkmark icon and "Cancel" with a red X icon.

Define Variable

The Define Variable command allows a variable to be defined.

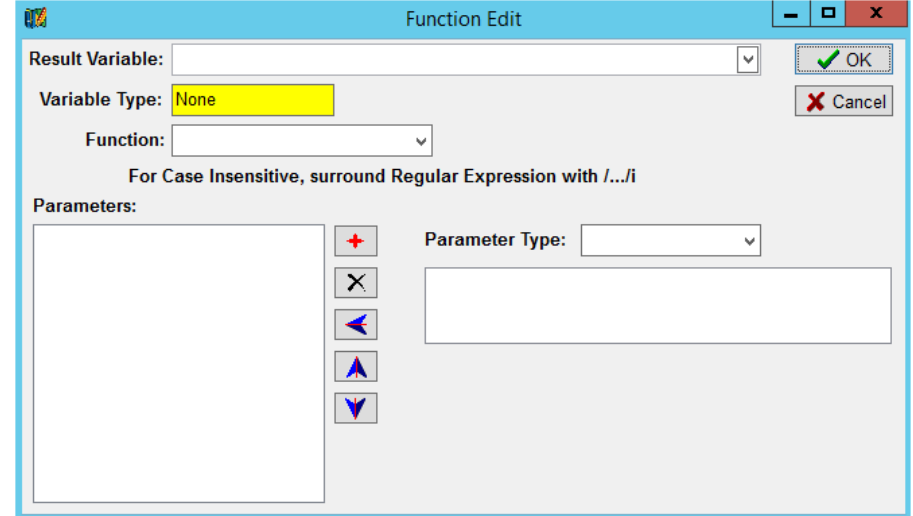
This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Variables](#).

A screenshot of a dialog box titled "Edit Variable". It has a light blue header bar with a small icon on the left and a close button on the right. The main area is divided into several sections. On the left, there are two groups of radio buttons: "Occurrence" with options "First" (selected), "Last", and "Page"; and "Field Type" with options "Position", "Test", "Delimited", "Fixed", "XML", and "Not Assigned" (selected). To the right of these is a "Variable Name:" label followed by a text input field. Below that is a "Value Type" section with radio buttons for "Text" (selected), "Integer", "Real", "Currency", "Date", and "Boolean". Further right is a "Function:" label followed by a dropdown menu and a text input field. Below these is a checkbox labeled "Use Output page #". The bottom half of the dialog is a large text area containing the text "This variable is not assigned". At the very bottom, there is a note: "For Case Insensitive, surround Regular Expression with /.../i". At the bottom right, there are "OK" and "Cancel" buttons with green checkmark and red X icons respectively.

Function

The Function command allows the result of a function to be assigned to a variable. The variable type for the result variable will determine the function options.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Functions](#).

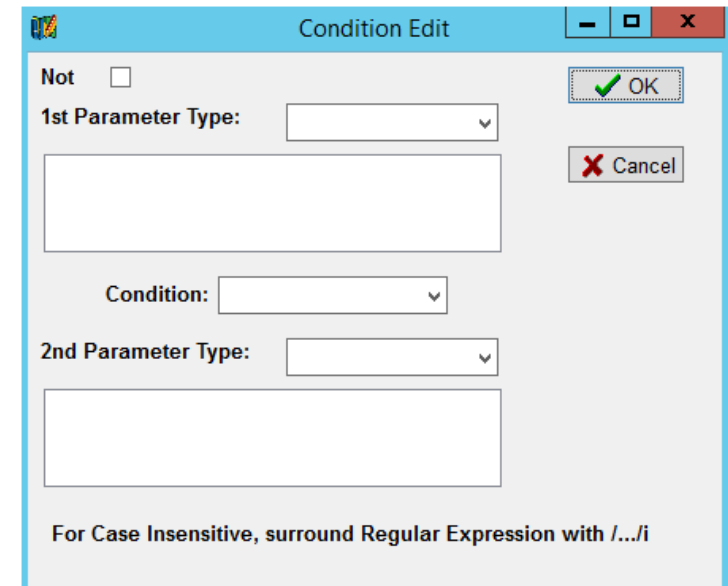


The Function Edit dialog box is used to configure a function. It features a title bar with standard window controls. The main area includes a 'Result Variable' dropdown, a 'Variable Type' dropdown (currently set to 'None'), and a 'Function' dropdown. Below these is a note: 'For Case Insensitive, surround Regular Expression with /.../i'. The 'Parameters' section contains a large text area, a 'Parameter Type' dropdown, and a set of navigation buttons (add, delete, left, right, up, down). 'OK' and 'Cancel' buttons are in the top right corner.

Conditional

The Conditional command allows the branching of actions based on a condition.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Conditional](#).

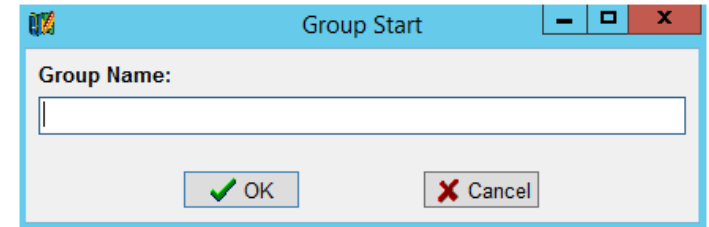


The Condition Edit dialog box is used to configure a conditional action. It features a title bar with standard window controls. The main area includes a 'Not' checkbox, a '1st Parameter Type' dropdown, a large text area for the first parameter, a 'Condition' dropdown, a '2nd Parameter Type' dropdown, and a large text area for the second parameter. Below these is a note: 'For Case Insensitive, surround Regular Expression with /.../i'. 'OK' and 'Cancel' buttons are in the top right corner.

Group

The Group command allows grouping commands together. This is useful for groups of commands that are executed based on a condition or for creating a group of commands that may need to be moved or saved for use later.

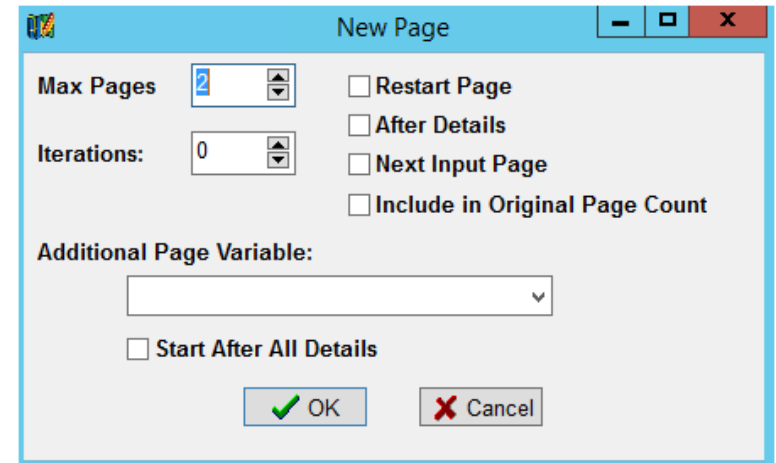
This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Start Group](#).



New Page

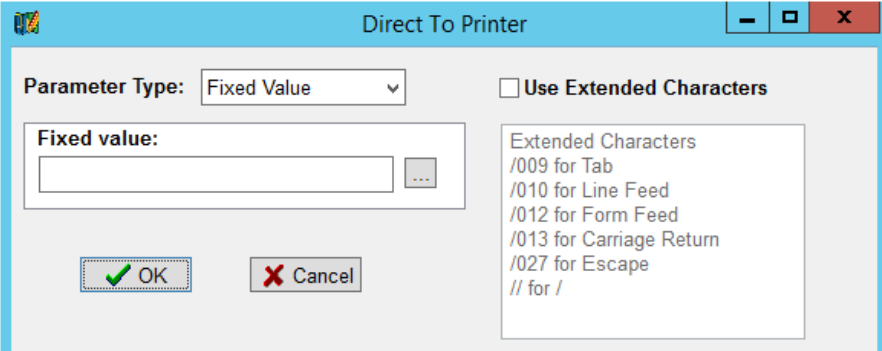
The New Page command allows additional output pages to be created.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [New Page](#).



Direct to Printer

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Direct To Printer](#).



The "Direct To Printer" dialog box has a light blue title bar with standard window controls. It contains a "Parameter Type" dropdown menu set to "Fixed Value". To the right is an unchecked checkbox labeled "Use Extended Characters". Below the dropdown is a "Fixed value:" label followed by a text input field and a small button with three dots. At the bottom are "OK" and "Cancel" buttons. On the right side, there is a list of "Extended Characters" with their corresponding codes: /009 for Tab, /010 for Line Feed, /012 for Form Feed, /013 for Carriage Return, /027 for Escape, and // for /.

Parameter Type: Fixed Value

Fixed value:

Use Extended Characters

Extended Characters

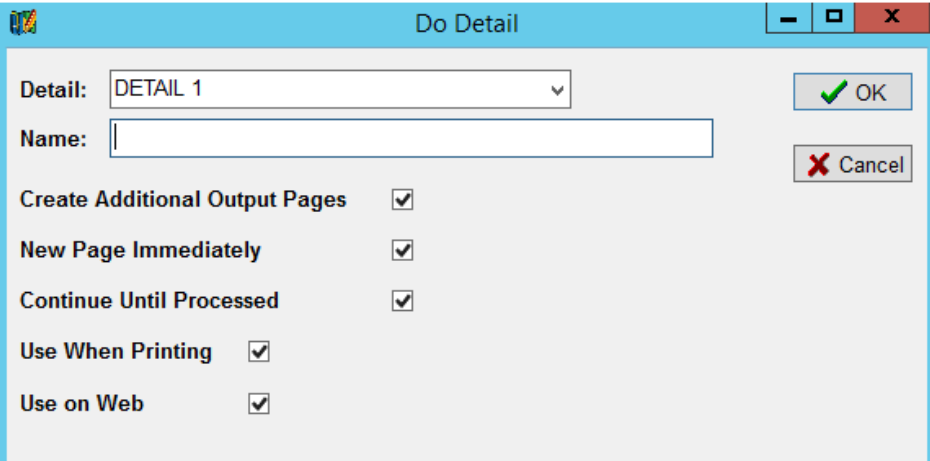
- /009 for Tab
- /010 for Line Feed
- /012 for Form Feed
- /013 for Carriage Return
- /027 for Escape
- // for /

OK Cancel

DoDetail

Manually calls a detail section(s) at any point. The detail is called at the end of the display commands by default. This is helpful for total page count, calculations, things needed in another detail section, things needed within the display commands, or for output definition.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [DoDetail](#).



The "Do Detail" dialog box has a light blue title bar with standard window controls. It features a "Detail:" dropdown menu set to "DETAIL 1" and a "Name:" text input field. On the right are "OK" and "Cancel" buttons. Below these are several checkboxes, all of which are checked: "Create Additional Output Pages", "New Page Immediately", "Continue Until Processed", "Use When Printing", and "Use on Web".

Detail: DETAIL 1

Name:

OK Cancel

Create Additional Output Pages ☒

New Page Immediately ☒

Continue Until Processed ☒

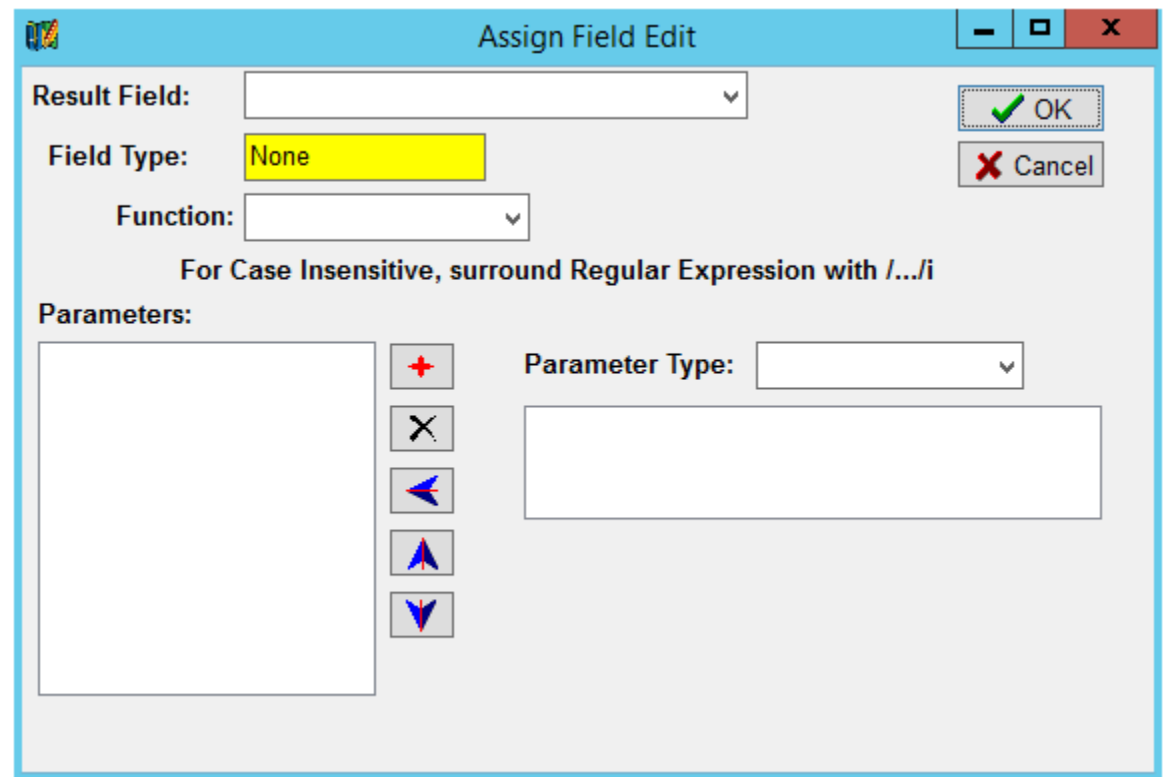
Use When Printing ☒

Use on Web ☒

Assign Field

The Assign Field command allows a field to be assigned a value based on the result of a function. The Functions available are similar to the Function command.

This is the same command that is found by Clicking the red plus sign on the Map Commands Display tab and selecting [Assign Field](#).

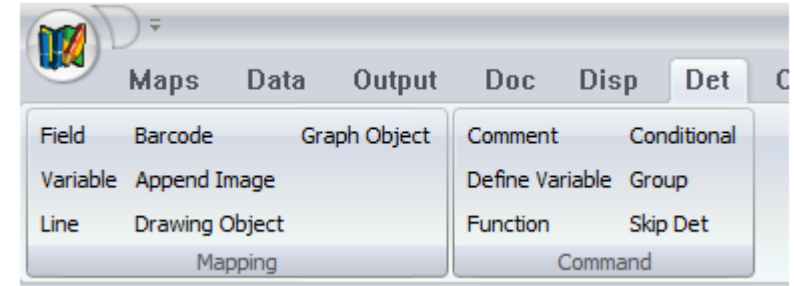


The image shows a software dialog box titled "Assign Field Edit". It has a standard Windows-style title bar with minimize, maximize, and close buttons. The dialog contains several input fields and controls:

- Result Field:** A dropdown menu.
- Field Type:** A dropdown menu currently showing "None" in a yellow-highlighted box.
- Function:** A dropdown menu.
- Buttons:** "OK" (with a green checkmark icon) and "Cancel" (with a red X icon) are located in the top right corner.
- Instructions:** Below the Function dropdown, it says "For Case Insensitive, surround Regular Expression with /.../i".
- Parameters:** A section on the left with a large empty text area. To its right are five small icons: a red plus sign, a black X, and three blue arrows pointing left, right, and down.
- Parameter Type:** A dropdown menu on the right side of the Parameters section.
- Text Area:** A large empty text area below the Parameter Type dropdown.

Det Ribbon

This bar contains some of the commands that will appear in the Detail Tab of the Map Commands form.



Field

This allows the user to map a field value onto the output.

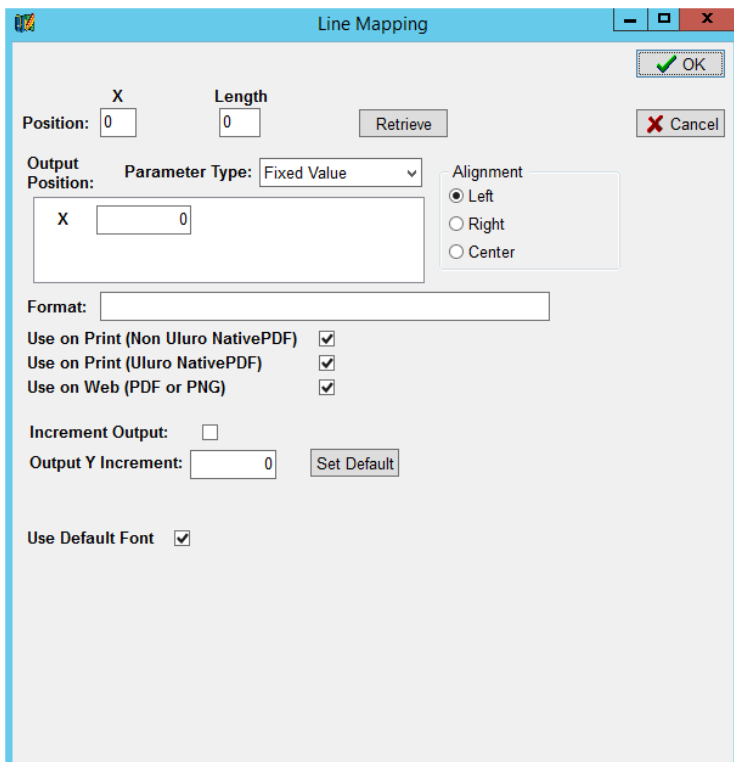
This is the same command that is found by Clicking the red plus sign on the Map Commands Detail tab and selecting [Field Mapping](#).

A screenshot of the 'Field Mapping' dialog box. The dialog has a title bar with a minus, maximize, and close button. The 'Field' dropdown is set to 'ADDR 1' and the 'Text' dropdown is set to 'Text'. The 'Position' dropdown is set to 'Fixed Value'. The 'X' input field is set to '0'. The 'Alignment' section has radio buttons for 'Left' (selected), 'Center', 'Right', and 'Decimal'. The 'Format' input field is empty. The 'Use on Print (Non Uluro NativePDF)' checkbox is checked. The 'Use on Print (Uluro NativePDF)' checkbox is checked. The 'Use on Web (PDF or PNG)' checkbox is checked. The 'Increment Output' checkbox is unchecked. The 'Output Y Increment' input field is set to '0' and there is a 'Set Default' button next to it. The 'HTML Link' input field is highlighted in yellow and has a browse button next to it. The 'Use Default Font' checkbox is checked. There are 'OK' and 'Cancel' buttons at the bottom right.

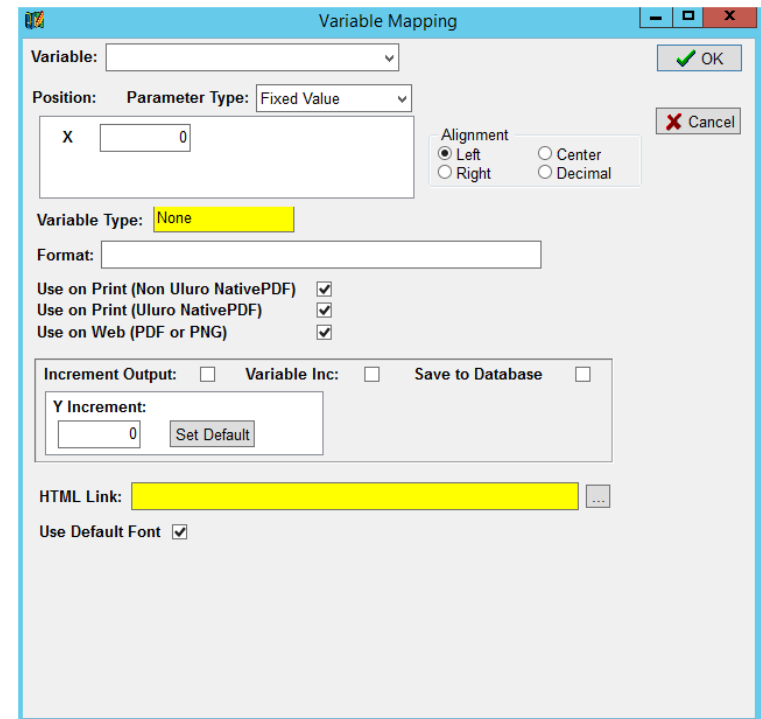
Variable

This allows the user to map a variable value onto the output.

This is the same command that is found by Clicking the red plus sign on the Map Commands Detail tab and selecting [Variable Mapping](#).



The Line Mapping dialog box is titled "Line Mapping". It features a "Position:" field with a value of "0" and a "Length:" field with a value of "0". A "Retrieve" button is located next to the "Length:" field. Below these fields is an "Output Position:" field with a value of "X" and a "Parameter Type:" dropdown menu set to "Fixed Value". To the right of the "Output Position:" field is an "Alignment" section with three radio buttons: "Left" (selected), "Right", and "Center". Below the "Output Position:" field is a "Format:" text box. Underneath the "Format:" box are three checkboxes: "Use on Print (Non Uluro NativePDF)" (checked), "Use on Print (Uluro NativePDF)" (checked), and "Use on Web (PDF or PNG)" (checked). Below these checkboxes are two more checkboxes: "Increment Output:" (unchecked) and "Output Y Increment:" (with a value of "0" and a "Set Default" button). At the bottom left is a "Use Default Font" checkbox (checked). The dialog has "OK" and "Cancel" buttons in the top right corner.



The Variable Mapping dialog box is titled "Variable Mapping". It features a "Variable:" dropdown menu. Below it is a "Position:" field with a value of "0" and a "Parameter Type:" dropdown menu set to "Fixed Value". To the right of the "Position:" field is an "Alignment" section with three radio buttons: "Left" (selected), "Right", and "Center". Below the "Position:" field is a "Variable Type:" dropdown menu set to "None". Below the "Variable Type:" dropdown is a "Format:" text box. Underneath the "Format:" box are three checkboxes: "Use on Print (Non Uluro NativePDF)" (checked), "Use on Print (Uluro NativePDF)" (checked), and "Use on Web (PDF or PNG)" (checked). Below these checkboxes are two more checkboxes: "Increment Output:" (unchecked) and "Variable Inc:" (unchecked). Below these checkboxes is a "Save to Database" checkbox (unchecked). Below the "Save to Database" checkbox is a "Y Increment:" field with a value of "0" and a "Set Default" button. At the bottom is an "HTML Link:" field with a value of "0" and a "Use Default Font" checkbox (checked). The dialog has "OK" and "Cancel" buttons in the top right corner.

Line

This allows input data to be directly mapped to the output.

This is the same command that is found by Clicking the red plus sign on the Map Commands Detail tab and selecting [Line Mapping](#).

Barcode

This allows the user to output a barcode.

This is the same command that is found by Clicking the red plus sign on the Map Commands Detail tab and selecting [Barcode](#).

The 'Add Image to Page' dialog box is shown. It has a title bar with a close button. The main area is divided into several sections. At the top, there's a 'Parameter Type' dropdown set to 'Fixed Value' and a checkbox for 'Relative to \\TRANSQA2\\SUBMIT\\IMAGES\\'. Below this is a 'Fixed value:' text field. To the right of the text field is a large gray rectangular area. Below the 'Fixed value' field, there's a section for 'Image Type' with radio buttons for BMP, PNG, Auto, JPG, TIF, WMF, and PDF. Below this are 'Scale' and 'Size' radio buttons, with 'Scale' selected. Under 'Scale', there are 'X' and 'Y' input fields, with 'X' set to 100 and 'Y' set to 600. Below these are three checkboxes: 'Use on Print (Non Uluro NativePDF)' (checked), 'Use on Print (Uluro NativePDF)' (checked), and 'Use on Web (PDF or PNG)' (checked). At the bottom left, there are checkboxes for '8 Bit Color', '1 Bit', and 'GrayScale', all of which are unchecked. Below these is a 'JPG Compression' dropdown set to '100'. At the bottom, there are 'Increment Output' and 'Output Y Increment' fields, with 'Output Y Increment' set to '0.0000'. There are 'Set Default', 'OK', and 'Cancel' buttons at the bottom right. An 'HTML Link:' field is at the very bottom.

The 'Barcode Mapping' dialog box is shown. It has a title bar with standard window controls. The main area contains several sections. At the top, there's a 'Parameter Type' dropdown set to 'Fixed Value' and 'OK'/'Cancel' buttons. Below this is a 'Fixed value:' text field. To the right of the text field are 'X' and 'Y' input fields, both set to 0. Below these are 'Output Position' and 'Rotation' fields, both set to 0. Below these is a 'Barcode Type' dropdown set to 'Ean 8'. Below this is a text field for '8 digits (7 digits + 1 check digit)'. Below this is a 'Background Color' section with a 'Param Type' dropdown set to 'Fixed Value' and a 'Transparent' checkbox. Below this is a 'Barcode Color' section with a 'Param Type' dropdown set to 'Fixed Value' and a color selection area. At the bottom, there are 'Increment Output' and 'Output Y Increment' fields, with 'Output Y Increment' set to 0 and a 'Set Default' button. There are also three checkboxes: 'Use on Print (Non Uluro NativePDF)' (checked), 'Use on Print (Uluro NativePDF)' (checked), and 'Use on Web (PDF or PNG)' (checked).

Append Image

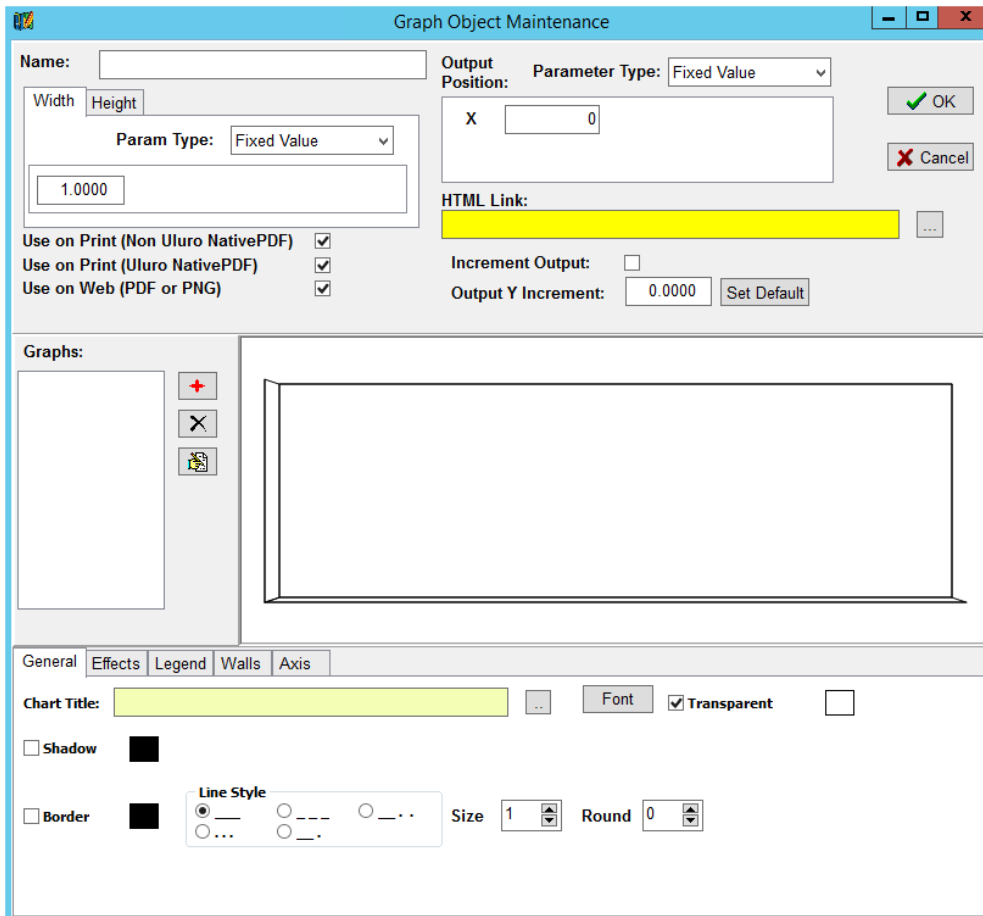
This allows defining of an image to output.

This is the same command that is found by Clicking the red plus sign on the Map Commands Detail tab and selecting [Append Image](#).

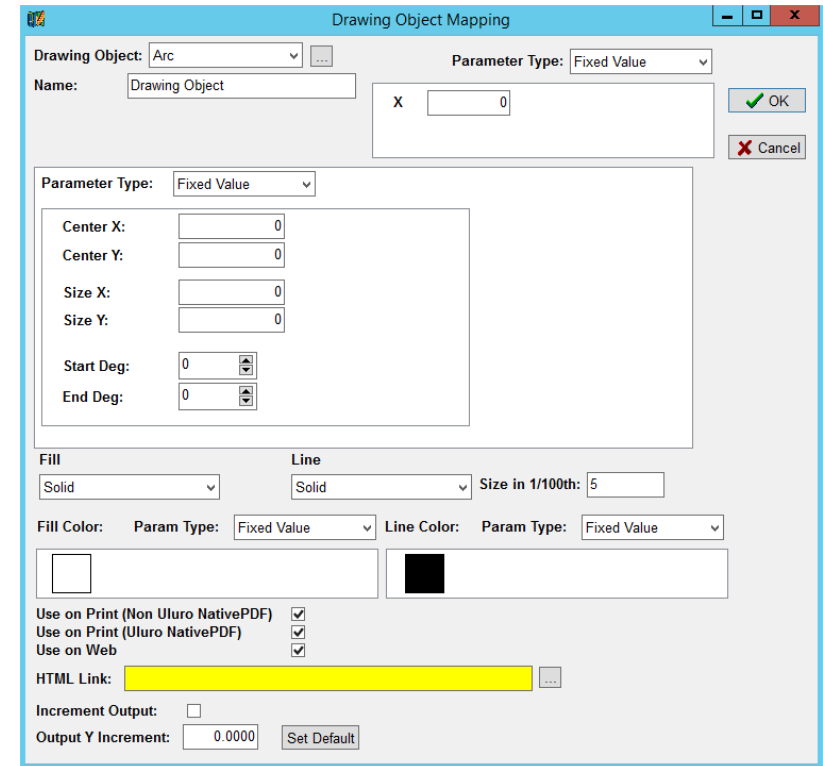
Drawing Object

This command allows simple drawing of arcs, polygons, rectangles, circles, and lines.

This is the same command that is found by Clicking the red plus sign on the Map Commands Detail tab and selecting [Drawing Object](#).



The **Graph Object Maintenance** dialog box is used for configuring a graph object. It includes fields for Name, Width, Height, and Param Type (Fixed Value). The Output Position section shows X and Y coordinates, with X set to 0. The HTML Link field is highlighted in yellow. The Use on Print (Non Uluro NativePDF) and Use on Print (Uluro NativePDF) checkboxes are checked. The Output Y Increment is set to 0.0000. The Graphs section shows a preview of a graph with a red plus sign button. The General tab is selected, showing Chart Title, Font, Transparent, Shadow, Border, Line Style, Size, and Round settings.



The **Drawing Object Mapping** dialog box is used for configuring a drawing object. It includes fields for Drawing Object (Arc), Name (Drawing Object), and Parameter Type (Fixed Value). The X coordinate is set to 0. The Parameter Type is Fixed Value. The Center X, Center Y, Size X, and Size Y fields are all set to 0. The Start Deg and End Deg fields are both set to 0. The Fill and Line sections show Solid fill and line styles. The Fill Color and Line Color are both set to Fixed Value. The Use on Print (Non Uluro NativePDF) and Use on Print (Uluro NativePDF) checkboxes are checked. The HTML Link field is highlighted in yellow. The Output Y Increment is set to 0.0000.

Graph Object

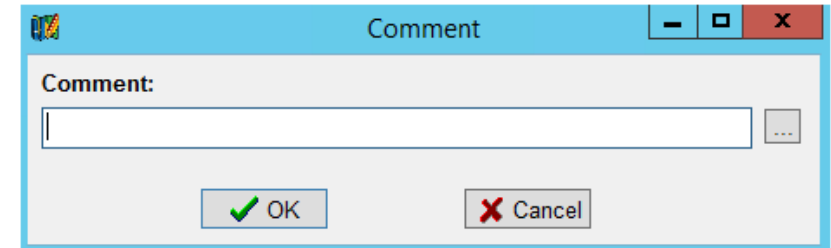
This allows the user to create a graph(s) on the output.

This is the same command that is found by Clicking the red plus sign on the Map Commands Detail tab and selecting [Graph Object](#).

Comment

This allows the user to add a comment into the command window. Comments do not display or print; they are for organization and clarifying the map commands.

This is the same command that is found by Clicking the red plus sign on the Map Commands Detail tab and selecting [Comment](#).

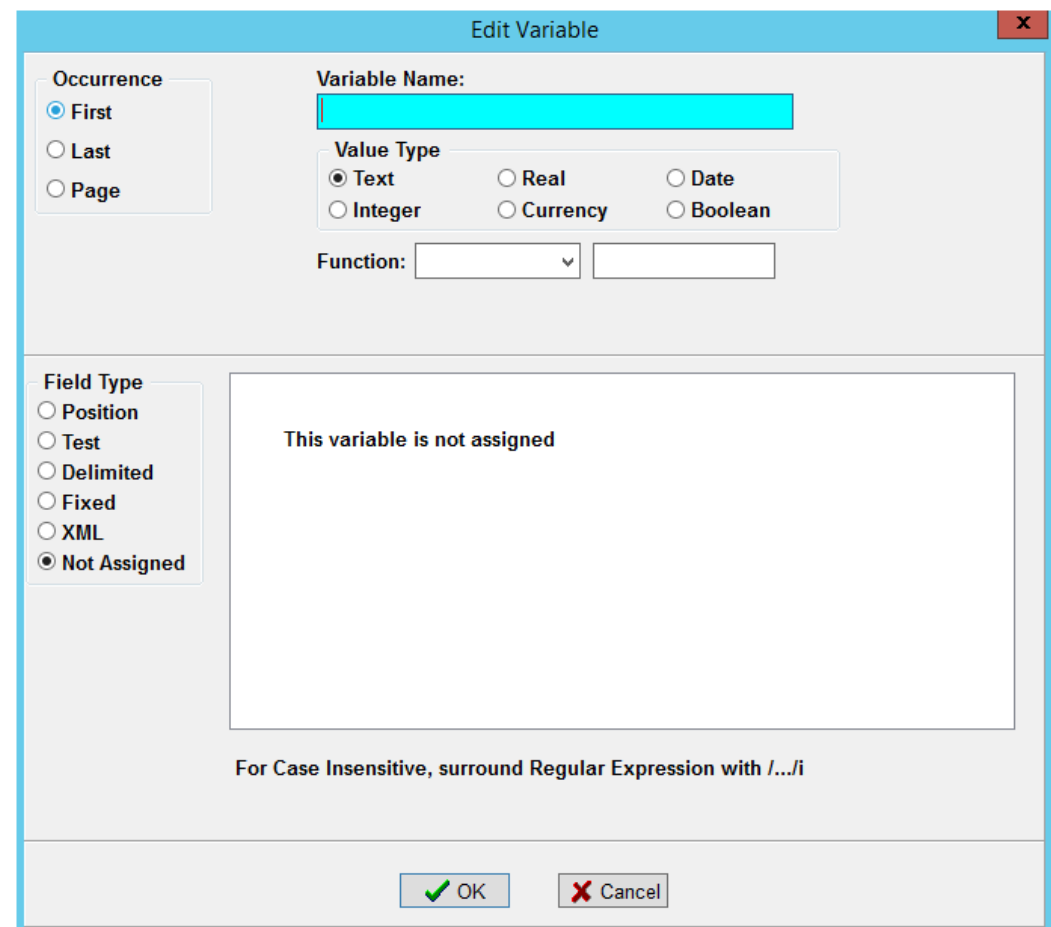


The screenshot shows a dialog box titled "Comment". It has a standard Windows-style title bar with minimize, maximize, and close buttons. Inside the dialog, there is a label "Comment:" followed by a text input field. To the right of the input field is a small button with three dots "...". At the bottom of the dialog, there are two buttons: "OK" with a green checkmark icon and "Cancel" with a red X icon.

Define Variable

The Define Variable command allows a variable to be defined.

This is the same command that is found by Clicking the red plus sign on the Map Commands Detail tab and selecting [Variables](#).

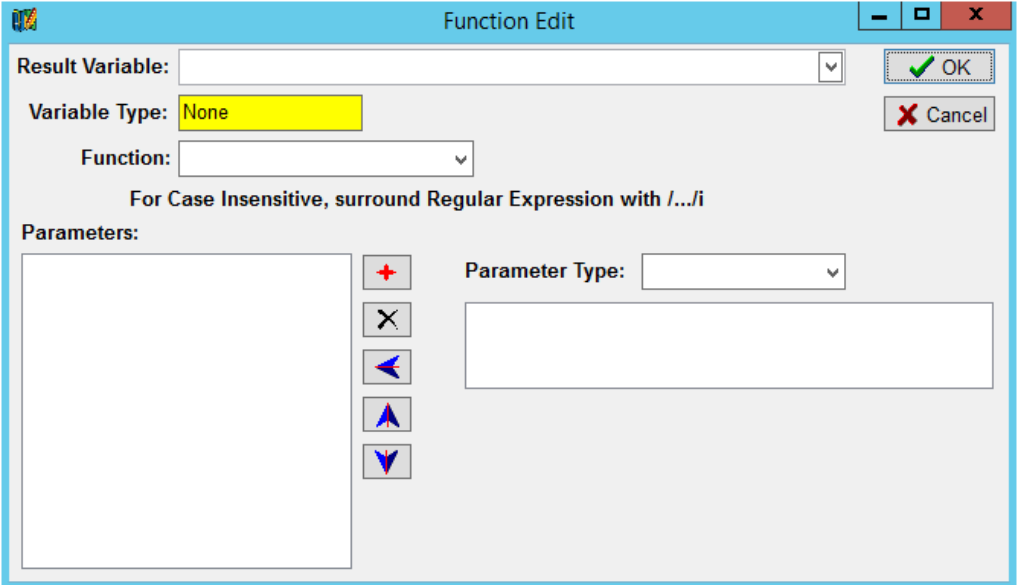


The screenshot shows a dialog box titled "Edit Variable". It has a standard Windows-style title bar. The dialog is divided into several sections. On the left, there is a group box "Occurrence" containing three radio buttons: "First" (selected), "Last", and "Page". To the right of this is a "Variable Name:" label followed by a text input field. Below the variable name is a "Value Type" section with six radio buttons: "Text" (selected), "Integer", "Real", "Currency", "Date", and "Boolean". Below the value type is a "Function:" label followed by a dropdown menu and a text input field. At the bottom left, there is a group box "Field Type" containing six radio buttons: "Position", "Test", "Delimited", "Fixed", "XML", and "Not Assigned" (selected). To the right of the field type is a large text area containing the message "This variable is not assigned". Below the text area is a note: "For Case Insensitive, surround Regular Expression with /.../i". At the bottom of the dialog, there are two buttons: "OK" with a green checkmark icon and "Cancel" with a red X icon.

Function

The Function command allows the result of a function to be assigned to a variable. The variable type for the result variable will determine the function options.

This is the same command that is found by Clicking the red plus sign on the Map Commands Detail tab and selecting [Functions](#).

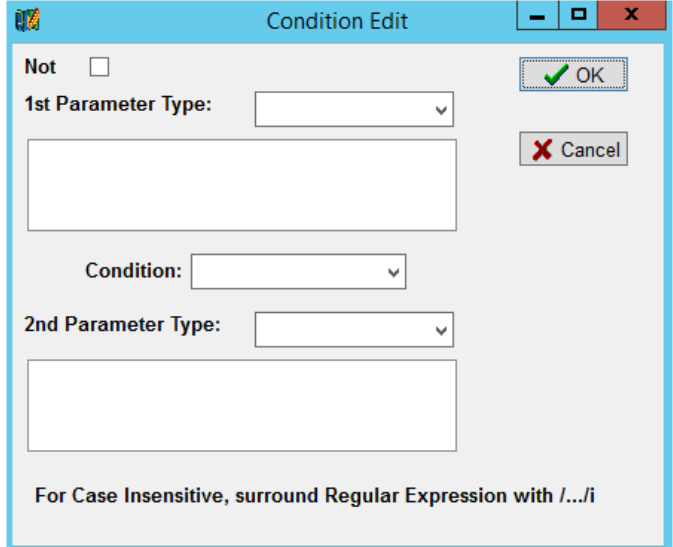


The Function Edit dialog box is used to configure a function. It features a title bar with a standard icon and window controls. The main area includes a 'Result Variable' dropdown, a 'Variable Type' dropdown (currently set to 'None'), and a 'Function' dropdown. Below these is a note: 'For Case Insensitive, surround Regular Expression with /.../i'. The 'Parameters' section consists of a large text area on the left and a 'Parameter Type' dropdown on the right. A vertical toolbar between the text area and the dropdown contains icons for adding (+), removing (X), and moving (arrows) parameters. 'OK' and 'Cancel' buttons are in the top right corner.

Conditional

The Conditional command allows the branching of actions based on a condition.

This is the same command that is found by Clicking the red plus sign on the Map Commands Detail tab and selecting [Conditional](#).

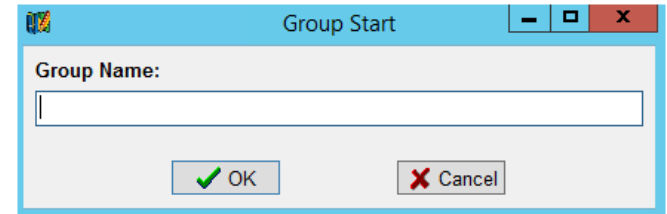


The Condition Edit dialog box is used to configure a conditional action. It has a title bar with a standard icon and window controls. The main area includes a 'Not' checkbox, a '1st Parameter Type' dropdown, a large text area for the first parameter, a 'Condition' dropdown, a '2nd Parameter Type' dropdown, and another large text area for the second parameter. A note at the bottom states: 'For Case Insensitive, surround Regular Expression with /.../i'. 'OK' and 'Cancel' buttons are in the top right corner.

Group

The Group command allows grouping commands together. This is useful for groups of commands that are executed based on a condition or for creating a group of commands that may need to be moved or saved for use later.

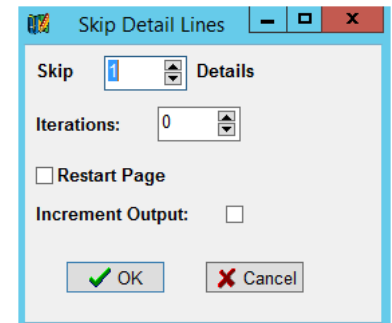
This is the same command that is found by Clicking the red plus sign on the Map Commands Detail tab and selecting [Start Group](#).



Skip Det

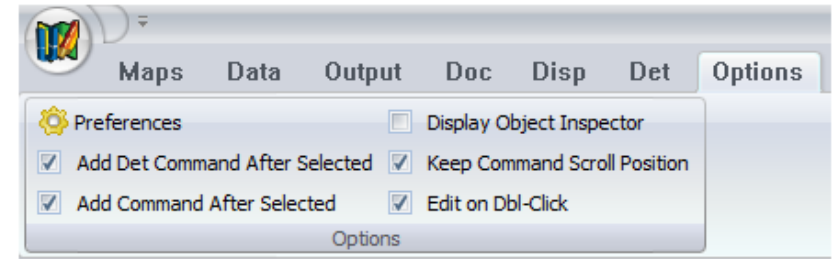
This allows the user to map a field value onto the output.

This is the same command that is found by Clicking the red plus sign on the Map Commands Detail tab and selecting [Skip Detail](#).



Options Ribbon

This bar is a way for the user to edit the Preference settings and access the Object Inspector.



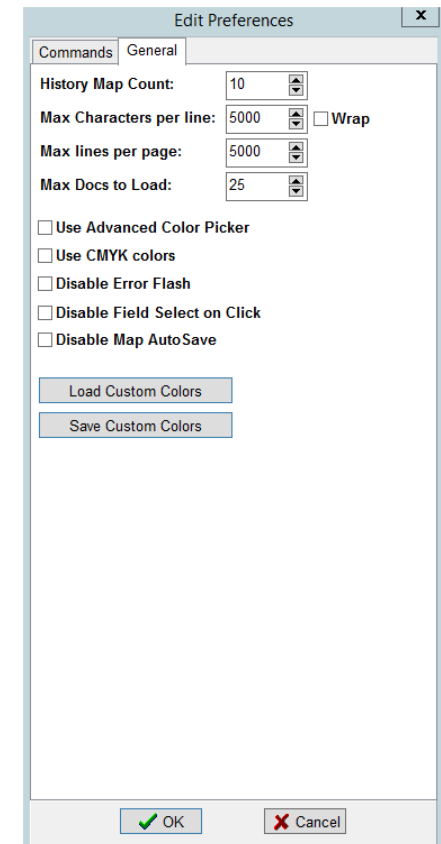
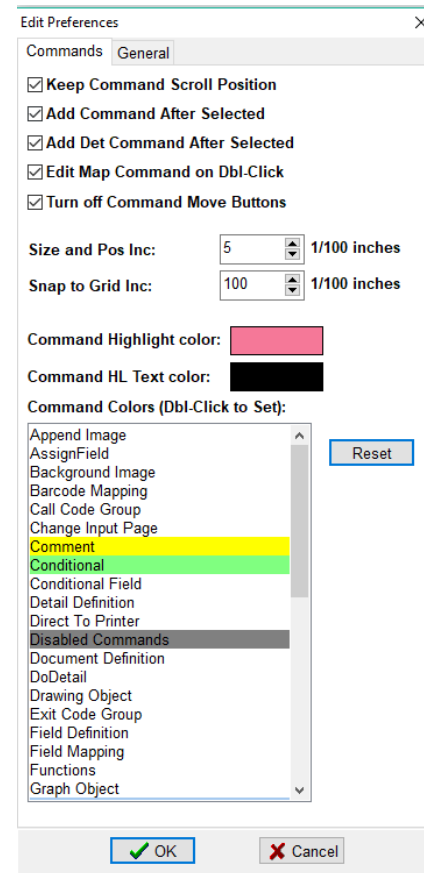
Preferences

Selecting this gives the user access to the [Preferences](#).

Add Det Command After Selected

When this is checked, the detail commands are added after the currently selected detail command. When unchecked, the detail commands are added before the currently selected command. The exception is the insert of a Conditional. The Conditional Command is always inserted before the currently selected command.

This can be checked/unchecked from the Options Ribbon or from the Preference settings. Both will display the current setting.



Add Command After Selected

When this is checked the non-detail commands are added after the currently selected non-detail command. When unchecked, the non-detail commands are added before the currently selected command. The exception is the insert of a Conditional. The Conditional Command is always inserted before the currently selected command.

This can be checked/unchecked from the Options Ribbon or from the Preference settings. Both will display the current setting.

Display Object Inspector

Checking this will display the Object Inspector. This can also be accessed by right-clicking on the Output Window.

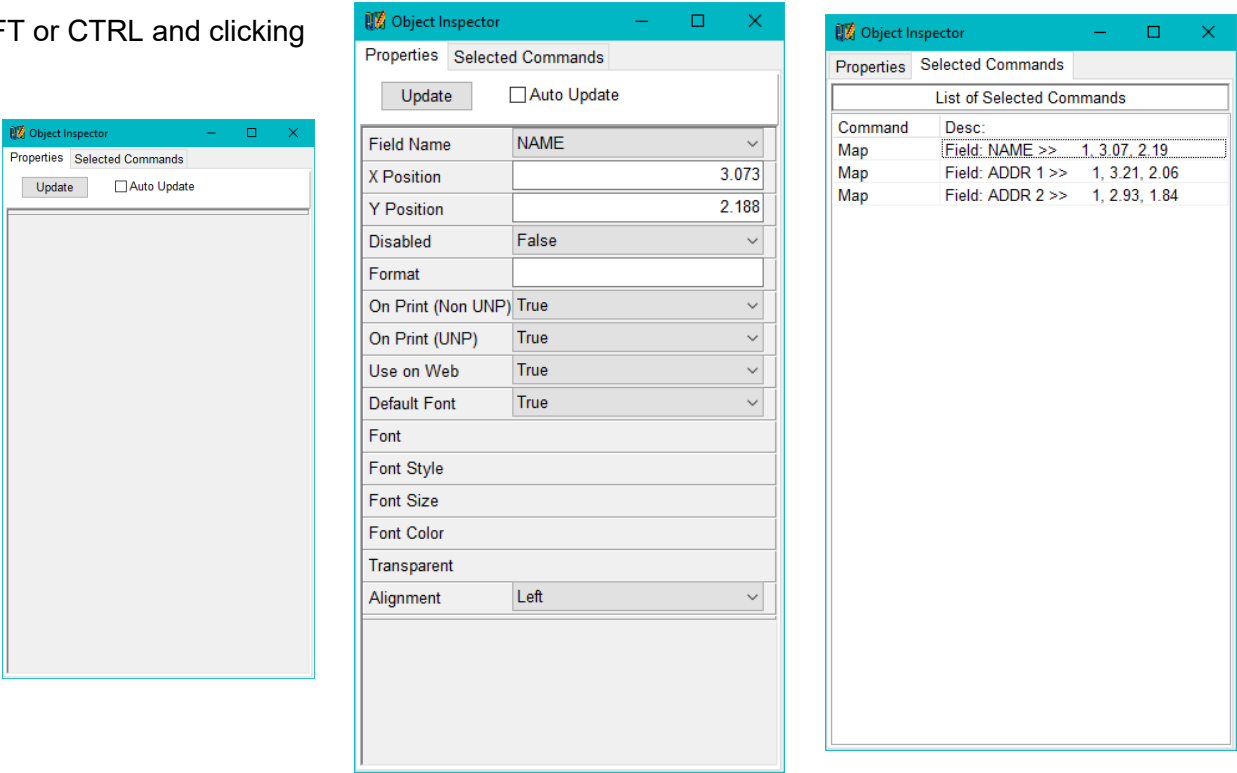
If a command or multiple commands are selected in the Map command Window the common parameters will be displayed and can be edited without opening the individual commands.

Multiple commands can be selected by holding SHIFT or CTRL and clicking the commands.

Position parameters will display 0 unless the values are identical. Changing the Position parameters will move the commands to the positions.

Change the desired value and click the **Update** button to update the command. To have the Commands automatically updated when the parameters change, check the **Auto Update** checkbox before making changes.

The Selected Commands tab will list the commands that are currently selected.



Keep Command Scroll Position

Checking this will keep the currently selected command in the command window.

This can be checked/unchecked from the Options Ribbon or from the Preference settings. Both will display the current setting.

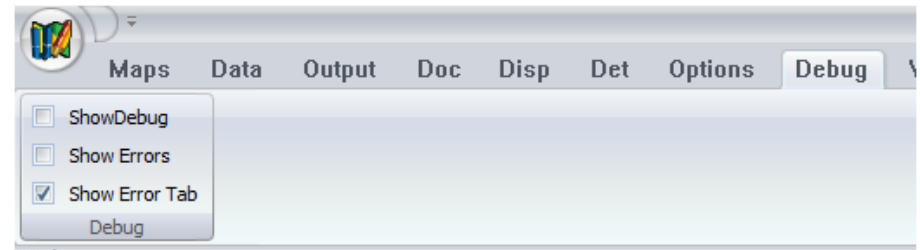
Edit on Dbl-Click

If checked, this will enable the editing of a selected mapping command by double-clicking on the command from the output window. If this is unchecked, the user can still double click the command in the map commands window to edit the command.

This can be checked/unchecked from the Options Ribbon or from the Preference settings. Both will display the current setting.

Debug Ribbon

This bar is for helping the user identify errors in the map and troubleshoot issues.



Show Debug

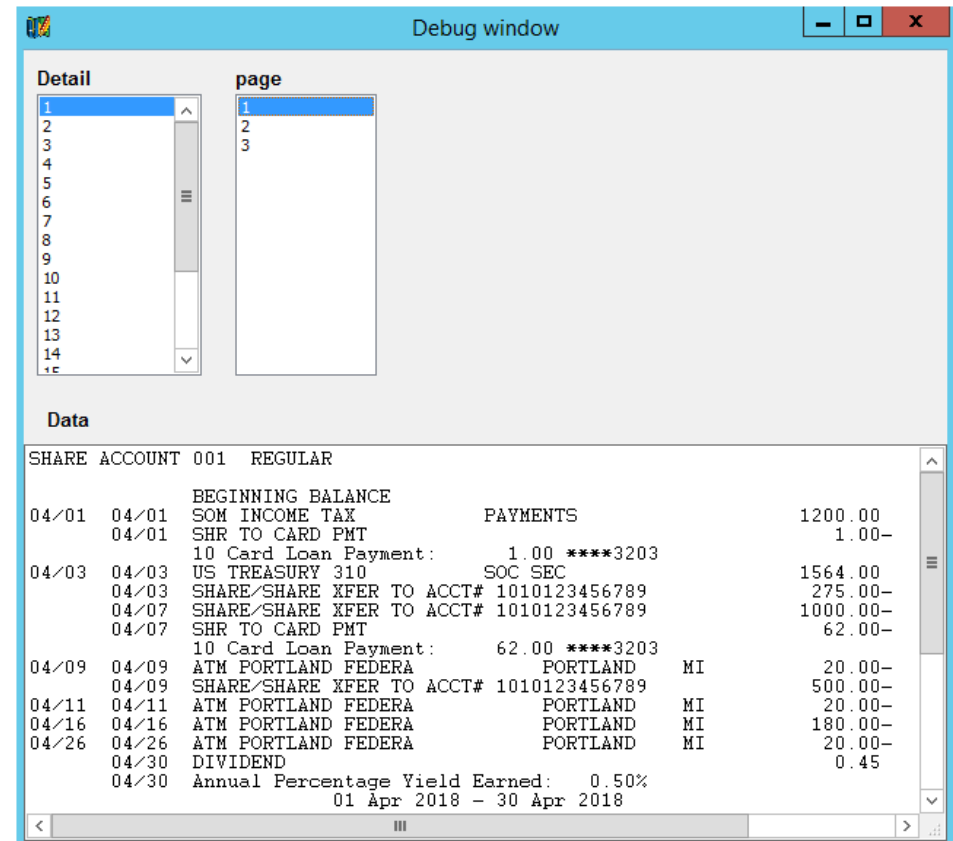
When checked this will display a Detail section Debug window. This window will be displayed after the Detail data has been parsed. Each Input Document will display this window.

The Debug window will pop up after the document is changed.

The Window will contain a list of the Detail sections, The Pages contained in the Detail Sections, and the list of data for the Page. This allows for debugging of the definition of a Detail section for non-XML data.

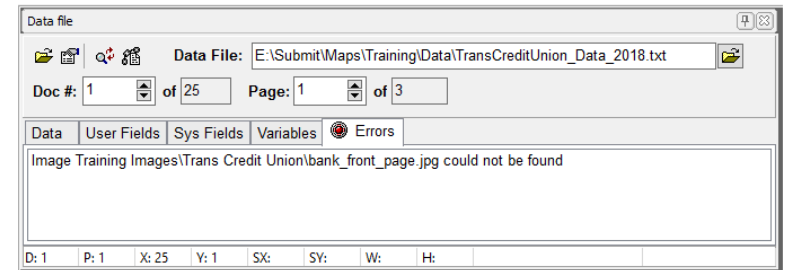
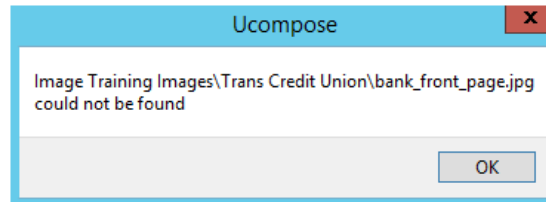
The Detail selected will list all the pages that are available for the detail. Selecting the Page will display the detail lines.

The data section displays the detail lines so the user can tell if the detail section is set up correctly.



Show Errors

When checked, this will display a popup when an error is encountered. When unchecked, the error will not pop up but will be available in the Error Tab.



Show Error Tab

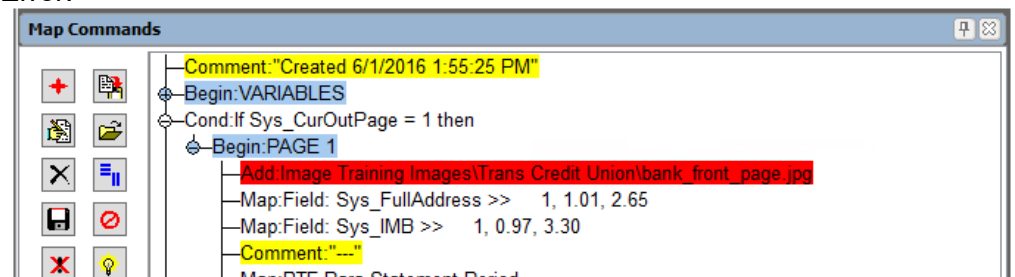
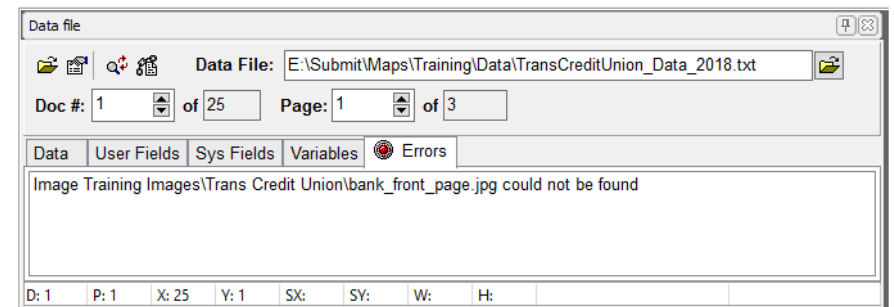
When checked the Errors tab will be displayed when an error occurs. When unchecked the error tab will not be displayed, even if an error has occurred.

The Error Tab is in the Data window after the variables tab. It is only displayed when an error occurs.

The Red light will flash to get the user's attention.

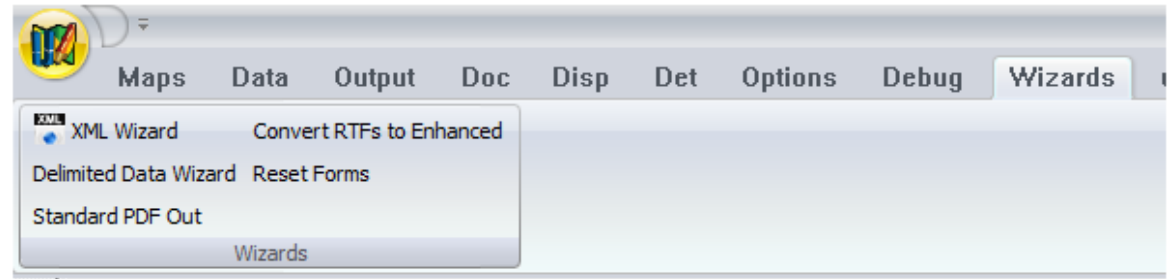
Double-clicking on the Error text will take the user to the Command in Error.

The command in error will be displayed in Red in the Command window. Double click on the command to edit and correct the error.



Wizards Ribbon

This bar contains the data import wizards and some general input settings.

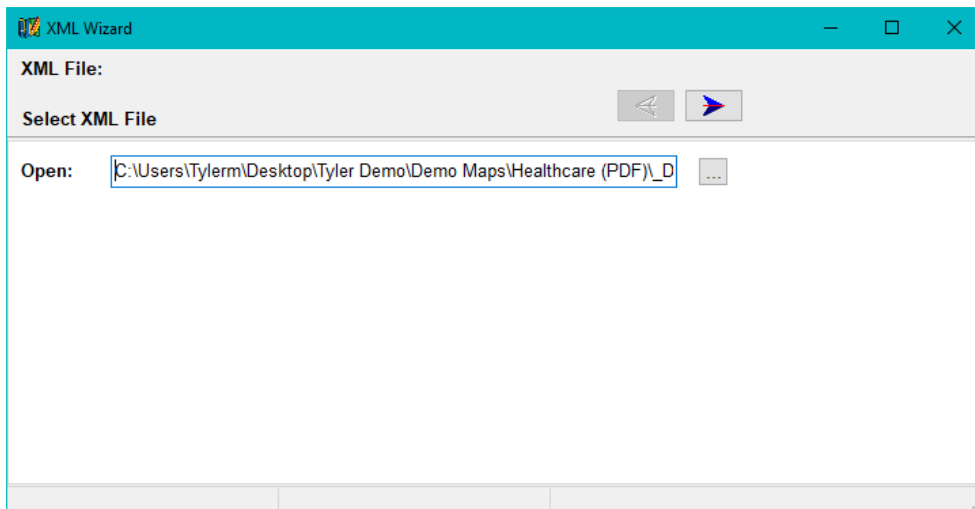
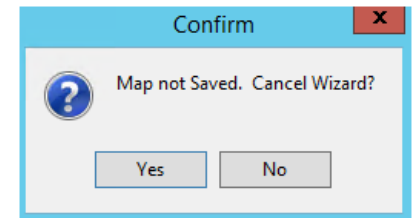


XML Wizard

This is used for importing XML data using the wizard instead of manually setting up the input page, document definition, detail definition, field and variable definitions, etc.

Selecting XML Wizard will begin the XML Wizard. If the Current Map has not been saved the confirmation window will be displayed.

Select Yes to cancel the Wizard to allow the map to be saved. Select No to continue with the XML Wizard. This will display the XML Wizard form.



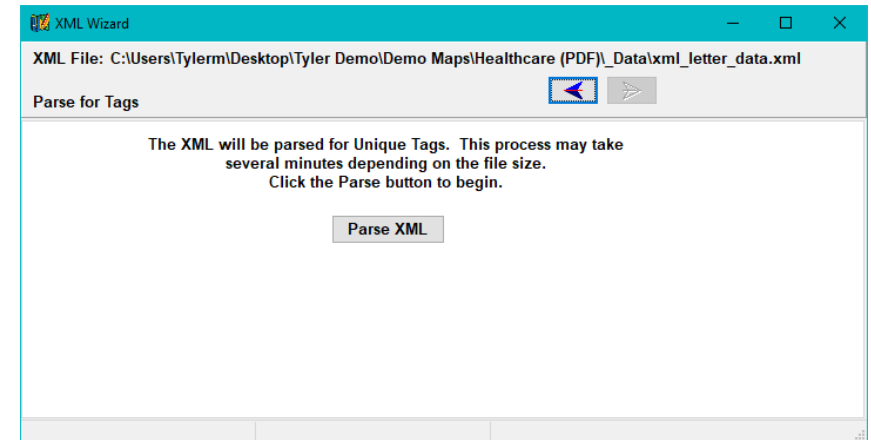
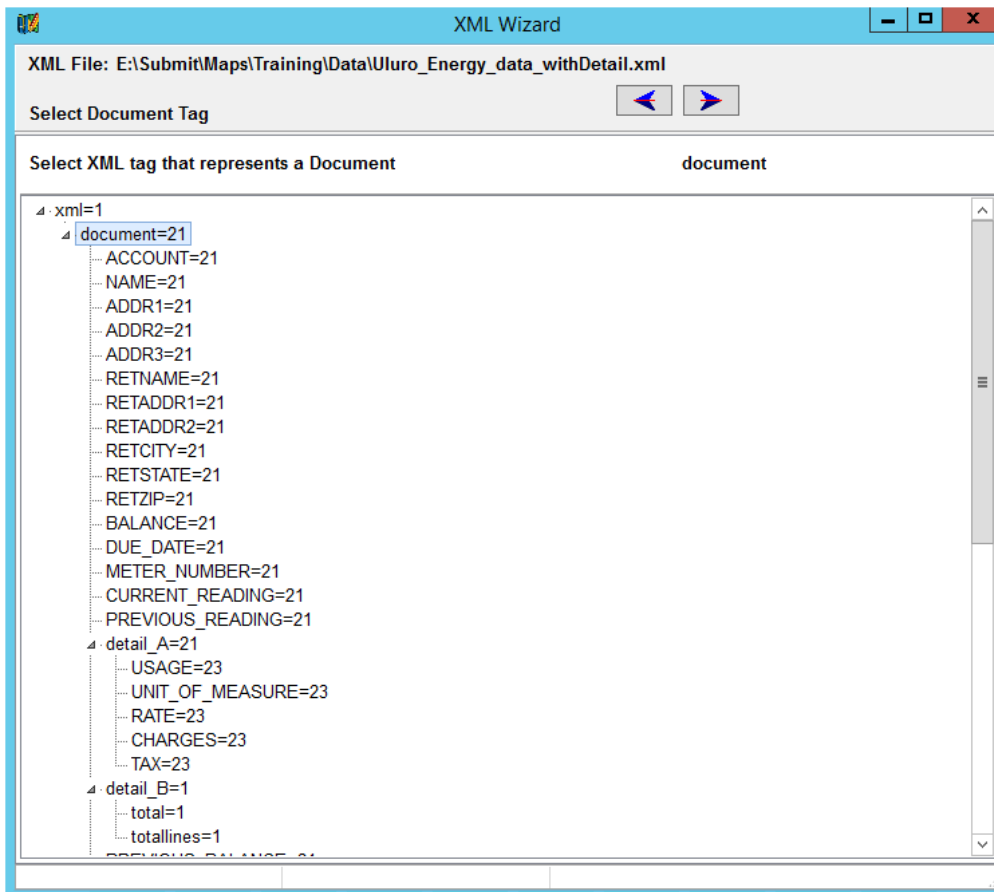
At the top are 2 buttons. One moves to the next page. The other moves to the previous page.

Select the XML file. The Ellipsis will allow browsing to the XML file.

Click the Next Button.

Click the **Parse XML** button to parse the XML data. This will display the XML tags and the tag count.

This allows the selection of the XML tag that appears to represent a document. The XML tag that represents a document is usually the first tag with a count greater than 1. In the example below, it is document=21. Select the XML tag and click the Next page button.



XML nodes, fields, and variables will be displayed with XML Namespace.



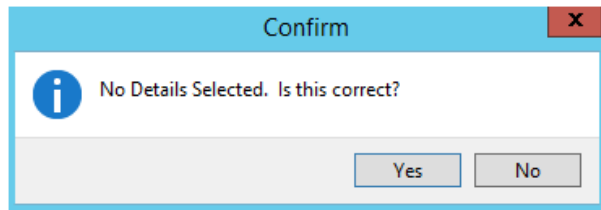
Tips:

XML is case sensitive. XML data can contain nested tags and multiple instances of tag pairs. XML data can also contain attributes. Attributes are sections of text that are contained in the beginning Tag and are in Attribute/Value pairs. The Value of an attribute is always contained in Double Quotes.

The Wizard now displays the XML for a typical document and asks for the selection of Details from the XML document. The XML tags for Details are usually the tags that are greater than the Document Count. In this example, it would be Detail_A and Detail_B.

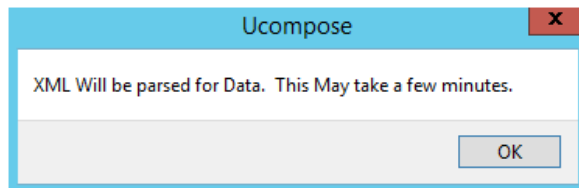
Select a detail tag and click the Add button.

When the Detail sections are selected click the next button. If no Detail tags are selected the confirmation window will be displayed.

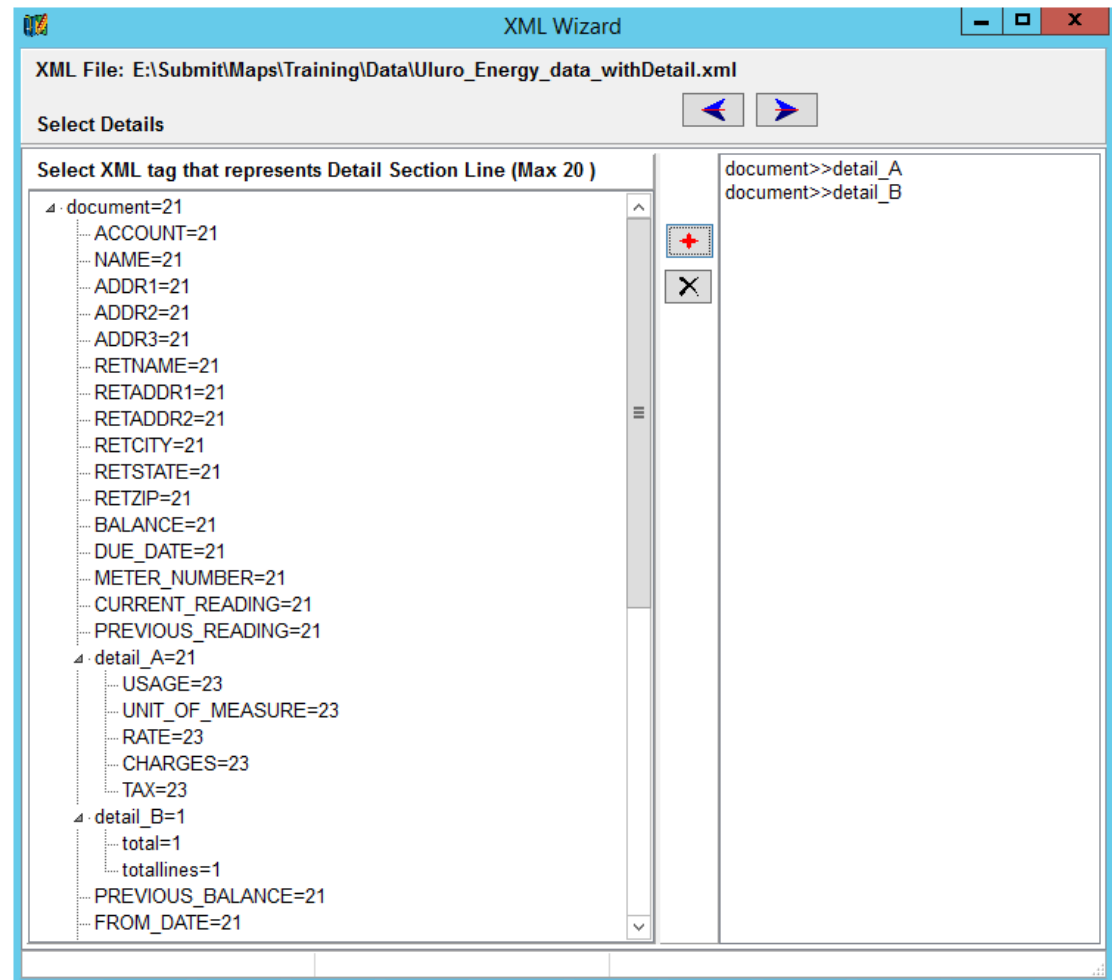


Click Yes to continue to next page or No to stay on the page and select a Detail Tag.

When the Next page is displayed the Message window will be displayed.



Click OK to start the parsing.



The Select Fields window is displayed.

The Document list on the left-hand side shows the tags within the current document. Selecting a Tag or Attribute will display the data from the tag or attribute in the Data Display at the bottom. Tags are in Blue. Tag Attributes are in Green and begin with A:.

The Current Document (Doc #) allows changing documents within the XML data. The Total Document Count shows the total number of documents in the file. Use the arrows to scroll through the different documents and see the data window display the tag/attribute value for that document.

The Current Tag # (Rep#) allows changing the Tag repetition number for the selected tag. The Total Tag count shows the total number of tag counts for the selected tag. Changing the Current Tag number will select the value for the tag or Attribute at the tag count selected.

Multiple Tags or Attributes may be selected by holding the Shift or Ctrl key while clicking on the Tag or Attribute.

When Tags or Attributes are selected, they may be added as Fields by clicking the Add Field button or as Variables by clicking the Add Variable button.

Adding a field will display the Edit Fields form. This is the same form described for the [Field Definition](#) in the Map Commands Doc tab.

If creating a field or variable from a tag or attribute that contains multiple instances, then the user may use the Occurrence radio buttons to set the occurrence desired. The Occurrence will be the value from the Rep # entry on the XML Wizard. The Occurrence defaults to First, but Last or Position can

also be selected. First will use the first occurrence of the tag or attribute. Last will use the Last occurrence, Pos will select the desired value (0 and 1 are the same as first). The user can also use an XPath query to obtain a particular instance of the data.

This query would be

`//*[@invoice/invoice/aritemlist/aritem[2]/item_description]`. This retrieves the 2nd instance of item_description. An alternative would be to use `//*[@aritemlist/aritem[2]/item_description]`.

Notice that the XML entries contain a Node, Attribute, Delimiter, and Length entry areas. The Node contains the node path. The node path tells the system how to find the desired node. Each tag is separated from its parent with `>>`. The Attribute is the selected attribute of the selected node.

Once the node and attribute are found, all the data is returned by the system unless the delimiter and/or the length is provided. A length of 0 and delimiter of blank will return all the data. If a length is provided, then the returned data contains at most the specified number of characters. If a delimiter is specified, then the data is returned up to the specified delimiter. If both delimiter and length are specified, then the data is returned to the delimiter and then the maximum specified characters are returned.

A XPath query can be used in the XPath text block. The Node and Attribute are not used if XPath is specified. If both XPath and Node are filled in the user will receive an error. If both XPath and Attribute are entered, the user will receive an error.

Edit the displayed entries as desired just as any other field.

If multiple values are selected in the XML Wizard, clicking the Add Field button will display the Field Group edit window. This is the same form described for the [Field Definition](#) in the Map Commands Doc tab.

As each field is selected in the List of Fields the information about the field will be displayed. Edit these as desired and click the Save arrow button (↵) to store the data.

When finished with the field group click the OK button.

Dialog box titled "Edit Group of Fields".

Occurrence: ☒ First, ☐ Last, ☐ Pos

Value Type: ☒ Text, ☐ Integer, ☐ Real, ☐ Date, ☐ Currency, ☐ Boolean

Field Type: ☐ Position, ☐ Delimited, ☒ XML, ☐ Test, ☐ Fixed, ☐ Not Assigned

Function: [Dropdown]

Save to DB: ☐

Fields: [List: NAME, ADDR1, ADDR2, ADDR3]

FieldName: [Text: NAME]

System Field Link: [Text: Sys_Name]

Node: [Text: xml>>document>>NAME]

Attribute: [Text]

XPath: [Text]

Delimiter: [Text]

Length: [Text: 0]

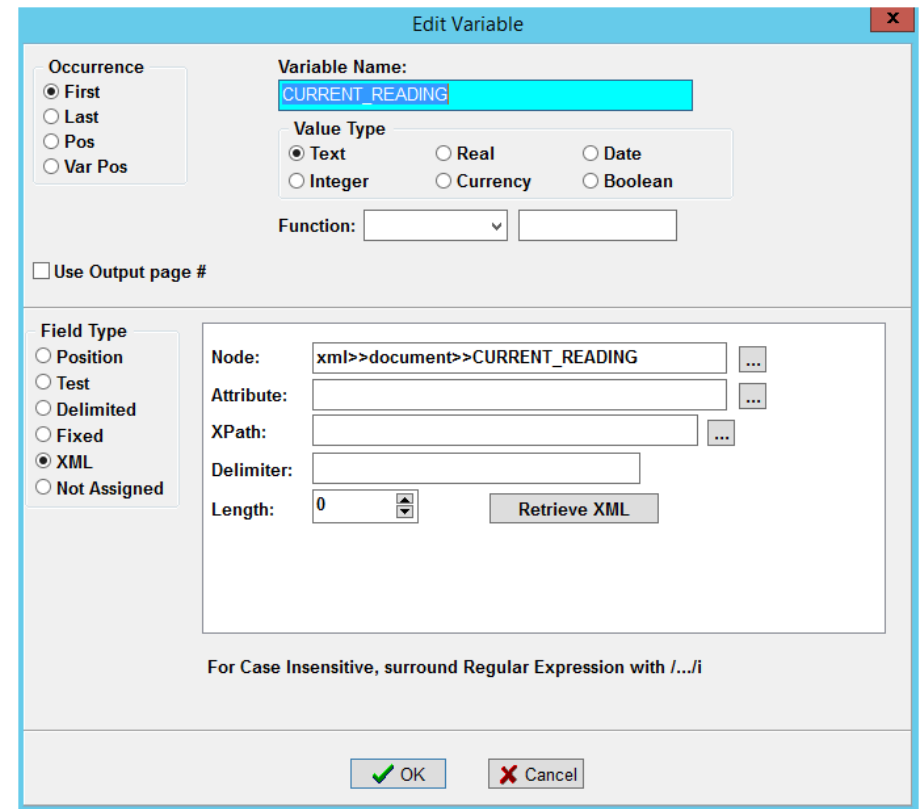
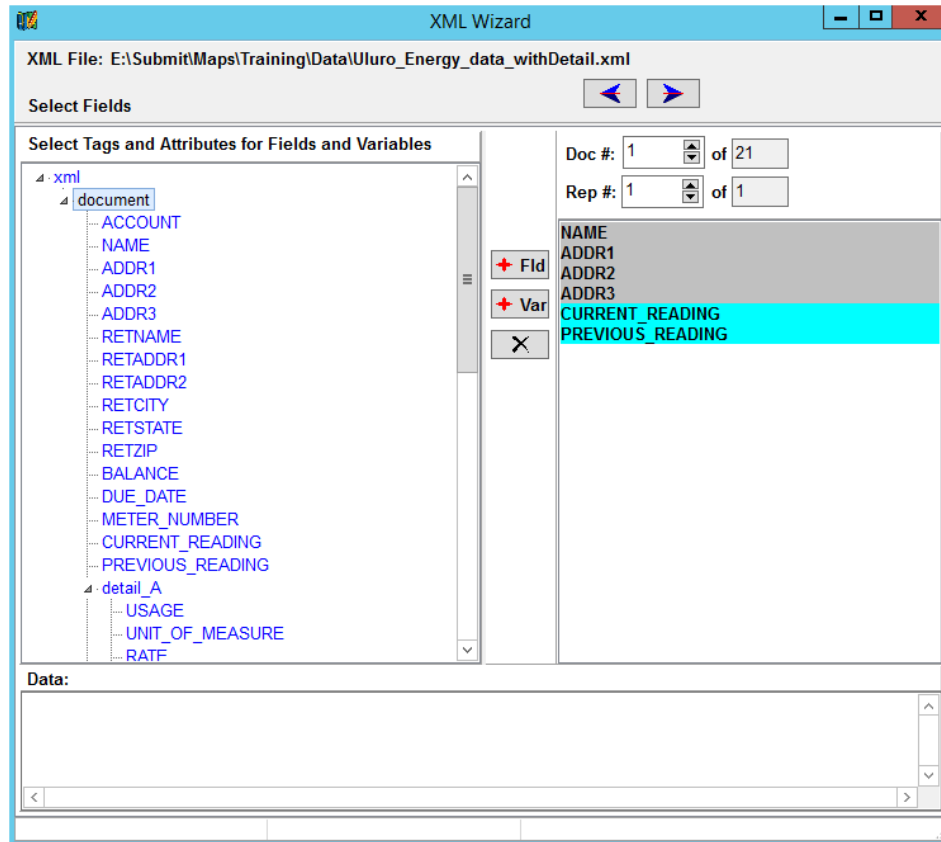
For Case Insensitive, surround Regular Expression with /.../.

OK, Cancel

If one item is selected and the Add Variable button is clicked, the Edit Variable form is displayed. This is the same form described for the [Variable Definition](#) in the Map Commands Display tab.

If multiple items are selected and the Add Variable button is checked, the Edit Variable form is displayed. This is the same form described for the [Variable Definition](#) in the Map Commands Display tab.

The values will be applied to all variables to be defined.

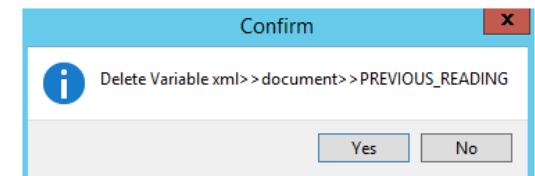


The Defined Fields are in Gray. The Defined Variables are in Aqua.

Double-click on the Field or Variable in the Fld/Var list on the right-hand side to display the Edit window.

To delete an item, select the item from the Fld/Var List and click the Delete button. This will display the confirmation form.

Click Yes to delete and No to keep the field/variable definition.



When all the Fields and Variables are defined click the Next Page button. The Detail Variables form is displayed.

The Detail Section is displayed for the Current Document. Select the Tag or Attribute. This will display the data in the Data Display area for the selected Tag or Attribute.

The Det # is the detail section of all the detail sections previously selected in the wizard. Use the arrows to add the variables for each defined detail section.

Click Add Variable to add the Variable. This will display the Edit Variable form. This is the same form described for the [Variable Definition](#) in the Map Commands Detail tab.

XML Wizard

XML File: E:\Submit\Maps\Training\Data\Uluro_Energy_data_withDetail.xml

Detail Vars

Select Tags and Attributes for Fields and Variables

- detail_A
 - USAGE
 - UNIT_OF_MEASURE
 - RATE
 - CHARGES
 - TAX

Doc #: 1 of 21

Det #: 1 of 2

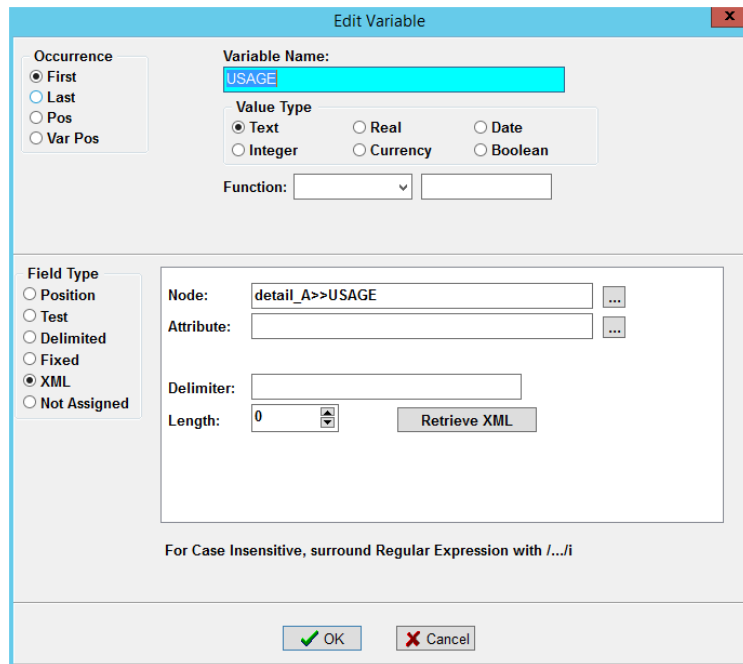
Rep #: 1 of 1

+ Var

X

+ All

Data:



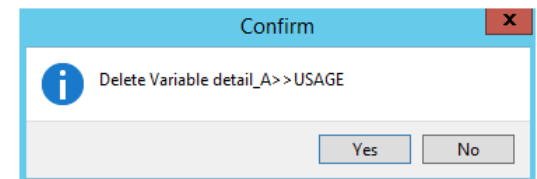
The 'Edit Variable' dialog box is shown. It has a title bar 'Edit Variable' with a close button. On the left, there are two sections: 'Occurrence' with radio buttons for 'First' (selected), 'Last', 'Pos', and 'Var Pos'; and 'Field Type' with radio buttons for 'Position', 'Test', 'Delimited', 'Fixed', 'XML' (selected), and 'Not Assigned'. The main area contains: 'Variable Name:' with a text box containing 'USAGE'; 'Value Type' with radio buttons for 'Text' (selected), 'Real', 'Date', 'Integer', 'Currency', and 'Boolean'; 'Function:' with a dropdown and an empty text box; 'Node:' with a text box containing 'detail_A>>USAGE' and a browse button (...); 'Attribute:' with an empty text box and a browse button (...); 'Delimiter:' with an empty text box; and 'Length:' with a spinner box set to '0' and a 'Retrieve XML' button. At the bottom, there are 'OK' and 'Cancel' buttons. A note at the bottom reads: 'For Case Insensitive, surround Regular Expression with /.../i'.

If multiple Tags or Attributes are selected the Edit Variable form is displayed. The values will be used (except name, Node, and Attribute which will change for each selected tag/attribute) to define the variables for all the selected Tags/Attributes.

Double-click on the Variable to display the Edit window.

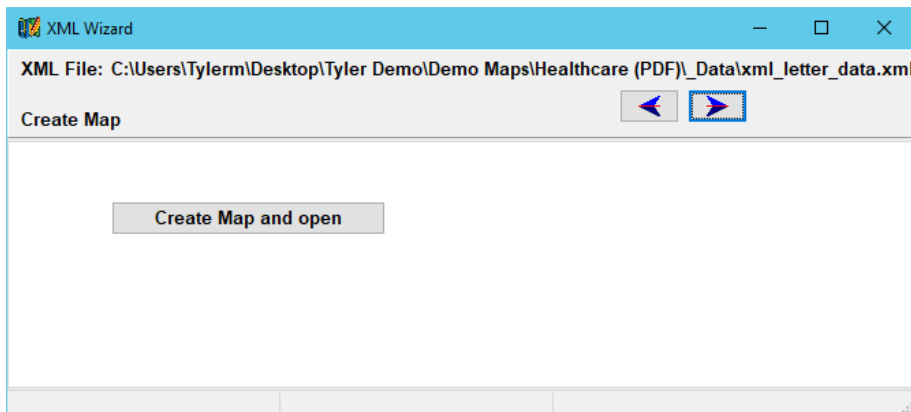
To Delete a Variable, select the Variable and click the Delete button. This will display the confirmation form.

Click Yes to Delete or no to keep the variable definition.



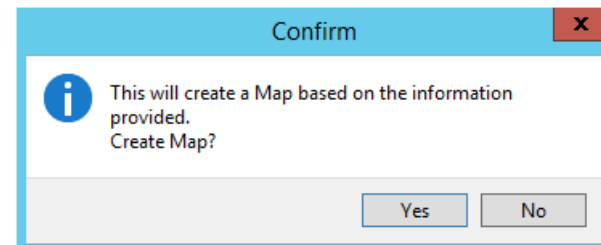
The 'Confirm' dialog box is shown. It has a title bar 'Confirm' with a close button. It contains an information icon (i) and the text 'Delete Variable detail_A>>USAGE'. At the bottom, there are 'Yes' and 'No' buttons.

Click Next to move to the Next Page.



The 'XML Wizard' dialog box is shown. It has a title bar 'XML Wizard' with standard window controls. The text 'XML File: C:\Users\Tylerm\Desktop\Tyler Demo\Demo Maps\Healthcare (PDF)_Data\xml_letter_data.xml' is displayed. Below this, there are left and right arrow buttons. The 'Create Map' section has a 'Create Map and open' button.

Click the Create Map and Open button to create the Map. This will display the Confirmation window.

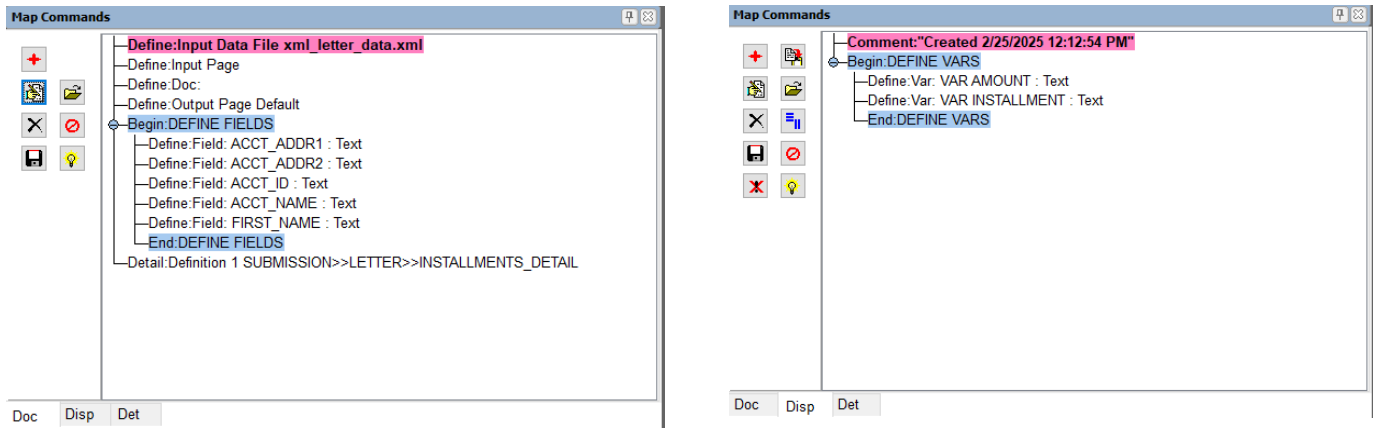


The 'Confirm' dialog box is shown. It has a title bar 'Confirm' with a close button. It contains an information icon (i) and the text 'This will create a Map based on the information provided. Create Map?'. At the bottom, there are 'Yes' and 'No' buttons.

Click Yes to create the Map. Click No to return to the Wizard.

The New Map has been created with the Fields, Display Variables, and Detail Variables defined. The remaining functions are designing the Output.

The command area contains all the field and variable definitions from the Wizard. The Doc tab will show the defined detail definitions.



The Detail definitions were created from the selected nodes. Change the Output display areas to the desired output areas, edit the fonts and increments if desired.

Detail Definition # 1

Detail Name: DOCUMENT>>DETAIL_A

Input Data

Options

Columns

Output Display

Font

Increments

Sort

Output Order

Start:

0:1.0000

+

×

↩

Page: 0Y Position: 1

Keep Last Y Position from Prev. ☐

End:

0:2.0000

+

×

↩

Page: 0Y Position: 2

OK

Cancel

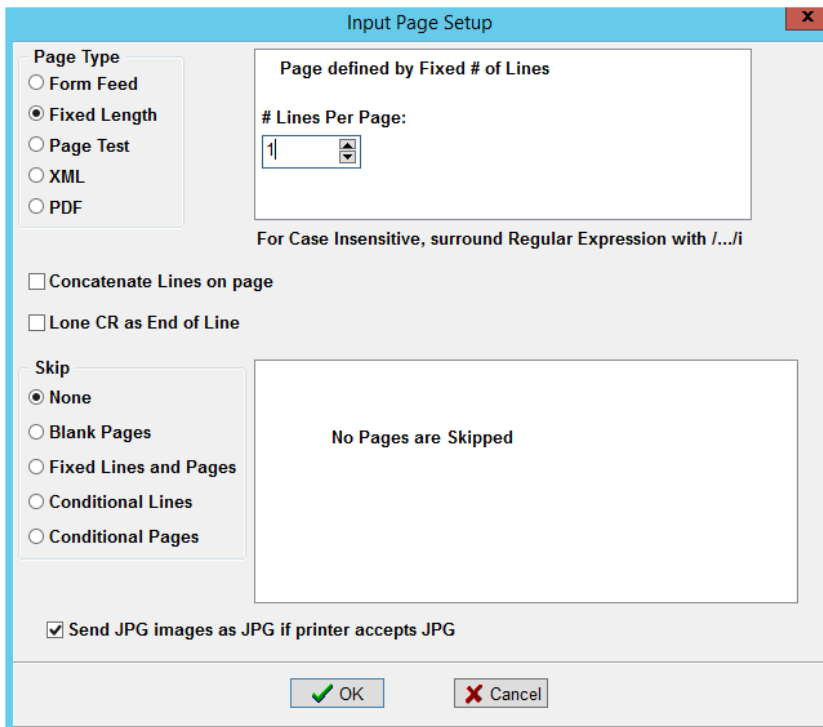
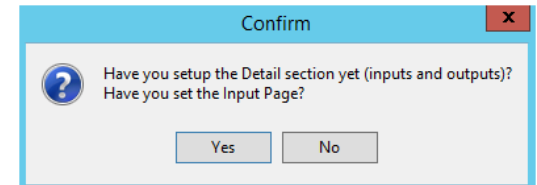
Begin building the output of the map now that the fields, variables and detail lines have been defined from the XML data.

Delimited Data Wizard

This is used for importing delimited data using the wizard instead of manually setting up the input page, document definition, detail definition, field and variable definitions, etc.

Selecting Delimited Data Wizard will begin the Wizard. A confirmation window will be displayed to check that the user has set up the Input Page Definition.

Click No to cancel the wizard and set the Input Page. Click Yes to continue with the wizard and display the Delimited Wizard form.

A dialog box titled "Input Page Setup" with a close button (X) in the top right corner. It contains several sections: "Page Type" with radio buttons for "Form Feed", "Fixed Length" (selected), "Page Test", "XML", and "PDF"; "Page defined by Fixed # of Lines" with a text box for "# Lines Per Page:" containing the value "1"; a checkbox for "Concatenate Lines on page"; a checkbox for "Lone CR as End of Line"; a "Skip" section with radio buttons for "None" (selected), "Blank Pages", "Fixed Lines and Pages", "Conditional Lines", and "Conditional Pages"; and a checkbox for "Send JPG images as JPG if printer accepts JPG". At the bottom are "OK" and "Cancel" buttons.

If the Input page definition is set before calling the Delimited Data Wizard, and the Input has a Header section that is output the same way as the rest of the document, then the Delimited Data Wizard will respect the settings.

To use the Delimited Data Wizard correctly the Input page should be set to 1 row per page.

If the Delimited Data contains more than 1 row the user will have to create the Fields and Variables outside of the Wizard.



Tips:

If the map will need to contain a detail section, define the detail prior to beginning the wizard.

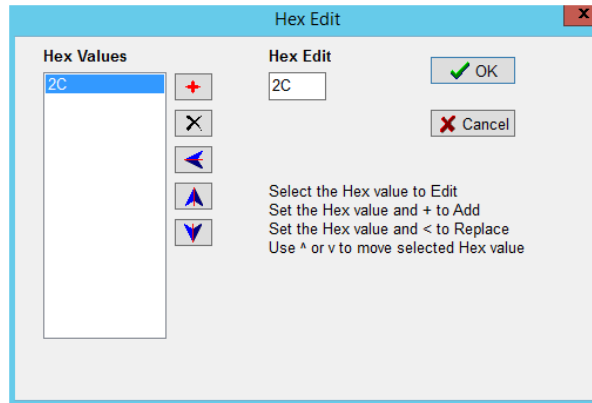
The wizard can be used multiple times; once to define the fields and main variables, and secondly to define the detail variables. It will need to be used twice if there are main and detail variables.

If using the wizard twice, any duplicate fields or variables will only be defined once.

Select the File to load using the Ellipsis to browse to the file.

Enter the delimiter to be used. If tab delimited, then use \t as the delimiter.

Hex Values can be entered by clicking on the **Hex** button. This will display the Hex editor form. The Hex Values list will contain the Hex values that make up the delimiter. When the Hex Value is selected in the Hex Values list, it will be transferred to the Hex Edit entry field. Change the Value in the Hex Edit entry field.

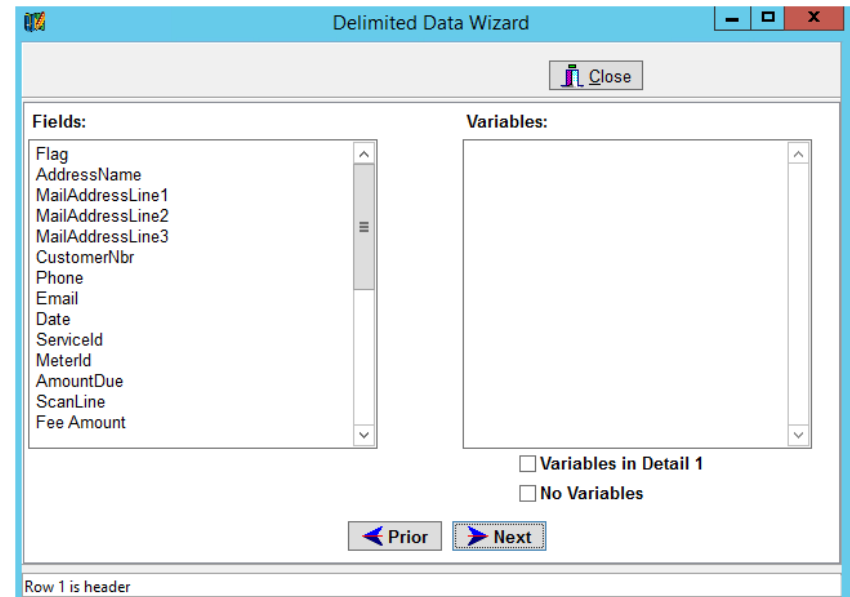
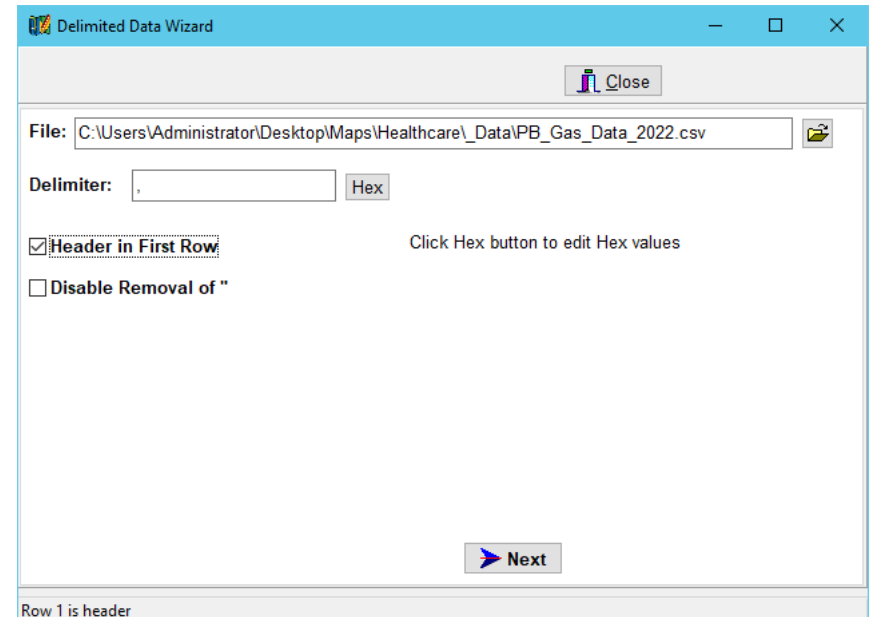


If the Data contains header information in Row 1 then check the **Header in First Row** box.

Check the **Disable Removal of "** box to keep the " characters and separate on delimiter only.

Once the selections are made, click the Next button. The close button will close the wizard, and all changes will be lost.

Enter the Variables desired in the Variables list as shown below. If the Delimited file contains a header, then the fields will already be populated. If the Delimited data does not contain a Header, then the Fields will have to be added manually.

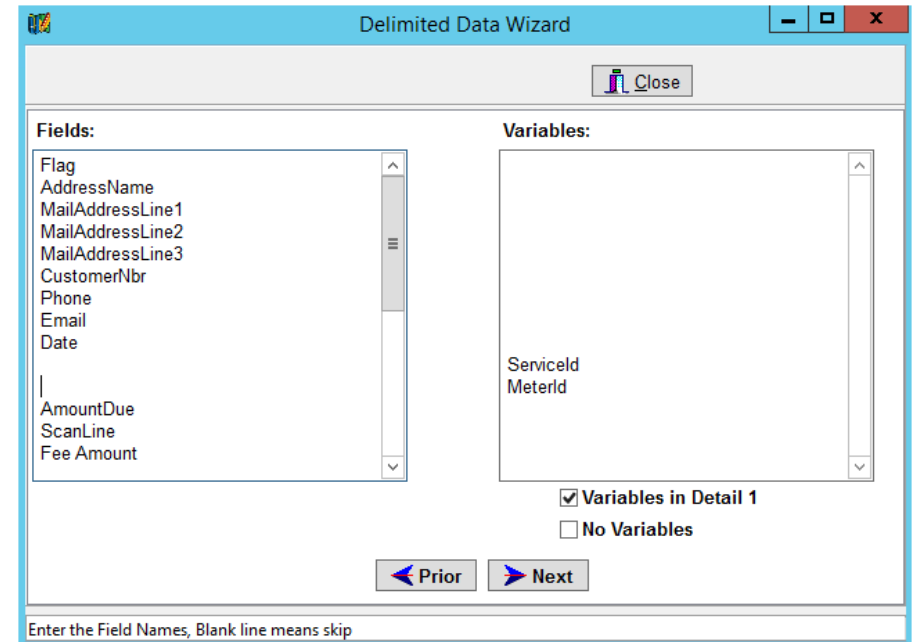
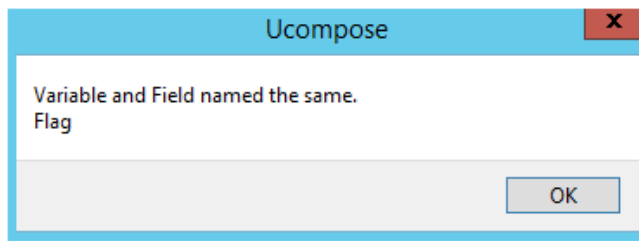


To add the Fields, enter the Field names in the Fields List. Each row is a separate field from the delimited data.

If one of the Fields from the delimited data is not required leave the Row blank.

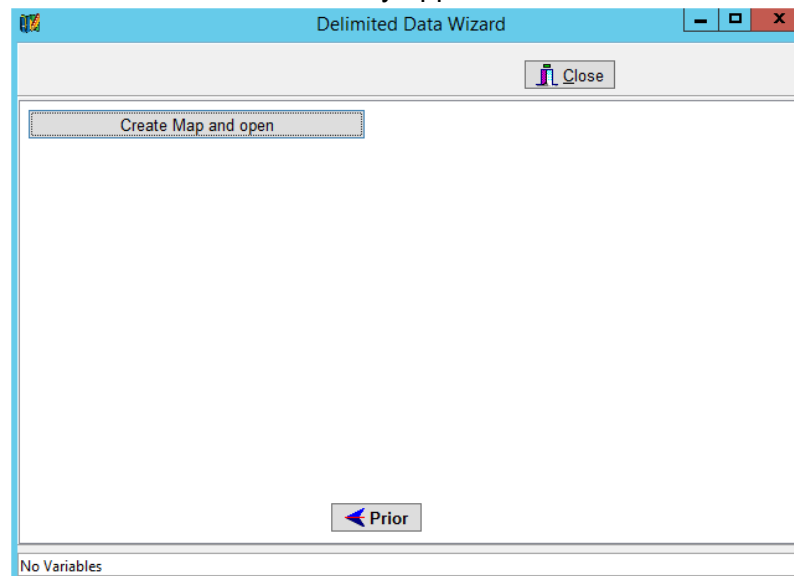
Variables will need to be entered in the correct position. If there are no variables, check the **No Variables** box. If there are variables entered, this checked setting will be overridden.

If the variables are listed in the same position as a field, there will be a warning displayed indicating the field/variable name.

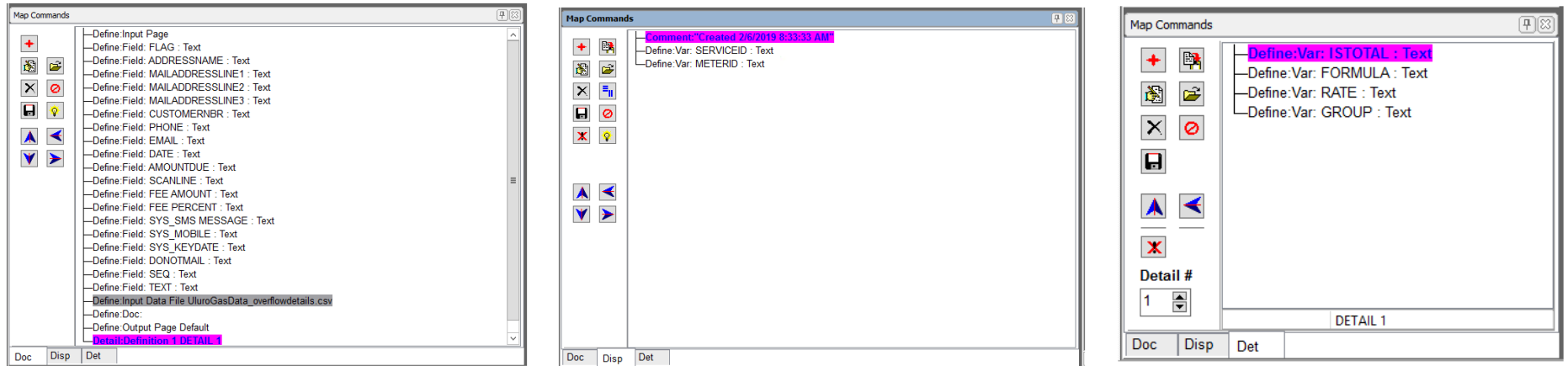


If the variables need to be defined in Detail 1 instead of The Main section, then check the **Variables in Detail 1** checkbox and then click the Next button. This is only applicable if a detail definition was setup prior to beginning the wizard.

Click the Create Map and Open button to create the Map.



This will automatically create the fields and Variables. The command area contains all the field and variable definitions from the Wizard.



The Detail definition had to be defined prior to the wizard. Continue to edit the detail definition including the Output display areas, fonts, and increments as necessary.

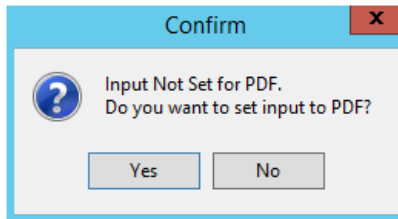
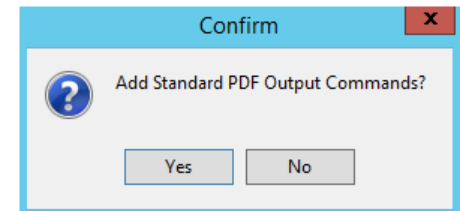
Begin building the output of the map now that the data is defined and input.

Standard PDF Out

This will allow the adding of the Standard PDF Output commands. If the data file is PDF, upon import the user will be asked to add these commands. If the commands need to manually be added to the map, select Standard PDF Out. The confirm window will be displayed.

Click Yes to add the Standard PDF Output Commands. Click No to cancel.

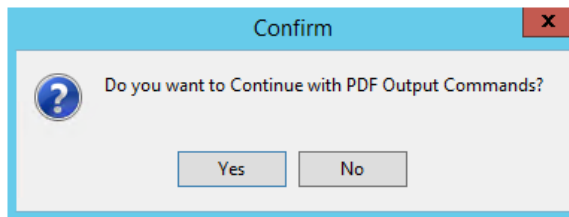
If the Input is incorrectly set for a PDF, the confirm window will be displayed.



Click yes to set the Input Page Definition to PDF. This should only be done if the data is PDF.

Click No to cancel.

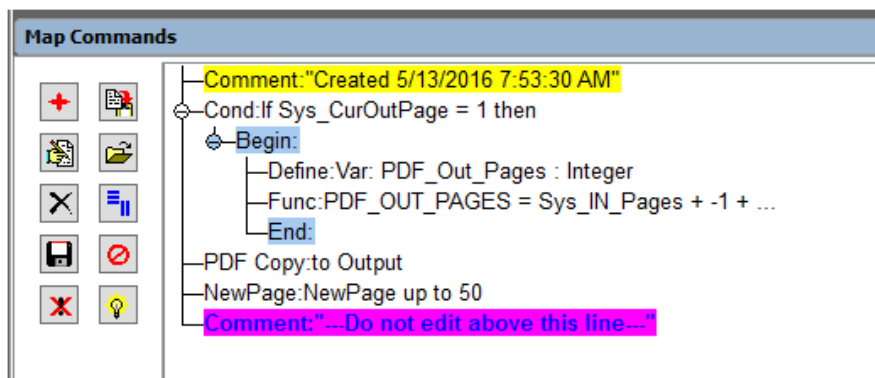
If the user selects No, the confirm window will be displayed.



Click Yes to add the Standard PDF Commands to the map.

Click No to cancel.

The Standard PDF commands are displayed below.



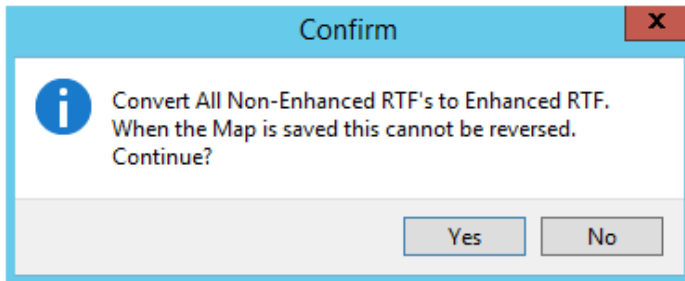
Tips:

It is recommended that the Standard PDF Commands are not edited. It may be helpful to users to add in a comment after the commands of "Do not edit above this line". All other commands such as barcodes, field mappings, etc. should be after the Standard PDF Commands on the Display tab of the Map Commands window.

Convert RTF's to Enhanced

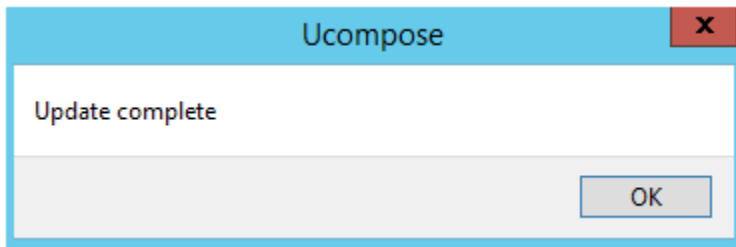
This is for converting old maps (created on a version earlier than 6.0.2.5) to enhanced RTFs.

Once selected, the confirm window will be displayed.



Click Yes to convert the RTFs. Click No to cancel.

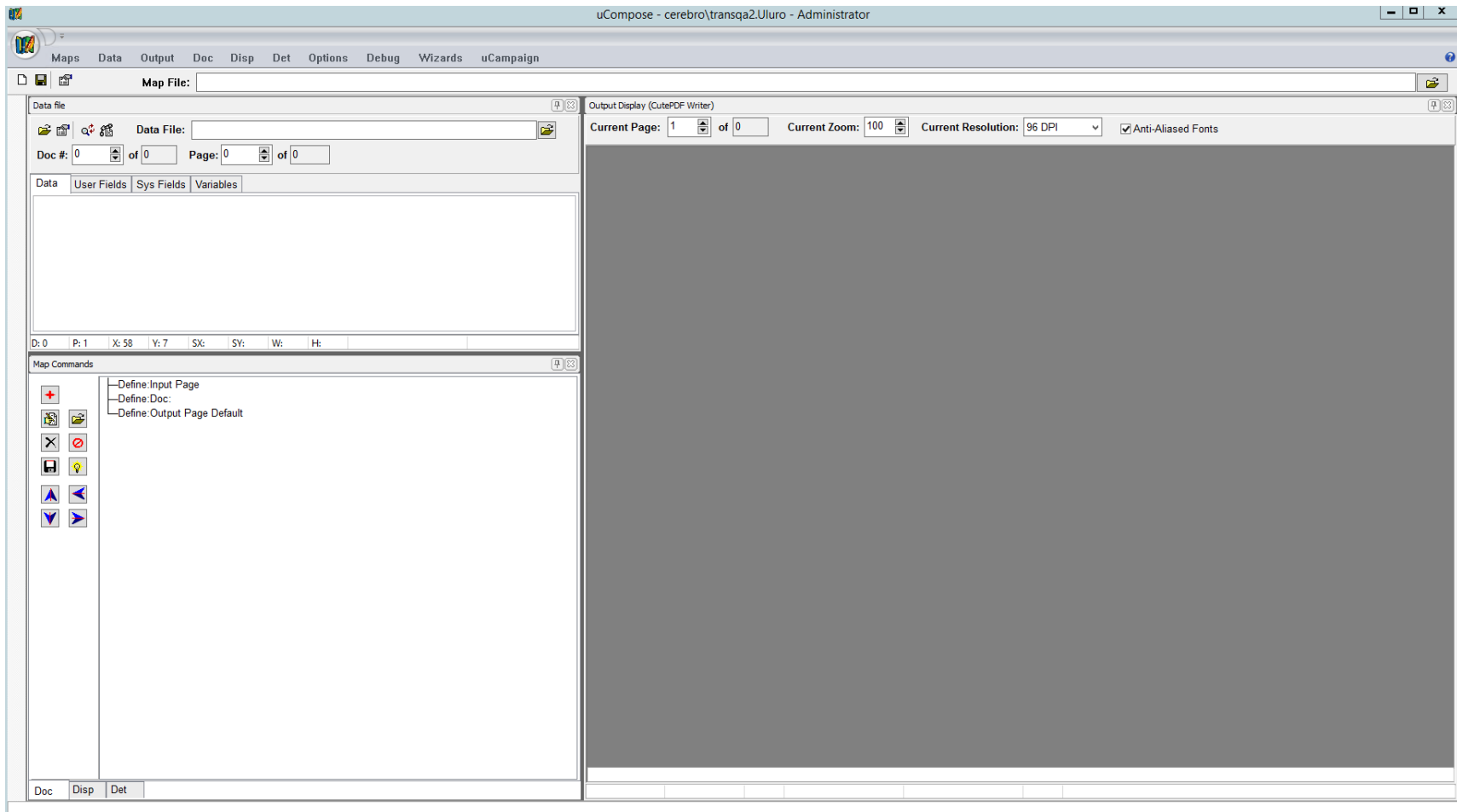
Once converted, there will be a confirmation notification.



Reset Forms

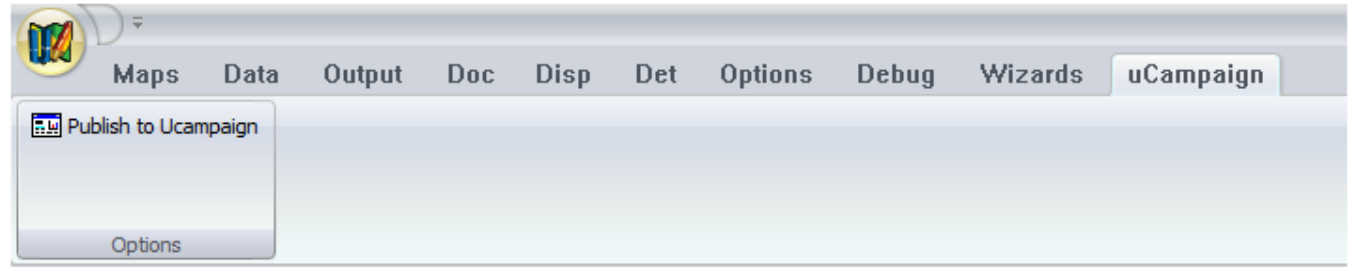
Selecting this will set the Data, Map Commands, and Output windows to their default positions if they have been moved or resized in any way. If any of those windows had been closed, they will reappear.

The result of resetting the forms will give this layout.



Relay Unify Customize Ribbon

This bar is for use with Relay Unify Customize. It allows the user to publish the campaign elements to be edited on the web.

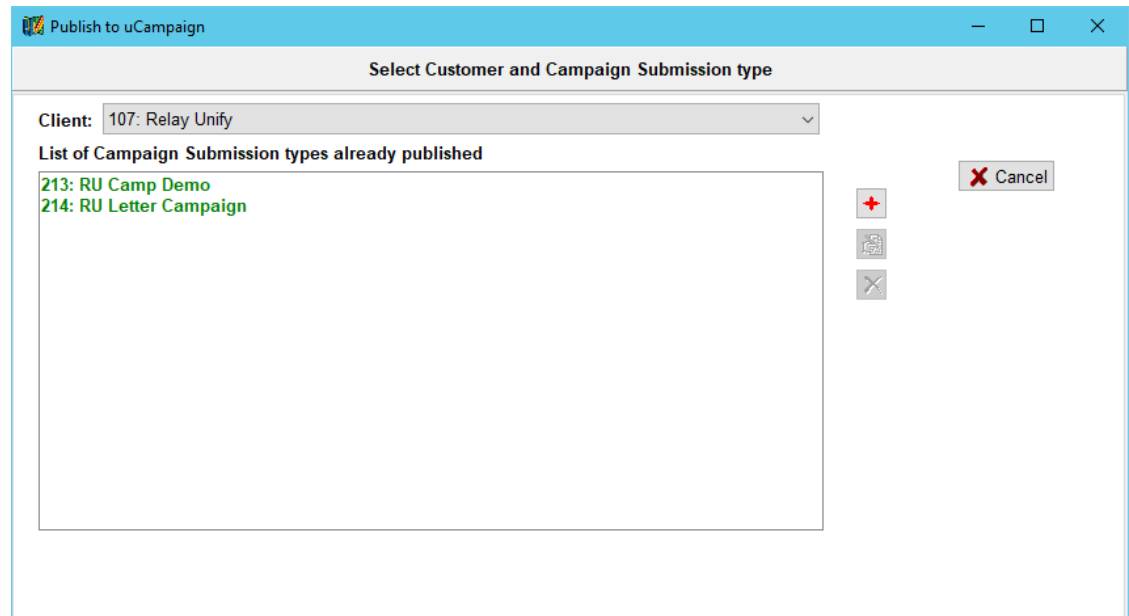


Publish to Relay Unify Customize

This will display the Publish to Relay Unify Customize form. The list of clients will be all the clients that have been enabled under Web Settings for Relay Unify Customize. A new submission type can be added, or a submission type edited for the client selected. The delete button will remove a submission type from the client selected.

The submission types correspond to a submission type that has been created for that client in uSetup.

Click the Add New button.



- Select the Submission Type** – The dropdown will list all submission types for the client that was previously selected.
- Set Inserts** – If this is checked, then the user will be able to publish up to ten Inserts to be edited on the web portal.
- Set RTF Paragraphs** – If this is selected multiple areas will be available for editing on the Relay Unify Customize web portal.
- Submission Letter** – If this is selected, then only one area will be available to edit on the web portal.

Publish to uCampaign

select Submission type and set Information

Select Submission Type:

213: RU Camp Demo

☒ Set Inserts

☒ Set RTF Paragraphs

☐ Submission Letter

A Submission Letter provides a single RTF area for Campaign letters to be created.

Back

Next

Click Next.

The envelope displayed, and corresponding weight and thickness, are populated from the selections in the submission type on the Consumables tab. This can only be edited in the submission type from uSetup. If nothing is set up in the submission type, select an envelope and enter a weight and thickness before clicking next.

Address Block Position

Currently the Address Block must be manually defined.

Set the Page the Address Block should appear. Set the Left and Top position (Inches from left and top).

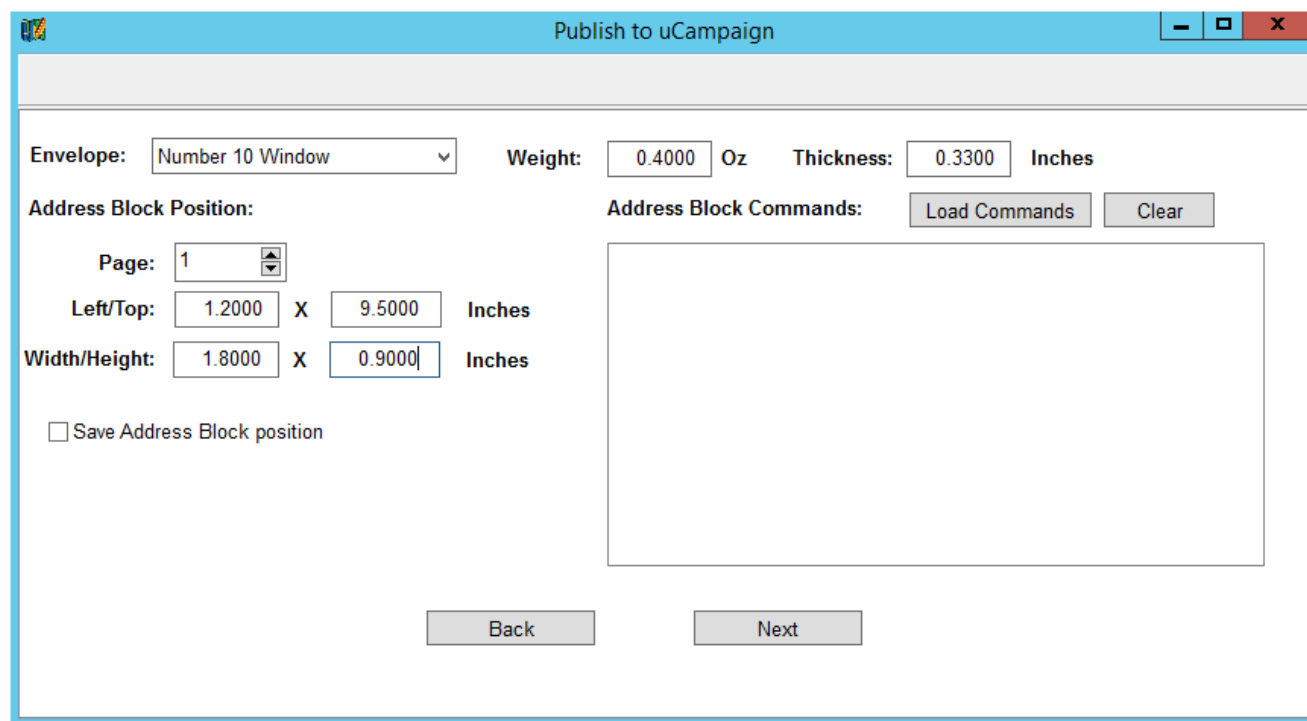
Set the Address Block Width and Height in inches.

Check the Save Address Block Position box to save these values for that envelope type.

Address Block commands can be entered. These commands will be used when printing the Address Block. When used this means that the Map does not need a predefined Address Block. The commands are created in Relay Unify uCompose and saved as a group. This command group is then loaded using the Load Commands Button. Clear will clear the commands.

If using a code group for the address block, do not load the code group as address block commands. The outline created by the dimensions should outline the code block that is output within the map commands.

When complete click the Next button.



The screenshot shows a software window titled "Publish to uCampaign". Inside, there are several input fields and buttons. At the top, "Envelope:" is set to "Number 10 Window" with a dropdown arrow. Next to it, "Weight:" is "0.4000 Oz" and "Thickness:" is "0.3300 Inches". Below this, "Address Block Position:" is a section with "Page:" set to "1" and a spinner. "Left/Top:" has "1.2000" and "9.5000" with "X" and "Inches" labels. "Width/Height:" has "1.8000" and "0.9000" with "X" and "Inches" labels. There is a checkbox labeled "Save Address Block position" which is currently unchecked. To the right of these fields is a section "Address Block Commands:" with "Load Commands" and "Clear" buttons. Below this is a large empty rectangular box. At the bottom of the window are "Back" and "Next" buttons.

The next page allows setting the Fields and Variables that will be available when editing on the web portal.

Select the desired field or Variable from the Avail list. Click the > to move to Published. Clicking >> will move all the items to Published. Select an item from Published and click the < button to move to Avail. Clicking << will move all items from Published to Avail.



Tips:

Any data that needs to be in the text that will be added by your client on the web will need to be selected at this stage. You will also need to add data that will trigger an Insert or be part of a condition for an image/text on the document.

Save to DB fields can be selected to publish under the User Fields tab.

Publish to uCampaign

Select Fields and Variables

System Fields | User Fields | System Variables | User Variables

Avail

- Sys_MergePrtJobDocCnt
- Sys_OnsertNo
- sys_PrtCurPage
- sys_PrtCursheet
- Sys_PrtJobDocCnt
- Sys_PrtPageSeqNum
- Sys_PrtSheetSeqNum
- Sys_RevDocSeqNum
- Sys_RevMergeDocSeqNum
- Sys_Submid
- Sys_Subname
- Sys_TransPromo1
- Sys_TransPromo10
- Sys_TransPromo2
- Sys_TransPromo3

Published

- Sys_prtJobId

Back Next

Select the System Fields, User Fields, System Variables, and User Variables.

When complete click Next.

Publish to uCampaign

Select Fields and Variables

System Fields | User Fields | System Variables | User Variables

Avail

- BC INS CTRL DIVERT
- BC INS CTRL PAGE NUM
- BC INS CTRL PRINT SEQ
- BC INS CTRL SET 1-4
- BC INS CTRL SET 5-8
- BC INS CTRL SET ID
- BC INS CTRL SET SIZE
- BC INS CTRL STATION 1-4
- BC INS CTRL STATION 5-8
- BC INS CTRL STRING
- BC INS CTRL ZIP SORT
- BC INS VER JOB ID
- BC INS VER OPT FIELD1
- BC INS VER OPT FIELD2
- BC INS VER OPT FIELD3

Published

- EXTRACT STATE
- SERVICE ID

Back Next

The next screen will either be the Inserts (if that box was previously checked) or Fonts.

The Inserts screen allows selecting which inserts will be published for use on the web portal.

Click Next to continue.

The next screen allows selecting the Fonts that will be available. Select the Font from Font List and click the > button to move to Published fonts. Select the Font from Published Fonts and click < to move out of Published Fonts. The >> button will move all fonts to Published. The << button will remove all fonts from Published. The Min and Max Font size can also be selected.

Publish to uCampaign

Select Available Inserts

Published Inserts

☒ Insert 1 ☐ Insert 6

☒ Insert 2 ☐ Insert 7

☒ Insert 3 ☐ Insert 8

☒ Insert 4 ☐ Insert 9

☒ Insert 5 ☐ Insert 10

Back Next

Publish to uCampaign

Select Available Fonts

Font List

8514oem
A028 Extrabold
A028 Medium
A030
Aharoni
Aldhabi
Andalus
Angsana New
AngsanaUPC
AntiqueOlive
Aparajita
Arabic Typesetting

>>
>
<
<<

Published Fonts

Arial
Times New Roman

Min Size: 8 Max Size: 24

Back Next



Tips:

Any inserts published here that are defined in the map will be overwritten by the web inserts. Only inserts not defined/conditionalized in the map should be selected.

The fonts should be installed on all servers, application web and print, to avoid errors and issues.

Click Next button to continue.

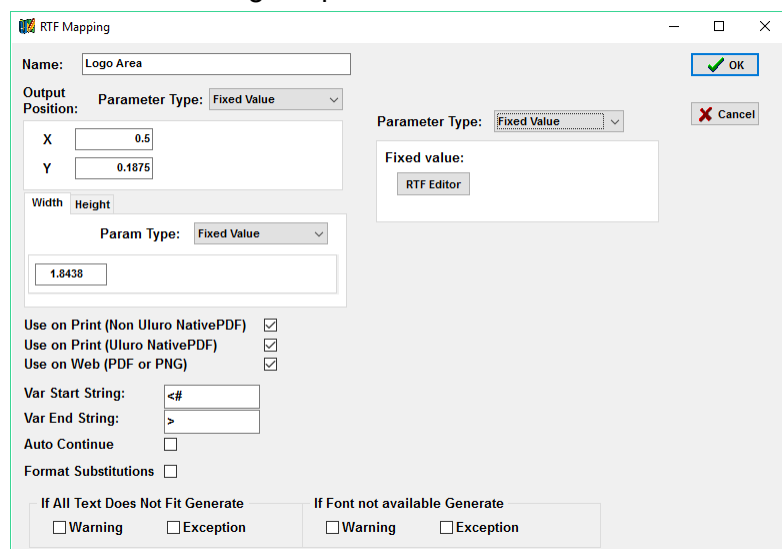
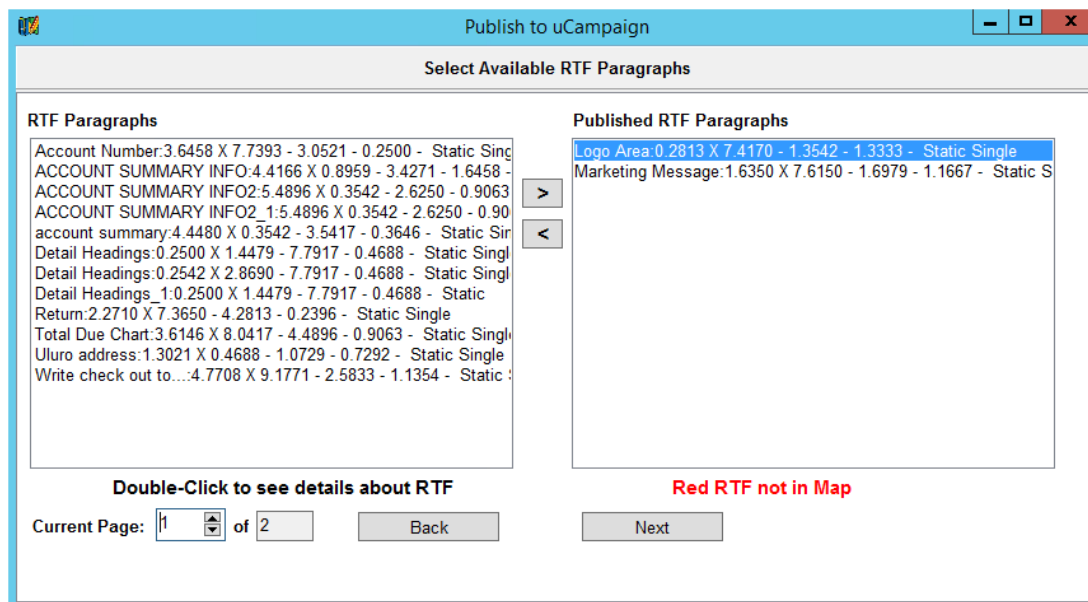
The Next Page will display the List of RTF Areas that can be published (if set RTF Paragraph checked).

Select the RTF Paragraph and click the > button to move. The RTF Paragraphs are moved one at a time. Only display tab RTFs will be listed; detail section RTFs cannot be published.

Only RTF Paragraphs with a Name are displayed. To allow the RTF Paragraph to be set make sure the RTF has an easily understandable name in the RTF mapping command. The RTF must be a fixed area. RTF's set by Variables or Fields will not be listed in the RTF List. Disabled RTFs will not be displayed.

Use the current Page values at the bottom to adjust the page displayed in the output window of Relay Unify uCompose. As RTFs are selected, the RTFs will be outlined in green when selected in the list on the right if they appear on that current page of output.

If the user is editing the publish command and an RTF is no longer available in the map it will be displayed in red.



If Submission Letter is checked only one RTF can be added.

The RTF for Submission Letter is usually a full-page RTF area that will be edited in the Relay Unify Customize web portal.

If an RTF is selected for customization in the Relay Unify Customize web portal, it will be set only by the users in the Relay Unify Customize web portal. Any value previously set in the map will be overwritten. None of the settings or values in the command in the map are passed through, only the area dimensions for editing.

After the RTF paragraphs are selected click the Next button.

The last page is a review page. This shows the Client, Submission Type, Insert count, Font count and RTF Paragraph count for Publish. If correct click the Save button. If incorrect click Back and correct the information.

Publish to uCampaign

— □ ×

Review and Save

Client:

107: Relay Unify

Submission Type:

218: RU Customize

Inserts:

of Published Inserts = 5

Fonts:

of Published Fonts = 3

RTF Para:

of Published RTF Paragraphs = 2

Back

Save

Clicking Save asks for a Confirmation of the Save.



The user is notified that the Map will be overwritten.

This overwrites the map file listed for Map Name in the submission type. This should be the map in the Submit\Maps directory.

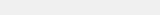


Confirm

i This will overwrite the existing map for this submission with the current map. Is this OK?

Yes No

The Update Complete will be displayed.



The screenshot shows a small application window titled "Ucompose". The window has a light blue header bar with the title and a red close button. The main content area is white and displays the text "Update Complete". At the bottom right of the window is a grey button labeled "OK".

The map will be updated on the File system as well as saved to Version control. ***This is true even if the map was not previously checked into version control.***



Tips:

The map that is marked as current (highlighted in green) in the Map Versions will be the map used when a submission is run. It is best not to alter the names of the maps when changes are made because the map name within the submission type setup will not update. If a map is renamed and marked as current that will be the map used regardless of the map name in uSetup.

The RTFs published to the campaign will be easily viewable in the Data window under the Campaign tab:

The screenshot shows the uCompose software interface with the 'Map Versions' window open. The window displays a list of map versions for a specific campaign. The 'Current' map is highlighted in green.

Is Current	Date	By	Name
Y	2/26/2025 10:25:17 AM	Administrator	Pitney Bowes Gas.nmp
N	2/26/2025 10:25:17 AM	Administrator	Pitney Bowes Gas.nmp
N	2/26/2025 10:21:53 AM	Administrator	Pitney Bowes Gas.nmp
N	2/26/2025 10:21:53 AM	Administrator	Pitney Bowes Gas.nmp

Date	By	Code	Comment	IPAddress
2/26/2025 10:25:17 AM	Administrator	Current	Set to Current	192.168.1.204
2/26/2025 10:25:17 AM	Administrator	Check In	Checkin Exit	192.168.1.204

The screenshot shows the 'Data file' window with the 'Campaign' tab selected. It displays campaign-related items, including RTFs published to the campaign and campaign insert mappings.

Campaign Related Items

RTF's Published to Campaign: Campaign Insert Mappings

Double-Click to Select RTF

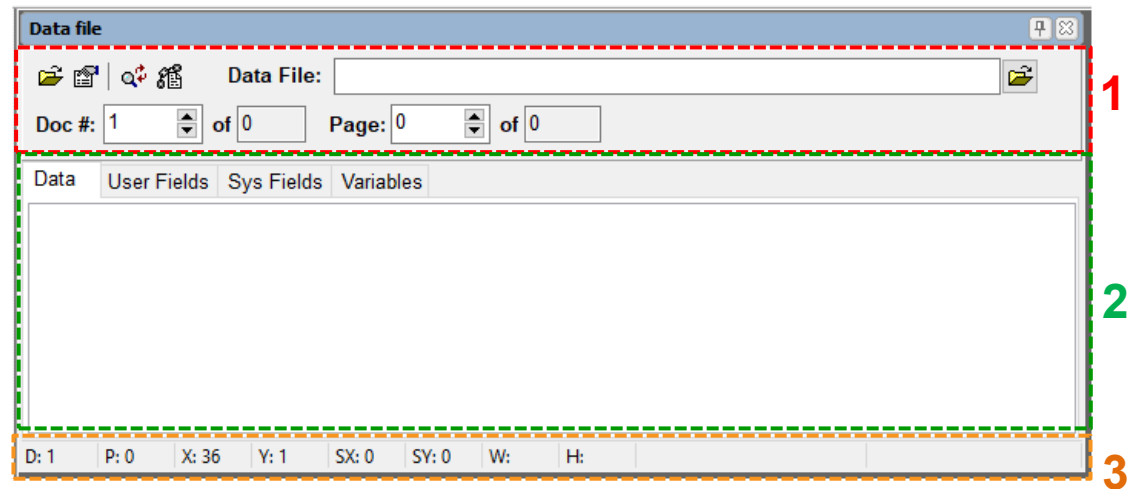
Relay Unify Campaign
RU Logo Area

Data File Window

The Data File Window allows a user to select the data file, set parameters for the file, change documents, change pages, select data and view information about the data file.

The Data File window contains three distinct areas: 1) the Top Status area, 2) the Central Area, and 3) the Bottom Status Area.

The Top Status area contains the data file Open, Page Setup, Parse, and define Sync buttons.



Click to load in a data file.



Click to access the [Input Page Setup](#) (Define Input Page command settings).



Click to Parse or re-parse the Data file.

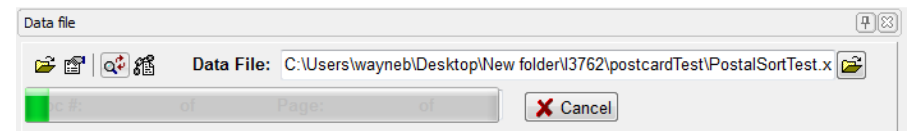


Click to define or edit the [Sync Field definitions](#).

It also contains the currently opened datafile name and path in **Data File**. The load button is also to the right of that allowing the user to browse for the desired data file initially or to change it as the map is being built.

There are Document and Page navigation controls for the user to scroll through the documents and/or input pages for each document. These list the current Document/Input Page of the total input documents/pages being pulled into Relay Unify uCompose.

The Top Status area also displays a progress bar during parsing. The Cancel button can be pressed during parsing to cancel the parse.



The Central Area contains up to seven tabs. Data, User Fields, Sys Fields, and Variables will always be displayed. The Temp Fields and Campaign tabs will only appear if the map is set up as a template or published for a campaign. The Errors tab will be visible if there is an error and the “Show Errors” setting has not been enabled, but “Show Error Tab” has been enabled.

The Data tab contains the data from the data file. The Data tab will be renamed PDF or XML for when the Input Page definition is set for those data types.

The User Fields tab contains the list of currently defined fields and values the user has defined. The friendly name will be displayed even if the field is linked to a system field in this tab.

The Sys Fields tab contains a list of the System Fields and values. If a user defined field is linked to a system field, it will be listed by the System field name in this tab.

The Variables tab contains a list of the Variables from the main display section, the detail section, and the global variables. The last value for the variable will be listed as the detail variable value.

The Bottom Status area contains current selection information.

The **D**: refers to the currently selected document number.

The **P**: refers to the currently selected input page number.

The **X**: refers to the cursor X position.

The **Y**: refers to the cursor Y position.

The **SX**: refers to the starting X position for the selection.

The **SY**: refers to the starting Y position for the selection.

The **W**: refers to the width of the selection.

The **H**: refers to the height of the selection.

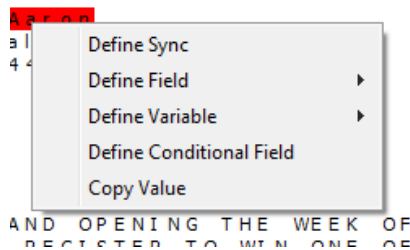
Data tab

The Data tab contains the data from the data file. The Data tab will be renamed PDF or XML for when the Input Page definition is set for those data types.

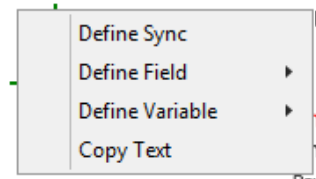
In the Data tab, the user may select text. The selection can be dragged onto the output page as a [line mapping](#) or used in the position data elements in various commands when defining fields and variables.

The Information displayed in the Data tab of the Data Window will depend on the Page type. For the data type, after selecting the Text or highlighting an area, right clicking with the cursor will display a popup menu with options depending on the data type.

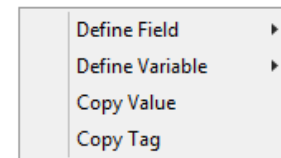
If Text or delimited, this will be the menu:



If PDF:

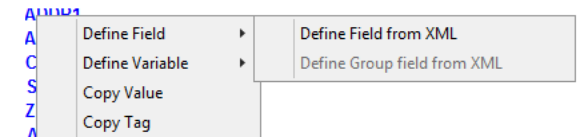
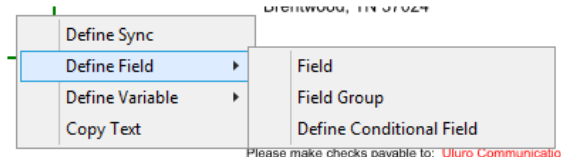
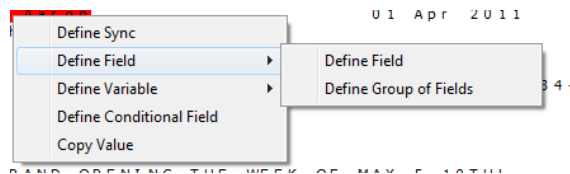


If XML:

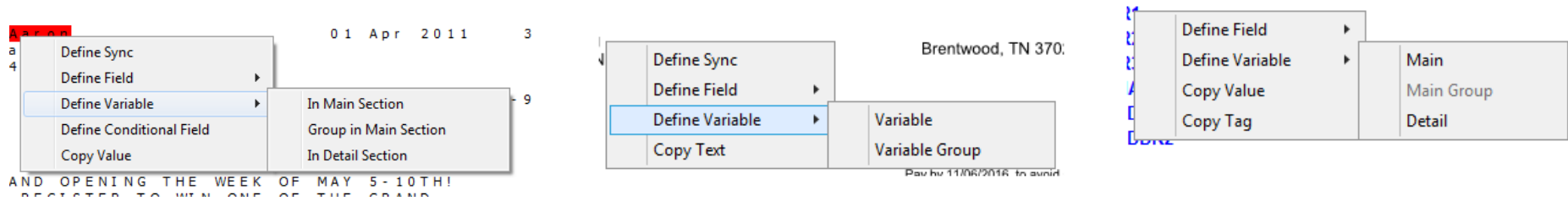


Define Sync will allow defining [Sync Fields](#). Sync Fields are special Fields that can be used to determine Document boundaries.

Define Field has options for defining a single [Field](#), a [Group of Fields](#), or a [Conditional Field](#). Conditional Field is only listed if the data is PDF. Group of Fields is not available for XML data. A Group of Fields allows defining multiple fields from the Data. This is useful when defining Address Fields.



Define Variable has options for Defining a Single [Variable](#) in the Main Section, a [Group of Variables](#) in the Main Section and a Single [Variable in the Detail Section](#).



Define Conditional Field allows the Definition of a [Conditional Field](#). A conditional Field is a field defined based on Conditions that occur in the Data.

Copy Value allows the user to copy the text value or XML value of the selected data/tag to the Clipboard for later use.

Copy Text allows the user to copy the text value for highlighted PDF data to the Clipboard for later use.

Copy Tag allows the user to copy the XML Node for the selected XML tag to the Clipboard for later use. The tag will not include the attribute selected.

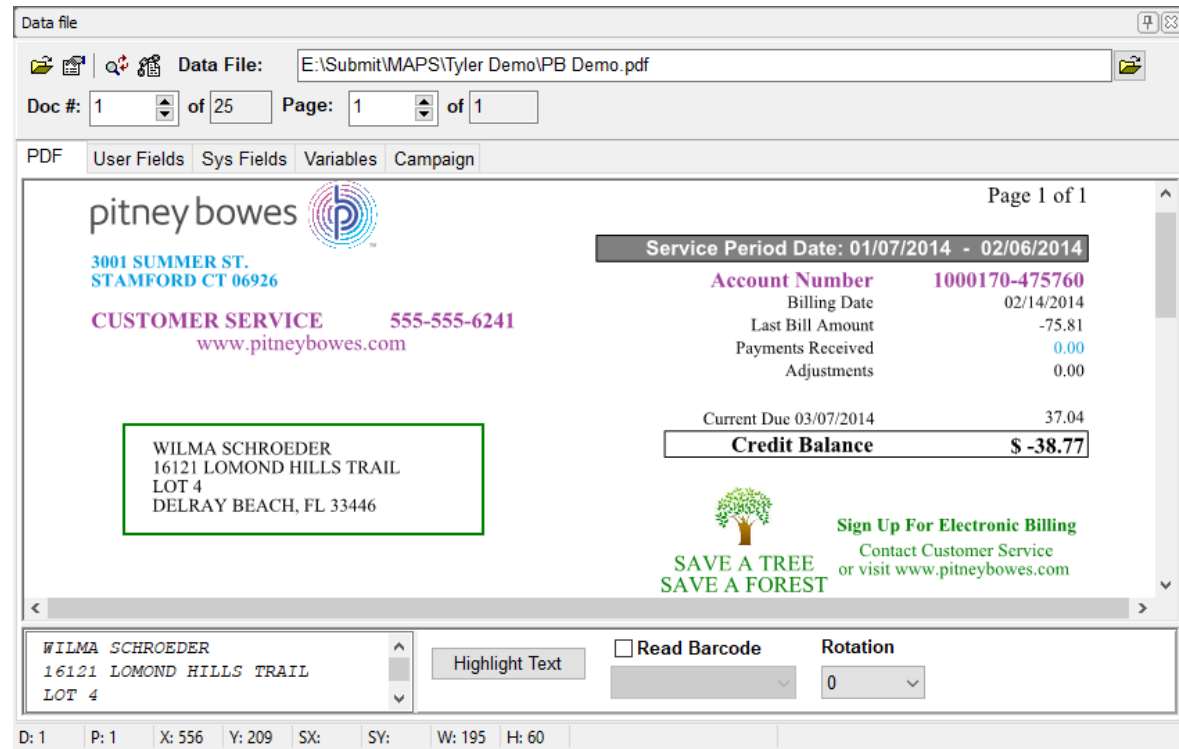
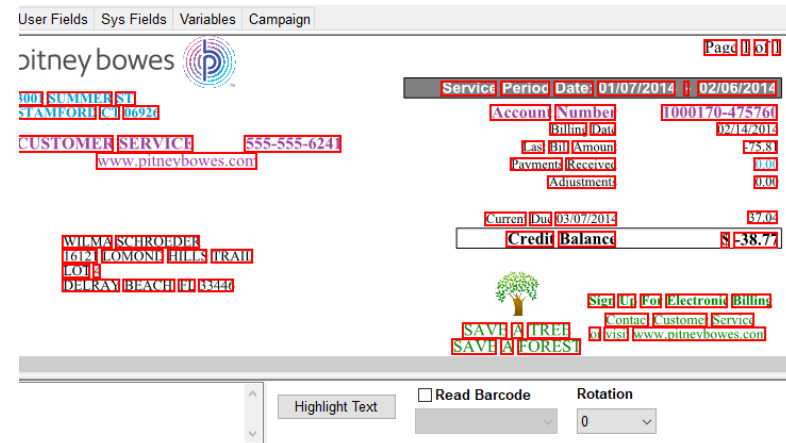
PDF

Click and drag with the cursor to select an area on the PDF data tab. This area will be outlined in green. Several lines can be selected at once. Which can be helpful for address blocks.

After selecting an area of text, right click with the cursor to display a popup menu with options for defining a field or variable from the selection.

The extractable text will appear in the Preview box at the bottom left area above the bottom status bar. Click the Highlight Text button again to unselect the extractable text.

Clicking the Highlight button will highlight all the Extractable Text on the PDF Page with red outlines.



Barcodes can be read from PDF input. The PDF must be an input not an Append Image. Barcodes should be Dark on Light colors (best is Black on White) because colors in Barcodes may prevent barcodes from being read.

The types of barcodes that can be read are:

Codabar

Code128, Code32, Code39, Code 93

Code11

EAN13, EAN8, EAN5

Interleaved 2 of 5

Patch code

Postnet

Plus 2

Plus 5

UPC A, UPC B

IMB

MSI

Datamatrix

PDF417

QR code

To read in the barcode, check the **Read Barcode** box and select the type of barcode being read in from the dropdown. Once the type is selected, the contents of the barcode will be displayed in the Preview box.

Relay Unify uCompose Field Definition has been changed to allow reading of Barcodes. Check the Read Barcode box and select the correct barcode type. It is recommended to check the **Save to DB** box. This will save the barcode and read from the database instead reading from the input PDF. **Save to DB** is faster than reading from the Input PDF.

Data file

Data File:

E:\Submit\MAPS\Tyler Demo\PB Demo.pdf

Doc #:

1

of 25

Page:

1

of 1

PDF

User Fields

Sys Fields

Variables

Campaign

Account Number	Cycle	Bill Date	Credit Balance
1000170-475760	10-04	02/14/2014	
Current Charges	Code	Due Date	
\$ 37.04	BL	03/07/2014	\$ -38.77

pitney bowes

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CHECK CARD USING FOR PAYMENT

VISA

VISA

MasterCard

MASTERCARD

CARD NUMBER

CARD SE

SIGNATURE

3 digits fr

EXP. DA

AMOUNT

\$

MAKE CHECK PAYABLE TO:

PITNEY BOWES
3001 SUMMER ST.
STAMFORD CT 06926

001000170000475760000000

001000170000475760000000000000

Highlight Text

☒ Read Barcode

Datamatrix

D: 1

P: 1

X: 440

Y: 780

SX: 40

SY: 598

W: 47

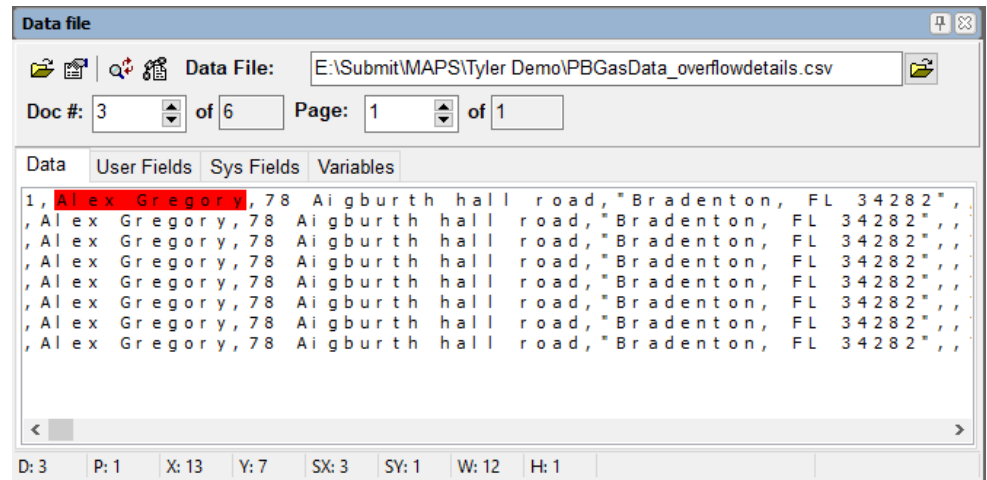
H: 46

of

Text and Delimited Data

Click and drag with the cursor to select an area on the Data tab. This area will be highlighted in red.

After selecting an area of text, right click with the mouse to display a popup menu with options for defining a field or variable from the selection.

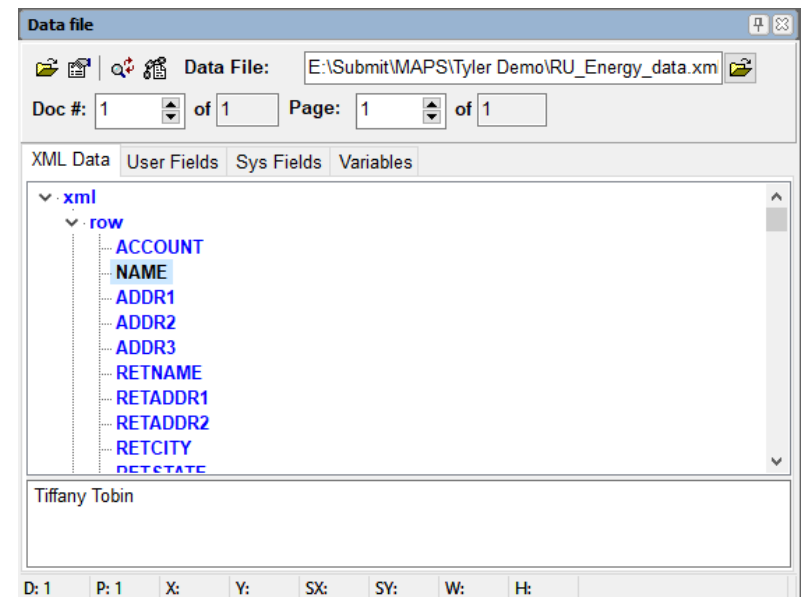


XML

In the XML data view the XML nodes are listed in Blue. The Attributes are listed in green and begin with A:.

Clicking on the XML Nodes or XML Attributes in the XML Data tab will display the value for that document in the Preview box.

After selecting a node or attribute, right click with the mouse to display a popup menu with options for defining a field or variable from the selection.



User Fields Tab

The User Fields tab contains the list of currently defined fields and values the user has defined. The friendly name will be displayed even if the field is linked to a system field in this tab.

The SYNC fields will be listed here at the top of the list, even if undefined.

The fields will be listed in ASCII order after that by their friendly name.

The values displayed for the fields will reflect the current document.

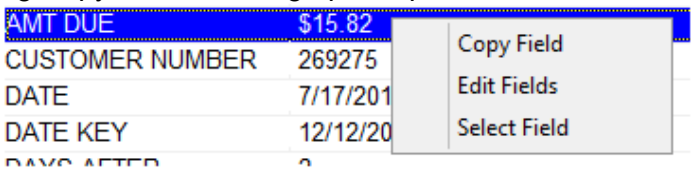
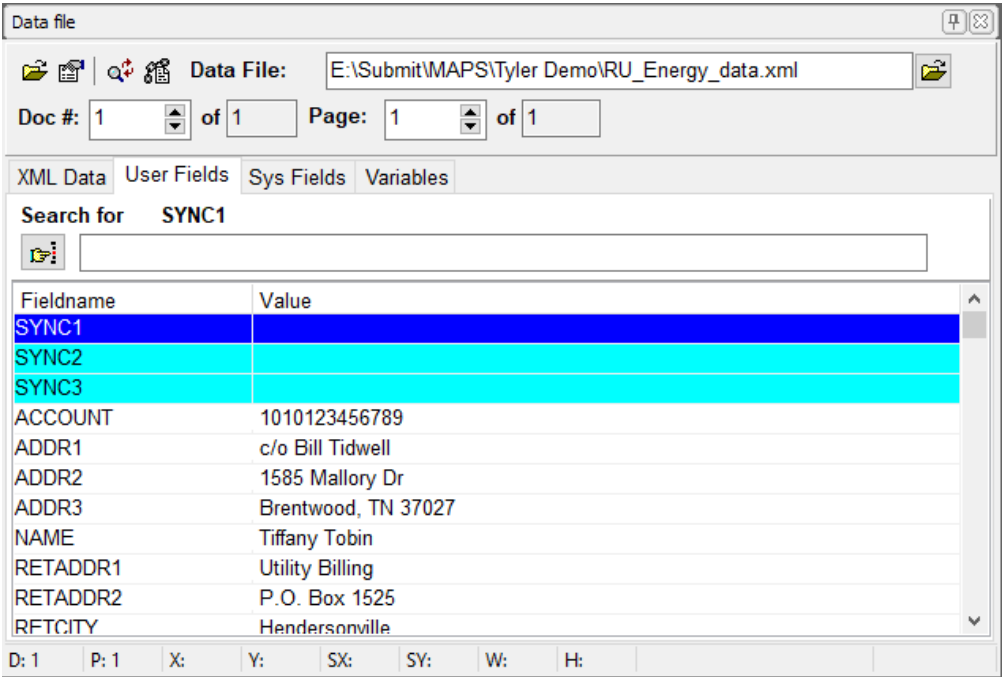
To Search for a field, select the field from the list. Then enter the value to search in the Search Value block. Click the Search button. The system will search through the loaded documents for the value. The search is a Regular Expression search. The first document that matches the Regular Expression will be displayed. This is an easy way to find a document with a specific account number for example.

Fields can be mapped to the Output page by selecting and dragging the Field to the Output.

Right clicking on a selected field will give the user the ability to copy a field definition. Selecting Copy Field will bring up a duplicate command and the user can edit and rename as desired.

To edit a field definition, double-click on the Field in the List to display the field definition form. Right clicking on the field and selecting Edit Fields will bring up the command to edit as well.

To select a field definition in the map commands list, click on the Fieldname in the Data window. Clicking the Fieldname highlights the field definition command in the map commands list. If a different command is selected in the map commands list, selecting the Select Field option will highlight the field definition command for that Fieldname in the list of map commands.

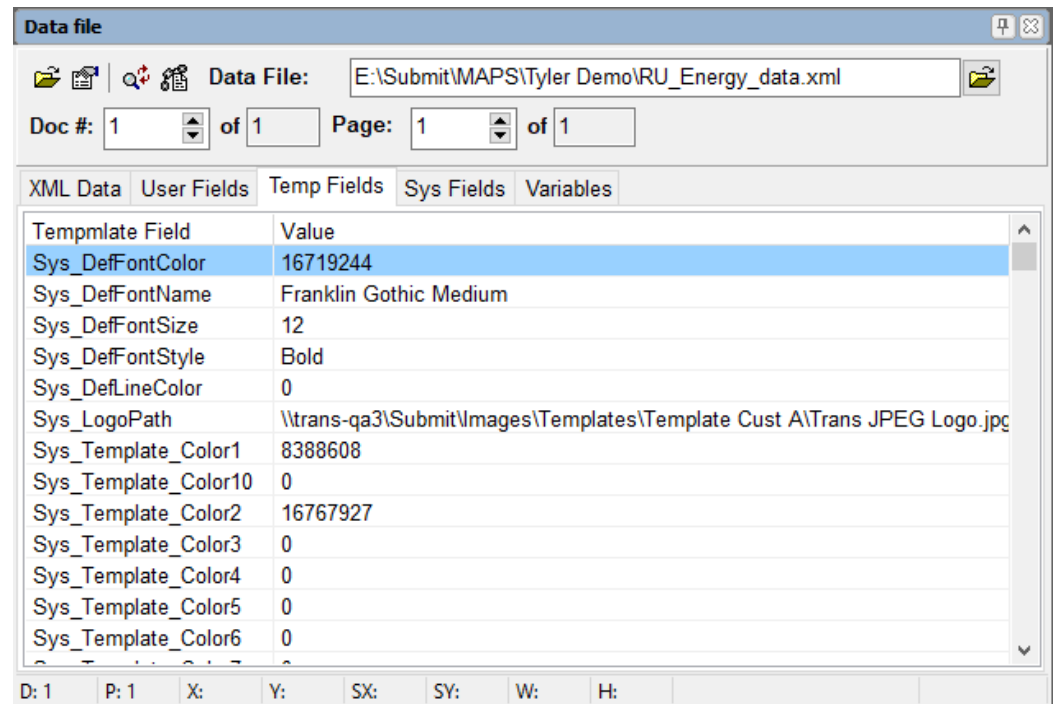


Temp Fields Tab

The Temp Fields tab contains the list of currently defined fields for a customer in uSetup.

This tab will only be visible if the map has been set up as a [template](#) map.

Fields can be mapped to the Output page by selecting and dragging the Field to the Output.



System Fields Tab

The Sys Fields tab contains a list of the System Fields and values for the current document. If a user defined field is linked to a system field, it will be listed by the System field name in this tab.

Address Cleansing and Presort System Fields will have example values; these will be populated during cleansing and presort with the correct values for that document.

System Fields can be mapped to the Output page by selecting and dragging the Field to the Output.

Data file

Data File:

E:\Submit\MAPS\Tyler Demo\PB Demo.pdf

Doc #:

1

of 25

Page:

1

of 1

PDF

User Fields

Sys Fields

Variables

Campaign

System Field	Value
Insert4	N
Insert5	N
Insert6	N
Insert7	N
Insert8	N
Insert9	N
Sys_ABCNO	1301012022003010100000313111011212213
Sys_ABSP	099
Sys_ABSPName	BSP Name
Sys_Acct_ID	
Sys_Addr1	16121 LOMOND HILLS TRAIL
Sys_Addr2	LOT 4
Sys_Addr3	DELRAY BEACH, FL 33446
Sys_Addr4	
Sys_ADPID	99999999
Sys_Balance	0.00

D: 1

P: 1

X: 109

Y: 1

SX:

SY:

W: 0

H: 0

To edit the Field definition linked to the System field, double-click on the System Field. This can only be done for fields being defined from the data, not by the system. Sys_DocNo cannot be edited for example.

If there is only one field linked to the system field, then the Field Definition form will be displayed. If there are multiple fields then the Select Field form will be displayed.

Select the field and click OK to display the Field Definition form.

Select Field to Edit

Select Field to Edit

STM STATEMENT DATE

DATE

OK

Cancel

Variables Tab

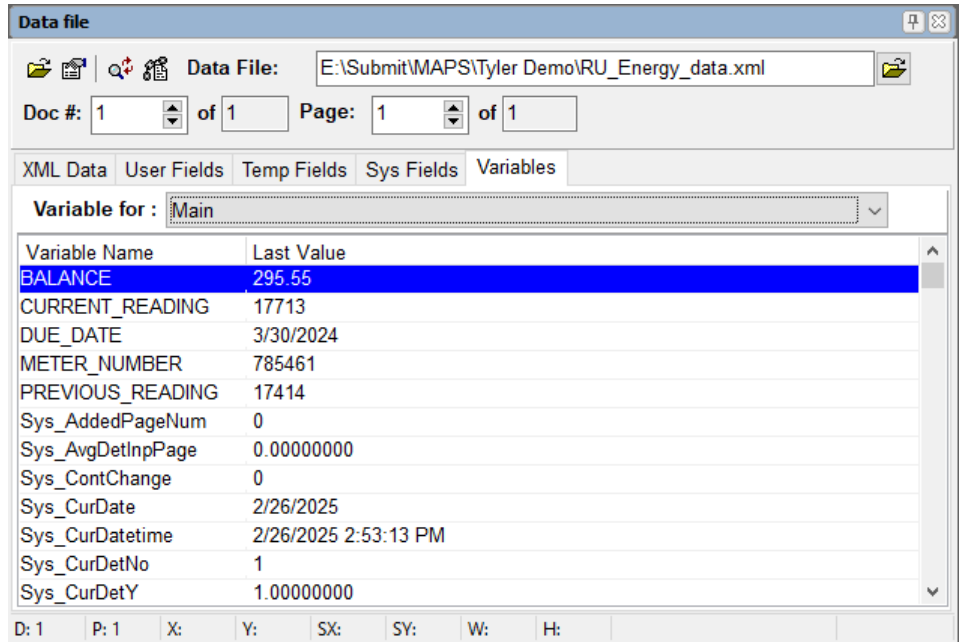
The Variables tab contains a list of the Variables from the main display section, the detail section(s), and the global variables. The last value for the variable will be listed as the detail variable value.

The user can change between these types of variables by using the Variable for dropdown.

Variables can be mapped to the Output page by selecting and dragging the Variable to the Output.

The Main selection shows variables from the Main section only. Main Variables can be mapped to the Output page by selecting and dragging the Variable to the Output. By Selecting Main, the output will be mapped to the Main Section only.

The Detail selection displays variables from that Detail section. Detail Variables can be mapped to the Output page by selecting and dragging the Variable to the Output. By selecting Detail, the variable will be mapped to the Detail section only.



Data file

Data File: E:\Submit\MAPS\Tyler Demo\RU_Energy_data.xml

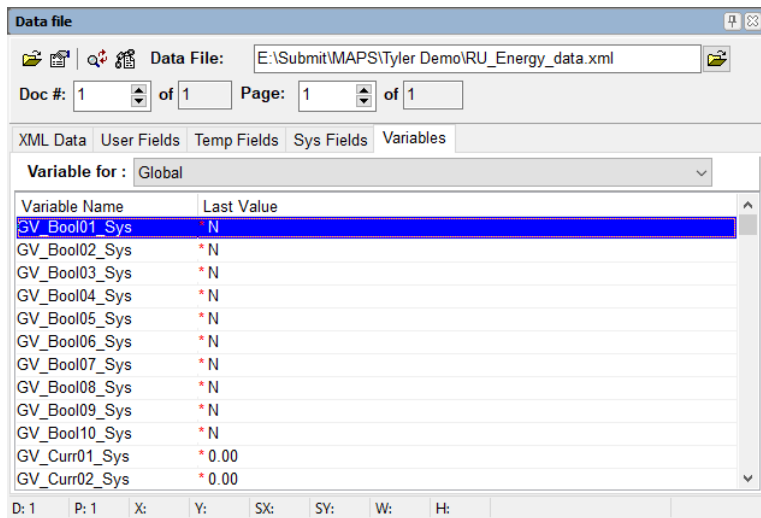
Doc #: 1 of 1 Page: 1 of 1

XML Data User Fields Temp Fields Sys Fields Variables

Variable for: Main

Variable Name	Last Value
BALANCE	295.55
CURRENT_READING	17713
DUE_DATE	3/30/2024
METER_NUMBER	785461
PREVIOUS_READING	17414
Sys_AddedPageNum	0
Sys_AvgDetInpPage	0.00000000
Sys_ContChange	0
Sys_CurDate	2/26/2025
Sys_CurDatetime	2/26/2025 2:53:13 PM
Sys_CurDetNo	1
Sys_CurDetY	1.00000000

D: 1 P: 1 X: Y: SX: SY: W: H:



Data file

Data File: E:\Submit\MAPS\Tyler Demo\RU_Energy_data.xml

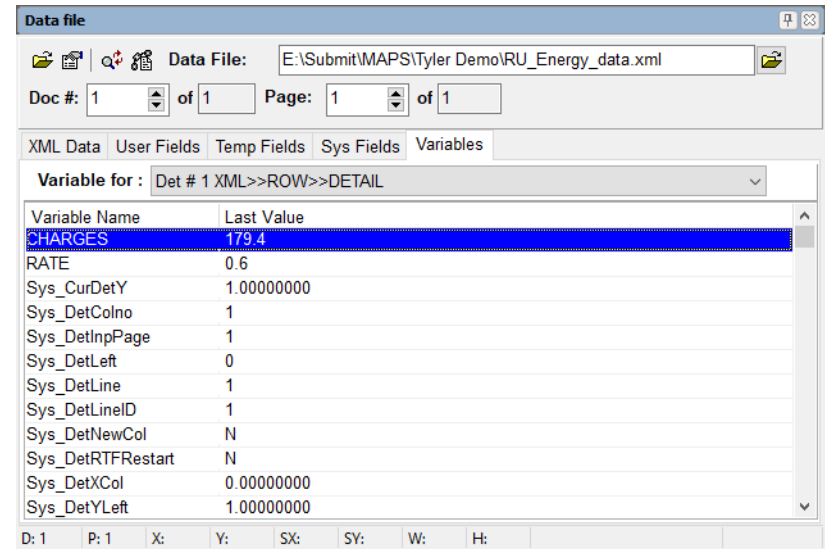
Doc #: 1 of 1 Page: 1 of 1

XML Data User Fields Temp Fields Sys Fields Variables

Variable for: Global

Variable Name	Last Value
GV_Bool01_Sys	* N
GV_Bool02_Sys	* N
GV_Bool03_Sys	* N
GV_Bool04_Sys	* N
GV_Bool05_Sys	* N
GV_Bool06_Sys	* N
GV_Bool07_Sys	* N
GV_Bool08_Sys	* N
GV_Bool09_Sys	* N
GV_Bool10_Sys	* N
GV_Curr01_Sys	* 0.00
GV_Curr02_Sys	* 0.00

D: 1 P: 1 X: Y: SX: SY: W: H:



Data file

Data File: E:\Submit\MAPS\Tyler Demo\RU_Energy_data.xml

Doc #: 1 of 1 Page: 1 of 1

XML Data User Fields Temp Fields Sys Fields Variables

Variable for: Det # 1 XML>>ROW>>DETAIL

Variable Name	Last Value
CHARGES	179.4
RATE	0.6
Sys_CurDetY	1.00000000
Sys_DetColno	1
Sys_DetInpPage	1
Sys_DetLeft	0
Sys_DetLine	1
Sys_DetLineID	1
Sys_DetNewCol	N
Sys_DetRTFRestart	N
Sys_DetXCol	0.00000000
Sys_DetYLeft	1.00000000

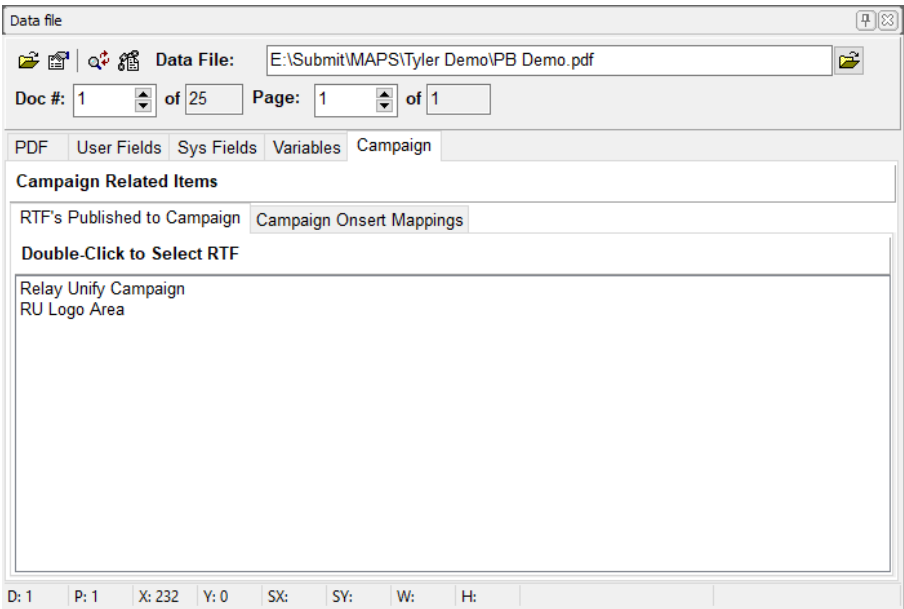
D: 1 P: 1 X: Y: SX: SY: W: H:

Campaign Tab

The Campaign tab will only be visible if the map has been published for use with Relay Unify Customize.

This tab will display the RTF's that have been published using the Publish to Campaign command. Double-clicking on the RTF name in the list will take the user to that command in the Map Commands list. It will also highlight the command with a green outline on the Output window.

It will also list the Mappings that are available on Campaign Onserts. These will be commands that have "Print on Campaign Onsert" checked. Double-clicking on the command in the list will take the user to that command in the Map Commands list. It will also highlight the command with a green outline on the Output window.



Please see the Relay Unify Customize Manual for more information.

Map Commands Window

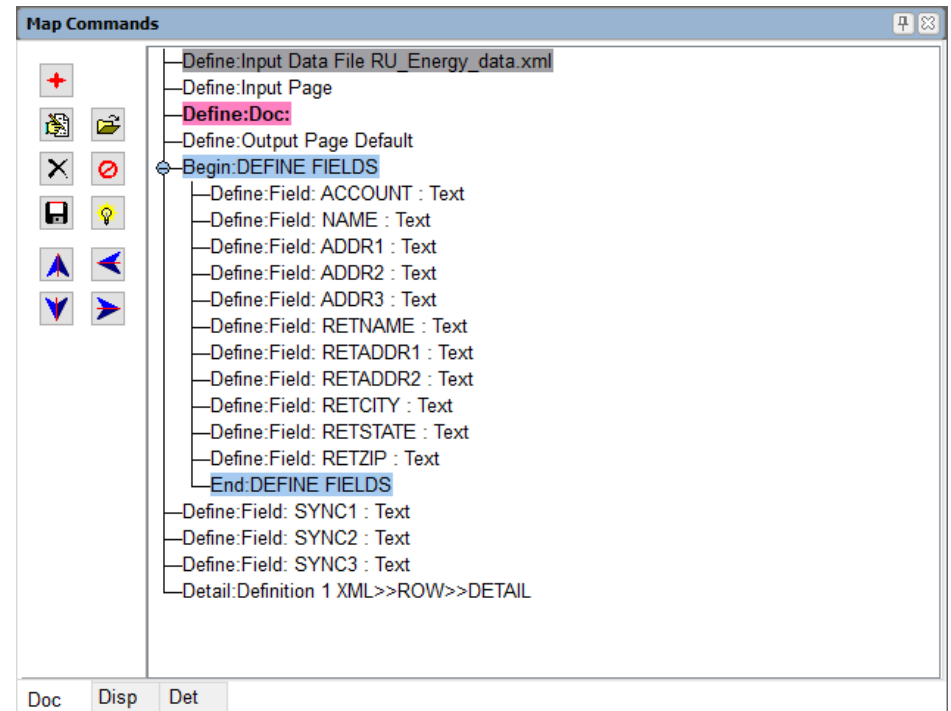
The Map Commands window lists the commands resulting in the definition of the pages/document as well as the layout and design of the output.

This window is made up of three tabs: 1) the Document, 2) the Display, and 3) the Detail tab.

The Doc tab contains the commands that define the pages and documents from the input data. The field definitions are on the Doc tab because they are defined once on a per document basis. The detail definition determining where the detail lines are displayed on the output, and the output page definitions that set up duplexing, page size, and tray calls, are found on the Doc tab.

The Display tab contains the commands specific to each output page, including images and text. Variables are defined on this tab since variables can change value multiple times throughout a document based on a function or a condition.

The Detail tab contains the commands that each detail line from the data will run through to generate the output for the detail lines.



Map Commands Buttons



Click to Add a new command. This will yield a different command selection window depending on if selected from the Document, Display, or Detail tab within the window.



Click to Copy the selected command. Once this button is clicked an edit of the selected command is displayed. Any of the parameters of the command may be changed before saving. The command will be added before/after the selected command, depending on the Preferences set.

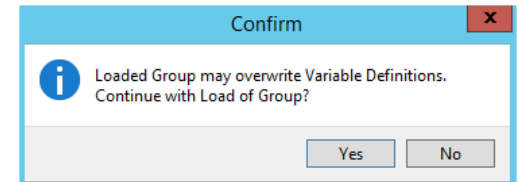
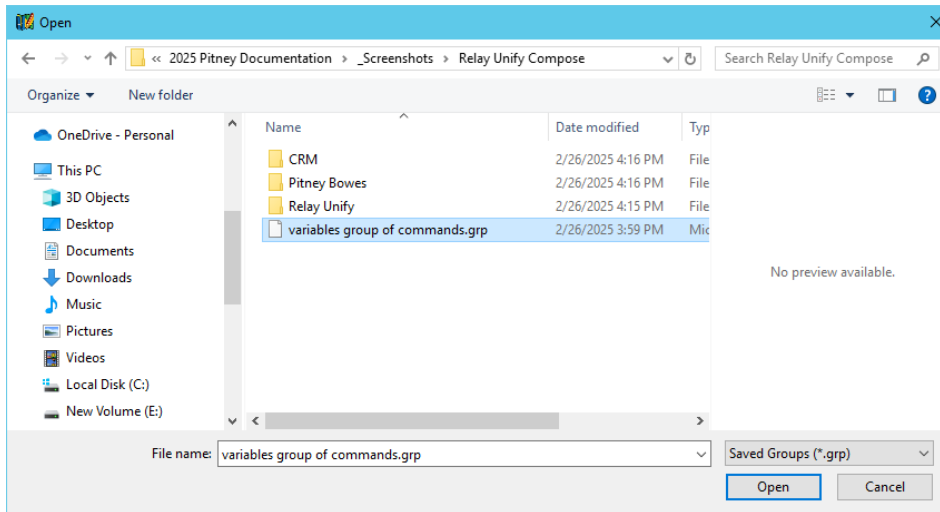


Click to Edit the selected command.



Click to Load in a group of commands previously saved as a file using the save button. This may ask for a confirmation. Click Yes to continue with the loaded group or No to cancel.

Select the name and location of the group being loaded. Click Open.



The commands that were saved will be loaded.

To load the commands in a group, create the group first. Select the Begin Group command and then click the Load Group.

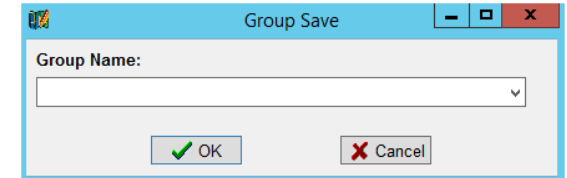
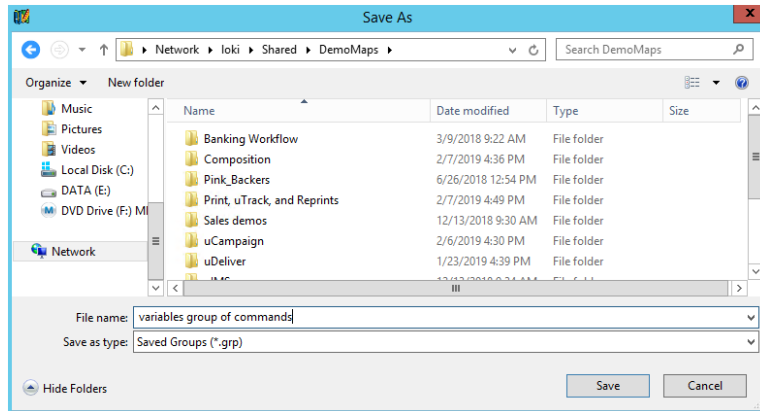


Click to Delete the selected command.



Click to Align mapping commands. Click to Align mapping commands. The Align button only works on commands in a group. You select the Group begin and it will allow you to align all the commands in the Group. The commands that will be aligned are Field Mappings, Variable Mappings, Barcode Mappings, Append Image, Drawing Objects, Graph Objects, OMR, Word Wrap Paragraph, Line Mappings. It does not align RTF paragraphs.

 Click to Save a group of commands as a file. This will display a group save selection window of the groups in the map. Select the group to save from the list and click OK.



Select the Location and name for the group of commands. The default extension is .grp. Click Save to save the group. There will be a confirmation window.



The group will not contain the Group begin or Group end commands; Only the commands between the begin and end commands will be saved. This group of commands can be loaded into any map using the Load button.

 Click to Disable a selected command or group.

 Click to Lock or Unlock a selected command. The command is outlined in green if unlocked and red if locked.

Locked commands cannot be moved by mouse drag. Locked commands also appear with ** at the beginning of the Command in the Map Commands Window. The lock status is not saved.

Mr Giancarlo Aafjes
28 High Street
Boyers, PA 16017



Brentwood Office Grand Opening The Week Of May 5-10th!
Enjoy Refreshments, Register To Win One Of The Grand
Prizes And Take A Memento! Notice: Our Offices Will
Be Closed 5-24 & 5-26 For Memorial Weekend.

```

-Define:Var: MAIN GENERAL : Text
-Cond:If Sys_CurOutPage = 1 then
  -Begin:PAGE 1 ONLY
    -**Map:Field: Sys_FullAddress >> 1, 0.51, 0.95
    -Map:Var: MAIN GENERAL >> 0, 5.04, 1.20
    -Map:Field: FROMDATE >> 0, 5.47, 1.20
    -Map:Var: MAIN GENERAL >> 1, 6.39, 1.20
    -Map:Field: TODATE >> 0, 6.60, 1.20
    -**Add:Image \varagorn\Releases\Development\Submit\images\Logo.jpg
    -Map:Field: ACCOUNT >> 1, 6.28, 0.90
  
```



Click this to highlight the PDF input data area for a previously selected field definition.



Click to Move the selected command Up one line.



Click to Move the selected command Down one line.



Click to Move the selected command Out one level, such as with a group or conditional.



Click to Move the selected command In one level, such as with a group or conditional.

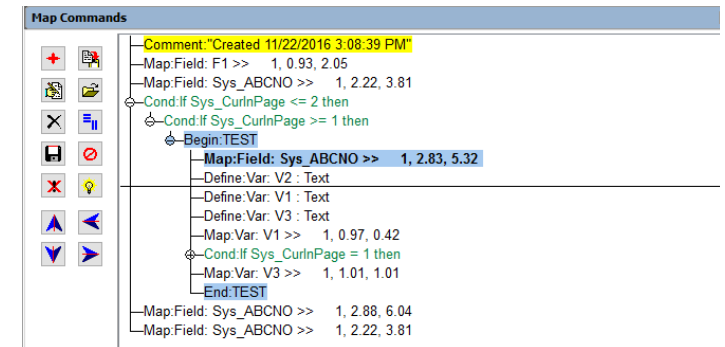
The Move Buttons can be turned off from the Preferences edit page. Checking the “Turn off Command Move Buttons” will turn off the Move Buttons.

The Command List uses a Linked Command List structure that allows drag and drop capability.

Dragging the commands up or down will scroll the view. Expanded commands will remain expanded after the drag.

The following are exceptions to the drag and drop:

- The child command of a Conditional cannot be dragged. This would result in a Conditional with no THEN.
- The End Group cannot be dragged. This command is the ending command in a Group.
- Parent Commands cannot be dragged into itself.
- Multiple commands cannot be dragged unless they are in a Group.



Click to pin the window to the left-hand side. Clicking the tab that was pinned will display the window. The window can then be re-pinned but clicking the sideways pin or remain accessible from the tab. Resetting the forms will undo the pin to the left-hand side tab.



Click to close the window.

Map Command Keyboard Shortcuts

From the Doc, Disp, and Det tabs, when a user right clicks, there are eight options in a popup menu. Each has a keyboard shortcut to access the operation. There is also the ability to Undo using Control-Z that is not listed in the popup menu.

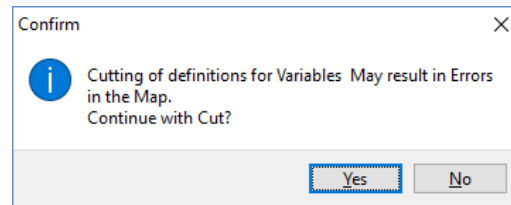
If a user selects multiple commands that are not consecutive, all the selected commands may not be processed. The operation will only process consecutive commands. If a command is skipped in the selection, it will stop the operation. The operation will start at the first selected command and perform the operation on selected commands until a command is found that is not selected. Commands after the skipped command will not be processed.

If a parent command is selected, all the child commands are considered selected.

Cut

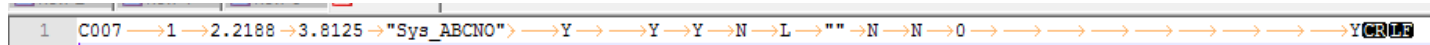
The Popup menu or control-X can be used to cut the selected commands.

A confirmation window will be displayed.

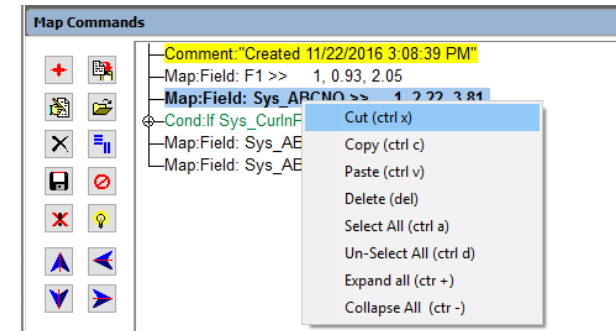
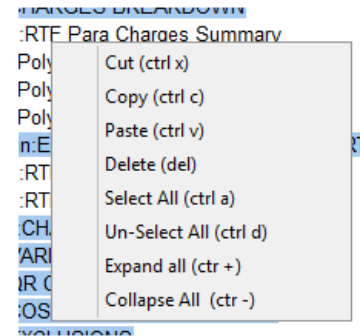


Select yes to cut the commands.

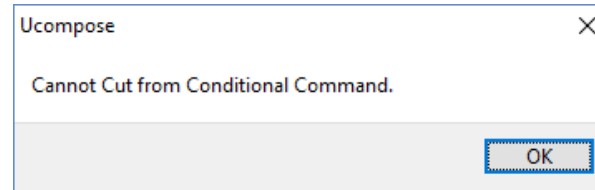
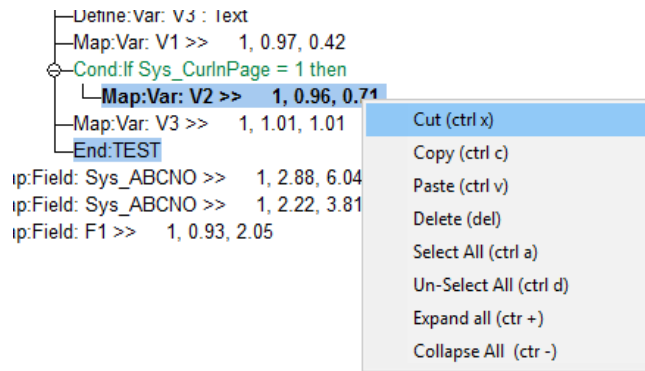
The cut command is now on the Clipboard.



A command cannot be cut from a conditional.

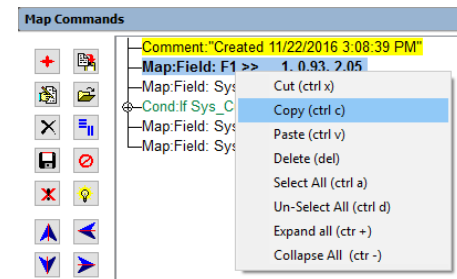


If attempted the following will be displayed after the Cut confirmation.

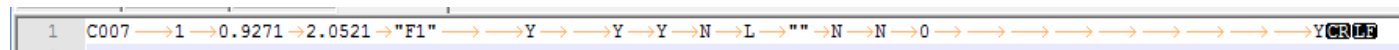


Copy

The Popup menu or control-C can be used to copy the selected commands.

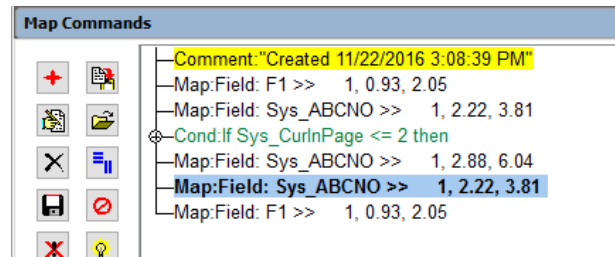
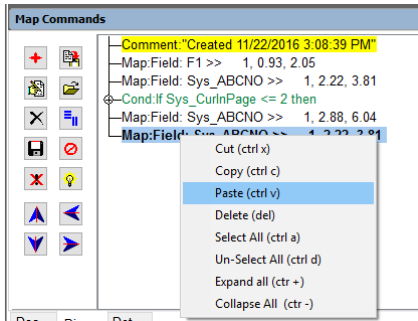


The copied commands will be in the clipboard.



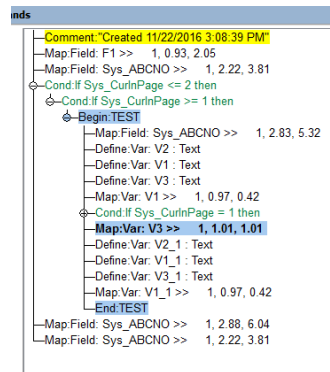
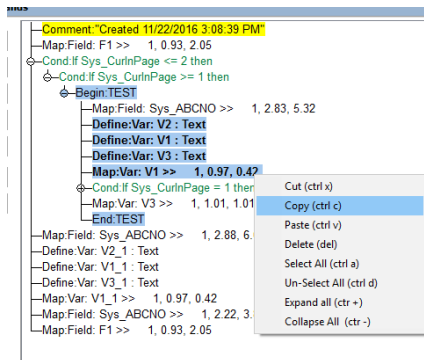
Paste

The Popup menu or control-V can be used to paste commands from the clipboard. The pasted commands will be added to the map after the selected command.



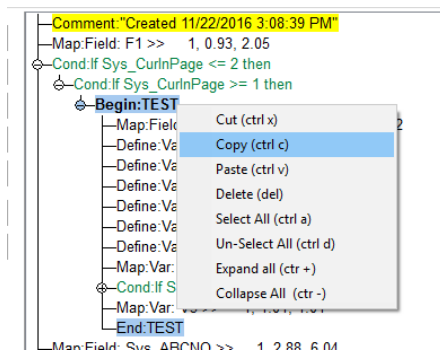
When pasting variable definitions or Group commands the Variable names or Group names may be changed if existing variables/field or Group has the same name.

Define Variables V1, V2, V3 and map variable V1 is selected.

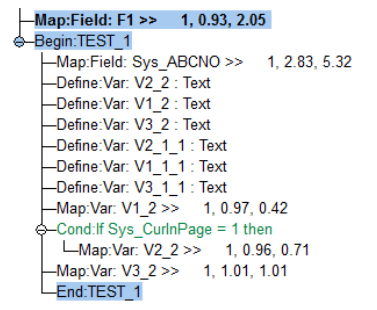


Define Variables V1_1, V2_1, V3_1 and map variable V1_1 are pasted.

Group Test is copied

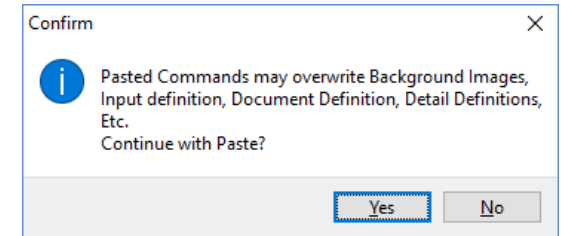


Group TEST_1 is pasted.



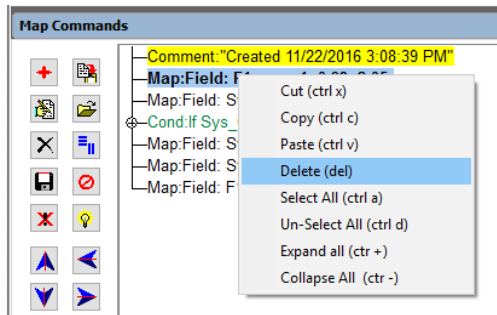
Only the Variable definitions and some Doc Tab commands will not copy. They will replace if copied. The commands are Background Images, Input Definition, Document Definition, Detail Definition, and Output Page definition.

When pasting there will be a confirmation window. Select Yes to paste.



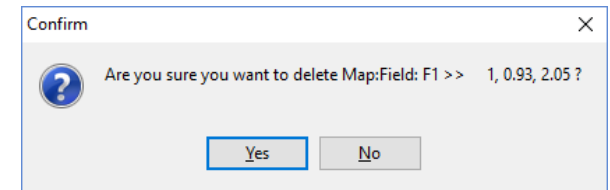
Delete

The Popup menu or delete key can be used to delete selected commands. The deleted commands will not be copied to the clipboard.

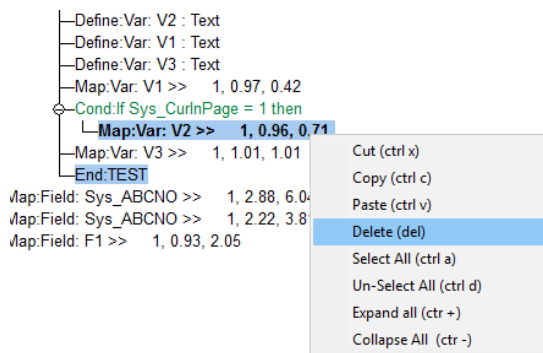


When deleting only the last selected command will be deleted.

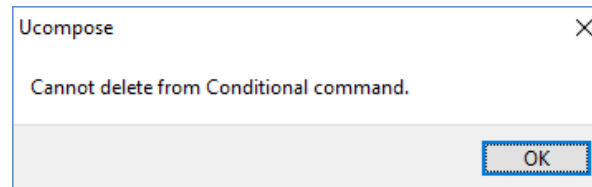
A confirmation window will be displayed. Select Yes to delete.



A command cannot be deleted from a conditional.

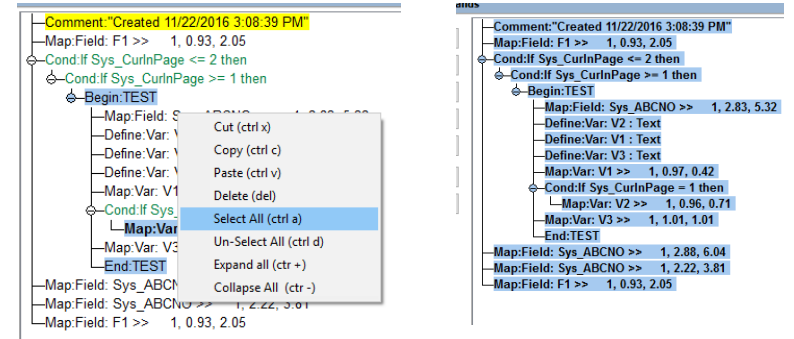


If attempted the following will be displayed after the Delete confirmation.



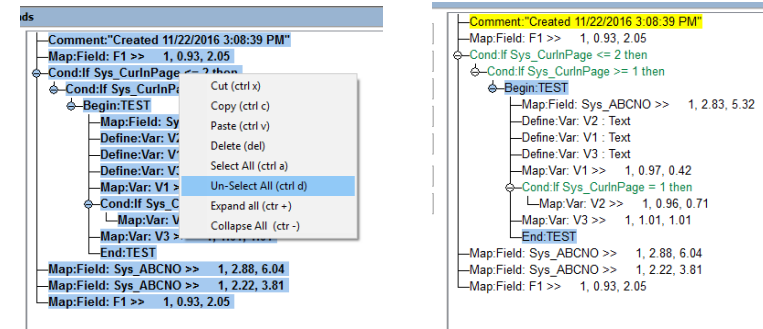
Select All

Commands may be selected by using the Mouse and either the Control key (selecting individual commands) or Shift key (selecting a range of commands). The Popup menu or control-a can be used to select all the commands in the list.



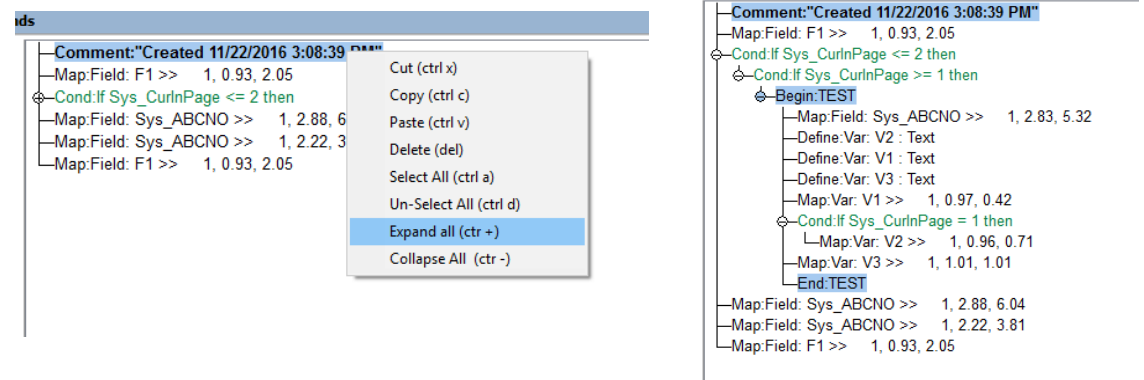
Un-Select All

When all the commands are selected, the user can unselect using control key (unselect individual command) or the popup menu or control-d.



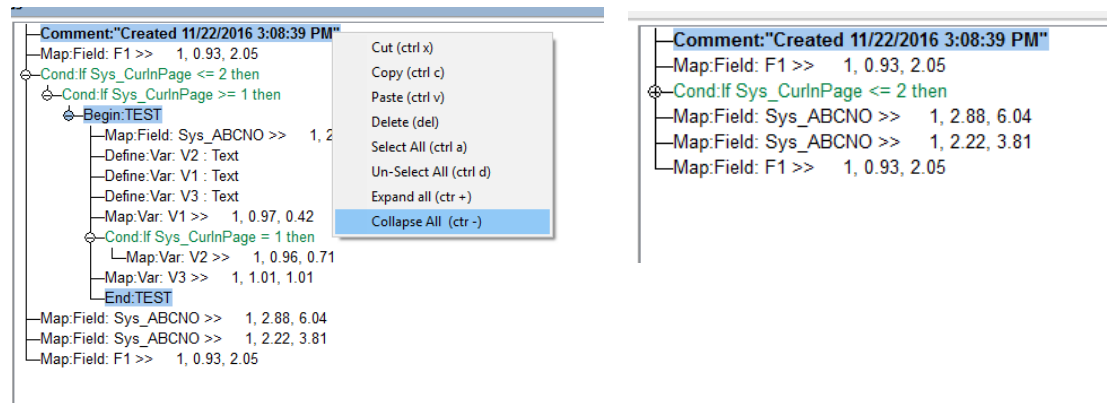
Expand all

Some commands contain child commands. These Commands may be expanded by clicking on the + (plus sign) next to the command or the Popup menu or control+ (plus sign).



Collapse all

The expanded Commands may be collapsed by clicking on the - (minus sign) next to the command or the Popup menu or control- (minus sign).

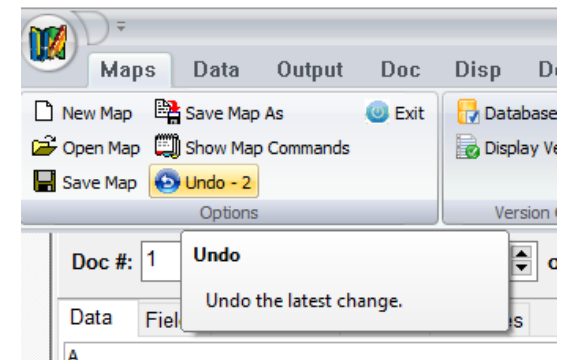


Undo

Users can use Control-Z to undo changes to commands. This has the same effect as selecting the map undo selection from the Maps Ribbon.

Each Control-Z will remove a single change. The maximum is 30.

The map will be reprocessed after each call to control-Z.



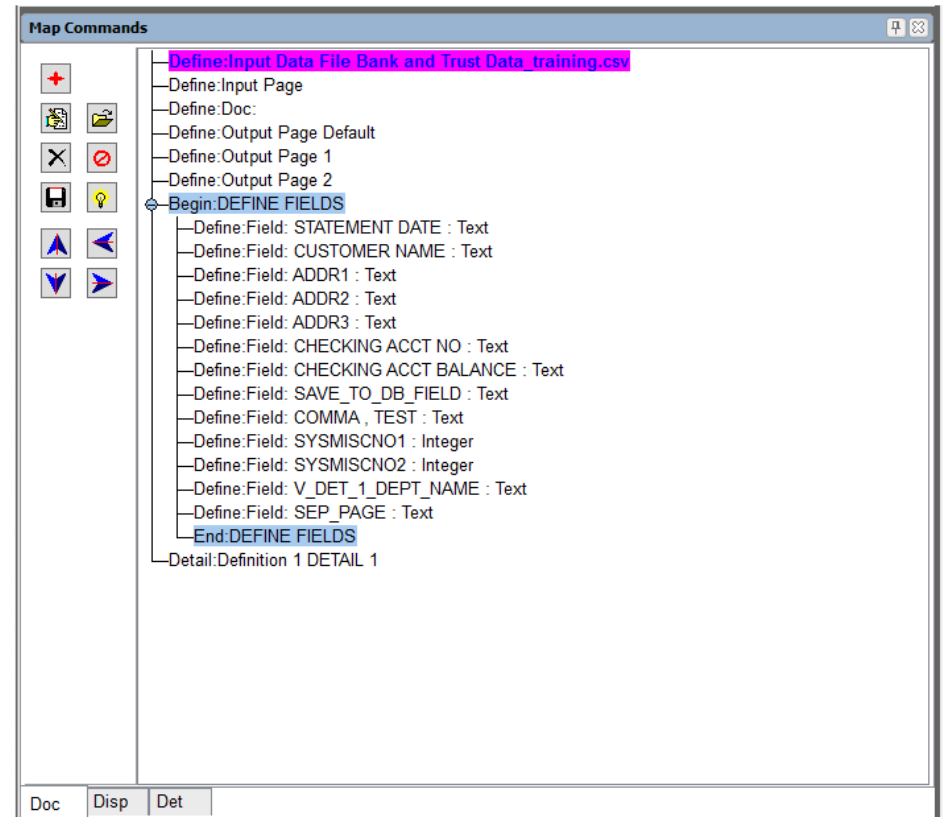
Doc Tab

The Doc tab displays document level commands.

The order of these commands does not matter. All are executed before the Display or Detail commands are executed.

To edit a command, select the command and either double-click on the command or click the edit button.

There are three commands that will be on the Doc tab by default when creating a map. The Input Definition, Document Definition, and the Output Page Definition. These should be set up and edited first before building the rest of the map.



Define Input Page

This command is for the user to identify the Data Input type and how the data is to be read in and paged out. The settings within the command will change based on the data type.

The Input Page command can be accessed in 2 ways. The 1st is to click Input Page from the Ribbon bar Doc. The 2nd is to double click the command in the Map commands window. This command is created by default and cannot be deleted.

To edit this command, double click on it in the Maps Command List or select one of the two methods above.

Select the data type for the **Page Type**. This will determine some of the settings available.

Form Feed

Selecting Form Feed, the pages will be broken out based on the Form Feed characters for page breaks. If Fix Inconsistent Line Endings is checked, then a space is added after the Form Feed. This will allow the Form feed line to be treated as the last line of the page. When unchecked and no CR-LF occurs, the Next line is on the same line as the Form Feed.

The screenshot shows the 'Input Page Setup' dialog box. The 'Page Type' section has 'Form Feed' selected. The 'Page defined by Form Feed' section is empty. The 'Fix inconsistent Line Endings' checkbox is unchecked. The 'Concatenate Lines on page' and 'Lone CR as End of Line' checkboxes are also unchecked. The 'Skip' section has 'None' selected. The 'No Pages are Skipped' message is displayed. The 'Send JPG images as JPG if printer accepts JPG' checkbox is checked. The 'OK' and 'Cancel' buttons are at the bottom.

The screenshot shows the 'Input Page Setup' dialog box. The 'Page Type' section has 'Fixed Length' selected. The 'Page defined by Fixed # of Lines' section is empty. The 'Fix inconsistent Line Endings' checkbox is unchecked. The 'Concatenate Lines on page' and 'Lone CR as End of Line' checkboxes are also unchecked. The 'Skip' section has 'None' selected. The 'No Pages are Skipped' message is displayed. The 'Send JPG images as JPG if printer accepts JPG' checkbox is checked. The 'OK' and 'Cancel' buttons are at the bottom.

Fixed Length

Selecting Fixed Length will require the user to put in the number of lines per input page. The value entered for **# of Lines Per Page** will break the input pages after that many lines. This is used with text input.

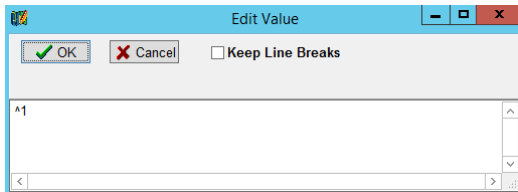
The default setting for a new map is 65 lines per Page.

Page Test

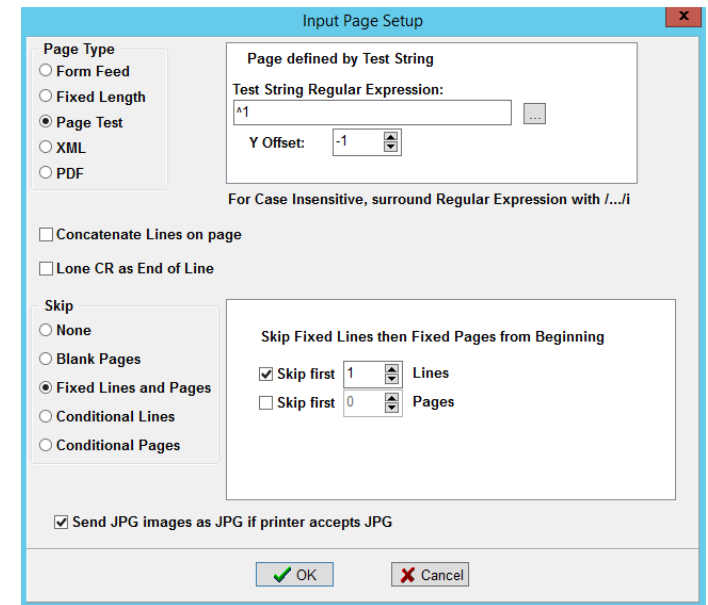
Selecting Page Test, the user will need to enter the **Test String Regular Expression**. This will be used to create the input pages when the input is text. Each time this string results in a match in the data, a new input page will be created.

The user can also enter a **Y Offset** value. If positive, the page will end Y lines after the text is found. If negative, the page will end Y lines before the text is found. For this example, the pages will be broken out when the beginning of a line starts with the character '1'. The -1 offset, breaks the pages one line previous to the line beginning with '1'. If the offset was zero, the last line for the input page would start with '1'.

The value can be entered in the field or by clicking on the Ellipsis button to pull up the edit form.

A small dialog box titled "Edit Value" with a blue header bar. It contains three buttons at the top: a green checkmark icon labeled "OK", a red X icon labeled "Cancel", and a checkbox labeled "Keep Line Breaks". Below these is a text input field containing the regular expression "^1". At the bottom of the field is a small ellipsis button.

In this form the user can enter data that can contain multiple lines. Check **Keep Line Breaks** to retain the Line Breaks. If Keep Line Breaks is not checked the multiple lines will be combined with a space.

A larger dialog box titled "Input Page Setup" with a blue header bar. On the left is a "Page Type" section with radio buttons for "Form Feed", "Fixed Length", "Page Test" (which is selected), "XML", and "PDF". To the right of "Page Test" is a section titled "Page defined by Test String" containing a text field for "Test String Regular Expression" with the value "^1", a small ellipsis button, and a "Y Offset" spinner set to "-1". Below this is a note: "For Case Insensitive, surround Regular Expression with /.../i". Further down are two checkboxes: "Concatenate Lines on page" and "Lone CR as End of Line", both of which are unchecked. Below these is a "Skip" section with radio buttons for "None", "Blank Pages", "Fixed Lines and Pages" (which is selected), "Conditional Lines", and "Conditional Pages". To the right of "Fixed Lines and Pages" is a section titled "Skip Fixed Lines then Fixed Pages from Beginning" containing two checkboxes: "Skip first 1 Lines" (checked) and "Skip first 0 Pages" (unchecked). At the bottom of the dialog is a checkbox "Send JPG images as JPG if printer accepts JPG" which is checked, and two buttons: a green checkmark icon labeled "OK" and a red X icon labeled "Cancel".

For the Form Feed, Fixed Length, and Page Test data inputs, the following are available.

If **Concatenate Lines on Page** is checked, this will concatenate all the lines on the page into one line for use with Delimited Data input. Blank lines will be removed during concatenation. This option is only available for Form Feed, Fixed Length, and Page Test page types. If Skipping of Lines or Pages is enabled, the pages or lines will be skipped before concatenation.

As an example, given the following data input, the data will be parsed to find an empty line and then all the lines will be concatenated into a single line output in Relay Unify uCompose.

Data file

Data File: D:\Requests and Tickets\concatinputlines\Multilinedelimited.txt

Doc #:

1

of 4

Page:

1

of 1

Data

User Fields

Sys Fields

Variables

Field1; field2; Field3; field4 ; field5; field6; field7; field8; field9; field10; field11; field12; field13

Multilinedelimited.txt

```
1 Field1;field2;  
2 Field3; field4 ;field5;field6;field7;  
3 field8;field9;field10;field11;  
4 field12;field13;  
5  
6 Doc1 a;data1;data2;  
7 data3;data4 ; data5; data6;  
8 data7; data8;  
9  
10 Doc2 a;data1;data2;data3;  
11 data4 ; data5; data6;  
12 data7; data8;Doc2-9;  
13  
14 Doc3 a;data1;data2;  
15 data3;data4 ; data5; data6;data7;  
16 data8;data9;data10; Doc3-11;  
17  
18
```

Ln: 14 Col: 20 Sel: 0|0 UNIX UTF-8 INS

If **Lone CR as End of Line** is checked, the input data contains a Carriage Return but not a Line Feed. If this is unchecked, the line will be treated to have both a Carriage Return and Line Feed.

The Skip section allows a user to skip various lines and pages in the input data.

If **None** is selected, no input pages will be skipped. This is the only setting for PDF and XML input.

Skip

☒ None

☐ Blank Pages

☐ Fixed Lines and Pages

☐ Conditional Lines

☐ Conditional Pages

No Pages are Skipped

If **Blank Pages** is selected, then any blank input pages will be skipped. This applies only to the beginning pages that are blank, containing only spaces.

Skip

☐ None

☒ Blank Pages

☐ Fixed Lines and Pages

☐ Conditional Lines

☐ Conditional Pages

Skip Beginning Blank Pages

If **Fixed Lines and Pages** is selected, the user can skip the first n lines or n pages based on the values entered. This only applies to lines and pages at the beginning of the file, not throughout. Either or both can be set. If both are selected, the lines are removed first and then the pages.

Skip

☐ None

☐ Blank Pages

☒ Fixed Lines and Pages

☐ Conditional Lines

☐ Conditional Pages

Skip Fixed Lines then Fixed Pages from Beginning

☒ Skip first

1

Lines

☐ Skip first

0

Pages

Conditional Line and Pages can be helpful for data that is not consistent in structure. For example, sometimes there are header lines and other times the data does not contain the header lines.

If **Conditional Lines** is selected, the condition for those lines will need to be setup.

Checking **Skip the Conditional Line** will skip the line where the condition is met. If this is unchecked, it will skip all lines until this condition is met.

The lines are tested one by one.

Enter the Regular Expression to look for in the Test String. Enter the Condition for the test and the Value for the Test. Some conditions do not require a Value.

Skip

☐ None

☐ Blank Pages

☐ Fixed Lines and Pages

☒ Conditional Lines

☐ Conditional Pages

Skip Conditional Lines until

Test String:

Condition:

Value:

☐ Skip the Conditional Line

Conditions:

- Blank – The Test string returned a blank on the Line. No Value Needed.
- Not Blank – The Test string returned a Non-Blank value on the Line. No Value Needed.
- SameText – The Test string returned data that matches the Value (without Case).
- Not SameText – The Test string returned data that does not match the value.
- Equal To – The Test string returned data that was an exact match to Value.
- Not Equal to – The Test String returned data that was not an exact match to Value.
- RegEx - The Test string returned a match. No Value Needed.

If **Conditional Pages** is selected, the condition for those pages will need to be setup.

Checking **Skip the Conditional Page** will skip the page where the condition is met. If this is unchecked, it will skip all pages until this condition is met.

The pages are tested one by one.

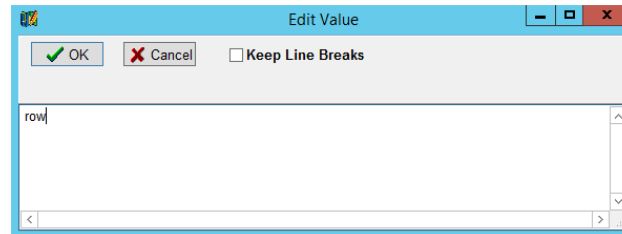
The screenshot shows a configuration panel titled "Skip". On the left, there is a list of options with radio buttons: "None", "Blank Pages", "Fixed Lines and Pages", "Conditional Lines", and "Conditional Pages". The "Conditional Pages" option is selected. To the right of this list is a sub-panel titled "Skip Conditional Pages until". This sub-panel contains three input fields: "Test String:" with a text box and a dropdown arrow, "Condition:" with a dropdown menu, and "Value:" with a text box and a dropdown arrow. At the bottom of the sub-panel is a checkbox labeled "Skip the Conditional Page".

XML

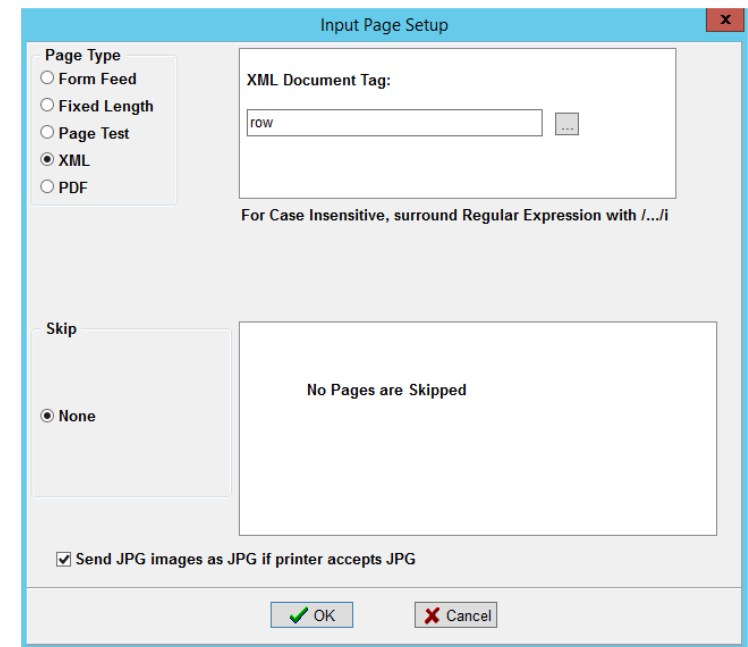
Selecting XML will require the user to enter the **XML Document Tag**. This will be used to break out each document. The input must be XML and each page contains the data for the XML node specified as the Document Tag.

The value can be entered in the field or by clicking on the Ellipsis button to pull up the edit form.

In this form the user can enter data that can contain multiple lines. Check **Keep Line Breaks** to retain the Line Breaks. If Keep Line Breaks is not checked the multiple lines will be combined with a space.



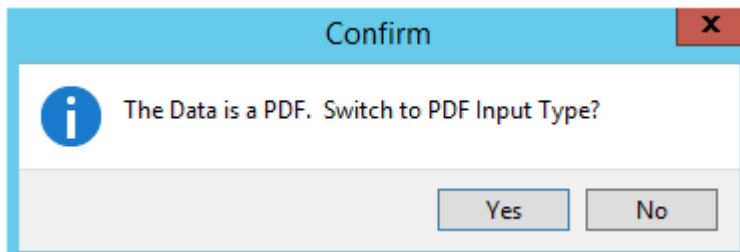
The 'Edit Value' dialog box has a title bar with standard window controls. It contains three buttons at the top: 'OK' (with a green checkmark), 'Cancel' (with a red X), and 'Keep Line Breaks' (with an unchecked checkbox). Below these is a large text area containing the text 'row'. At the bottom of the text area are horizontal and vertical scroll bars.



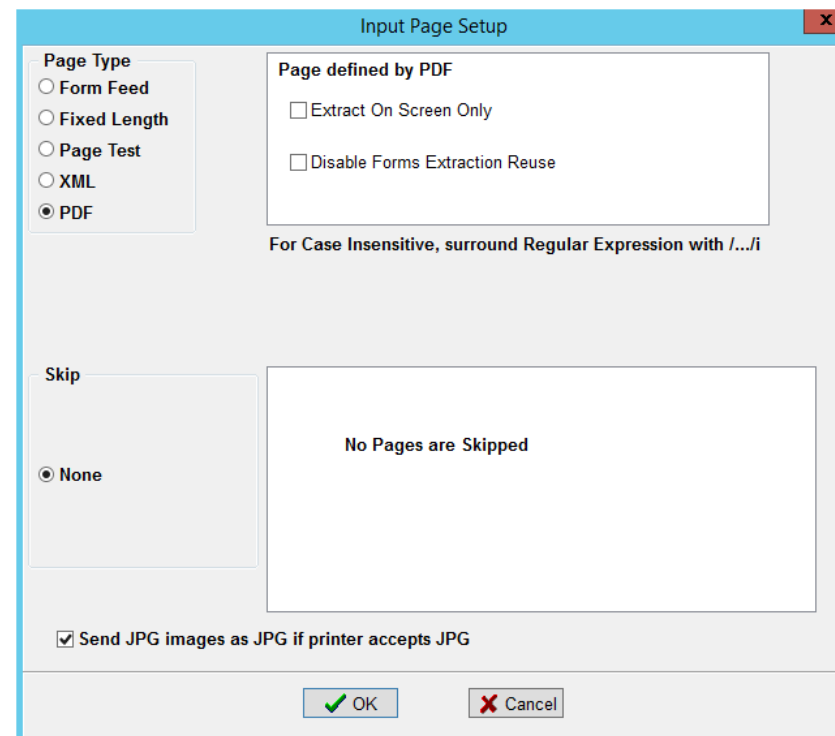
The 'Input Page Setup' dialog box has a title bar with a close button. On the left, the 'Page Type' section has four radio buttons: 'Form Feed', 'Fixed Length', 'Page Test', and 'XML' (which is selected). Below this is a section for 'XML Document Tag' with a text field containing 'row' and an ellipsis button. A note below reads: 'For Case Insensitive, surround Regular Expression with /.../i'. On the left side, there is a 'Skip' section with a radio button for 'None'. The main area on the right contains a large text box with the text 'No Pages are Skipped'. At the bottom, there is a checkbox labeled 'Send JPG images as JPG if printer accepts JPG' which is checked. At the very bottom are 'OK' and 'Cancel' buttons.

PDF

For PDF, if the user says Yes to confirming the data file loaded into Relay Unify uCompose is a PDF, then this will be selected automatically.



If a user manually selects PDF, the standard PDF commands will not automatically be added to the map. The user can add those by selecting Standard PDF Out from the Wizards Ribbon.



Since PDF's can contain text that is off the page, the **Extract On Screen Only** checkbox allows limiting the Extracted text to the text contained on the PDF page. This is designed to remove any text that is extracted from a PDF that is off the page or not desired as input. When this is unchecked all the text is extracted.

The **Disable Forms Extraction Reuse** setting is unchecked by default. When unchecked, the area or text extracted from the PDF data will be treated as a form and reused. If the text/data is not the same on each page and cannot be reused, check this box to disable the reuse of the forms.

By default, Relay Unify will **Send JPG images as JPG if the printer accepts JPG**. This is the default for the Windows Print System. This can be disabled, by unchecking this setting. Some printers report they accept JPG images, but do not print them. The printers do not report any errors, they just don't print. If unchecked, Relay Unify will convert the JPG to Bitmap before sending.

Define Document Command

The Define Document command is for grouping pages together and determining where a new document begins in the data. This can be done in a few ways. If the data is PDF, delimited, or text a Sync field(s) may be required.

The Document Definition command can be accessed in 2 ways. The 1st is to click Document from the Ribbon bar Doc. The 2nd is to double click the command in the Map commands window. This command is created by default and cannot be deleted.

To edit this command, double click on it in the Maps Command List or select it one of the two methods above.

A [Sync field](#) is designed to aid in the definition of a document. If a Sync field is going to be used, the Doc Type will be one of the options involving Sync fields: 1) Same Sync, 2) Sync on Page, or 3) Sync on Last.

Same Sync is to be selected if the document will have the same value on every page of the document. It must be in the same location in the input data on each page/line. An example would be an account number in the top right corner of the PDF data on every page. When the value changes, that is a new document.

The screenshot shows the 'Document Definition' dialog box. Under 'Doc Type', 'Same Sync' is selected. The 'Doc Defined by Same Sync Fields' box is empty. The 'Pages' field is set to 50, and 'Force Exception' is checked.

Sync on Page is to be selected if the Sync field has a unique value on page 1 of the document. The **Doc Defined by Sync on Page** can only have a value of 1 currently. An example would be a Page number on each page of the document. Page 1 or 1 could be used to determine a new document.

The screenshot shows the 'Document Definition' dialog box. Under 'Doc Type', 'Sync on Page' is selected. The 'Doc Defined by Sync on Page' box contains the value '1'. The 'Pages' field is set to 50, and 'Force Exception' is checked.

Sync on Last is to be selected if the Sync field has a unique value on the last page of a document. This option is only available for PDF input data. An example would be a barcode that is only on the last page of each document.

This is a full screenshot of the 'Document Definition' dialog box. The 'Doc Type' section has 'Same Sync' selected. The 'Doc Defined by Same Sync Fields' box is empty. The 'Pages' field is set to 50, and 'Force Exception' is checked. There are several checkboxes for parsing options, including 'Disable Incremental Character Positioning', 'Use CMYK Color in Output PDF', 'Template', 'Disable PDF-A in Output PDF', 'Use Default Resolution for RTF', 'Override Global Reusable RTF in PDF', 'Disable Reusable RTF in PDF', 'Use Type 3 fonts in PDF Output to Reduce PDF Size', 'Disable Auto creation of Type 3 fonts in PDF', 'Use Detail Section Flow correction (7-2020)', 'Re-Enable keep Last Y correction', and 'Do not reset global variables for new files on print job'. There is also a section for 'Delimited Data Parsing Options' with checkboxes for 'Force V1 Parser', 'Force Parser V2 (overrides date setting)', and a date field for 'Mapper Parser test date' set to 2/19/2025. At the bottom, there are 'OK' and 'Cancel' buttons, and a note that 'Reusable RTFs in PDF are not Globally Disabled'.

The screenshot shows the 'Document Definition' dialog box. Under 'Doc Type', 'Sync on Last' is selected. The 'Doc Defined by Sync on Last Page' box is empty. The 'Pages' field is set to 50, and 'Force Exception' is checked.

Typically, Same Sync, and Sync on Page 1 are used to defined documents; Sync on Last is a rare need.

Page Count is to be selected for scenarios not needing a sync field. These include Form Feed, XML, and some delimited input files. If the input page definition has each document grouped appropriately and a sync field is not going to be used, this is the Doc Type to select. XML will always be Page Count of 1.

PDF Bookmark is to be selected when the input PDF has bookmarks. Currently only top-level outlines are supported. The outline for a document can also be used to define fields. This is only available for PDF input data.

The PDF will be parsed, and the PDF broken into Documents. If the First Outline does not begin on Page 1 then the Pages before the 1st Outline are dropped.

The System Field Sys_PDF_Outline will contain the contents of the PDF Outline text, from which fields and variables can be defined.

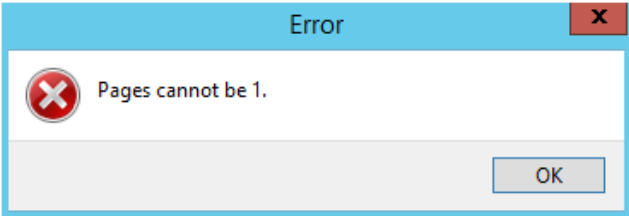
The **Pages** or **Max Pages** for each Doc Type should be 50 for PDF input. It should match the number of pages in the New Page command as part of the Standard PDF commands. If not, all pages may not be output. This value will need to be greater than one if using Same Sync, Sync on Page or Sync on Last. Using a sync field implies the documents have multiple pages so there will be an error message prompting the user to increase the value. For Sync on Page and Same Sync, the number of pages acts as a limiter on the document. When the pages count occurs, a new document will be generated regardless of the Sync field.

These pages are input pages, not output pages.

If the Document contains more than the specified number of Pages a Warning is generated in Breakpack. It is also visible in Relay Unify uCompose.

The screenshot shows a dialog box titled 'Doc Type'. It contains five radio button options: 'Same Sync', 'Sync on Page', 'Page Count' (which is selected), 'PDF Bookmark', and 'Sync on Last'. To the right of these options is a text box containing the text 'Doc defined by page count of Max Pages'. Below the radio buttons, there is a 'Max' label followed by a spinner box set to '50', and a 'Pages' label followed by a checked checkbox labeled 'Force Exception'.

The screenshot shows the same 'Doc Type' dialog box, but with 'PDF Bookmark' selected. The text box on the right now contains 'Doc defined by PDF Bookmark'. The 'Max' spinner is still at '50' and the 'Force Exception' checkbox is still checked.



The screenshot shows a window titled 'Data file'. It has a menu bar with 'Data File', 'Data Fields', 'Page', and 'Page Count'. Below the menu bar, there is a 'Data File' field containing 'E:\Submit\MAPS\Tyler Demo\PB Demo.pdf'. Below that, there is a 'Doc #' field with '1' and an 'of 25' label, and a 'Page' field with '1' and an 'of 1' label. Below these fields, there is a tabbed interface with tabs for 'PDF', 'User Fields', 'Sys Fields', 'Variables', and 'Errors'. The 'PDF' tab is selected, and it shows a list of documents: 'Doc 25 Max Page Count', 'Doc 24 Max Page Count', 'Doc 23 Max Page Count', 'Doc 22 Max Page Count', 'Doc 16 Max Page Count', 'Doc 15 Max Page Count', 'Doc 14 Max Page Count', 'Doc 10 Max Page Count', 'Doc 9 Max Page Count', 'Doc 8 Max Page Count', and 'Doc 7 Max Page Count'. At the bottom of the window, there is a status bar with fields for 'D: 1', 'P: 1', 'X: 205', 'Y: 0', 'SX:', 'SY:', 'W: 0', and 'H: 0'.

If **Force Exception** is checked, then an Error is generated for each document in Breakpack the Submission is set to Error Status.

and

SUBMISSIONS SUBMISSION 7727

SUBMISSION DETAILS

SUBMISSION ID:7727

STATUS:Error

TYPE:Relay Unify Gas

CUSTOMER NAME:Relay Unify

EXTERNAL CUSTOMER #:MAP:Tyler Demo\Pitney Bowes Gas.nmp

EXPIRES:N

EXPIRATION DATE:

EXCLUSIONS

	ESTATEMENT = N	ESTATEMENT = Y	TOTAL
Non-Excluded	500	0	500
No Mail	0	0	0
Omit	0	0	0
Exclude	0	0	0
Total	500	0	500

FILE INFORMATION

DATE RECEIVED:2/27/2025 10:03:19 AM

RECEIVED VIA:FTP

FILE NAME:20250227100317862RU_Gas

ORIG FILE NAME:PB Demo.pdf

MD5 SUM:9AC64AFA9CA9F83FD0B0678C7D31C7C

TOTAL DOCS:0

TOTAL CLEANSED:0

TOTAL PAGES:0

JOB & PRINT INFORMATION

JOB STATUS:PS JOB ID:None

FORM:standard 24 C fold perf.

WEB APPROVAL

APPROVED:DATE APPROVED:

APPROVED BY:APPROVAL REASON:

SUBMISSION TRANSACTION DETAIL

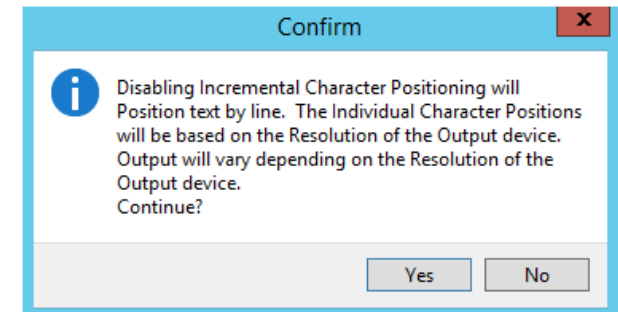
Select DetailsTransaction Audit Log

TRANSACTIONS

ID	DATE	TRANSACTION DESCRIPTION	USER NAME
942740	2/27/2025 10:03:28 AM	Doc 558 Max Page Count	System
942741	2/27/2025 10:03:28 AM	Doc 565 Max Page Count	System
942742	2/27/2025 10:03:29 AM	Doc 574 Max Page Count	System
942743	2/27/2025 10:03:29 AM	Breakpack Complete	System
942744	2/27/2025 10:03:29 AM	Error: Doc 574 Max Page Count	System

The following settings can be applied to any map; they are not dependent on data input type.

Relay Unify Incrementally positions each character to ensure that the Relay Unify uCompose display closely resembles the printed output. Without the Incremental positioning the Character positions will be different depending on the Resolution of the Output device. If **Disable Incremental Character Positioning** is checked, it will reduce the print file output size, but the output will differ more as the output format resolution changes. If this setting is checked, the user will receive a confirmation window. Select Yes to continue or No to cancel.



As an Example of the Character Positioning difference the following would be displayed if the Incremental Character Positioning is enabled (checkbox not checked) the image on the left would be displayed.

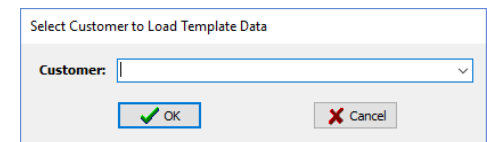
With Incremental Character Positioning disabled (checkbox is checked) the image on the right would be displayed.



The IMB barcode is stretched out due to the Resolution of the PNG Display.

If **Use CMYK Color in Output PDF** is checked, then CMYK colors will be used in creating the PDF output using Relay Unify Native PDF only. Checking this will disable PDF-A Compliance.

If **Template** is checked, this will turn an existing or new map into a [template map](#). The user will be asked to select a customer to load the template data. Select a customer and click OK. The customer values must be set in uSetup and can then be used in various mapping commands for position, text, images, colors, or fonts.



If **Disable PDF-A in Output PDF** is checked, PDF-A Compliance will be turned off when creating the PDF. This is unchecked by default. Checking Use CMYK Color in Output PDF will also disable PDF-A. RPPrintapp.exe for creating print files, and PNGDLL.dll for Web display, RPPregen, and PDF Emails will use this setting.

If **Use Default Resolution for RTF** is checked, then the default resolution will be used. This will use the Screen resolution (usually 96 DPI) for RTFs instead of using the printer resolution (usually more than 300 DPI).

If **Override Global Reusable RTF in PDF** is checked, then the Disable Reusable RTF in PRD is no longer grayed out and can be checked. If **Disable Reusable RTF in PDF** is checked, then the reusable RTF will be disabled. If unchecked the Reusable RTF will not be disabled. The Reusable RTF in PDF causes problems with some printers with older RIP's. Reusable RTF's are fixed RTF's without Embedded Variables or Fields. Reusable RTF's remain XObjects to reduce the PDF File size.

If **Use Type 3 fonts in PDF Output to Reduce PDF size** is checked, then fonts will be output as Type 3 fonts. In some cases, using Type 3 fonts can reduce the size of a PDF. If a few characters from a Font are used and the font file size is large, then using Type 3 fonts can reduce the PDF size.

Define Output Page

This command allows the user to define how the output page will be generated.

The Output Page Definition command can be accessed in 3 ways. The 1st is to click Output Page from the Ribbon bar Doc. The 2nd is to Click the + on the Doc tab of the Map Commands window, then select Output Page Definition from the list. This method can be used to create multiple output definitions. The 3rd is to double click the command in the Map commands window. This command is created by default.

The **Page #** refers to the page this definition will apply toward. The range is from -3 to 999. Page -3 is 3rd page from last. Page -2 is 2nd page from last. Page -1 is the last page. Default is all pages not otherwise defined. The Print Banner applies to Banner and Separator Pages only. The Campaign Onsert is only visible if the map is published to a campaign and for use with Relay Unify Customize.

If the first page is landscape for example and the others are portrait, then there would be a Page 1 output definition and a default for the other pages.



Tips:

If the document is going to be duplexed, there will need to be an output definition for both pages. For example, if sheet one is landscape and duplexed, then there will need to be a page 1 output definition and an identical page 2 output definition.

—Define:Field: SYNC3 : Text
—Define:Doc:
—Define:Output Page Default
—Define:Output Page 1
—Define:Output Page 2
—Begin:DEFINE FIELDS

The **Name** field is for naming the output definition so that it is easily identifiable within the map commands list.

The Paper tab allows the Paper size to be selected. The items in this list are determined by the currently selected printer.

Select the **Paper** from the dropdown. When the Paper is selected the corresponding Page Size is set. The page sizes can be changed by the user. Enter the Width and Height dimensions for the **Page Size**. The values are in inches.

Select the **Type of tray** from the dropdown. This dropdown will be populated based on the printer selected in Relay Unify uCompose as well as if Bin or Media is selected. If **Bin** is selected, the list will be specific to trays for the printer. If Media is selected, the list will be based on **Media** types setup for the printer.

Select the **Duplex Mode** for this output definition.

Select the **Orientation** for this output definition.

The **Force Side** allows forcing a page to a specific side of the sheet of paper. This is only enforced if the document is duplexed. None will not force a side. Front will always force the page to the Front side of a Duplex page. Back will always force the page to the Back side of a Duplex page. The Force Front or Force Back will only be respected if the page is duplexed.

The **Default Font** section is for the document. Any command that is mapped to the output and has a font parameter will use this default font. This can be overridden on each mapped command, so this should be the most commonly used font for the map. Click on the **Font** button to edit the font parameters.

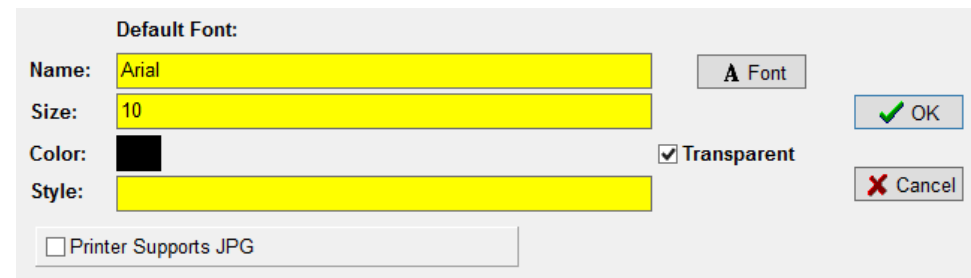
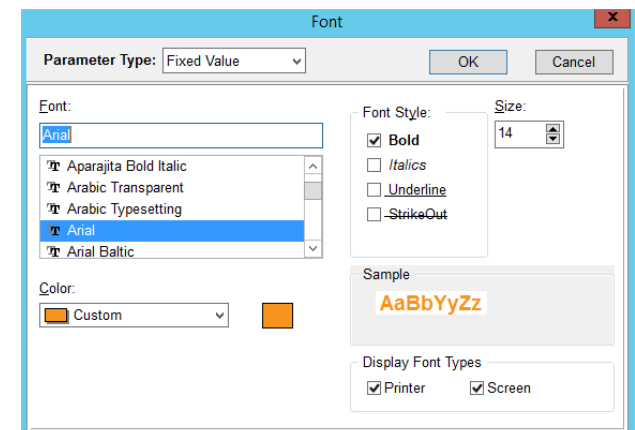
This will display a standard Windows font selection dialog. Select the desired Font, Size and Color.

The fonts must still be installed on the server/machine running Relay Unify uCompose.

The Color can also be changed by clicking on the Color Square.

For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.

To have the font Transparent, check the **Transparent** checkbox. If unchecked the font will have a white background. If any other color background is desired, then create a drawing object of the desired color and make the font transparent.

A dialog box titled "Default Font:" with fields for Name (Arial), Size (10), Color (black square), and Style. There is a "Font" button, a "Transparent" checkbox (checked), and "OK" and "Cancel" buttons. A checkbox for "Printer Supports JPG" is at the bottom.A "Font" dialog box with "Parameter Type" set to "Fixed Value". It includes a font list with "Arial" selected, font style options (Bold checked, Italic, Underline, StrikeOut), size (14), color (Custom), a sample text "AaBbYyZz", and "Display Font Types" checkboxes for "Printer" and "Screen".

If the Printer Supports JPG images the **Printer Supports JPG** box will be checked. This is information only. This is tied to the setting for Send JPG Images as JPG if printer accepts JPG on the Input Page Definition since some printers claim to accept JPG and do not.

There are times when the page settings will be conditional, based on something in the data or the value of a field. The Condition tab allows setting the Conditions for the Output Page. These settings are applied after the [Page Setup](#) command.

Condition Types can be Position, Test, Not Assigned, or Field.

The **Position** Condition Type allows selecting data from the input at a specific position. Enter the X and Y character start positions. Enter a Delimiter if necessary and the Length. If a Delimiter is used the data will end before the Delimiter or the Length specified whichever is less. If the Text is selected in the Input window, then click the Retrieve button to obtain the selected settings.

The Use Current Input Page only occurs on PDF input. If checked, the current input page is used instead of the current output page when checking for values on which to base the conditional. Unchecked, it uses the output page. The input pages and output pages can be different. Input pages can be skipped on the Input PDF. Output page 2 can be input page 3 or 4. Checking “Use Current Input Page” will use text from the current input page of the PDF (PDF page = Current Input Page). Unchecked it will use the PDF page = Output page. The Input Page Offset Field can be used to adjust the input page using a field value.

The **Test** Condition Type allows selecting data from the input by a regular expression test. Enter the Regular Expression in the Test Text field. Enter the X offset from the beginning of the Regular expression and the Y offset. Enter the Delimiter if desired and the Length. If a Delimiter is used the data will end before the Delimiter or the Length specified whichever is less.

The screenshot shows the 'Condition' tab with the 'Position' radio button selected. The settings include: X Position: 1, Y Position: 1, Delimiter: (empty), Length: 0, and a 'Retrieve' button. There is an 'Input Page Offset Field' dropdown and a 'Value Type' dropdown set to 'Currency'. A checkbox for 'Use Current Input Page' is unchecked. At the bottom, a note states: 'For Case Insensitive, surround Regular Expression with /.../i'.

The screenshot shows the 'Condition' tab with the 'Test' radio button selected. The settings include: Test Text: tray1, X offset: 0, Y Offset: 0, Delimiter: (empty), and Length: 10. A checkbox for 'Use Current Input Page' is checked. There is a 'Value Type' dropdown set to 'Text' and an input field containing '='. At the bottom, a note states: 'For Case Insensitive, surround Regular Expression with /.../i'.

When Use Current Input Page the checkbox is checked, the current input page only will be used for testing. If it is unchecked, the test will start with page 1 and going through all the input pages for the document to find the test data.

The **Field** Condition Type allows testing a field for the condition. Select the Field to test.

Paper

Condition

Type

☐ Position

☐ Test

☐ Not Assigned

☒ Field

Field:

ACCOUNT NUMBER

Value Type:

Text

For Case Insensitive, surround Regular Expression with /.../i

The **Not Assigned** Condition Type means there is no condition.

Paper

Condition

Type

☐ Position

☐ Test

☒ Not Assigned

☐ Field

This Condition is not assigned

Value Type:

Text

For Case Insensitive, surround Regular Expression with /.../i

If a Condition is assigned, then the Value type should be selected. **Value Type** defines the format the data should be converted to for comparison. This can be Text, Integer, Real, Currency, Date, and Boolean.

The Condition should then be selected from the drop down below the Value Type. Then enter the Compare to Parameter next to it.

The Conditions are:

Assign – The value has been assigned.

NotAssign – The value has not been assigned or is null.

= Equal to the Parameter.

> Greater than the Parameter.

< Less than the Parameter.

<> Not Equal to the Parameter.

<= Less than or Equal to the Parameter.

>= Greater than or Equal to the Parameter.

SameText – The data is the same text as parameter (Case not considered).

Blank – The data is blank (only spaces), No parameter.

Not Blank – The data is not blank, No parameter.

Not Same Text – The data does not match the value.

Regexp – The data matches the regular expression in the parameter.

In – The value is in the Parameter, which is a semi-colon delimited list.

When the Condition is met for the Page, the page will be set to the defined values. Multiple conditions can be set for a page, but only one non-conditional Output Page definition can be set per page #.

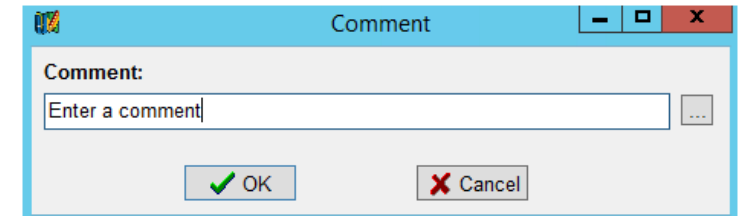
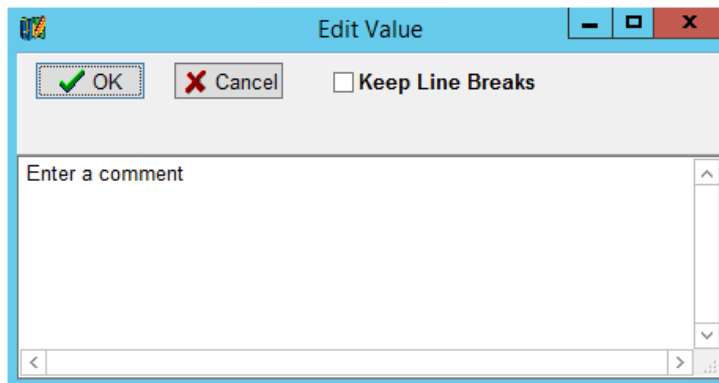
Comment

The Comment command allows a comment to be added to the Command List for clarification and organization of the commands. This is helpful for when multiple users work on a map, or someone needs to make edits later.

This command can be accessed by clicking the Red Plus Sign on the Doc tab and selecting Comment.

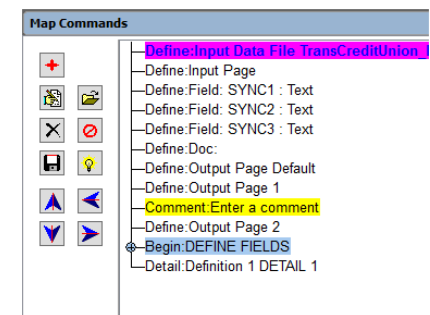
Enter the Comment that will be displayed within the Map Commands list.

The value can be entered in the field or by clicking on the Ellipsis button to pull up the edit form.



Enter the Comment and Click OK to Save. Click Cancel to cancel the changes to the comment. Comments are displayed by default in Yellow on the Map Commands List.

Comments do not display or print.



Field Definition

This will allow a field to be defined in Relay Unify uCompose. A Field is a data element that is assigned for a Document and does not change.

The Field Definition command can be accessed in 3 ways. The 1st is to click Field from the Ribbon bar Doc. The 2nd is to click the + on the Doc tab of the Map Commands window, then select Field Definition. The 3rd way is to highlight an area on the data tab, right-click, then selecting Define Field.

The Edit Fields form is then displayed.

Occurrence

Occurrence defines which page to locate the field. First does not mean page 1. Selecting First will locate the field in the First input page that results in a value field.

Last does not mean last page. Selecting Last will locate the last input page that results in a value for the field.

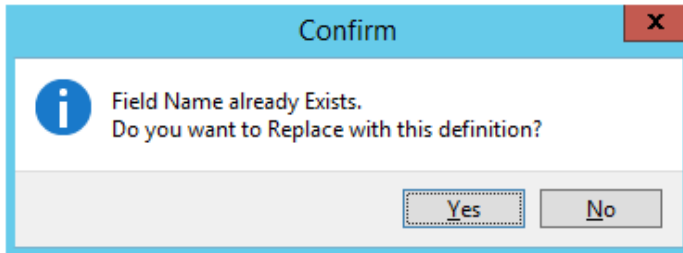
Pos/Page will display a spin edit that allows setting the Input Page number to use for the selection. The range is 1 to 9999. When set, the value is selected only from the defined Input Page.

If the Field Type is set to XML, then the Occurrence of Page will be set to Pos.

This will allow the N instance of the XML value when there is more than one XML node.

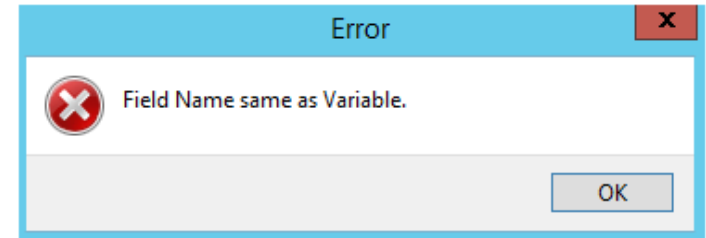
Fieldname

Fieldname is the Name the user selects for the Field. The Fieldname must be unique within the map and cannot be the same as any other Field of Variable used in the Map. If the name is used by a Variable an error will be displayed.

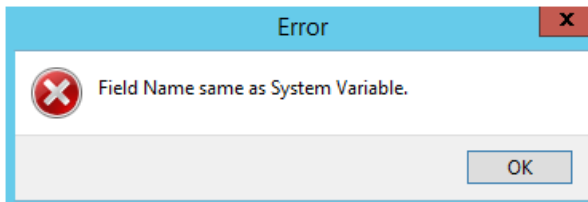
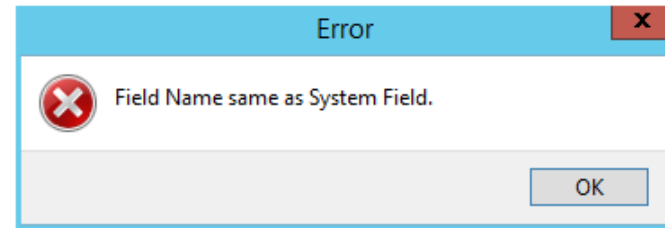


If the name is already used as a field a confirmation will be displayed.

Select Yes to replace the existing Field or No to return to the Edit Fields Dialog.



If the name is a System Field, then an Error will be displayed.



If the name is a System Variable, then an Error will be displayed.

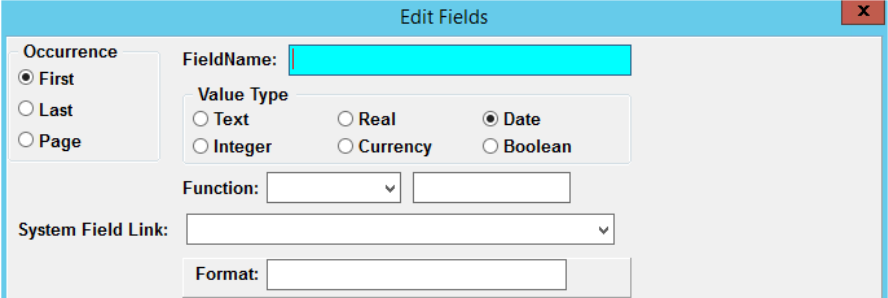
Value Type

Value Type specifies how to store the data for the Field.

Text – Contains text data (i.e. “This is text”).

Real – Contains numbers that can be expressed with a decimal (i.e. 186.254).

Date – Contains date and time information (i.e. “01/01/2009 12:24pm”) When Date is selected an additional entry area for Input format will be display.



The screenshot shows the 'Edit Fields' dialog box. It has a title bar with a close button. The 'Occurrence' section has three radio buttons: 'First' (selected), 'Last', and 'Page'. The 'Value Type' section has six radio buttons: 'Text', 'Real', 'Date' (selected), 'Integer', 'Currency', and 'Boolean'. The 'Function' section has a dropdown menu and a text input field. The 'System Field Link' section has a dropdown menu. The 'Format' section has a text input field.

The **Format** entry allows the definition of how the input date is represented.

'd' = Displays the day number without a leading zero (1 - 31).

'dd' = Displays the day number with a leading zero (01 - 31).

'ddd' = Displays the three-letter day abbreviation (Sun - Sat).

'dddd' = Displays the full day name (Sunday - Saturday).

'dddddd' = Displays the 'Short Date' (m/d/yyyy).

'ddddddd' = Displays the 'Long Date' (dddd, mmmm dd, yyyy).

'm' = Displays the month number without a leading zero (1 - 12).

'mm' = Displays the month number with a leading zero (01 - 12).

'mmm' = Displays the three-letter month abbreviation (Jan - Dec).

'mmmm' = Displays the full month name (January - December).

'yy' = Displays the 2-digit year.

'yyyy' = Displays the full, 4-digit year.

Relay Unify will attempt to convert the dates using the format and slight variations. If the date cannot be converted, then the date will be blank.

Integer – Contains number that can be expressed without a decimal (i.e. 186).

Currency – Contains numbers that represent money (i.e. \$25.25).

Boolean – Contains Y or N (true or false) (Yes or No).

Function

Function allows the data to be modified before being stored. The Functions available will depend on the Value Type. Some functions may require an extra parameter. The extra parameter is entered to the right of the Function.

Functions for Text are:

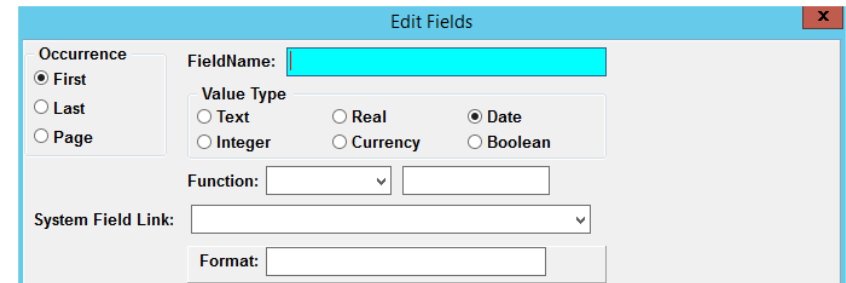
Trim – Removes leading and trailing whitespace characters. This will include tabs, CR, control Characters, as well as space. For most Text fields it is desirable to trim the data before storage. No extra parameter is necessary.

Ltrim – Removes leading whitespace characters. No extra parameter is necessary.

Rtrim – Removes trailing whitespace characters. No extra parameter is necessary.

Remove Zeros – Removes leading zeros from the data. As an example, if the data contains 00000123, **Remove Zeros** will cause the stored value to be 123. No extra parameter is necessary.

Reverse text – This will allow the first text block to be removed from the beginning and added to the end. The delimiter is contained in the extra parameter block. If no value is placed in the parameter block, then a space is assumed. As an example, if the Incoming text is “Smith, Robert M” then **Reverse Text** with a parameter of “,” will store the value “Robert M Smith”.



The screenshot shows the 'Edit Fields' dialog box. It has a title bar with a close button. The 'Occurrence' section has three radio buttons: 'First' (selected), 'Last', and 'Page'. The 'FieldName' field is a text box. The 'Value Type' section has six radio buttons: 'Text' (selected), 'Integer', 'Real', 'Currency', 'Date', and 'Boolean'. The 'Function' section has a dropdown menu and a text box. The 'System Field Link' section has a dropdown menu. The 'Format' section has a text box.

Functions for Real and Currency are:

X – This allows multiplication of the value by the extra parameter.

/ - This allows division of the value by the extra parameter.

+ - This allows addition of the value with the extra parameter.

Function for Date are:

+ - This allows adding days to the Value. The number of days are in the extra parameter.

Function for Integer are:

X – This allows multiplication of the value by the extra parameter.

/ - This allows division of the value by the extra parameter.

+ - This allows addition of the value with the extra parameter.

Mod – This allows determining the Modulo (remainder after integer division). The extra parameter is the Divisor. An example of this is 9 Mod 7. The result would be 2 ($9 / 7 = 1$ with remainder of 2).

There are no Functions for Boolean values.

System Field Link

The System Field Link provides a way of defining where System Fields should obtain their data. System Fields are data values that are commonly used, and many are saved in the Database. If more than one field is linked to the same System Field, a warning message will be displayed and only the last one assigned will be used.

For more information on system fields, please see the 2019_System_Fields_and_Variables document.

Field Type

The selection for Field type changes based on the Input data.

Non-PDF data files

Position

Position defines a field occurring at a set position defined as X position, Y position, Delimiter, length and height. The system will look for the data at the **X and Y position** defined. If **Delimiter** is included, it will stop when the delimiter is reached or the **Length** of characters (whichever is less). The **Height** can be set to retrieve multiple lines.

If the data is selected in the Data window, click the **Retrieve** button to obtain the currently selected area. Clicking the **Highlight** button will select the area defined in the Field on the data window. The user can then adjust the Position values for the desired area.

If **Non-Blank Only** is checked, Relay Unify will find the first non-blank area on the input page for the Occurrence. This is for use when each page may have a different value and the first or last occurrence that is not blank needs to be used.

Edit Fields

Occurrence
☒ First
☐ Last
☐ Page

FieldName: ACCOUNT

Value Type
☒ Text
☐ Real
☐ Date
☐ Integer
☐ Currency
☐ Boolean

Function: Trim

System Field Link: Sys_Acct_ID

Define Error Handling

Field Type
☒ Position
☐ Test
☐ Delimited
☐ Fixed
☐ XML
☐ Not Assigned

Test Text: ACCOUNT #

X Offset: 9

Y Offset: 0

Delimiter:

Length: 10

Height: 1

Retrieve Highlight

For Case Insensitive, surround Regular Expression with /.../i

OK Cancel

Edit Fields

Occurrence
☒ First
☐ Last
☐ Page

FieldName: ACCOUNT

Value Type
☒ Text
☐ Real
☐ Date
☐ Integer
☐ Currency
☐ Boolean

Function: Trim

System Field Link: Sys_Acct_ID

Define Error Handling

Field Type
☒ Position
☐ Test
☐ Delimited
☐ Fixed
☐ XML
☐ Not Assigned

X Position: 44

Y Position: 9

Delimiter:

Length: 17

Height: 1

Retrieve Highlight

For Case Insensitive, surround Regular Expression with /.../i

OK Cancel

Test

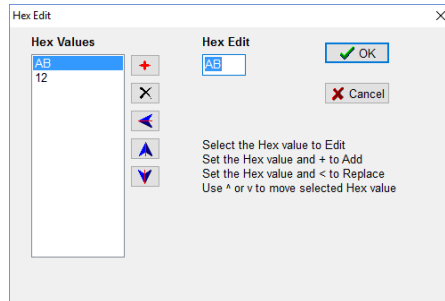
Test defines a field using a test for a specific value using a Regular Expression defined as **Test Text**, X offset, Y offset, Delimiter, length and height. The system will look for the Test Text. If found, the data will be retrieved **X (X offset) characters** from the start of the Test Text and **Y (Y Offset) lines** from the Test Text. If **Delimiter** is included, it will stop when the delimiter is reached or the **Length** of characters (whichever is less). The **Height** can be set to retrieve multiple lines.

Delimited

Delimited defines a field by selecting the information from a delimited set of data (comma, tab, etc.) by Row and Field #.

Enter the **Delimiter** for the data. For tab use \t. Then enter the **Field #** (column number) and **Row #** from the data. The first field is field # 1.

Hex Values can be entered by clicking on the **Hex** button. This will display the Hex editor form. The Hex Values list will contain the Hex values that make up the delimiter. When the Hex Value is selected in the Hex Values list, it will be transferred to the Hex Edit entry field. Change the Value in the Hex Edit entry field.



Once added, the Hex Value will be displayed in the command below the Hex button.

Disable Removal of “ is for poorly constructed delimited data. If the data has “test,” data, and the setting is checked, the output will be “test. If this setting is not checked, the output will be “test,”data.

The 'Edit Fields' dialog box has a title bar 'Edit Fields'. It has two tabs: 'Occurrence' and 'Define'. The 'Occurrence' tab is active, showing 'Field Name: ACCOUNT', 'Value Type: Text', 'Function: Trim', and 'System Field Link: Sys_Acct_ID'. The 'Define' tab is also visible, showing 'Field Type: Delimited', 'Delimiter: ,', 'Field #: 5', 'Row #: 1', and a 'Hex' button. There is a checkbox for 'Disable Removal of “' and a 'Save to DB' checkbox. At the bottom are 'OK' and 'Cancel' buttons.The 'Edit Fields' dialog box is shown with the 'Define' tab active. It displays 'Field Type: Delimited', 'Delimiter: ,', 'Field #: 5', 'Row #: 1', and a 'Hex' button. There is a checkbox for 'Disable Removal of “' and a 'Save to DB' checkbox. At the bottom are 'OK' and 'Cancel' buttons.

Fixed

Fixed defines a field as a Fixed value entered in Relay Unify uCompose. Use the Ellipsis button to bring up an editor.

In this form the user can enter data that can contain multiple lines. Check **Keep Line Breaks** to retain the Line Breaks. If Keep Line Breaks is not checked the multiple lines will be combined with a space.

The 'Edit Value' dialog box has a title bar 'Edit Value'. It contains 'OK', 'Cancel', and 'Keep Line Breaks' checkboxes. Below is a text area containing the text 'Relay Unify Gas|'. At the bottom are 'OK' and 'Cancel' buttons.

XML

XML defines a field from XML data to be accessed. XML data can be entered either by specifying the Pos, Node and Attribute or by entering the XPath Query. XPath Queries are methods of extracting data from XML data. XPath Query will not be explained in this document. A search of the Internet will provide documentation and examples of XPath Queries.

The **Node** contains the node path. The node path tells the system how to find the desired node. Each tag is separated from its parent with >>. The **Attribute** is the selected attribute of the selected node.

Clicking on the **Retrieve XML** button will pull in the Node for the XML node that is selected in the Data Window.

A XPath query can be used in the **XPath** text block. The Node and Attribute are not used if XPath is specified. If the user enters an XPath and Node there will be an error. If the user has XPath and Attribute the user will receive an error.

Once the node and attribute are found, all the data is returned by the system unless the delimiter and/or the length is provided. A length of 0 and delimiter of blank will return all the data. If a **length** is provided, then the returned data contains at most the specified number of characters. If a **delimiter** is specified, then the data is returned up to the specified delimiter. If both delimiter and length are specified, then the data is returned to the delimiter and then the maximum specified characters are returned.

The screenshot shows the 'Edit Fields' dialog box with the 'Define' tab selected. The 'Field Name' is 'ACCOUNT'. The 'Value Type' is 'Text'. The 'Function' is 'Trim'. The 'System Field Link' is 'Sys_Acct_ID'. The 'Field Type' is 'XML'. The 'Node' is 'xml>>row>>ACCOUNT'. The 'Attribute' is empty. The 'XPath' is empty. The 'Delimiter' is empty. The 'Length' is '0'. The 'Retrieve XML' button is visible. The 'OK' and 'Cancel' buttons are at the bottom.

Not Assigned

Not Assigned defines a Field that has a value of blank. This allows the field to be defined at a later time, possibly after a calculation or formatting change. The [Assign Field](#) command will normally be used to define the data based on conditions and functions.

PDF data files

Position

Position defines a PDF field occurring at a set position defined in a Rectangle on the PDF page with **Top-Left X position, Y position** and **Width** and **Height** measured in PDF units. Once the Text within the

Rectangle is extracted the system operates as a Test field with Test Text, X offset, Y offset, Delimiter, length and height. This defines a field using a test for a specific value using a Regular Expression defined as **Test Text**, X offset, Y offset, Delimiter, length and height. The system will look for the Test Text. If found, the data will be retrieved **X (X offset) characters** from the start of the Test Text and **Y (Y Offset) lines** from the Test Text. If **Delimiter** is included, it will stop when the delimiter is reached or the **Length** of characters (whichever is less). The **Height** can be set to retrieve multiple lines.

If the data is selected in the Data window, click the **Retrieve** button to obtain the currently selected area. Clicking the **Highlight** button will select the area defined in the Field on the data window. The user can then adjust the Position values for the desired area.

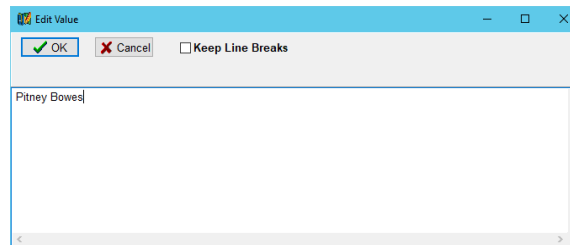
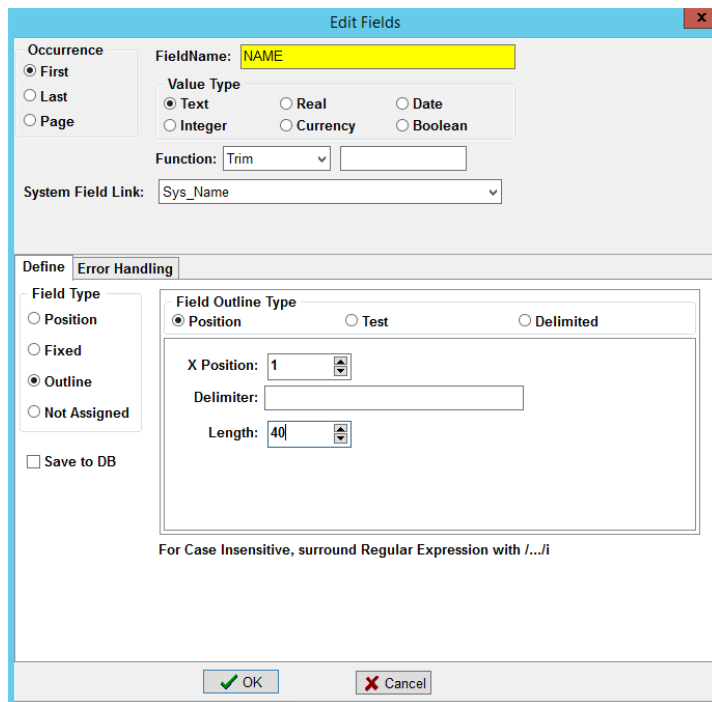
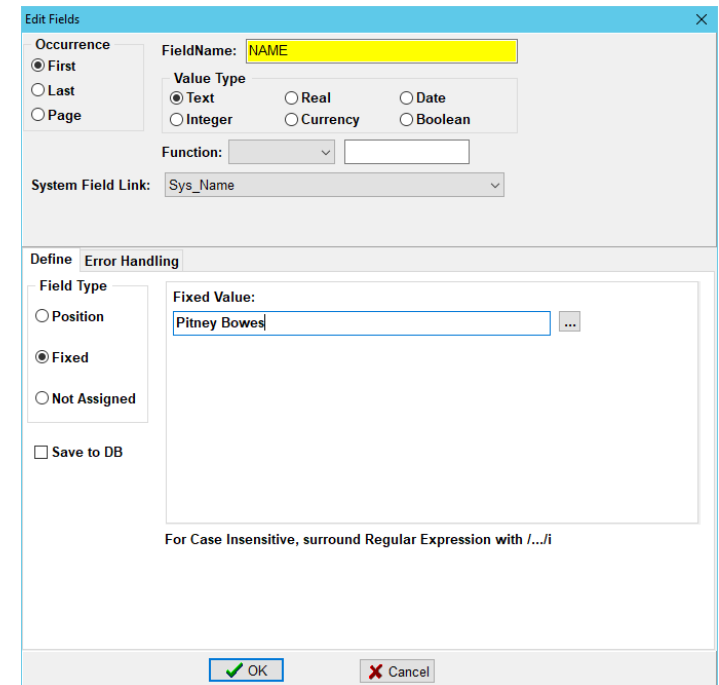
To define the barcode from the data, check the **Read Barcode** box and select the type of barcode being read in from the dropdown. It is recommended to check the **Save to DB** box. This will save the barcode and read from the database instead of reading from the input PDF. Save to DB is faster than reading from the Input PDF.

Fixed

Fixed defines a PDF field as a Fixed value entered in Relay Unify uCompose.

Fixed defines a field as a Fixed value entered in Relay Unify uCompose. Use the Ellipsis button to bring up an editor.

In this form the user can enter data that can contain multiple line. Check **Keep Line Breaks** to retain the Line Breaks. If Keep Line Breaks is not checked the multiple lines will be combined with a space.

A small dialog box titled "Edit Value" with a blue header bar. It contains an "OK" button with a green checkmark and a "Cancel" button with a red X. Below the buttons is a text area containing the text "Pitney Bowes". To the right of the text area is a checkbox labeled "Keep Line Breaks" which is currently unchecked.A dialog box titled "Edit Fields" with a blue header bar. It has two tabs: "Define" and "Error Handling". The "Define" tab is active. Under "Occurrence", "First" is selected. "FieldName" is "NAME". Under "Value Type", "Text" is selected. "Function" is "Trim". "System Field Link" is "Sys_Name". Under "Field Type", "Outline" is selected. "Field Outline Type" has "Position" selected. "X Position" is "1". "Delimiter" is empty. "Length" is "40". There is a checkbox for "Save to DB" which is unchecked. At the bottom are "OK" and "Cancel" buttons. A note at the bottom says "For Case Insensitive, surround Regular Expression with /.../i".A dialog box titled "Edit Fields" with a blue header bar. It has two tabs: "Define" and "Error Handling". The "Define" tab is active. Under "Occurrence", "First" is selected. "FieldName" is "NAME". Under "Value Type", "Text" is selected. "Function" is empty. "System Field Link" is "Sys_Name". Under "Field Type", "Fixed" is selected. "Fixed Value" is "Pitney Bowes". There is a checkbox for "Save to DB" which is unchecked. At the bottom are "OK" and "Cancel" buttons. A note at the bottom says "For Case Insensitive, surround Regular Expression with /.../i".

Outline

This is for use with PDF Bookmarks being used in the [Document Definition](#). The System Field Sys_PDF_Outline will contain the contents of the PDF Outline text from the PDF Bookmarks.

The user can define fields based on the Outline. Select Position, Test or Delimited for the type of information in the Outline.

Position, Test, and Delimited function as the Field Type options function. Position allows selection of the Starting character position, a Delimiter and a length. Test allows selection of the starting character by a Test using a Regular Expression. Delimited allows selection of the data based on delimited data.

If a Delimiter is entered data returned will be the Characters in the Outline from the starting point to the Delimiter. If the Delimiter is blank, then the data returned will be the characters from the starting point for the length defined. A Delimiter of space may be used.

Not Assigned

Not Assigned defines a PDF Field that has a value of blank.

The screenshot shows the 'Edit Fields' dialog box with the following settings:

- Occurrence:** ☒ First, ☐ Last, ☐ Page
- FieldName:** NAME
- Value Type:** ☒ Text, ☐ Real, ☐ Date, ☐ Integer, ☐ Currency, ☐ Boolean
- Function:** Trim
- System Field Link:** Sys_Name
- Define:** ☐ Position, ☐ Fixed, ☒ Not Assigned
- Save to DB:** ☐
- Error Handling:** This Field is not assigned
- Footer:** For Case Insensitive, surround Regular Expression with /.../i

Save to DB

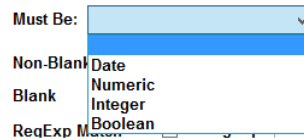
If checked, the **Save to DB** checkbox allows the field data to be stored in the database in the DocFields table. The value stored in the DocFields table is limited to 200 Characters. If the Field contains more than 200 Characters, it will be truncated to 200 characters when saved to the database. Marking a Field as Save to DB will slow down Processing as additional data will be saved to the Database during Breakpack and retrieved during document presentation as output.

Error Handling

The **Error Handling** tab allows the definition of validation criteria for a Field. These settings are not dependent on the data input type.

Each Field can have a Min and Max value. To set, check the **Set Min/Max** checkbox and enter the **Min** and **Max** values for the Field. The Min and Max values must match the Value type of the Field. Comparison of the Min and Max with the Field value also occurs based on the Value type. Number in Text values are handled as Text. The Text Value "10" is less than "2".

If the value must be a specific type select the **Must Be** setting from the dropdown.



Must Be: ▼

- Non-Blank
- Blank
- RegExp Match
- Date
- Numeric
- Integer
- Boolean

Date requires that the Field data must contain a Date. Date must be valid and in the form of mm/dd/yy, mm-dd-yy, yymmdd, mm/dd/yyyy, mm-dd-yyyy, yyyymmdd, or the current system date format.

Numeric requires the Field data must contain Numeric data (integer or real).

Integer requires the Field data must contain Integer data.

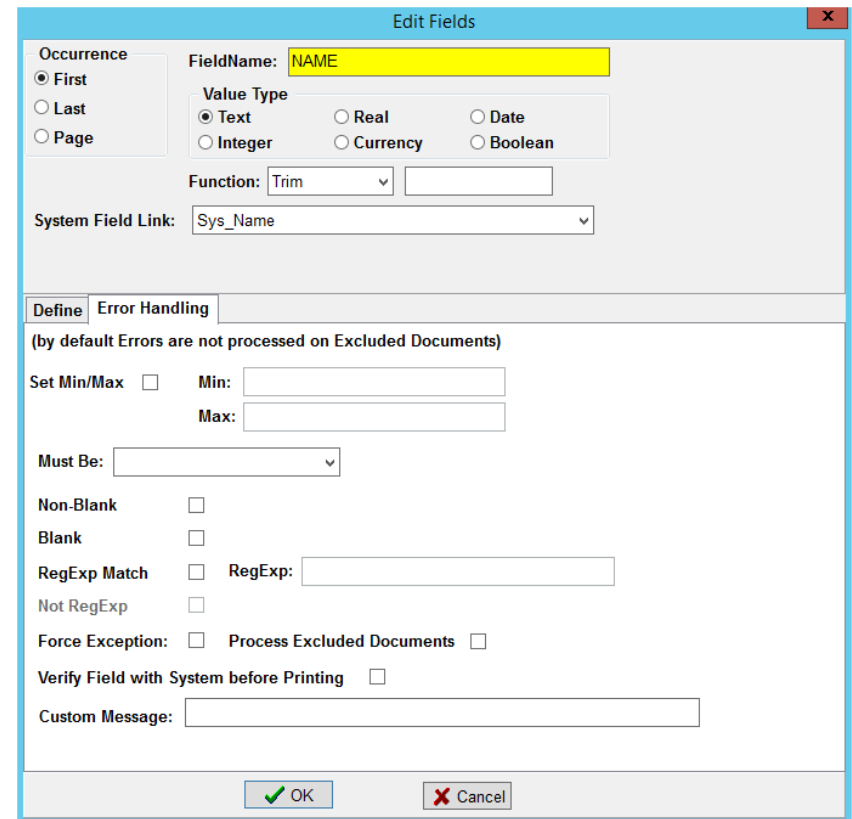
Boolean requires the Field data must contain T, F, Y, N, Yes, No, True, False, 1, or 0.

If **Non-Blank** is checked, it will require the Field data to be non-blank (cannot contain only a space character).

If **Blank** is checked, it will error if the Field is blank.

If **RegExp Match** is checked, it will require the Field data must match the Regular expression entered in **RegExp**. If RegExp Match is checked, the Not RegExp setting will no longer be grayed out and can be checked. If **Not RegExp** is checked, it will error if the field is not in the RegExp format, such as if an account number is not nine digits.

By default any errors will generate a transaction record in the Submission Transaction log (available in uControl and uSetup), but will not stop processing. If **Force Exception** is checked, it will generate an exception that will stop processing at Breakpack. This will prevent the submission from being processed if the field fails validation.



Edit Fields

Occurrence: ☒ First ☐ Last ☐ Page

FieldName: **NAME**

Value Type: ☒ Text ☐ Real ☐ Date ☐ Integer ☐ Currency ☐ Boolean

Function: Trim

System Field Link: Sys_Name

Define **Error Handling**

(by default Errors are not processed on Excluded Documents)

Set Min/Max: ☐ Min: Max:

Must Be: ▼

Non-Blank: ☐

Blank: ☐

RegExp Match: ☐ RegExp:

Not RegExp: ☐

Force Exception: ☐ Process Excluded Documents: ☐

Verify Field with System before Printing: ☐

Custom Message:

OK Cancel

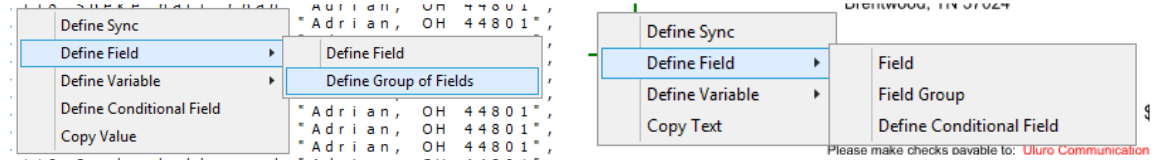
If **Process Excluded Documents** is checked, then documents that are excluded (N-NoMail, O-Omit, or X-Exclude) will not be checked for this field's error handling criteria.

If checked, the **Verify Field with System before Printing** will check the system field linked to the field. If the System field does not match the current value the system will generate an error at print time. This will ensure that the correct document is being printed.

The **Custom Message** field can be used to enter a message that will display in the Transaction details of uControl, uSetup, and Print Jobs when the error handling finds a field that doesn't meet the criteria set. This will also display in Relay Unify uCompose on the Errors tab in the Data Window if there is an error. The default error message is different based on the setting on this tab. Min/Max will have one error and Blank will have another. This is to be used for a more descriptive error message.

Field Group

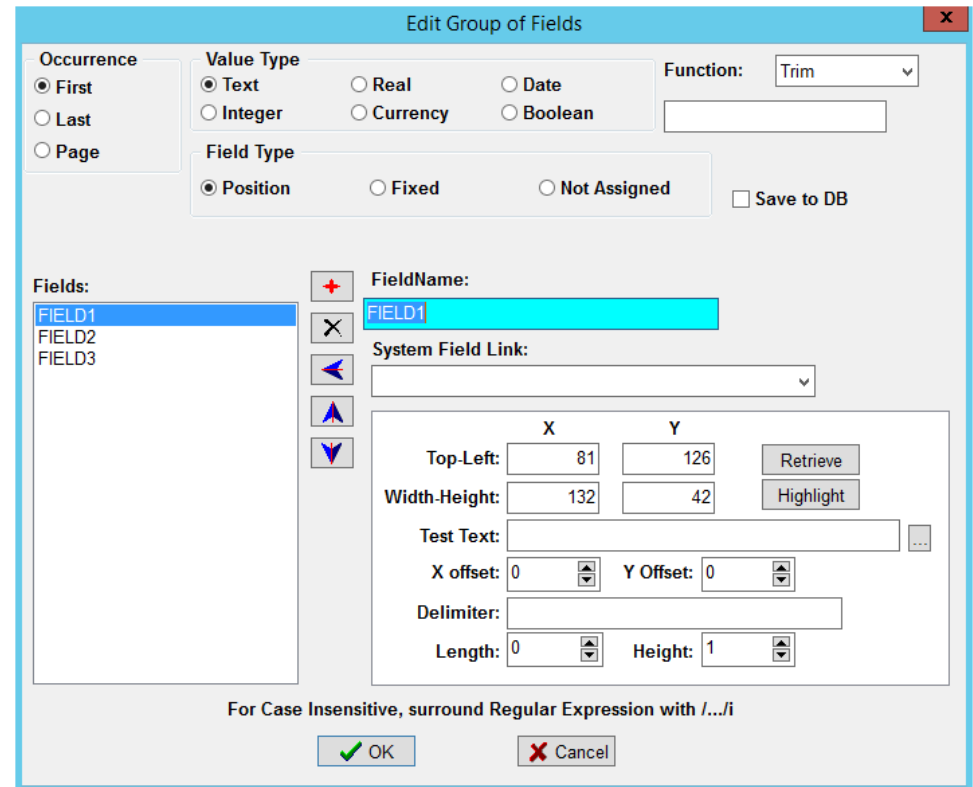
This can only be accessed by highlighting an area on the Data tab of the Data window. Once an area is selected, right-click and select Define Field > Define Group of Fields for Delimited Data and Define Field>Field Group for PDF Data. This is not available for XML input.



This will display the Edit Group of Fields form with the Fields defaulted to Position for the Field Type.

The List of defaulted fields is displayed based on the selection of data with FIELD1 selected. As each field is selected in the Fields list the values used to define the Field is displayed on the right. Edit the Values and click the Replace (left facing arrow) button to replace the Field with the current definition.

This can be helpful for defining address blocks of several lines, or multiple fields at once. If the Occurrence, Value Types, and various settings will be the same for several fields, this can help save time by defining several at once.



Once the Fields are saved the system will reparse the data and the value of the Field will be displayed on the Fields tab on the Data Window.

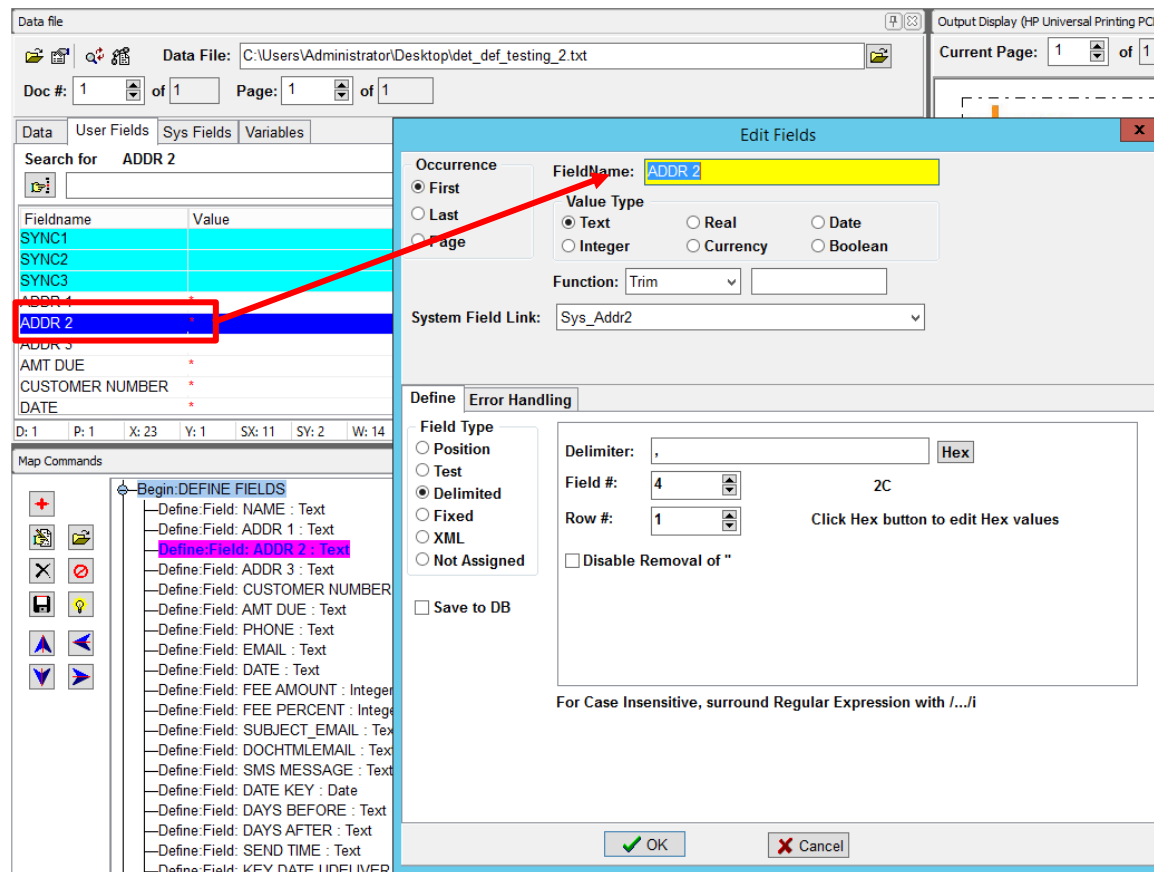
Editing a Field Definition

Once the Fields are saved the system will reparse the data and the value of the Fields will be displayed on the Fields tab in the Data Window.

Fields can be edited from the Data Window. Select the field to edit and double click the field name. This will pull up the edit field window so that the properties of the field definition can be edited.

The name cannot be edited.

This only applies to User Fields.



Sync Definition

Sync fields are fields that can define the Boundaries of a document. Relay Unify allows setting up to 3 Sync Fields. The Sync Fields are Sync1, Sync2, and Sync3. Each can be of a different field type. The Field Value is always Text.

The Sync Definition command can be accessed in 3 ways. The 1st is to click Sync from the Ribbon bar Doc. The 2nd is to click the + on the Doc tab of the Map Commands window, then select Sync Definition. The 3rd way is to highlight an area on the data tab, right-click, then selecting Define Sync.

The Sync Fields will usually be one of the following:

Have the same value on every page of the Document.

Have a value on just the First page of the Document.

Have a value on just the Last page of the Document.

Sync fields are used with PDF, text, or delimited data; they are not necessary for XML data.

Sync fields are defined in the same way as regular fields except there are no fixed values.

Position defines a field occurring at a set position defined as X position, Y position, Delimiter, length and height. The system will look for the data at the **X and Y position** defined. If **Delimiter** is included, it will stop when the delimiter is reached or the **Length** of characters (whichever is less). The **Height** can be set to retrieve multiple lines. If the sync field command was selected from the data window, these will be populated already.

If the data is selected in the Data window, click the **Retrieve** button to obtain the currently selected area. Clicking the **Highlight** button will select the area defined in the Field on the data window. The user can then adjust the Position values for the desired area.

If the sync field command was selected from the data window, these will be populated already.

The Sync fields may also be linked to one of the System Fields.

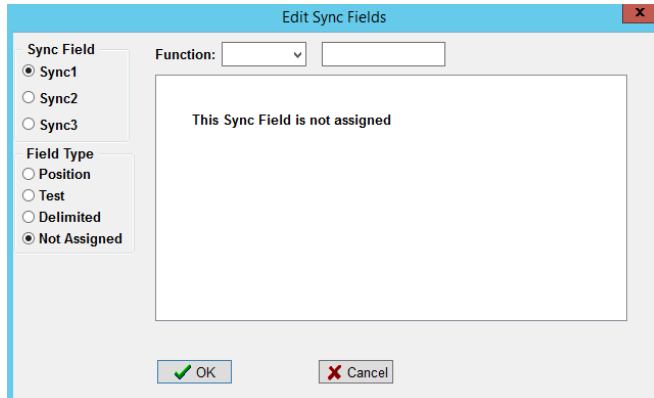
The screenshot shows the 'Edit Sync Fields' dialog box. It features a sidebar on the left with two sections: 'Sync Field' and 'Field Type'. Under 'Sync Field', 'Sync1' is selected with a radio button. Under 'Field Type', 'Position' is selected with a radio button. The main area of the dialog contains a 'Function:' dropdown menu and a text box. Below this are four numeric input fields: 'X Position: 1', 'Y Position: 1', 'Length: 0', and 'Height: 1'. A 'Delimiter:' text box is located between the 'Y Position' and 'Length' fields. A 'Retrieve' button is positioned to the right of the 'Length' and 'Height' fields. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

Test defines a field using a test for a specific value using a Regular Expression defined as **Test Text**, X offset, Y offset, Delimiter, length and height. The system will look for the Test Text. If found, the data will be retrieved **X (X offset) characters** from the start of the Test Text and **Y (Y Offset) lines** from the Test Text. If **Delimiter** is included, it will stop when the delimiter is reached or the **Length** of characters (whichever is less). The **Height** can be set to retrieve multiple lines.

Delimited defines a field by selecting the information from a delimited set of data (comma, tab, etc.) by Row and Field #.

Enter the **Delimiter** for the data. For tab use \t. Then enter the **Field #** (column number) and **Row #** from the data. The first field is field # 1.

Hex Values can be entered by clicking on the **Hex** button. This will display the Hex editor form. The Hex Values list will contain the Hex values that make up the delimiter. When the Hex Value is selected in the Hex Values list, it will be transferred to the Hex Edit entry field. Change the Value in the Hex Edit entry field. Once added, the Hex Value will be displayed in the command below the Hex button.



Not assigned is used for sync fields that are not used. Not all three must be defined when using sync fields.

If **Use All Defined Sync fields** is checked, then all sync fields will be used to define a new document. One reason for having Multiple Sync Fields is that the Sync Field would change position. Sometimes it would be located in the top right, sometimes in the top left. For this scenario, the user would set up one Sync field for the Top Right and one for the Top Left. Relay Unify looks for both fields and concatenates them together.

Field 1 = “

Field 2 = “

Field 3 = ‘test’

The Sync Field is Field 1+Field 2+Field3 = ‘test’

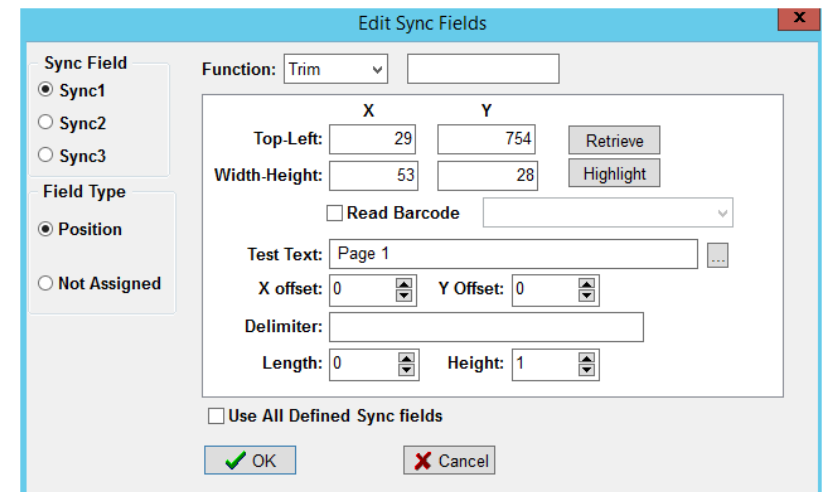
Field 1 = ‘test’

Field 2 = “

Field 3 = “

The Sync Field is Field 1+Field 2+Field3 = ‘test’

If Use All Defined Sync fields is unchecked and multiple Sync Definitions have been set up, if any of the Syncs has a value then it will be used to break documents. This is similar to an “Or” situation, whereas if checked, the Sync fields are treated as “And” to determine when a document begins.



Background Image Definition

This allows defining a Background image for a page. This is useful if the background image can be set based on output page number. If the background image is based on other criteria, it is better to use the [Append Image command](#). Unlike the Append Image command, the Background image cannot be selected in Relay Unify uCompose. The Append image command provides more control than the Background image command.

The Background Image Definition command can be accessed in 2 ways. The 1st is to click Background Image from the Ribbon bar Doc. The 2nd is to Click the + on the Doc tab of the Map Commands window, then select Background Image Definition from the list.

The **Image File** is for the full UNC path to the image on the server that will be processing the map. If the **Relative To** checkbox is checked, this will be a relative path to the directory listed. The directory listed is the default image path from the Processes in uSetup. If that is blank, the Images Submit directory will be used. The Ellipsis can be used to browse for the file.

When the image is selected the **Image Type** will be determined based on the File Extension and a smaller preview of the image will be displayed.

Relay Unify can accept images in the following formats.

BMP – Bitmap image.

JPG – Jpeg image compressed image.

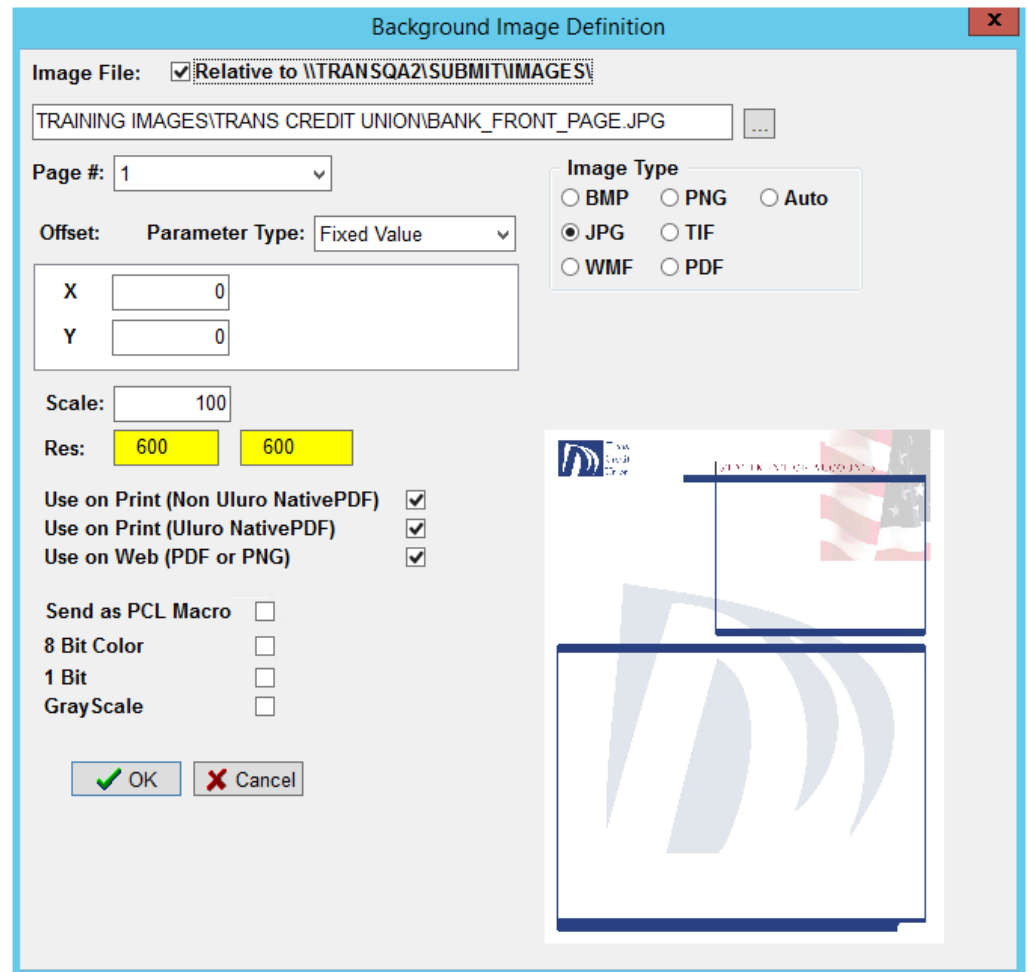
WMF – Windows Meta File Image.

PNG – PNG image.

TIF – Tagged Image Format (single Page only).

PDF –PDF Image from a page in the pdf.

Auto is for allowing the image type to be determined from the file extension.



The screenshot shows the 'Background Image Definition' dialog box. The 'Image File' field is set to 'Relative to \\TRAN\SQA2\SUBMIT\IMAGES\' with a file path 'TRAINING IMAGES\TRANS CREDIT UNION\BANK_FRONT_PAGE.JPG'. The 'Page #' is set to 1. The 'Image Type' section has 'JPG' selected. The 'Offset' section has 'Parameter Type' set to 'Fixed Value' with X and Y values both at 0. The 'Scale' is set to 100. The 'Res' section shows 600 for both width and height. The 'Use on Print (Non Uluro NativePDF)' checkbox is checked. The 'Use on Print (Uluro NativePDF)' checkbox is checked. The 'Use on Web (PDF or PNG)' checkbox is checked. The 'Send as PCL Macro' checkbox is unchecked. The '8 Bit Color' checkbox is unchecked. The '1 Bit' checkbox is unchecked. The 'GrayScale' checkbox is unchecked. There are 'OK' and 'Cancel' buttons at the bottom.

The **Page #** dropdown ranges from 1 to 999 or All Pages. This allows defining Background images to different pages. Select the Page # for the Background Image. If the user selects All Pages, there will be a confirmation message that all pages will have the same background.

If All Pages is selected the image will be used for all pages. No other Background image may be used.

The **Offset** section is for the positioning of the image. The **Parameter Type** dropdown has three options: 1) Fixed Value, 2) Variable, or 3) Field. Selecting Variable or Field will result in a dropdown to select the X and Y positions. Enter or select the X and Y offset values in inches.

Enter the **Scale** value for the scaling factor. By default, this is 100.

The **Resolution (Res)** is displayed for the Currently selected printer. If the Resolution is displayed in Red this means the Resolution does not match the original Resolution. This will also be displayed in Red if this is a new Background image. The Resolution settings are read-only. When the map command is saved and reopened the current settings will be saved and the Resolution will be displayed in Yellow.

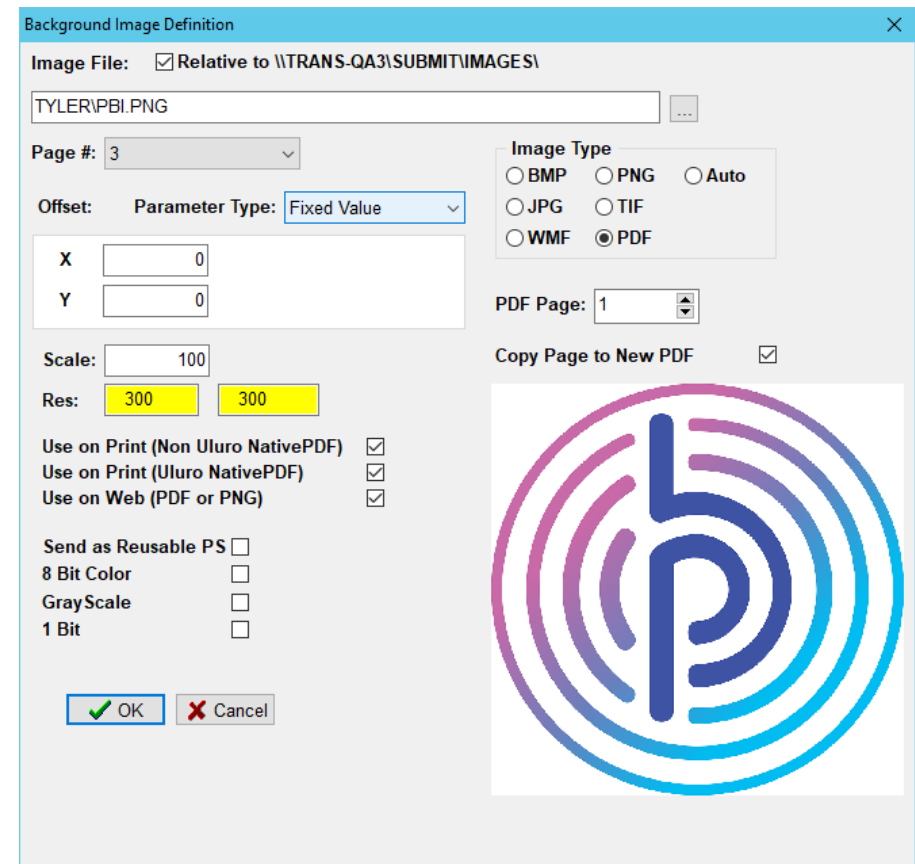
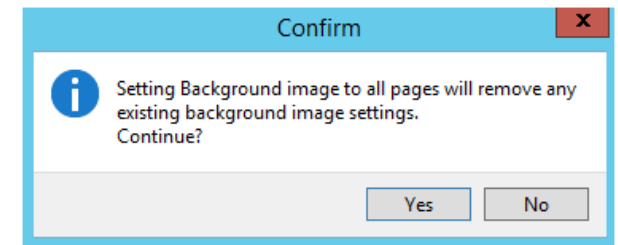
If the background image will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the background image will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the background image will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

If the Use PS command has been enabled, then there will also be an option to **Send as Reusable PS**. This will cache the image once in the Print stream and send the image as a reference when needed. This will speed up the Print and reduce the Print Stream size.

If the Use PCL command has been enabled, then there will also be an option to **Send as PCL Macro**. This will cache the image once in the Print Stream and send the image as a PCL Macro call when needed.



When using Send as Reusable PS or Send as PCL Macro only one can be set. For Send as Reusable PS the printer must be a Post Script printer and the Print Driver must be set to Post Script Level 3. For Send as PCL Macro the print driver must be HP LaserJet 5 only.

Check the **8 Bit Color** if the image should be converted to 8 Bit color. This will make the image smaller when being sent to the printer.

Check the **1 Bit** box if the image should be converted to 1 Bit. This is the same as black and white.

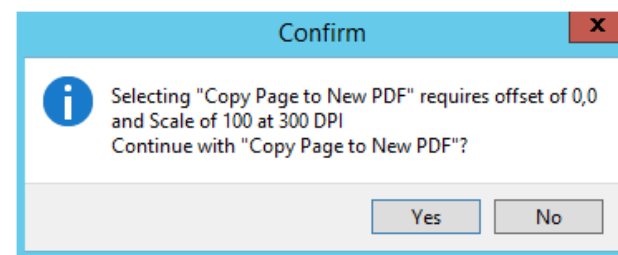
Check the **GrayScale** box if the image should be converted to GrayScale.

If the image is a PDF select the desired **PDF Page** to be used as the background image. Only one page of the PDF can be used for each definition.

If the image is a PDF, the user will be asked to confirm the **Copy Page to New PDF** settings.

If Copy Page to New PDF is checked, Relay Unify will copy the original PDF page to the output PDF page.

Select Yes to continue with those settings or No to cancel.



Conditional Field

This allows defining a Field based on conditions that could come from the data. Before the [Assign Field](#) command, it was the only way to conditionally set a field. The Assign Field makes the definition of conditional fields easier. Using the Conditional field, the user will select data and then compare the data and set the final field value based on the results of the comparisons.

The Conditional Field command can be accessed in 2 ways. The 1st is to click Conditional Field from the Ribbon bar Doc. The 2nd is to Click the + on the Doc tab of the Map Commands window, then select Conditional Field from the list.

Enter the **Fieldname** for the Field. The name cannot be used as a field or variable elsewhere in the map. **Field Value Type** is the same as in the [Field Definition](#) and can be Text, Integer, Real, Currency, Date, or Boolean. **Occurrence** is the same as in the [Field Definition](#) and can be First, Last or Page.

Find Value Type defines how to locate in the test data. These are the same as the [Field Definition](#) Field types. These can be Position, Test, Delimited, Fixed, XML (if XML input), PDF (if PDF input), or Not Assigned.

Position defines a field occurring at a set position defined as X position, Y position, Delimiter, length and height.

Occurrence: First | FieldName: | Field Value Type: Text |

X Position: 1 | Y Position: 1 | Length: 0

Delimiter: | Retrieve

For Case Insensitive, surround Regular Expression with /.../i

Test defines a field using a test for a specific value using a Regular Expression defined as Test Text, X offset, Y offset, Delimiter, length and height.

Occurrence: First | FieldName: | Field Value Type: Text |

Test Text: | X offset: 0 | Y Offset: 0 | Length: 0

Delimiter: | Retrieve

For Case Insensitive, surround Regular Expression with /.../i

Occurrence: First | FieldName: | Field Value Type: Text |

X Position: 1 | Y Position: 1 | Length: 1

Delimiter: | Retrieve

For Case Insensitive, surround Regular Expression with /.../i

After the Value is found compare using:
Condition: | Parameter: | Value Type: |

Set Values:

Function: | System Field Link: |

Save to DB | OK | Cancel

How and what to compare the data

The value to assign it if the condition is met

The settings applied to the field once the value is

Delimited defines a field by selecting the information from a delimited set of data (comma, tab, etc) by Row and Field #.

Fixed allows setting a fixed value for the Data.

XML defines a field from XML data to be accessed. XML data can be entered either by specifying the Pos, Node and Attribute or by entering the XPath Query. XPath Queries are methods of extracting data from XML data. XPath Query will not be explained in this document. A search of the Internet will provide documentation and examples of XPath Queries.

PDF defines a PDF field occurring at a set position defined in a Rectangle on the PDF page with Top-Left X position, Y position and Width and Height measured in PDF units.

Not Assigned defines a Field that has a value of blank. This allows the field to be defined at a later time, possibly after a calculation or formatting change. This is useful when the user wants to use the conditional field to create a calculated value regardless of the input. A Default value can be set later. The [Assign Field](#) command will normally be used to define the data based on conditions and functions.

Once the Data is determined the user will set the conditions and set the value type.

In all cases a Default value must be set for a Conditional Field. This will be the value that is set if no other Conditions occur.

Select **Condition** of Default, then select the Value Type. **Value Types** are Fixed Value, Lookup, Field, or Function.

When the condition is not default, the **Parameter** types are Fixed values or Fields. Enter the Value or Select the Field.

Fixed Value – This allows setting a fixed value for the Conditional Field. Enter the Fixed Value and click the Add Button.

Lookup – This allows a lookup of data from the input. Available options are Position, Test, and Delimited. The Function available depends on the Field Value Type.

After the Value is found compare using:

Condition: Parameter: Value Type:

Set Values:

Lookup Type:

Left-Top:

Width-Height:

Test Text:

X Offset: Y Offset:

Delimiter:

Length: Height:

☐ Remove White Space

Function:

Field – This allows setting the Conditional Field to another field value.

After the Value is found compare using:

Condition: Value Type:

Set Values:

Fixed value:

Function:

System Field Link:

☐ Save to DB

After the Value is found compare using:

Condition: Value Type:

Set Values:

Field:

ACCT NO

ADDR1

ADDR2

AMT DUE

DUE DATE

FEE AMOUNT

FEE PERCENT

Function – Allows the setting of the value based on a Function.

Available functions change based on Field Value Type.

For Text the functions are:

Assign – Assign the Value from another field or a fixed value.

+ - Creating the Value from adding multiple fields or Fixed Values.

Trim – Remove Leading and Trailing Blanks from Parameter.

Ltrim – Remove Leading Blanks from Parameter.

Rtrim – Remove trailing Blanks from Parameter.

To_Str – Converts data to String from Parameter.

Mod10 – Generate a Mod10 Check Digit. This function accepts a string of numbers, A starting Direction, and a weight and calculates the Mod10. The Values for the Starting direction are 0 (start from right) and 1 (start from Left). The values for the Weight are 0 (Start with 1 for the Weight) or 1 (start with 2 for the weight) or 3-9 (start with the desired value and alternate with 1). Only the Check digit is created.

CustomCheckDigit – This uses an algorithm to calculate checkdigits based on the parameters set.

Regexp – Perform the Regular expression.

Substring – Obtain a Substring, Input is String, Start position (start with 1), and Length.

Format – Format the String. Additional Format Strings are available for Changing the Case of a string. Use #L for Lower case, #U for Upper case, and #m for Mixed Case. This must be the first 2 characters of the format. For Example, using the text 'wayne boyte' using a format string of #M%s will result in 'Wayne Boyte'

Julian – returns the Number of Days since the Start of the Year. Parameter 1 must be a valid date.

Evaluate- This allows freeform entry of Equations. Variables can be used in the Equation in the Form <#VarName>. An example of a valid equation would be 15 + 25. The result would be 40.

The screenshot displays a configuration window for a function. At the top, it says "After the Value is found compare using:". Below this, there are two dropdown menus: "Condition:" with "Default" selected, and "Value Type:" with "Function" selected. The main area is divided into two panes. The left pane, titled "Set Values:", contains a list of functions: "= Field ACCT NO := Fixed: 10" and "Default := Fixed: Default Valu". The right pane, titled "Function:", shows "Assign" selected in the "Function:" dropdown and "Param Type:" in the "Param Type:" dropdown. Below these, there is a "Fixed value:" field and a "Param_1" field. To the right of the "Param_1" field, there are several small icons: a red plus, a blue minus, a blue left arrow, a blue right arrow, a blue up arrow, and a blue down arrow.

URLEncode – This will encode a string for use in a Web URL.

Click OK when the conditional field is done being set up.

After the Value is found compare using:

Condition: Parameter: Value Type:

Set Values:

Function: System Field Link:

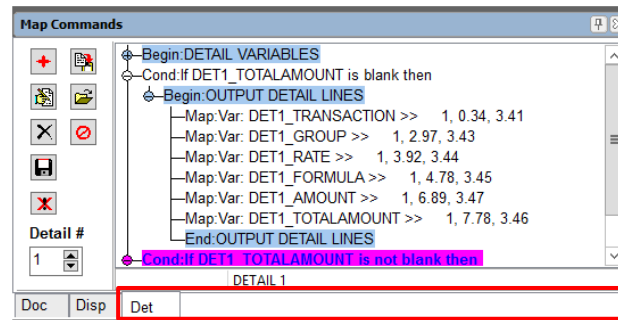
☐ Save to DB

Detail Definition

This defines the Details for the document. Relay Unify uCompose allows up to twenty Detail sections, each section separately defined.

The Detail Definition command can be accessed in 2 ways. The 1st is to click Detail from the Ribbon bar Doc. The 2nd is to Click the + on the Doc tab of the Map Commands window, then select Detail Definition from the list.

Enter the **Detail Name** that will be used to name this detail section. This name will appear in the Detail Map Commands tab at the bottom to help the user identify the detail section being viewed using the Detail number arrows.



Tips:

This is the first step of setting up a detail section. This must be defined before any map commands can be added to the Detail tab.

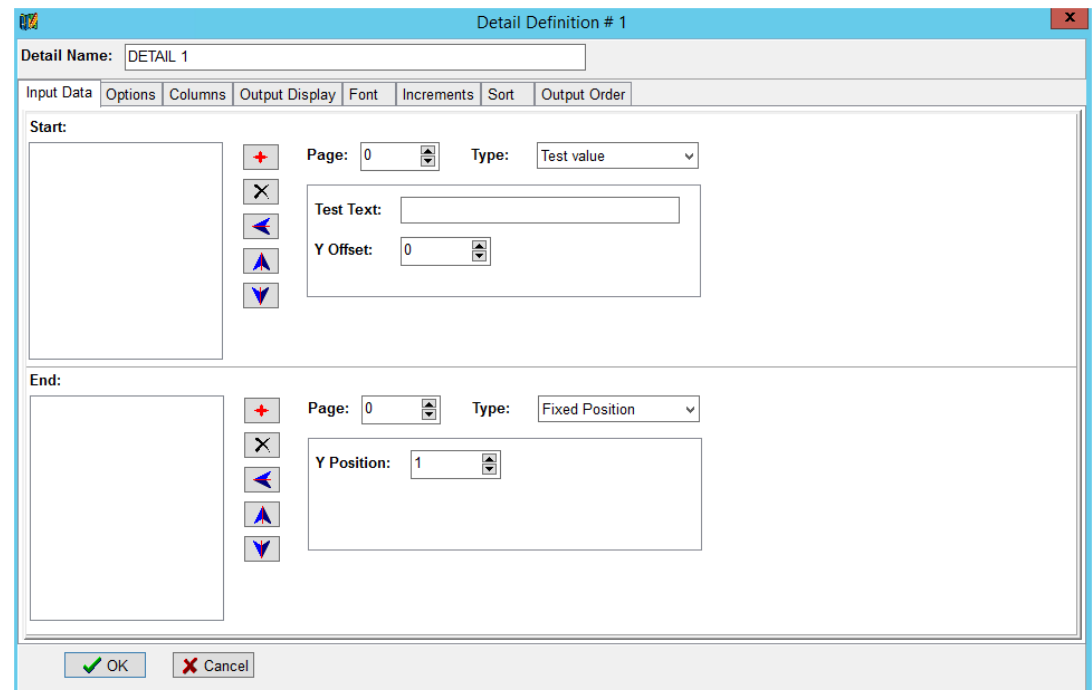
All the tabs do not need to be setup, but the Column and Output Display tabs will need to be setup before clicking OK to save the settings for the detail definition. If not setup, an error message will be displayed to setup the appropriate tab.

The Detail Definition contains multiple tabs. The Tabs will change based on the Type of Input Data.

Input Data

This section defines how the input section of the detail data is defined. There may be unique criteria for each page or criteria that will work for all pages.

The **Start** section defines the beginning of the detail lines in the data and the **End** section defines where the detail lines stop. A difference is that the end of the Detail section test will only occur on data after the start of the detail section. The End of the Detail section will also automatically stop at the end of the page.



The **Page** entry defines the page for the criteria. Page 0 means all pages unless otherwise defined. If there are pages defined, then the system will look at those criteria first.

Criteria **Type** defines the type of Criteria. This can be Test Value or Fixed Position.

If Fixed Position is selected, then the data that can be entered is the line position from the top of the input page as the **Y Position**.

If Test Value is selected, then the data that can be entered is the test value for **Test** Text and the number of lines to offset as the **Y Offset**. The test is a Regular Expressions test.

As an example, Data with a detail section that will start at 29 lines down or will start with the word DATE at the beginning of the Line and then start on the next will have start detail criteria of both of the following.

The image displays three screenshots of the uCompose interface, illustrating different criteria configurations for a data section.

Top Left Screenshot: The 'Start:' list contains one entry, '0:F=29'. The 'Page' is set to 0, and the 'Type' is 'Fixed Position'. The 'Y Position' is set to 29. The interface includes a list of criteria on the left, a set of navigation buttons (add, delete, up, down, first, last), and a configuration panel on the right for the selected criteria.

Top Right Screenshot: The 'Start:' list contains two entries: '0:F=29' and '0:T="DATE"#1'. The 'Page' is set to 0, and the 'Type' is 'Test value'. The 'Test Text' is set to '^DATE', and the 'Y Offset' is set to 1. The interface includes a list of criteria on the left, a set of navigation buttons, and a configuration panel on the right for the selected criteria.

Bottom Screenshot: The 'Start:' list contains two entries: '0:T="DATE"#1' and '0:F=29'. The 'Page' is set to 0, and the 'Type' is 'Test value'. The 'Test Text' is set to '^DATE', and the 'Y Offset' is set to 1. The interface includes a list of criteria on the left, a set of navigation buttons, and a configuration panel on the right for the selected criteria.

If testing for ^Date first, then move this to the top of the list.

As an example, if the Detail data ends at line 53 or one line before the word Message is at the beginning of the line, then the ending detail would be:

End:
0:F=53

Page: 0 Type: Fixed Position

Y Position: 53

End:
0:F=53
0:T="Message"#-1

Page: 0 Type: Test value

Test Text: ^Message
Y Offset: -1

End:
0:T="Message"#-1
0:F=53

Page: 0 Type: Test value

Test Text: ^Message
Y Offset: -1

If searching for Message first, then move the Message to the top.

For XML data, the Detail is defined by the **Detail Tag** that defines the Detail area in the XML. This will automatically be filled in if the [XML Wizard](#) was used to define the fields, variables, and detail section.

Input Data Options Columns Output Display Font Increments Sort Output Order

Detail Tag: Accounts>>Account>>Service

Use the Ellipsis button to bring up an editor.

In this form the user can enter data that can contain multiple lines. Check **Keep Line Breaks** to retain the Line Breaks. If Keep Line Breaks is not checked the multiple lines will be combined with a space.

Edit Value

OK Cancel

☐ Keep Line Breaks

Accounts>>Account>>Service

Options

After the Input Data is defined Options for the Detail can be set.

These options are

Call Detail Independent – This allows the Detail to be called in the Display command section manually instead of being called automatically at the end of each page.

Allow Detail RTF Embedding – This allows a detail section to be embedded in an existing RTF Paragraph. Checking this enables additional options for RTF Detail. If this setting is checked, Call Detail Independent must also be checked.

These additional areas allow enabling and creating an RTF Header, RTF Row, and RTF Footer. For the Replacement of Variables in the RTF Header, Row, and Footer the **Variable Start String** and **Variable End String** are defined.

To set an RTF Header check the **Header** checkbox to enable and display the preview. The select **Set Header** button to display the RTF Editor.

Input Data	Options	Columns	Increments	Sort	Output Order
Call Detail Independent ☒		Allow Detail RTF Embedding ☒			

Detail Definition # 1

Detail Name:

Input Data	Options	Columns	Increments	Sort	Output Order															
Call Detail Independent ☒		Allow Detail RTF Embedding ☒																		
RTF Options		Header ☒	Set Header	☒ Disable Header if No Rows																
Var Start String: <		Row ☒	Set Row																	
Var End String: >		Footer ☒	Set Footer	☒ Disable Footer if No Rows																
Preview																				
<table border="1"><thead><tr><th>Installment #</th><th>Amount</th><th>Due Date</th></tr></thead><tbody><tr><td><DET1_INSTALLME</td><td>\$<DET1_AMOUN</td><td><DET1_DUE_DATE</td></tr><tr><td>NT></td><td>T></td><td>></td></tr><tr><td>Total Balance</td><td colspan="2">\$<Balance_Due></td></tr><tr><td>Due:</td><td colspan="2"></td></tr></tbody></table>						Installment #	Amount	Due Date	<DET1_INSTALLME	\$<DET1_AMOUN	<DET1_DUE_DATE	NT>	T>	>	Total Balance	\$<Balance_Due>		Due:		
Installment #	Amount	Due Date																		
<DET1_INSTALLME	\$<DET1_AMOUN	<DET1_DUE_DATE																		
NT>	T>	>																		
Total Balance	\$<Balance_Due>																			
Due:																				
OK Cancel																				

Set Header

Home Advanced Table

Paste Copy Select All

Clipboard

Font

Paragraph

List

Bullets

Numbering

Styles

Add Style

Inspect Styles

Clear Format

Find

Replace

Character Case

Editing

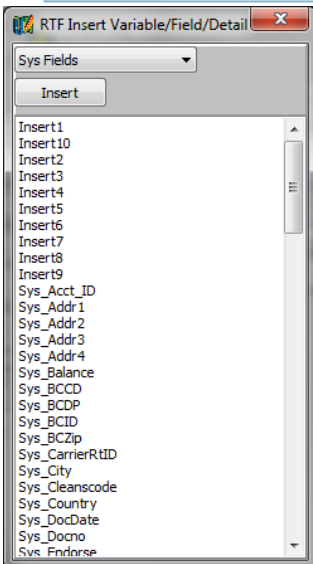
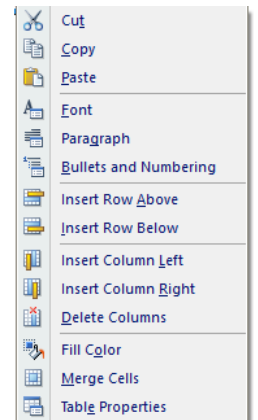
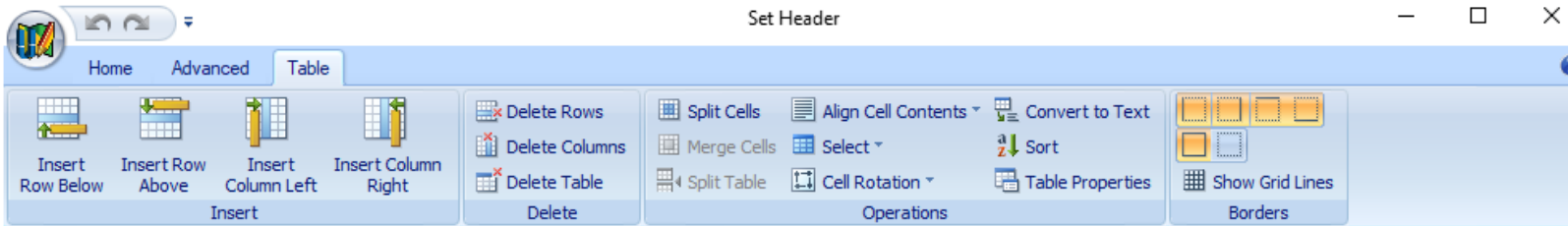
Installment #	Amount	Due Date

The RTF editor has the standard RTF editing functions for setting position using a ruler, Setting fonts, sizes and colors, Setting Alignments, Bullets, etc.

On the Advanced tab in the editor, there are options for Creating Tables, Inserting contents of a File, Symbols, Pictures, Inserting already defined Variables or Fields, and Lines. The Background and fill colors can also be set. Page breaks can be set and will force new pages.



When tables are defined, the Table tab allows operations on the Table. In general, tables can be manipulated using the Mouse, but in some cases a table must be selected, and table properties edited. This can be done from the Table tab or a popup menu once the user right clicks on the table.



To insert a Variable or Field click the Insert Var/Fld button on the Advanced tab in the RTF editor. This will display the Insert Variable/Field/Detail window.

There is a drop-down selection for:

Sys Fields – System Fields.

User Fields – User created Fields.

Main Sys Vars – Main Document System Variables.

Main User Vars – Main Document User Created Variables.

Det Sys Vars – Detail Section System Variables.

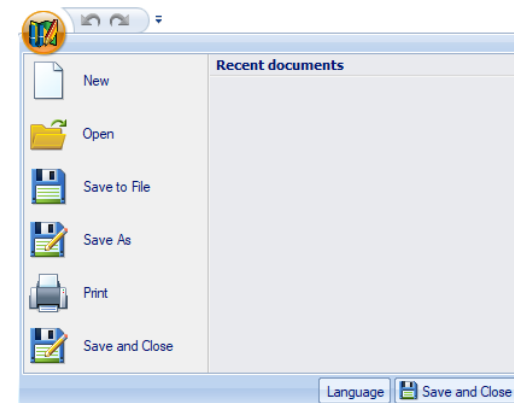
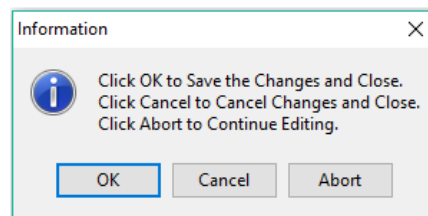
Det User Vars – Detail Section User Created Variables.

The Det User Vars will not contain any variables until the Detail section has been defined and Variables created.

Once the Fields or Variables are displayed, they can be added to the RTF by setting the Cursor at the location where the Field or Variable is desired. Then select the Field or Variable. Click the Insert button or Double-Click on the Field or Variable. The selected item will be inserted at the Location specified. It will be surrounded by the Var Start String and Var End String set on the Options tab.

When finished the Header can be saved by selecting the Save and Close from the Main Menu. Or close the RTF Form by clicking on the X in the Upper Right Corner.

Using the X in the upper right corner will display the Confirmation form. Select OK to save the RTF and Close. Select Cancel to cancel all edits and close. Select Abort to continue Editing.



Set up the Row and Footer in the same manner as the Header.

When the user returns to the Options tab a Preview of the Detail section will be displayed.

If **Disable Header if No Rows** or **Disable Footer if No Rows** are checked the header and footer will not be displayed if there are no detail lines for that document. If the blank table consisting of the Header and Footer are desired on the output uncheck the boxes. They are checked and disabled by default.



Tips:

After the Header is created the Row and Footer should be created. To ensure that the Row matches the Header the Header should be selected (ctrl-A) and copied (ctrl-c). Close the RTF form and click the Set Row button. In the New RTF paste the Header (ctrl-v). Then edit the RTF but keep the Cells the same size.

Detail Definition #1

Detail Name:

Input Data | **Options** | Columns | Increments | Sort | Output Order

Call Detail Independent ☒ Allow Detail RTF Embedding ☒

RTF Options: Header ☒ Set Header ☒ Disable Header if No Rows

Var Start String: < Row ☒ Set Row

Var End String: > Footer ☒ Set Footer ☒ Disable Footer if No Rows

Preview

Installment #	Amount	Due Date
<DET1_INSTALLME NT>	\$<DET1_AMOUN T>	<DET1_DUE_DATE >
Total Balance	\$<Balance_Due>	
Due:		

OK Cancel

Open the RTF Paragraph where Detail section will be embedded.

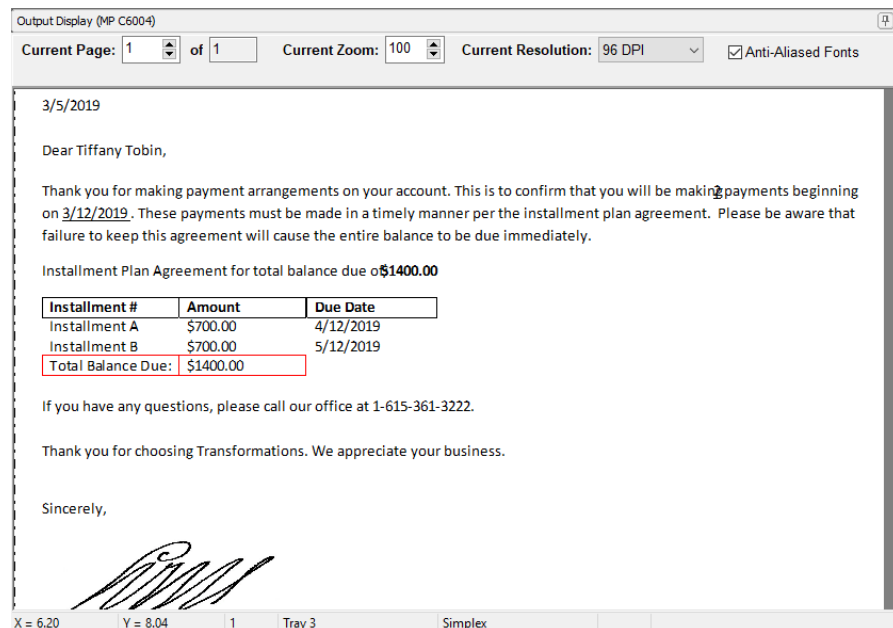
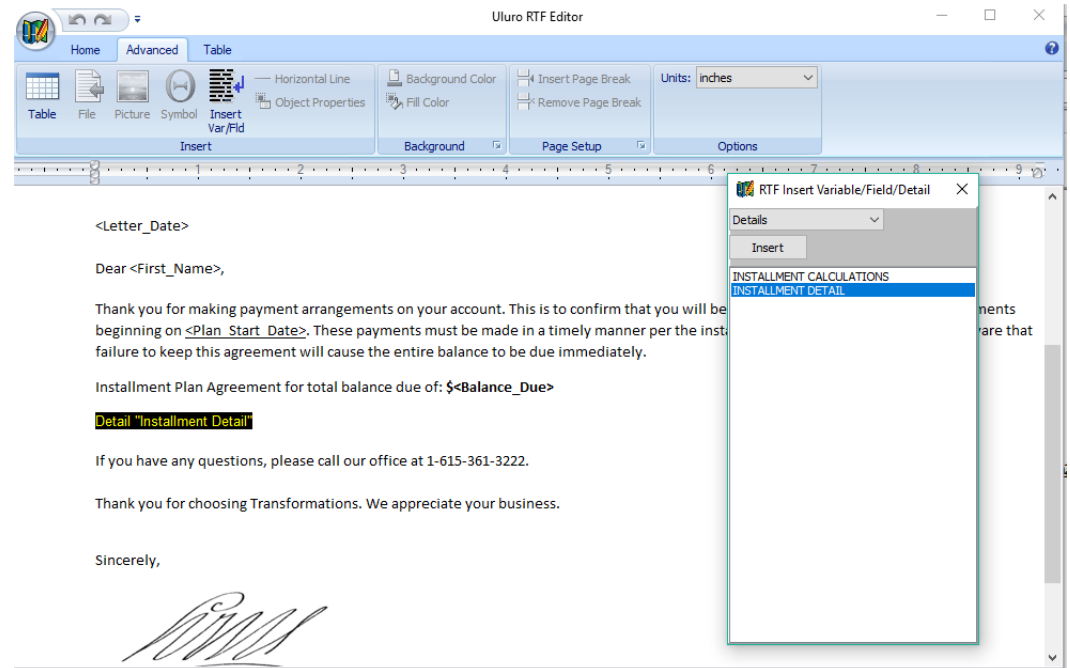
Select the Area within the RTF. From the Advanced tab, select Insert Var/Fld.

Select Details from the Drop down and select the desired Detail section.

Double-click on the Detail or Click insert. This will insert the detail section.

The detail cannot be edited, but can be deleted.

Save the RTF Paragraph to see the Header, Detail, and Footer in the Document.



To correct any problems edit the Detail definition and make the necessary changes. If the Column width on the Row, Header, or Footer are changed be sure to change it on the others as well to keep the columns lined up.

Columns

The Input Detail can occur in one column of detail data or multiple columns. This input Column is not the individual columns within the detail section. This is the number of Detail columns. Most detail definitions will have one column defined.

For example, if the data is:

Check #	Check Date	Check Amount	Check #	Check Date	Check Amount

There are two Input columns in one line. Both Input columns contain the same individual columns.

In the example above, two Input columns would be defined as:

Col 1	and	Col 2
Start 1		Start 50
Width 49		Width 49

This will break the one line into 2 lines at the defined breaking points.

The settings on the right apply to all column definitions.

The Output can be generated as one column or in multiple columns. By default, Relay Unify will output with 1 column. To generate multiple column output, enter the number of columns as the **Output Column Definition** value. The X Increment (in inches) between the columns should be entered for **Column X Increment**.

If **Keep Column from Prev** is checked, Relay Unify will start the next Detail section at the Last Column X Position from the Previous Detail Section. This only has an effect if there are multiple Detail sections defined.

Set the **Draw Order**. This can be Down then Across or Across then Down. This determines how the detail lines will be output.

Detail Definition # 1

Detail Name: DETAIL 1

Input Data Options Columns Output Display Font Increments Sort Output Order

Input Column Definition:

- 1:1:49
- 2:50:49

Col: 1 Start: 1 Width: 49

Output Column Definition:

Col: 2

Start: 1

Width: 49

Column X Increment: 0.25 Inches

Keep Column from Prev. ☐

Draw Order

☒ Down then Across

☐ Across then Down

OK Cancel

Detail Definition # 1

Detail Name: DETAIL 1

Input Data Options Columns Output Display Font Increments Sort Output Order

Input Column Definition:

- 1:1:49
- 2:50:49

Col: 2 Start: 50 Width: 49

Output Column Definition:

Col: 2

Start: 50

Width: 49

Column X Increment: 0.25 Inches

Keep Column from Prev. ☐

Draw Order

☒ Down then Across

☐ Across then Down

OK Cancel

As an example, with the Across then Down setting, Relay Unify will not use the New Column to do the headers. Sys_DetLine will need to be used instead.

For these Detail Commands, the Output would be the following.

Map Commands

Define:Var: ROW : Integer

Define:Var: DATA : Text

Define:Var: DET1 HEADER : Text

Cond:If Sys_DetLine = 1 then

Begin:HEADER

 Cond:If Sys_DetLeft > -1 then

 Map:Var: DET1 HEADER >> 1, 0.57, 1.00

 Cond:If Sys_DetLeft > 0 then

 Map:Var: DET1 HEADER >> 1, 2.25, 1.00

 Cond:If Sys_DetLeft > 1 then

 Map:Var: DET1 HEADER >> 1, 4.09, 1.00

 Map:Var: DUMMY >> 0, 0.00, 0.00

End:HEADER

Map:Var: ROW >> 0, 0.35, 0.00

Map:Var: Sys_DetXCol >> 1, 1.12, 1.00

Map:Var: DATA >> 0, 0.70, 0.00

Detail #

1

Header for Detail 1			Header for Detail 1			Header for Detail 1		
464	264	0.00000000	465	261	1.75000000	466	332	3.50000000
467	299	0.00000000	468	283	1.75000000	469	265	3.50000000
470	264	0.00000000	471	262	1.75000000	472	338	3.50000000
473	348	0.00000000	474	284	1.75000000	475	327	3.50000000
476	260	0.00000000	477	275	1.75000000	478	344	3.50000000
479	266	0.00000000	480	309	1.75000000	481	297	3.50000000
482	301	0.00000000	483	304	1.75000000	484	347	3.50000000
485	338	0.00000000	486	260	1.75000000	487	344	3.50000000
488	320	0.00000000	489	281	1.75000000	490	344	3.50000000
491	270	0.00000000	492	306	1.75000000	493	319	3.50000000
494	331	0.00000000	495	334	1.75000000	496	316	3.50000000
497	316	0.00000000	498	350	1.75000000	499	350	3.50000000
500	299	0.00000000						

With the Conditionals, use Sys_DetLeft to determine if the Header is necessary. If the Last page only needs two Header rows the output will look like the following.

Header for Detail 1			Header for Detail 1		
464	264	0.00000000	465	261	1.75000000

The Output would be

On Last Page the Output would be

Header for Detail 1		Header for Detail 1		Header for Detail 1	
267	0.00000000	344	1.50000000	302	3.00000000
335	0.00000000	267	1.50000000	291	3.00000000
326	0.00000000	285	1.50000000	268	3.00000000
331	0.00000000	322	1.50000000	329	3.00000000
345	0.00000000	334	1.50000000	297	3.00000000
346	0.00000000	275	1.50000000	340	3.00000000
289	0.00000000	303	1.50000000	347	3.00000000
261	0.00000000	261	1.50000000	349	3.00000000
262	0.00000000	340	1.50000000	334	3.00000000
260	0.00000000	265	1.50000000	341	3.00000000
282	0.00000000	262	1.50000000	329	3.00000000
321	0.00000000	295	1.50000000	272	3.00000000
294	0.00000000	318	1.50000000	326	3.00000000
283	0.00000000	282	1.50000000	317	3.00000000
320	0.00000000	315	1.50000000	293	3.00000000
268	0.00000000	296	1.50000000	265	3.00000000
268	0.00000000	340	1.50000000	268	3.00000000
272	0.00000000	291	1.50000000	308	3.00000000
271	0.00000000	272	1.50000000	281	3.00000000
279	0.00000000	349	1.50000000	325	3.00000000
342	0.00000000	277	1.50000000	308	3.00000000
342	0.00000000	314	1.50000000	334	3.00000000

Header for Detail 1	Header for Detail 1	Header for Detail 1	
264	0.00000000	260	1.50000000
261	0.00000000	344	1.50000000
332	0.00000000	320	1.50000000
299	0.00000000	281	1.50000000
283	0.00000000	344	1.50000000
265	0.00000000	270	1.50000000
264	0.00000000	306	1.50000000
262	0.00000000	319	1.50000000
338	0.00000000	331	1.50000000
348	0.00000000	334	1.50000000
284	0.00000000	316	1.50000000
327	0.00000000	316	1.50000000
260	0.00000000	350	1.50000000
275	0.00000000	350	1.50000000
344	0.00000000	299	1.50000000
266	0.00000000		
309	0.00000000		
297	0.00000000		
301	0.00000000		
304	0.00000000		
347	0.00000000		
338	0.00000000		

Map Commands

Define:Var: ROW : Integer

Define:Var: DATA : Text

Define:Var: DET1 HEADER : Text

Cond:If Sys_DetLine = 1 then

 Begin:DETAIL HEADER

 Map:Var: DET1 HEADER >> 0, 0.50, 0.00

 Map:Var: DET1 HEADER >> 8, 2.39, 1.00

 Map:Var: DET1 HEADER >> 8, 3.69, 1.03

 End:DETAIL HEADER

Cond:If Sys_DetNewCol = True then

 Cond:If Sys_DetColno <> 1 then

 Map:Var: DUMMY >> 0, 0.00, 0.00

Map:Var: Sys_DetXCol >> 0, 1.32, 0.00

Map:Var: DATA >> 1, 0.70, 1.00

Detail # 1

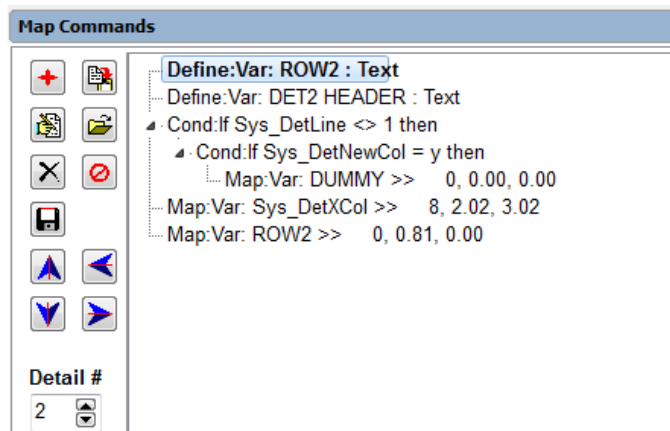
The Output will look like this on all pages except the last.

On the Last page it will look like the image below.

Header for Detail 1		Header for Detail 1		Header for Detail 1	
267	0.00000000	344	1.50000000	302	3.00000000
335	0.00000000	267	1.50000000	291	3.00000000
326	0.00000000	285	1.50000000	268	3.00000000
331	0.00000000	322	1.50000000	329	3.00000000
345	0.00000000	334	1.50000000	297	3.00000000
346	0.00000000	275	1.50000000	340	3.00000000
289	0.00000000	303	1.50000000	347	3.00000000
261	0.00000000	261	1.50000000	349	3.00000000
262	0.00000000	340	1.50000000	334	3.00000000
260	0.00000000	265	1.50000000	341	3.00000000
282	0.00000000	262	1.50000000	329	3.00000000
321	0.00000000	295	1.50000000	272	3.00000000
294	0.00000000	318	1.50000000	326	3.00000000
283	0.00000000	282	1.50000000	317	3.00000000
320	0.00000000	315	1.50000000	293	3.00000000
268	0.00000000	296	1.50000000	265	3.00000000
268	0.00000000	340	1.50000000	268	3.00000000
272	0.00000000	291	1.50000000	308	3.00000000
271	0.00000000	272	1.50000000	281	3.00000000
279	0.00000000	349	1.50000000	325	3.00000000
342	0.00000000	277	1.50000000	308	3.00000000
342	0.00000000	314	1.50000000	334	3.00000000

Header for Detail 1		Header for Detail 1		Header for Detail 1	
264	0.00000000	260	1.50000000		
261	0.00000000	344	1.50000000		
332	0.00000000	320	1.50000000		
299	0.00000000	281	1.50000000		
283	0.00000000	344	1.50000000		
265	0.00000000	270	1.50000000		
264	0.00000000	306	1.50000000		
262	0.00000000	319	1.50000000		
338	0.00000000	331	1.50000000		
348	0.00000000	334	1.50000000		
284	0.00000000	316	1.50000000		
327	0.00000000	316	1.50000000		
260	0.00000000	350	1.50000000		
275	0.00000000	350	1.50000000		
344	0.00000000	299	1.50000000		
266	0.00000000				
309	0.00000000				
297	0.00000000				
301	0.00000000				
304	0.00000000				
347	0.00000000				
338	0.00000000				

Account for the Header already being created by decrementing on Sys_DetNewCol = Y and Sys_DetLine <> 1. The resulting output is displayed below.



Header for Detail 1		Header for Detail 1		Header for Detail 1	
264	0.00000000	260	1.50000000	11	3.00000000
261	0.00000000	344	1.50000000	12	3.00000000
332	0.00000000	320	1.50000000	13	3.00000000
299	0.00000000	281	1.50000000	14	3.00000000
283	0.00000000	344	1.50000000	15	3.00000000
265	0.00000000	270	1.50000000	16	3.00000000
264	0.00000000	306	1.50000000	17	3.00000000
262	0.00000000	319	1.50000000	18	3.00000000
338	0.00000000	331	1.50000000	19	3.00000000
348	0.00000000	334	1.50000000	20	3.00000000
284	0.00000000	316	1.50000000	21	3.00000000
327	0.00000000	316	1.50000000	22	3.00000000
260	0.00000000	350	1.50000000	23	3.00000000
275	0.00000000	350	1.50000000	24	3.00000000
344	0.00000000	299	1.50000000	25	3.00000000
266	0.00000000	4	1.50000000	26	3.00000000
309	0.00000000	5	1.50000000	27	3.00000000
297	0.00000000	6	1.50000000	28	3.00000000
301	0.00000000	7	1.50000000	29	3.00000000
304	0.00000000	8	1.50000000	30	3.00000000
347	0.00000000	9	1.50000000	31	3.00000000
338	0.00000000	10	1.50000000	32	3.00000000

Output Display

The Output Display tab will be displayed unless the detail section is an Embedded RTF Detail (setting on the Options tab). The Start and End positions for different pages can be set up. The Start and End positions are defined as Inches from the top of the form. The End position must be greater than the Start position.

The Output Display settings function like the Input Data tab. The Output just defines where the detail lines will appear on the output page. Add the necessary settings for the document by defining individual pages or by using zero as the general default setting for pages that are not otherwise defined.

This example starts outputting the detail lines on page 1 at 4.5 inches from the top of the page. All other pages have detail lines beginning at 1 inch from the top.

All pages, including page 1 stop outputting detail lines at 10 inches from the top of the page.

If more detail lines remain at the end of the output definition, another page will be created for the overflow of detail lines.

Checking **Keep Last Y Position from Prev.** will start the next detail section below where this detail section finishes on the output. This setting only applies to multiple detail sections.



Tips:

Move the cursor on the Output Window prior to creating the detail definition to obtain the Y value that can be used as a helpful beginning value for the Start and End Y positions.

A default for additional pages that may result as overflow should always be defined.

The screenshot shows the 'Detail Definition # 1' dialog box with the 'Output Display' tab selected. The 'Detail Name' is 'DETAIL 1'. The 'Start' section shows a list of Y positions: '0: 1.0000' and '1: 4.5000', with '1: 4.5000' selected. To the right, 'Page: 1' and 'Y Position: 4.5' are displayed. The 'End' section shows a list of Y positions: '0: 10.0000', with '0: 10.0000' selected. To the right, 'Page: 0' and 'Y Position: 10' are displayed. The 'Keep Last Y Position from Prev.' checkbox is unchecked. The dialog has 'OK' and 'Cancel' buttons at the bottom.

Font

The Detail section can be output in any font available in Windows. The Default Font is set by checking the **Use Default Font** checkbox. This will use the Output Page Definition Default font.

To use a different font for the detail section, uncheck the Use Default font Checkbox. This will display the default Font information and allow the user to select a different font.

To select a different font, click the **Font** button. This will display a standard Windows font selection dialog. Select the desired Font, Style, Size and Color.

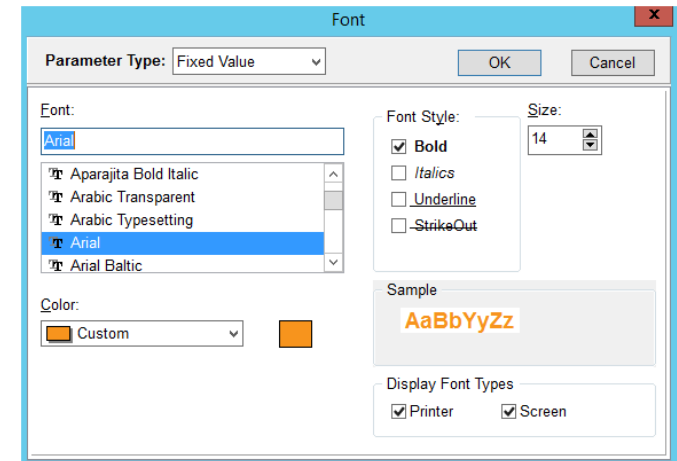
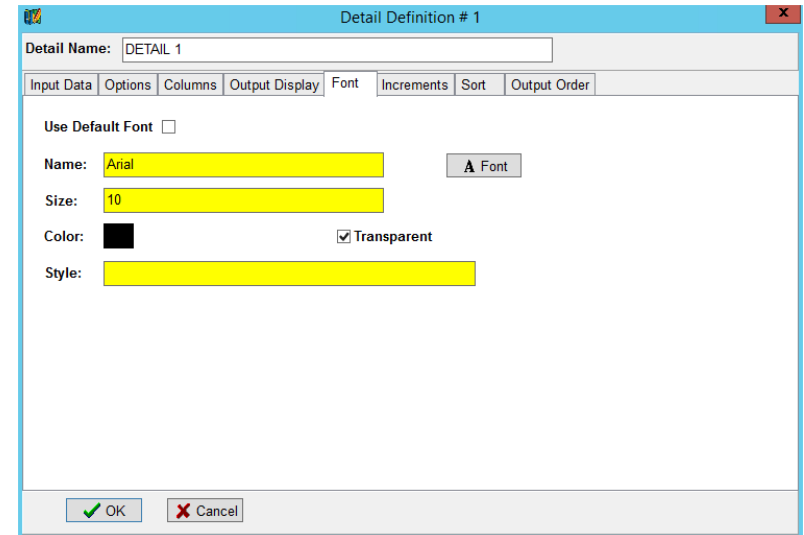
The fonts must still be installed on the server/machine running Relay Unify uCompose.

The Color can also be changed by clicking on the Color Square.

If mapping an entire line, use a fixed width font.

For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.

To have the font Transparent, check the **Transparent** checkbox. If unchecked the font will have a white background. If any other color background is desired, then create a drawing object of the desired color and make the font transparent.



Increments

The Increment tab allows selection of information that will affect the way the system outputs the detail data.

If **Consolidate Detail Pages** is unchecked the system will keep each input page of detail information separate. The number of output pages will contain at least the same number of detail input pages. With this checked the system will consolidate all the input pages into one long detail page. This allows the system to output detail data in a condensed form without regard to the input page.

If **Remove Blank Lines** is unchecked, the system will keep all the detail lines, Even the lines that contain only spaces. The blank detail lines will then have to be handled in the map. With this checked, the system will remove all detail lines that contain only blanks.

If **Auto Increment Output** is unchecked the system will not increment the output after the detail line is printed. An increment will have to be put in one or more of the detail output commands to increment to the next output Y position. With this checked, the system will increment by the amount specified after each input detail line is processed.

Output Y Increment contains the value in Inches to increment after each input detail line. Clicking **Set Default** will set the Output Y Increment based on the font selected for the detail section. To use this setting, Auto Increment Output must also be checked.

If Auto Increment Output is checked, the value for Output Y Increment will be applied.

Detail Definition # 1

Detail Name:

Input Data | Options | Columns | Output Display | Font | **Increments** | Sort | Output Order

Consolidate Detail Pages ☐ Remove Blank Lines ☐

Auto Increment Output: ☒

Output Y Increment: Inches

Sort

This section will allow the user to sort the input detail data.

The Sort is set by defining the sort Column definition which consists of input data position, input data type, and the sort order.

The data position is defined with **Start** which is the starting X position and the **Width**. The **Data Types** available are Text, Integer, Real, Currency, Date, and Boolean and correspond to the data types for field and variable definitions. The Sort Type is Ascending or Descending.

An example is the following data:

01/16/02 Newborn Hosp
01/20/02 Newborn Office
01/21/02 Office Level 1
01/21/02 Lipid Profile
01/27/02 Office Level 1
01/28/02 Office Level 2
01/30/02 Office Level 2

The first section of data is a Date, the 2nd section is text. To sort this data in descending date order, enter the following into the sort tab. Column 1, Starting at character 1, having a width of 8 characters in length, is a Date for Data Type, sorted in descending order.

Check the **Sort Detail Lines** checkbox to apply the settings for the data to be sorted.

The output data will now be:

01/30/02 Office Level 2
01/28/02 Office Level 2
01/27/02 Office Level 1
01/21/02 Lipid Profile
01/21/02 Office Level 1
01/20/02 Newborn Office
01/16/02 Newborn Hosp

Detail Definition # 1

Detail Name: DETAIL 1

Input Data | Options | Columns | Output Display | Font | Increments | Sort | Output Order

Sort Detail Lines ☐

Sort Column Definition:

Sort Column Definition	Col	Start	Width	Data Type	Sort Type
1:1:1:T:A	1	1	1	Text	Ascending

OK Cancel

Detail Definition # 1

Detail Name: DETAIL 1

Input Data | Options | Columns | Output Display | Font | Increments | Sort | Output Order

Sort Detail Lines ☒

Sort Column Definition:

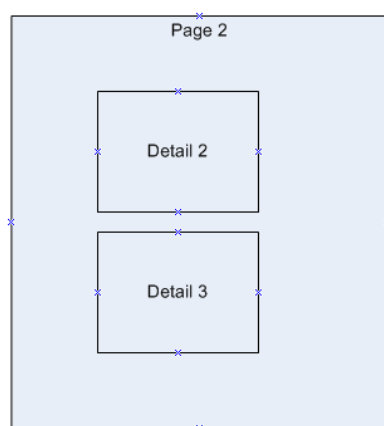
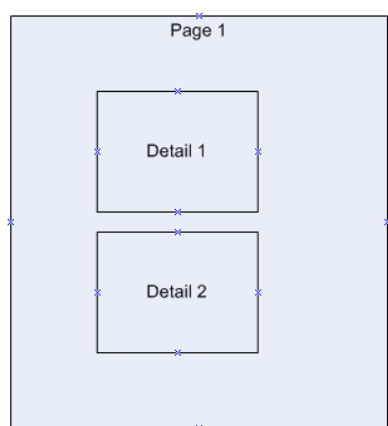
Sort Column Definition	Col	Start	Width	Data Type	Sort Type
1:1:8:D:D	1	1	8	Date	Descending

OK Cancel

Output Order

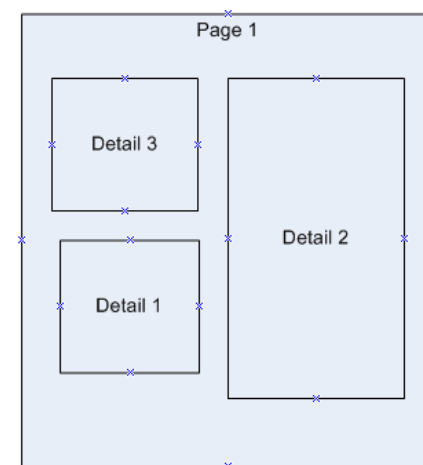
With multiple detail sections the user will need to select how the detail sections will be printed. The detail lines are not limited to being printed in the order they occur in the original input data. If Detail section 1 has been defined as the Check Register and detail section 2 as Transactions, they may be in the input data as Transactions first, then check register. Either detail section can be output first. The detail sections can be printed on the same output page even if the input occurred on different pages.

For example, if the data comes in with detail 1 on page 1 and the first part of detail 2 on page 1, the 2nd part of detail 2 on page 2 and detail 3 on page 3.



But with a little manipulation of the data it can all fit on one page.

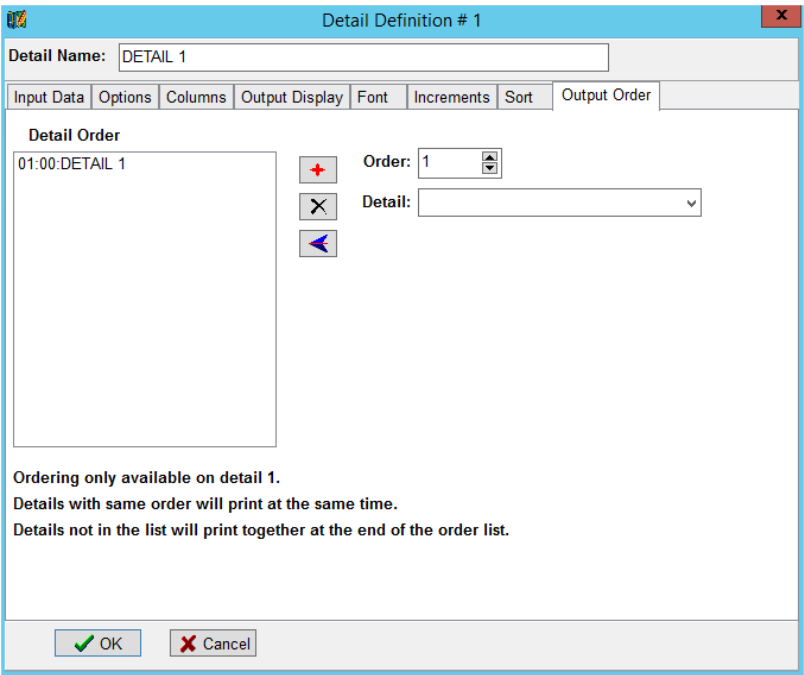
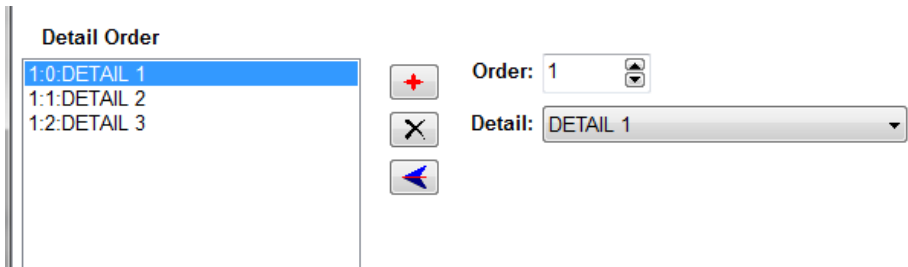
This can be accomplished by using the Consolidate Detail pages setting on the Increments tab and the sort Output Order sections of the Detail Definition.



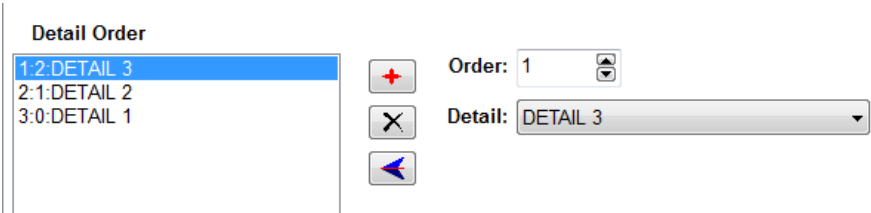
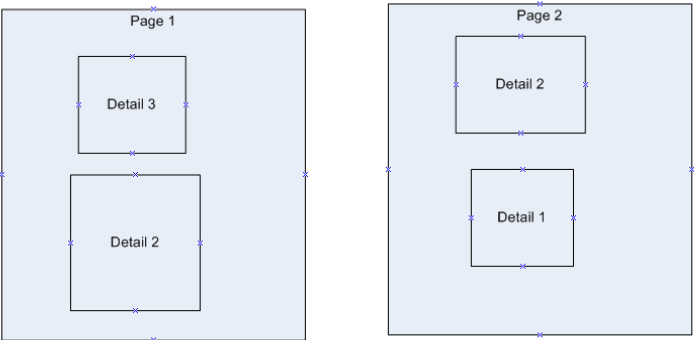
The Output Order tab will only be available on Detail # 1.

All detail sections in the same **Order** will be printed together (at the same time). If the detail section, selected for **Detail**, is in a different order, then all the previous detail sections will be printed before starting on the next Detail output.

For the example of all 3 detail sections together on one page, put all three detail sections in Order 1.



To print Detail 3 then all of detail 2 then detail 1, put detail 3 in order 1, Detail 2 in order 2 and detail 1 in order 3.



Details not in the list will print together at the end.

N-up Documents

The N-up command will allow setting up a document with multiple output pages on each sheet of paper. The Output Definition must first be set up for n-up documents.

Output Page Definition Command

N-up Documents can only have one Output Page Definition command.

All the pages must be the same output size and Duplexing mode.

When setting up the Output Page size enter the Sheet Size. If Printing on a Roll enter the width of the Roll and the height of output before cutting.

This size should contain all margins. A 2 across by 1 down print of 8.5 x 11 with a margin of 0.5 in on left and right side and 0.5 in margin on Top and bottom with a gutter of 0.5 inches between documents would require a sheet size of:

$$0.5 + 8.5 + 0.5 + 8.5 + 0.5 = 18.5 \text{ inches wide}$$

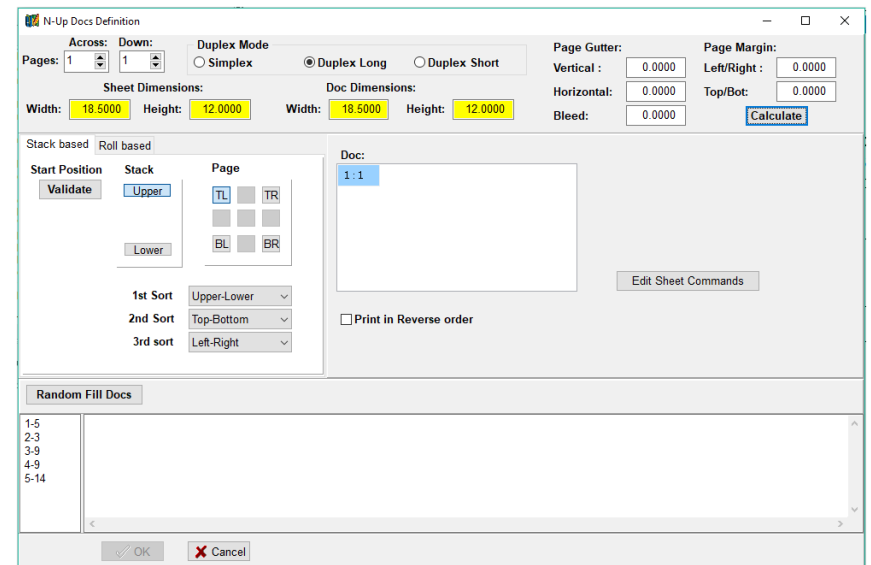
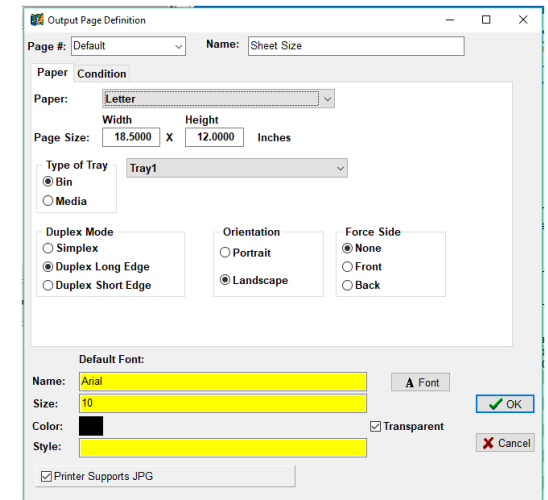
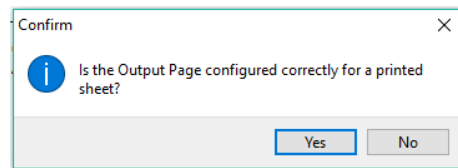
$$0.5 + 11.0 + 0.5 = 12.0 \text{ inches high}$$

N-up Command

The N-up command allows defining how the in Documents will be printed.

The N-up command can be accessed in 2 ways. The 1st is to click N-Up Doc from the Ribbon bar Doc. The 2nd is to Click the + on the Doc tab of the Map Commands window, then select N-up Documents from the list.

When the command is added, Relay Unify will make sure that the user has previously set up the output definition correctly.



Once confirmed, the command will open, and the user will see the Sheet dimensions and Document dimensions displayed from the Output Definition.

Enter the # documents across and down. The Doc Dimensions and Doc area will immediately reflect the number of documents across and down. The duplexing defined in the Output Page definition will be displayed in the Duplex Mode section.

N-Up Docs Definition

Across: 2 Down: 1

Duplex Mode: ☐ Simplex ☒ Duplex Long ☐ Duplex Short

Page Gutter: Vertical: 0.0000 Horizontal: 0.0000 Bleed: 0.0000

Page Margin: Left/Right: 0.0000 Top/Bot: 0.0000

Sheet Dimensions: Width: 18.5000 Height: 12.0000

Doc Dimensions: Width: 9.2500 Height: 12.0000

Stack based Roll based

Start Position: Validate Upper

Page: TL TR BL BR

1st Sort: Upper-Lower

2nd Sort: Top-Bottom

3rd Sort: Left-Right

Doc: 1:1 2:1

☐ Print in Reverse order

Edit Sheet Commands

Random Fill Docs

1-5 2-3 3-9 4-9 5-14

OK Cancel

Select the Page Gutters, Bleed and Page Margins.

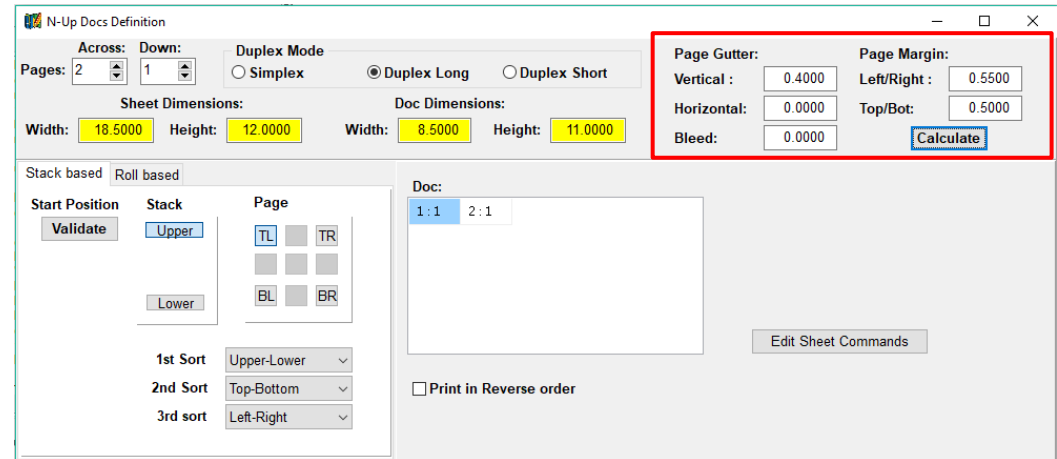
The Vertical Page Gutter is the spacing between pages across.

The Horizontal Page Gutter is the spacing between pages down.

The Left/Right Margin is the spacing on the Left and Right side of the Sheet before the documents print.

The Top /Bottom Margin is the spacing on the Top and Bottom side of the Sheet before the documents print.

The gutters and margins can be entered manually. As values are entered, the Doc dimensions will change to reflect those values.



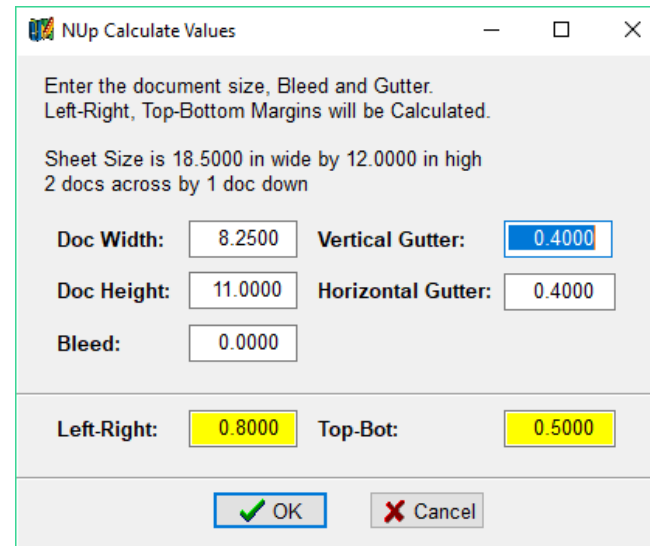
The N-Up Docs Definition dialog box is shown. It has tabs for 'Stack based' and 'Roll based'. The 'Stack based' tab is active. It contains fields for 'Across' (2), 'Down' (1), 'Duplex Mode' (Duplex Long), 'Sheet Dimensions' (Width: 18.5000, Height: 12.0000), and 'Doc Dimensions' (Width: 8.5000, Height: 11.0000). A red box highlights the 'Page Gutter' section with fields for 'Vertical' (0.4000), 'Horizontal' (0.0000), 'Bleed' (0.0000), 'Page Margin' (Left/Right: 0.5500, Top/Bot: 0.5000), and a 'Calculate' button. Other sections include 'Start Position', 'Stack', 'Page', '1st Sort', '2nd Sort', '3rd Sort', 'Doc', and 'Print in Reverse order'.

To calculate the values, click the Calculate button.

Enter the desired document width and height.

Enter the gutter and bleed values.

The margins will be calculated automatically.



The NUp Calculate Values dialog box is shown. It contains text: 'Enter the document size, Bleed and Gutter. Left-Right, Top-Bottom Margins will be Calculated.' and 'Sheet Size is 18.5000 in wide by 12.0000 in high 2 docs across by 1 doc down'. It has input fields for 'Doc Width' (8.2500), 'Doc Height' (11.0000), 'Bleed' (0.0000), 'Vertical Gutter' (0.4000), 'Horizontal Gutter' (0.4000), 'Left-Right' (0.8000), and 'Top-Bot' (0.5000). At the bottom are 'OK' and 'Cancel' buttons.

Scenario 1

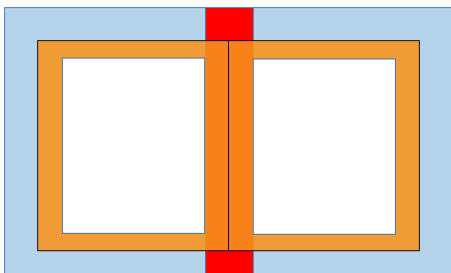
Gutter equals twice the Bleed.

White rectangle – Document.

Orange border – Bleed area around the document.

Red area – Gutter between each document.

Blue area – Margins outside the bleed/doc areas.



NUp Calculate Values

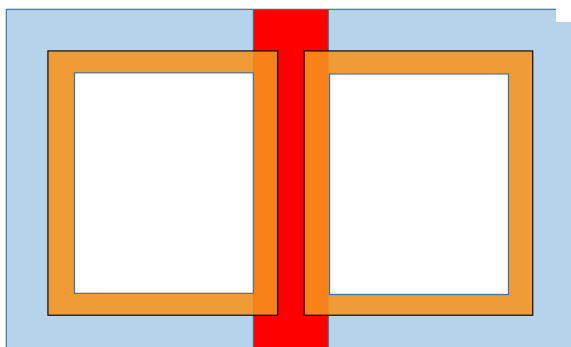
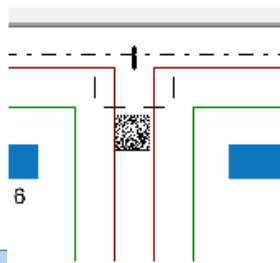
Enter the document size, Bleed and Gutter.
Left-Right, Top-Bottom Margins will be Calculated.

Sheet Size is 18.5000 in wide by 12.0000 in high
2 docs across by 1 doc down

Doc Width:	8.5000	Vertical Gutter:	0.5000
Doc Height:	11.0000	Horizontal Gutter:	0.0000
Bleed:	0.2500		
Left-Right:	0.2500	Top-Bot:	0.2500

Scenario 2

Gutter is greater than twice the Bleed.



NUp Calculate Values

Enter the document size, Bleed and Gutter.
Left-Right, Top-Bottom Margins will be Calculated.

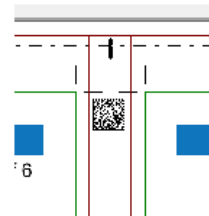
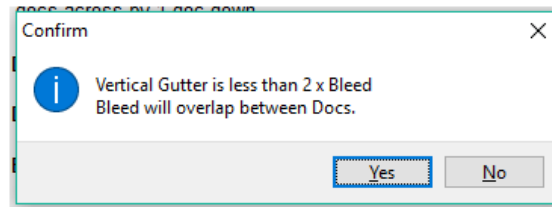
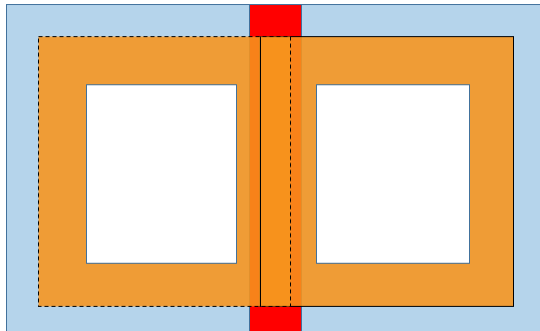
Sheet Size is 18.5000 in wide by 12.0000 in high
2 docs across by 1 doc down

Doc Width:	8.5000	Vertical Gutter:	0.7500
Doc Height:	11.0000	Horizontal Gutter:	0.0000
Bleed:	0.2500		
Left-Right:	0.1250	Top-Bot:	0.2500

Scenario 3

Gutter is less than twice the Bleed.

Once the values have been entered, when the user clicks OK there will be a message to confirm that the bleed areas between documents should overlap.



NUp Calculate Values

Enter the document size, Bleed and Gutter.
Left-Right, Top-Bottom Margins will be Calculated.

Sheet Size is 18.5000 in wide by 12.0000 in high
2 docs across by 1 doc down

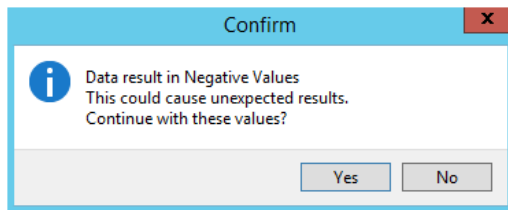
Doc Width:	8.5000	Vertical Gutter:	0.5000
Doc Height:	11.0000	Horizontal Gutter:	0.0000
Bleed:	0.4000		

Left-Right:	0.1000	Top-Bot:	0.1000

Scenario 4

Margins are negative values.

There is a warning if the user creates negative margins with the calculation values. This scenario will result in the margins or bleed being outside of the printable area. This scenario should be avoided.



NUp Calculate Values

Enter the document size, Bleed and Gutter.
Left-Right, Top-Bottom Margins will be Calculated.

Sheet Size is 18.5000 in wide by 12.0000 in high
2 docs across by 1 doc down

Doc Width:	8.5000	Vertical Gutter:	1.0000
Doc Height:	11.0000	Horizontal Gutter:	0.0000
Bleed:	0.5000		

Left-Right:	-0.2500	Top-Bot:	0.0000

Select the Desired N-up type.

Stack Based

Stack Based N-up will print down through a stack of Paper. This allows for the stack to be cut and stacked on top of the other with the documents in the correct order.

The Start Position sets the 1st document position in the Stack.

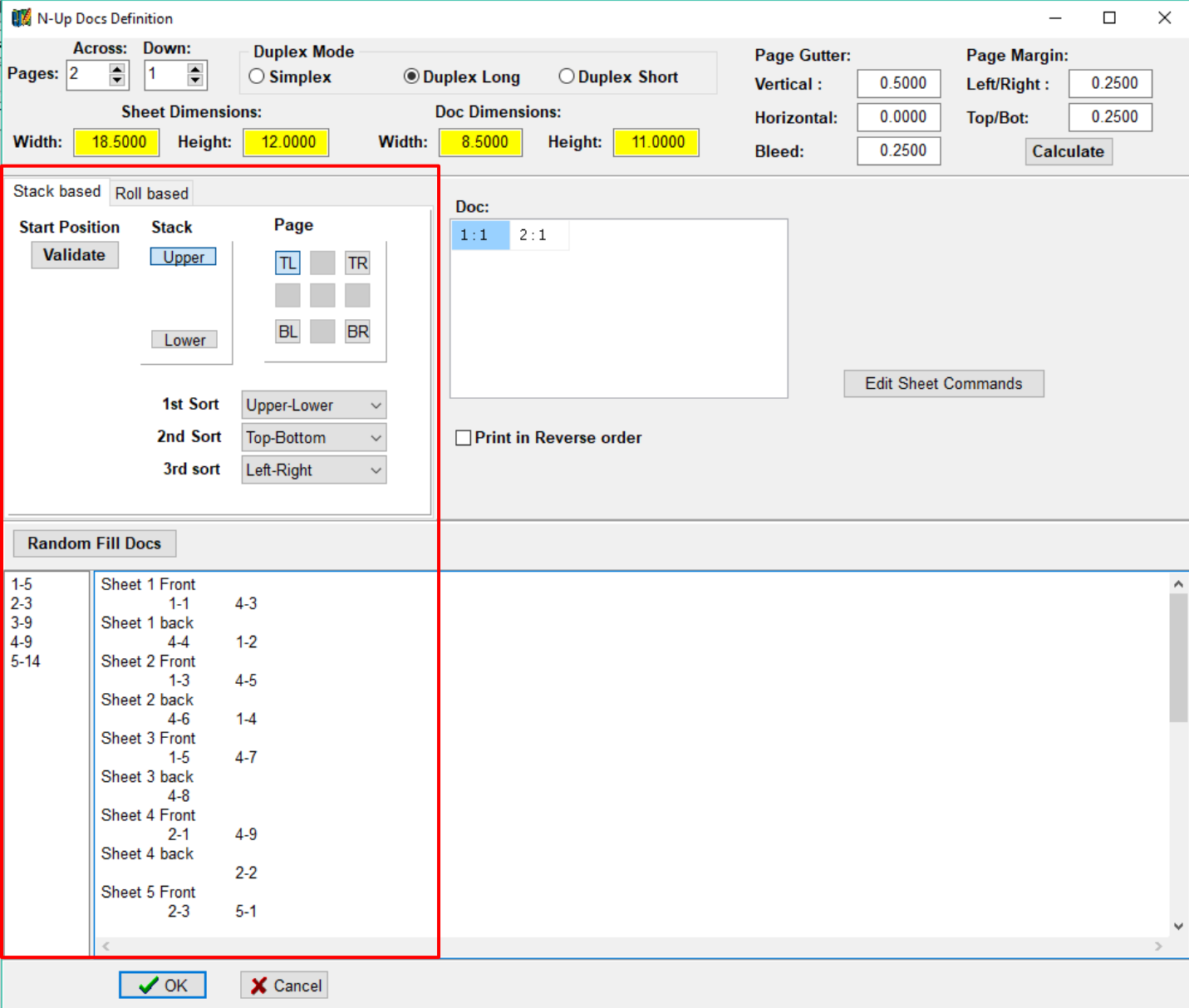
Stack Upper – Sets the 1st document starting at the top of the stack of paper.

Stack Lower – Sets the 1st document starting at the bottom of the stack.

Page TL – Sets the 1st document page on the sheet in the Top Left corner.

Page BL – sets the 1st document page on the sheet in the Bottom Left Corner.

Page TR – Sets the 1st document page on the sheet in the Top Right corner.



The image shows the 'N-Up Docs Definition' dialog box. It is divided into several sections. At the top, there are settings for 'Across' (2), 'Down' (1), 'Duplex Mode' (Duplex Long selected), 'Page Gutter' (Vertical: 0.5000, Horizontal: 0.0000, Bleed: 0.2500), and 'Page Margin' (Left/Right: 0.2500, Top/Bot: 0.2500). Below these are 'Sheet Dimensions' (Width: 18.5000, Height: 12.0000) and 'Doc Dimensions' (Width: 8.5000, Height: 11.0000). A 'Calculate' button is on the right. The main area is titled 'Stack based' and 'Roll based'. Under 'Stack based', there is a 'Start Position' section with a 'Validate' button and 'Upper'/'Lower' options. A 'Page' section shows a 2x2 grid with 'TL' selected. Below this are '1st Sort' (Upper-Lower), '2nd Sort' (Top-Bottom), and '3rd sort' (Left-Right). To the right of this is a 'Doc:' section showing '1:1' and '2:1' with a 'Print in Reverse order' checkbox. At the bottom is a 'Random Fill Docs' section with a table of document ranges and sheet/page assignments. The dialog has 'OK' and 'Cancel' buttons at the bottom.

Range	Sheet	Page
1-5	Sheet 1 Front	
2-3	1-1	4-3
3-9	Sheet 1 back	
4-9	4-4	1-2
5-14	Sheet 2 Front	
	1-3	4-5
	Sheet 2 back	
	4-6	1-4
	Sheet 3 Front	
	1-5	4-7
	Sheet 3 back	
	4-8	
	Sheet 4 Front	
	2-1	4-9
	Sheet 4 back	
		2-2
	Sheet 5 Front	
	2-3	5-1

Page BR – sets the 1st document page on the sheet in the Bottom Right corner.

1st sort – sets the 1st printing order of the document pages. Duplex will require the 1st sort to be Upper-Lower.

2nd sort – sets the 2nd printing order of the document pages.

3rd sort – sets the 3rd printing order of the document pages.

The value available in the Sorts will change depending on the Select of Stack and Page.

With Stack = upper and page TL the 1st sort will be left-right or top-bottom or upper-lower.

This means the output can be set to print from left to right first or top to bottom (on the Page) first or Upper page on the Stack to lower page on the Stack.

The bottom portion of the page will allow the user to see the results of the above settings. The left side contains a list of documents and the document page count. This list can be changed manually by clicking in the area and manually changing or adding data. A random set of documents and pages can be created by clicking the Random Fill Docs button.

To see the results of the settings, click the Validate button. Once clicked the settings will be validated and the Right side will display a list of the output based on the criteria selected. This shows the Sheet of Paper and Side and the Document and page of the document that will be printed.

The OK button will not be enabled until the Validate button is clicked. This requires the settings to be validated by the user before saving.

When the N-up command is saved the Output display will change. The output page size will be changed to display the available area based on the N-up settings. If a Letter size sheet is used (8.5 X 11) and the N-up is set to 2 across and 2 down the output will be split into a page the size of 4.25 x 5.5. The output page definition will stay at 8.5 X 11, but the displayed area will be set to 4.25 X 5.5. This provides the area to define the output.

Roll based

Roll based will print documents side by side. When each sheet is cut, the pages are stacked on top of each other.

The Sorts determine how the Documents are printed.

To see how the documents will print enter document # and Page count (1-5) in the left side list and click the Validate button. The right-side list will display how the documents will be printed.

To generate a Random set of documents, click the Random Fill Docs button.

Before saving is allowed the Validate button must be clicked.

Print in Reverse Order

Normal print would be:

- Banner Sheet front
- Banner Sheet Back
- Sheet 1 (Doc 1 page 1, Doc 2 page 1) front
- Sheet 1 (Doc 2 page 2, Doc 1 page 2) back

- ..
- Last Sheet (Doc N1 page M1, Doc N2 page M2) front
- Last Sheet (Doc N2 page M2+1, Doc N1 page M1+1) back

When checked this causes the Sheets to print out in Reverse Order

- Last Sheet (Doc N2 page M2+1, Doc N1 page M1+1) back
- Last Sheet (Doc N1 page M1, Doc N2 page M2) front

- Sheet 1 (Doc 2 page 2, Doc 1 page 2) back
- Sheet 1 (Doc 1 page 1, Doc 2 page 1) front
- Banner Sheet Back
- Banner Sheet front

The Documents in the Sheet are not reversed, only the sheets.

Stack based

Roll based

Cut and Stack

Validate

1st Sort

Left-Right

2nd Sort

Top-Bottom

Doc:

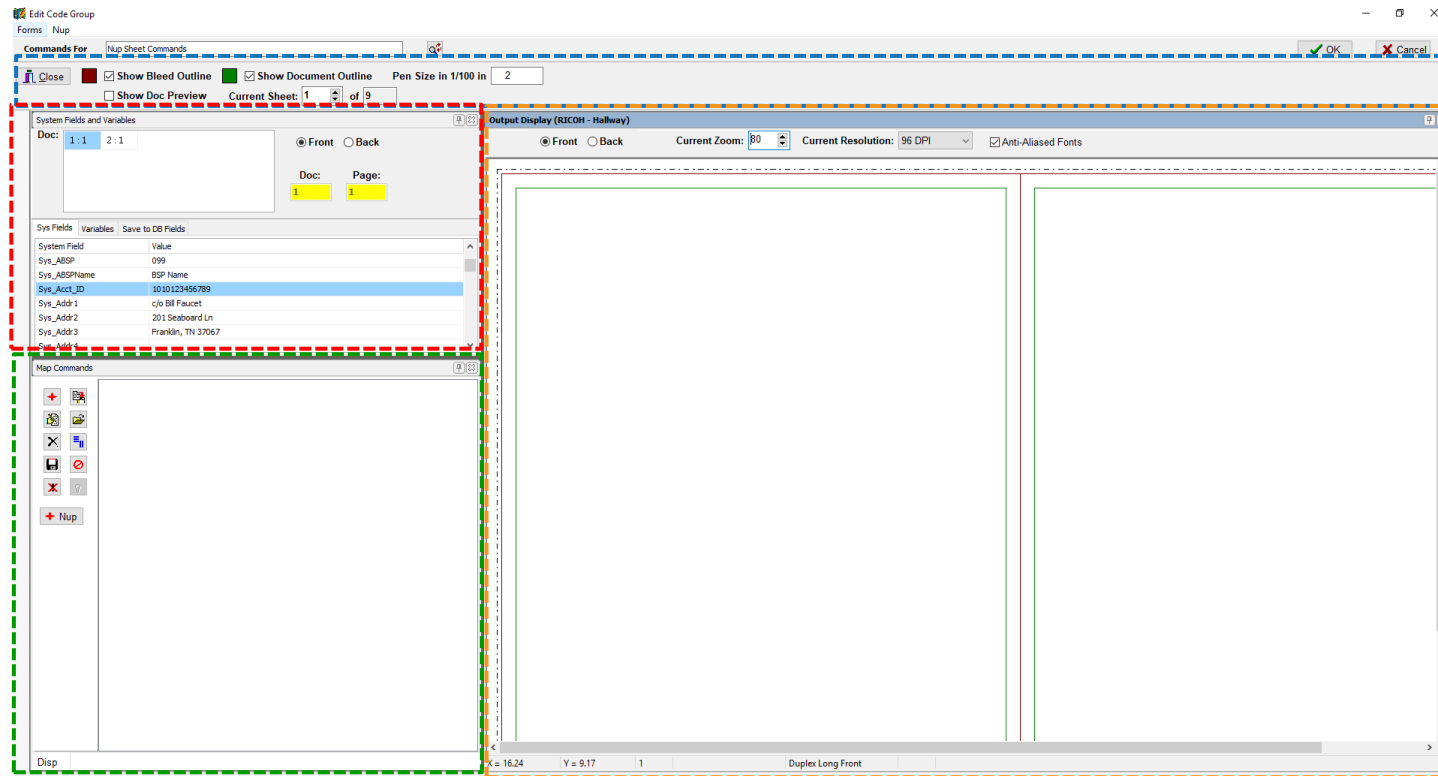
1:1 2:1

Random Fill Docs

1-5	Sheet 1 Front	
2-3	1-1	1-3
3-9	Sheet 1 back	
4-9	1-4	1-2
5-14	Sheet 2 Front	
	1-5	2-1
	Sheet 2 back	
	2-2	
	Sheet 3 Front	
	2-3	3-1
	Sheet 3 back	
	3-2	
	Sheet 4 Front	
	3-3	3-5
	Sheet 4 back	
	3-6	3-4
	Sheet 5 Front	
	3-7	3-9
	Sheet 5 back	
		3-8

Nup Sheet Commands

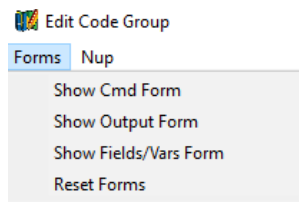
It is possible to create a list of commands to print on the sheet after the documents are imposed. This allows Crop marks, Fold Marks, barcodes, etc to be printed. To setup the commands click the Edit Sheet Commands button. The Edit Code Group window is displayed. This is like a standard code group edit. There are no input or Output Parameters.



The Edit Code Group window displays “Commands for Nup Sheet Commands”. This text cannot be changed.

There are 2 menu items.

1. The Forms Menu item
2. The Nup Menu item



Show Cmd Form – Select this to display the Map Commands window (outlined in green above).

Show Output Form – Select this to display the Output Display window (outlined in orange above).

Show Fields/Vars Form – Select this to display the System Fields and Variables window (outlined in red above).

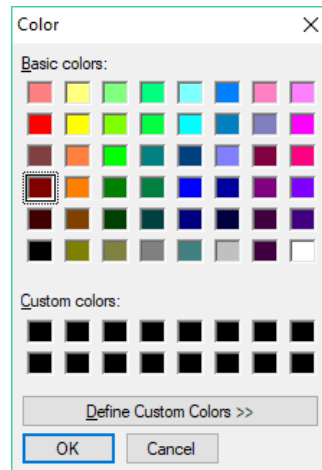
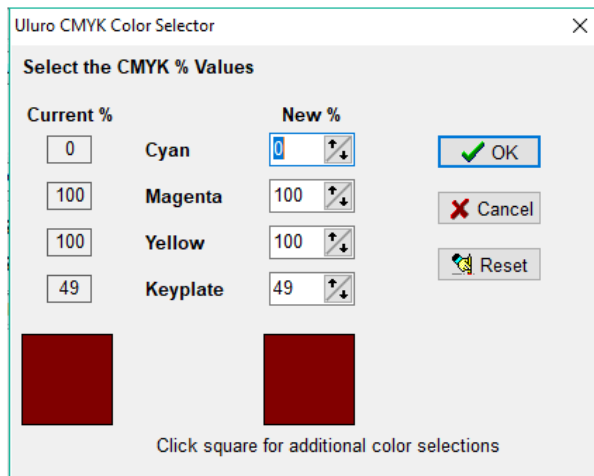
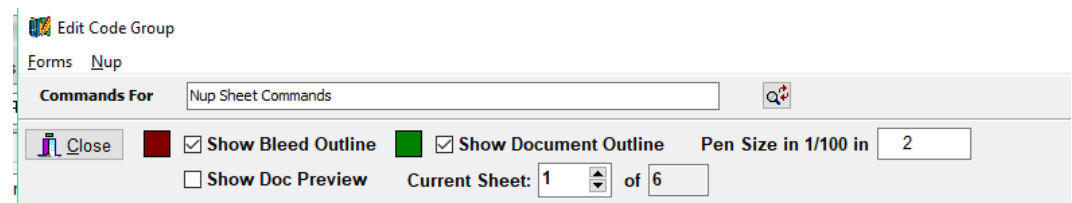
Reset Forms – Select this to display all 3 windows in this default positioning.

The Nup menu item will display the Nup Settings and Navigation panel (outlined in blue above). This displays by default when opening the Edit Sheet Commands. If this item is closed, click this menu item to make it reappear.

Nup Settings and Navigational Panel

The check boxes control the display of the Bleed outline, Document outline and Document Preview.

The color boxes control the color of the Bleed outline and Document Outline. Click to colored square to display the Color Selection window. This will give the user one of the following windows based on if the preference settings has Use CMYK Colors checked.



System Fields and Variables

The System Fields and Variable displays the System Fields, Nup Variables and Document Save to DB Fields.

It displays a layout of the Documents. Clicking on the Layout will display the document and current page. It also changes the field display to the Document selected.

This shows Document at position 1:1 (top left document) contains Document 1 page 1.

The fields in the Sys Fields tab displayed are for Document 1 from the original map.

The screenshot shows the 'System Fields and Variables' window. At the top, there is a 'Show Doc Preview' checkbox and a 'Current Sheet' dropdown set to '6' of '9'. Below this, the 'Doc:' section shows '1:1' and '2:1' with '1:1' selected. To the right, there are radio buttons for 'Front' and 'Back', with 'Back' selected. Below these, 'Doc:' is '3' and 'Page:' is '2'. The 'Sys Fields' tab is active, displaying a table of system fields and their values for Document 1.

System Field	Value
Insert8	N
Insert9	N
Sys_ABCNO	130 10 120220030 10 100000313111011212213
Sys_ABSP	099
Sys_ABSPName	BSP Name
Sys_Acct_ID	1010290000000
Sys_Addr1	
Sys_Addr2	203 Seaboard Ln
Sys_Addr3	Franklin, PA 37067
Sys_Addr4	
Sys_ADPID	99999999
Sys_Balance	10283.11
Sys_BCCD	99
Sys_BCDP	99

The screenshot shows the 'System Fields and Variables' window. At the top, there is a 'Show Doc Preview' checkbox and a 'Current Sheet' dropdown set to '6' of '9'. Below this, the 'Doc:' section shows '1:1' and '2:1' with '2:1' selected. To the right, there are radio buttons for 'Front' and 'Back', with 'Front' selected. Below these, 'Doc:' is '1' and 'Page:' is '1'. The 'Sys Fields' tab is active, displaying a table of system fields and their values for Document 3.

System Field	Value
Insert8	N
Insert9	N
Sys_ABCNO	130 10 120220030 10 100000313111011212213
Sys_ABSP	099
Sys_ABSPName	BSP Name
Sys_Acct_ID	1010123456789
Sys_Addr1	c/o Bill Faucet
Sys_Addr2	201 Seaboard Ln
Sys_Addr3	Franklin, TN 37067
Sys_Addr4	
Sys_ADPID	99999999
Sys_Balance	1965.85
Sys_BCCD	99
Sys_BCDP	99

This shows Document at position 2:1 (bottom right document) contains Document 3 page 2 on the back of sheet 6. The fields displayed are for Document 3 from the original map.

Clicking the Front or Back radio buttons switches from front to back of sheet.

Clicking through the current sheet will reflect the Document and Page shown in this window.

The Variables tab shows the List of Variables available for Nup.

Sys_CurDate – Current Date.

Sys_CurDateTime – Current Date and Time.

Sys_CurPaperSide – Current Paper Side (0 is front, 1 is back).

Sys_NupDocX – Current Nup Doc Position Across (1 to Num Docs Across).

Sys_NupDocY – Current Nup Doc Position Down (1 to Num Docs Down).

Sys_NupLastSheet – Is this the Last Nup Sheet (True if Sys_NupSheetNum = Sys_NupSheetCount)

Sys_NupSheetCount – The Number of Nup Sheets, Each sheet will have front and back if duplexed.

Sys_NupSheetNum – The Current Nup Sheet number.

Sys_PrtJobId – the Print Job ID.

The Save to DB Fields tab shows any fields that have been saved to the database during the Field definition in the map.

The screenshot shows the 'System Fields and Variables' dialog box with the 'Variables' tab selected. The 'Doc:' field is set to '1:1' and '2:1'. The 'Front' radio button is selected. The 'Doc:' and 'Page:' fields are set to '6' and '2' respectively. The 'Main' tab is selected, showing a table of variables and their last values.

Variable Name	Last Value
Sys_CurDate	1/26/2018
Sys_CurDateTime	1/26/2018 7:41:41 AM
Sys_CurPaperSide	1
Sys_NupDocX	1
Sys_NupDocY	1
Sys_NupLastSheet	N
Sys_NupSheetCount	9
Sys_NupSheetNum	1
Sys_prtJobId	

The screenshot shows the 'System Fields and Variables' dialog box with the 'Save to DB Fields' tab selected. The 'Fieldname' and 'Value' columns are visible. The 'SAVE_TO_DB_FIELD' field is highlighted, with the value 'This is a save to DB field'.

Fieldname	Value
SAVE_TO_DB_FIELD	This is a save to DB field

Fields, variables and Save to DB Fields can be dragged and dropped onto the output form.

Map Commands Form

The Map Command Form displays the list of commands for the Nup Sheet. This functions like the standard Code Group edit. The +Nup button displays a form to create Crop marks and Fold marks.

Crop Marks

Check Add Crop marks to generate the commands for the Crop marks. Crop marks are marks that are printed outside the document area for cutting alignment.

Set the Line Style, Line Size (in 100ths of inch), Line Length and Offset (in inches) from the Document Boundary. To change the Color, click on the Line Color Box to display the color selection window.

Click Ok to create the Crop marks. This will create a group and all the commands necessary for the crop marks.

Existing Crop marks are automatically removed if the Group name is “CROP MARK GROUP”.

To remove the Crop marks without creating a New Setup of Crop marks check Remove Existing Crop Marks within the +Nup button and the group will be removed.

Fold Marks

Fold Marks are marks printed outside the document area for guiding folding. These are centered in the gutter area.

Set the Line Style, Line Size (in 100ths of inch), Line Length and Offset (in inches) from the Document Boundary. To change the Color, click on the Line Color Box to display the color selection window.

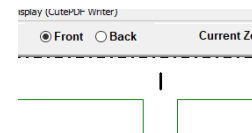
Click Ok to create the Fold marks. This will create a group and all the commands necessary for the fold marks.

Existing Fold marks are automatically removed if the Group name is “FOLD MARK GROUP”. To remove the Fold marks without creating a New Setup of Fold marks check Remove Existing Fold Marks within the +Nup button and the group will be removed.

There is a subset of the standard commands that are available in the Sheet Commands.

The Nup Command Wizard dialog box for Crop Marks. It has tabs for 'Crop Marks' and 'Fold Marks'. Under 'Crop Marks', the 'Add Crop Marks' checkbox is checked. The 'Line' section shows 'Solid' for line style, '2' for size in 1/100th, '0.125' for length, and a black color box for line color. The 'Offset' is set to '0.0625'. The 'Pages' section shows 'Across: 2' and 'Down: 1'. There are 'OK' and 'Cancel' buttons at the bottom.

The Map Commands window showing the generated commands for crop marks. It starts with 'Begin:CROP MARK GROUP' and lists 16 commands: 8 for the first page (GO Poly VERTICAL CROP MARK 1 - 1 TOP LEFT, GO Poly VERTICAL CROP MARK 1 - 1 BOTTOM LEFT, GO Poly HORIZONTAL CROP MARK 1 - 1 TOP LEFT, GO Poly HORIZONTAL CROP MARK 1 - 1 BOTTOM LEFT, GO Poly VERTICAL CROP MARK 1 - 1 TOP RIGHT, GO Poly VERTICAL CROP MARK 1 - 1 BOTTOM RIGHT, GO Poly HORIZONTAL CROP MARK 1 - 1 TOP RIGHT, GO Poly HORIZONTAL CROP MARK 1 - 1 BOTTOM RIGHT) and 8 for the second page (GO Poly VERTICAL CROP MARK 2 - 1 TOP LEFT, GO Poly VERTICAL CROP MARK 2 - 1 BOTTOM LEFT, GO Poly HORIZONTAL CROP MARK 2 - 1 TOP LEFT, GO Poly HORIZONTAL CROP MARK 2 - 1 BOTTOM LEFT, GO Poly VERTICAL CROP MARK 2 - 1 TOP RIGHT, GO Poly VERTICAL CROP MARK 2 - 1 BOTTOM RIGHT, GO Poly HORIZONTAL CROP MARK 2 - 1 TOP RIGHT, GO Poly HORIZONTAL CROP MARK 2 - 1 BOTTOM RIGHT). It ends with 'End:CROP MARK GROUP'. There are icons for adding, deleting, and saving commands, and a '+Nup' button.



The Nup Command Wizard dialog box for Fold Marks. It has tabs for 'Crop Marks' and 'Fold Marks'. Under 'Fold Marks', the 'Add Fold Marks' checkbox is checked. The 'Line' section shows 'Solid' for line style, '4' for size in 1/100th, '0.125' for length, and a black color box for line color. The 'Offset' is set to '0'. The 'Pages' section shows 'Across: 2' and 'Down: 1'. There are 'OK' and 'Cancel' buttons at the bottom.

The Map Commands window showing the generated commands for fold marks. It starts with 'Begin:CROP MARK GROUP' and 'Begin:FOLD MARK GROUP'. It lists 4 commands: GO Poly VERTICAL FOLD MARK 2 - 55968534 TOP, GO Poly VERTICAL FOLD MARK 2 - 55968534 BOTTOM, and two more commands. It ends with 'End:FOLD MARK GROUP'. There are icons for adding, deleting, and saving commands, and a '+Nup' button.

Change Nup Doc Command

There is also a New Command to Change Nup Doc. This command allows access to the Fields for the Document contained in the Nup Area.

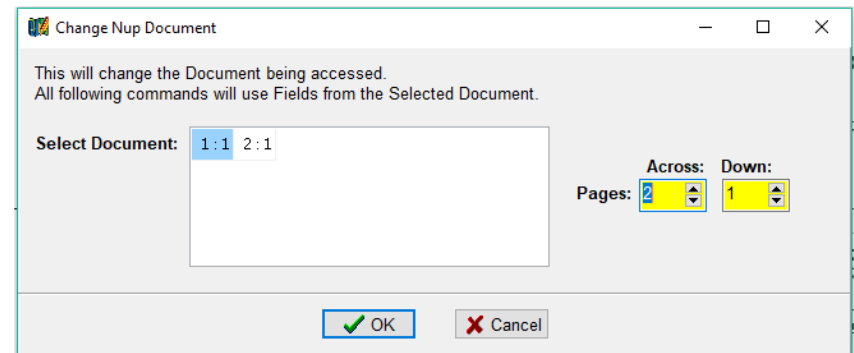
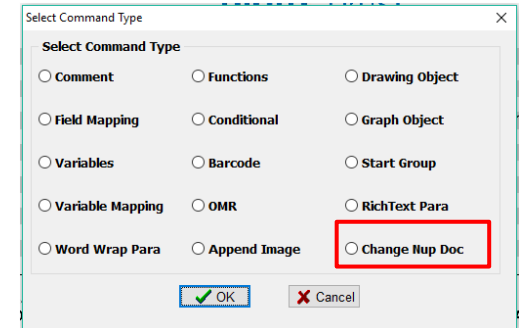
Click the  to add the new command.

Select Change Nup Doc from the options.

Select the Document area on the Sheet.

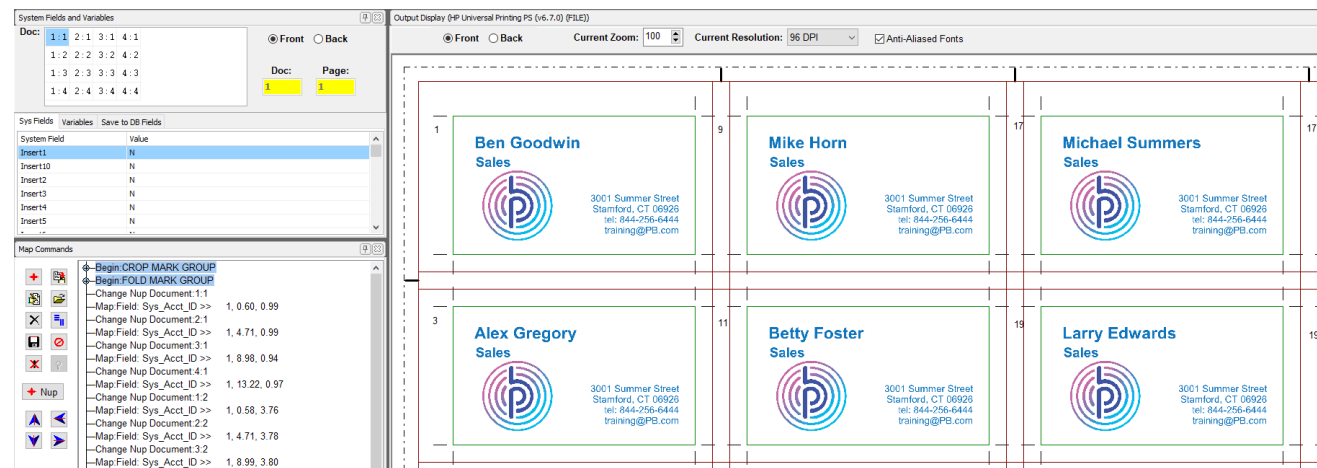
After the Selection all commands after the Change Nup Document command will access fields from the selected document.

This is helpful for barcode values to access document specific values in different areas of the sheet since the sheet has multiple documents on it. The user may need to add this command multiple times to accommodate the various areas on the output. On the example below, I have added the AcctID for each document to be displayed to the left of each document.



Once finished editing the Sheet Commands, click OK. The user will then need to click the Validate button to click Ok within the N-up Docs Definition. If the user exits out of the N-up Docs Definition without Validating and Saving, then the changes made in the Edit Sheet Commands will not be saved.

The changes made in the N-up Doc Definition including the Edit Sheet Commands, will not be displayed in the output Display of the map. They are only accessible in the N-up Definition.



Output Display Form

The Font Back radio buttons will switch from front to back of the Sheet.

Current Zoom will zoom in and out.

Current Resolution changes the DPI of the display.

The bottom shows the X and y position of the Cursor and the Duplex mode and front or back.

This window will also reflect the setting in the Nup Settings and Navigational Panel, including the Current Sheet, and outline colors.

When finished editing click the OK button to return to the Nup Document Definition.

Output Display (HP Universal Printing PS (v6.7.0) (FILE))

● Front ○ Back Current Zoom: 100 Current Resolution: 96 DPI ☒ Anti-Aliased Fonts

Page 1 of 1

pitney bowes
3001 SUMMER ST.
STAMFORD CT 06926
CUSTOMER SERVICE 555-555-6241
www.pitneybowes.com

Service Period Date: 01/07/2014 - 02/06/2014

Account Number 1000170-475760
Billing Date 02/14/2014
Last Bill Amount -75.81
Payments Received 0.00
Adjustments 0.00

Current Due 03/07/2014 37.04
Credit Balance \$ -38.77

WILMA SCHROEDER
16121 LOMOND HILLS TRAIL
LOT 4
DELRAY BEACH, FL 33446

AMELIA PARK
731 SASCO HILL RD
FAIRFIELD, CT 06824

**SAVE A TREE
SAVE A FOREST**
Sign Up For Electronic Billing
Contact Customer Service
or visit www.pitneybowes.com

Account Detail	Usage	Charge
ED BASE CHG, RESIDENTIAL	test	4.00
ED \$0.07557 / KWH	265.00	20.29
ED \$0.04284 POWER COST	265.00	11.35
TOTAL ELECTRIC		36.14
GR FL GROSS RECEIPTS TX		.90
TOTAL TAX		.90

Account Detail	Usage	Charge
WA WATER BASE CHARGE		10.32
WA 1 IN 1 USAGE LOG	2.00	3.84
TOTAL WATER		14.16
SW SEWER BASE CHARGE		11.33
SW 1 IN 1 USAGE	2.00	10.26
TOTAL SEWER		21.59
SU STORM WATER UTILITY		5.00
TOTAL STORM WATER		5.00

This document was printed on an environmentally friendly printer

X = 0.31 Y = 0.02 1 Duplex Long Front

Nup PDF Output

In Relay Unify uCompose it is possible to generate output to a PDF of the Nup documents.

From the Main Relay Unify uCompose form select Output, then PDF Output.

Maps Data Output Doc Disp Det Options Debug Wizards Camp

Output Form ☐ Snap To Grid ☐ Display Grid ☒ Display Address Block

Disable Auto-Parse ☐ Lock Objects

Select Printer ☐ Output Web PNG's ☐ Print Document ☐ Output Print PNG's ☐ Print Range ☒ PDF Output

Doc #: 2 of 9 Page: 1 of 1

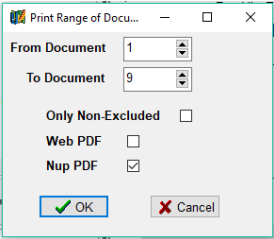
ata User Fields Sys Fields Variables

1_Header, 2 / 1 / 2017, Tiffany Tobin, c/o Bill Tackett, 2017

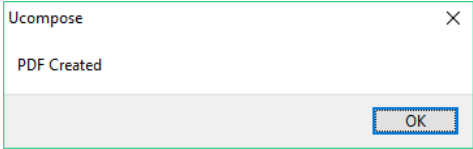
PDF Output
Output a PDF containing a Range of Documents

Select the location and enter the file name for the PDF.

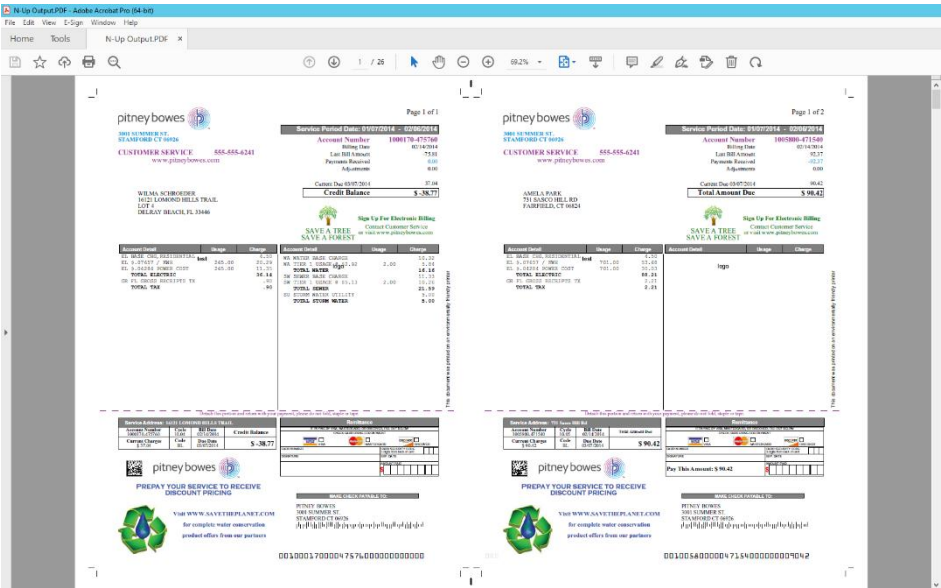
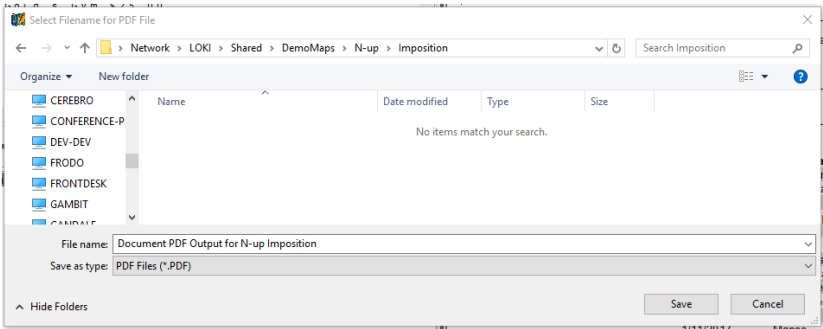
Enter the Document Range and check Nup PDF.



The PDF will be created.



The Print job will contain one file that contains all documents; the user cannot split the print job into multiple print files.



Use PCL Macros or Postscript Images

This command allows reusable images in PCL and PS output. It also allows the setup of tray calls for HPLaserjet5 for PCL Macros because they may not be read properly using only the Output Page Definition.

This command can be accessed in 2 ways. The 1st is to click on Use PCL or PS from the Ribbon bar Doc. The 2nd is to Click the + on the Doc tab of the Map Commands window, then select Use PCL Macros or Postscript Images from the list.

This forces the System to use PCL or Post Script. When **Use PCL** is checked, Tray Pulls are defined, and images can be sent as Macro Files.

Add trays to the PCL configuration. Fill in the **Tray** and **PCL** fields. The PCL for the trays should include the entire PCL command. For the ESC character use /027.

Use the Ellipsis button to edit the field or enter the text.

In this form the user can enter data that can contain multiple line. Check **Keep Line Breaks** to retain the Line Breaks. If Keep Line Breaks is not checked the multiple lines will be combined with a space.

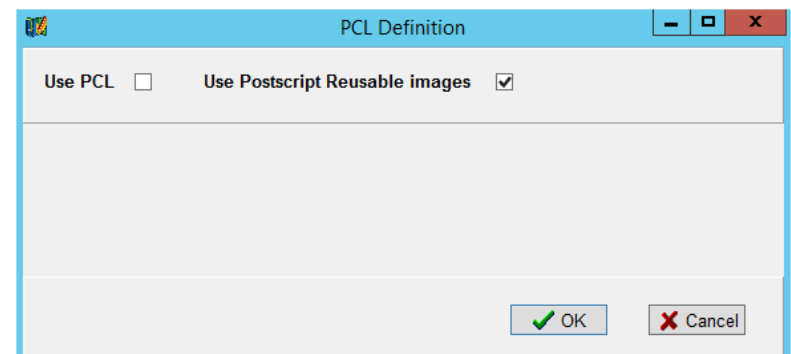
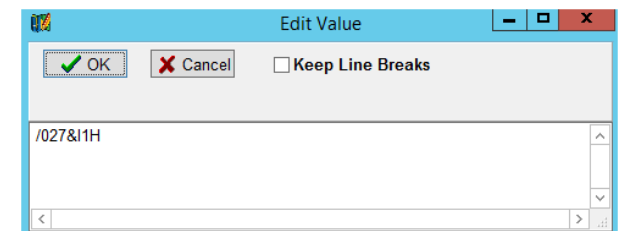
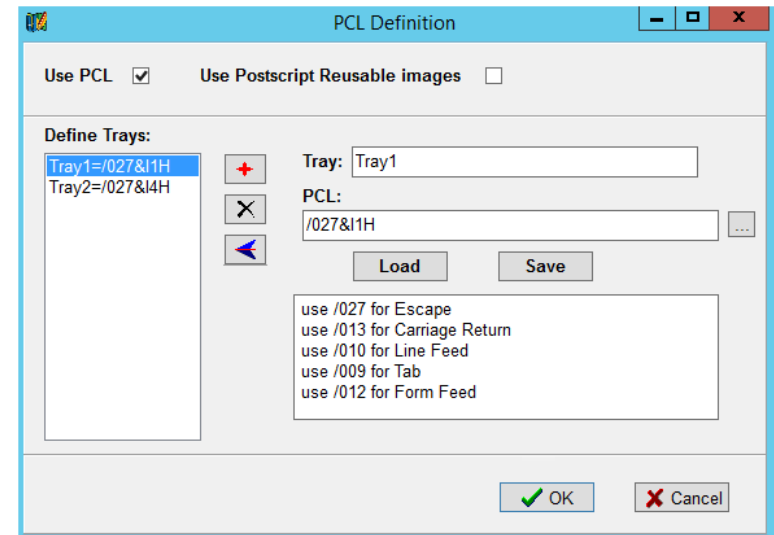
When the Trays are correctly set for the printer, click the **Save** button to save the tray configuration. This will allow the configuration to be loaded in other maps using the **Load** button.

The Trays will be displayed in the Output Page definition command.

Use PCL can only be used with PCL print drivers. To output PCL Macros the Printer Driver must be HP LaserJet 5.

Only one, either PCL or PS can be selected at a time.

When PCL is selected then the Background image and append image commands will have a checkbox for Send as PCL Macro. If Use Postscript Reusable Images is selected, then the Background image and append image will have a checkbox for Send as Reusable PS.



If **Use Postscript Reusable Images** is checked, then there are no additional settings needed. Use Reusable PS can only be used with Post Script print Drivers. The Post Script driver must be compatible with the Printer to correctly set the trays.

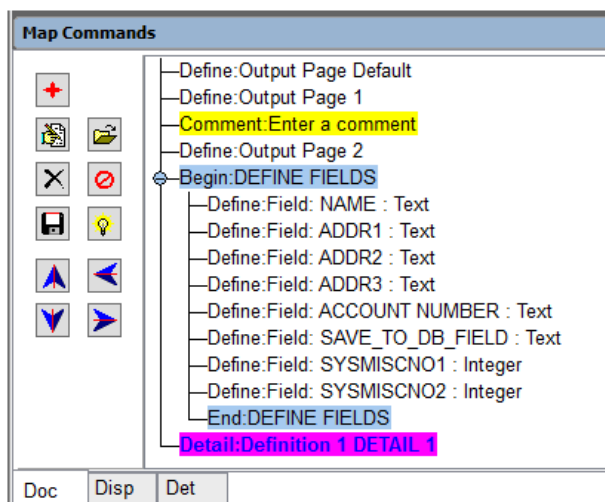
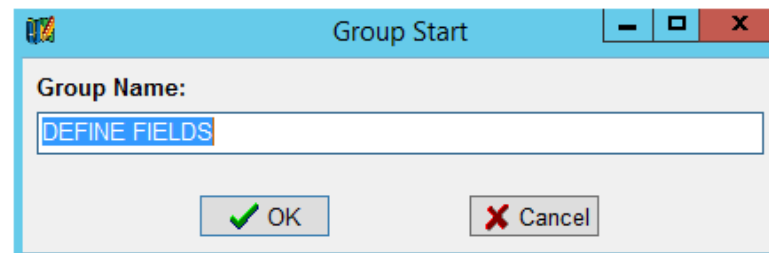
Begin Group

The Group command allows grouping commands together. This is useful for groups of commands that are executed based on a condition or for creating a group of commands that may need to be moved or saved for use later.

This command can be accessed by clicking the + on the Doc tab of the Map Commands window and selecting Begin Group.

Enter the Group name.

Groups are displayed by default with a Blue background in the Command Window. Both the Start and End Commands are created.



A group defines a group of commands. If the Start Group command is the first command after a Conditional, then the commands in the Group will be processed if the conditional is true.

Groups can be added within groups as well.

PDF Output Configuration

The PDF Output Configuration command allows setting information for Fonts in the Relay Unify Native PDF Output. The configuration is saved in the Map and will be used when generating Relay Unify Native PDF Output.

This command can be accessed by clicking the + on the Doc tab of the Map Commands window and selecting PDF Output Configuration.

Relay Unify uCompose will query the commands in the map and determine what Fonts are being used and the font style. Then the PDF Output Configuration form will be displayed.

This will display the Font Name, Font Style, whether the font is a true type font, whether the font is set for embedding, and the Font File name to use during embedding.

Only fonts used in commands that are fixed are known. If an RTF is coming from a Field, Variable or file, those are not being checked. Only Fonts included in the PDF font substitution will be checked.

Fonts with **Embed** unchecked will be referenced in the PDF, but not embedded.

Fonts that are not listed will be embedded if possible. Open Type and Postscript fonts may not embed properly without the Font File name.

Font Name	Font Style	TrueType	Embed	FileName
Arial		Y	☒	
Arial	Bold	Y	☒	
Times New Roman		Y	☒	
USPS4CB		Y	☒	
USPSIMBStandard		Y	☒	
Courier		N	☐	
Courier	Bold	N	☐	
Courier	BoldItalic	N	☐	
Courier	Italic	N	☐	
Helvetica		Y	☐	
Helvetica	Bold	Y	☐	
Helvetica	BoldItalic	Y	☐	
Helvetica	Italic	Y	☐	
Times		Not Available	☐	
Times	Bold	Not Available	☐	

An Individual font and style may have embedding turned off by unchecking the embed checkbox. All the embedding checkboxes can be checked by clicking the **Check All** button. All the embedding checkboxes can be unchecked by clicking the **Un-Check All** button.

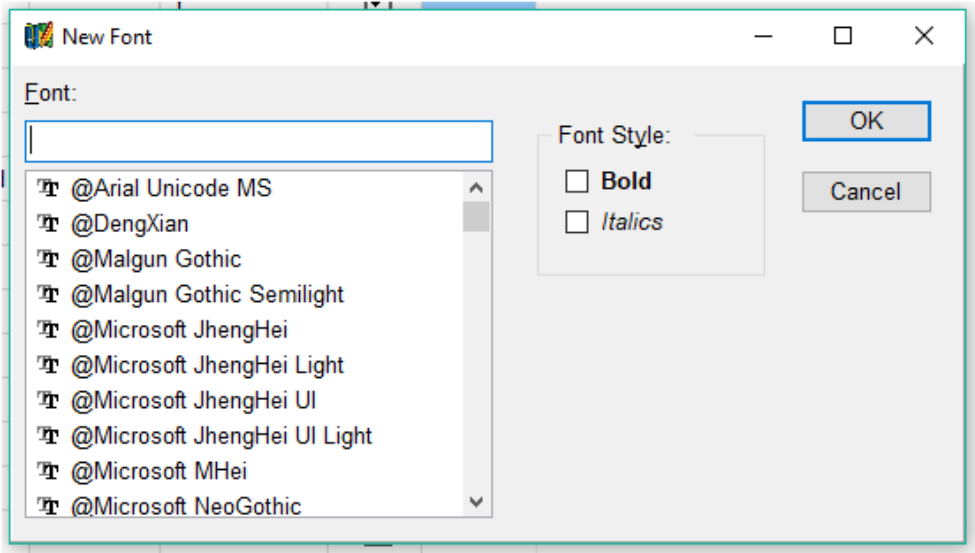
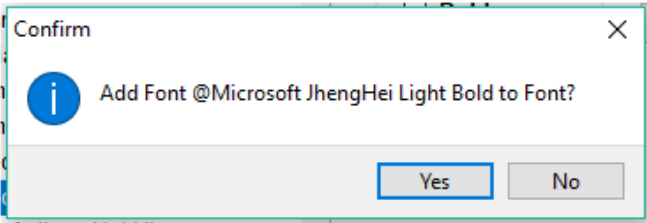
All the FileNames specified can be cleared by clicking the **Clear All Files** button.

Clicking the **Reset** button will reset all the changes made to the font list.

A new font and style can be added by clicking the **Add** button.

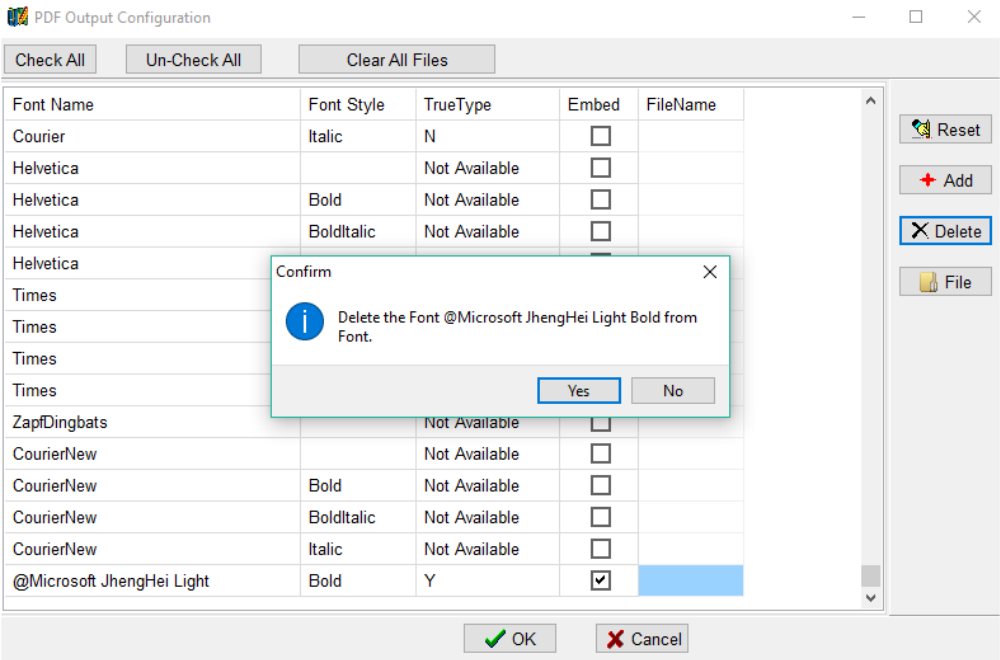
New Fonts will need to be added if they are present in Variable data that the system cannot access (RTF from file system or from incoming data).

To add, click OK. There will be a confirmation message. Click Yes to add the font, or No to cancel.



Fonts can be deleted from the command by selecting the font (clicking on the FileName column to highlight it), then clicking the **Delete** button to remove the font and style from the list.

There will be a confirmation message. Click Yes to delete the font, or No to cancel.

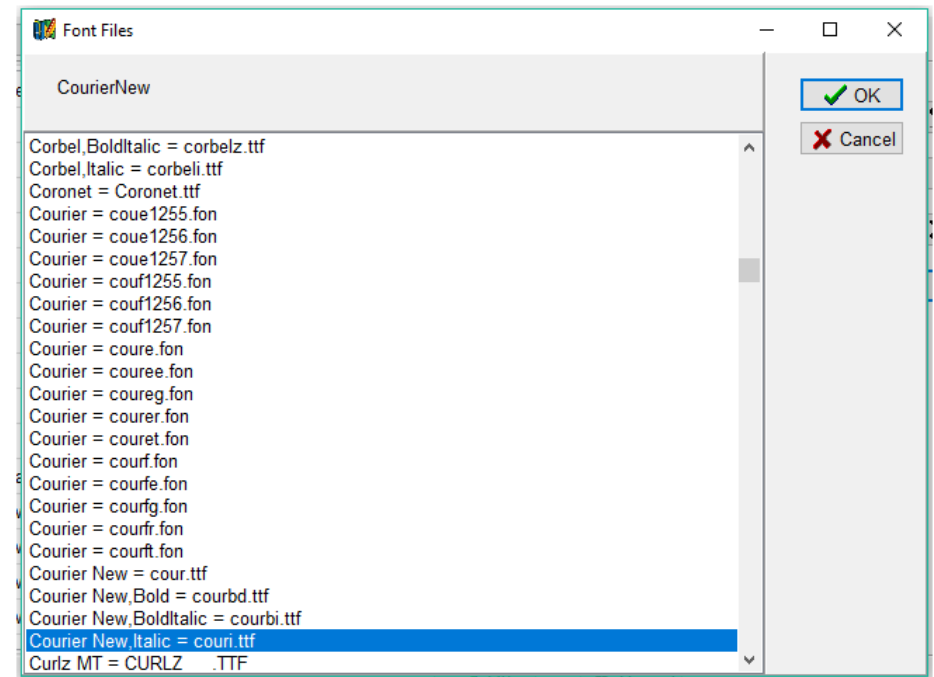
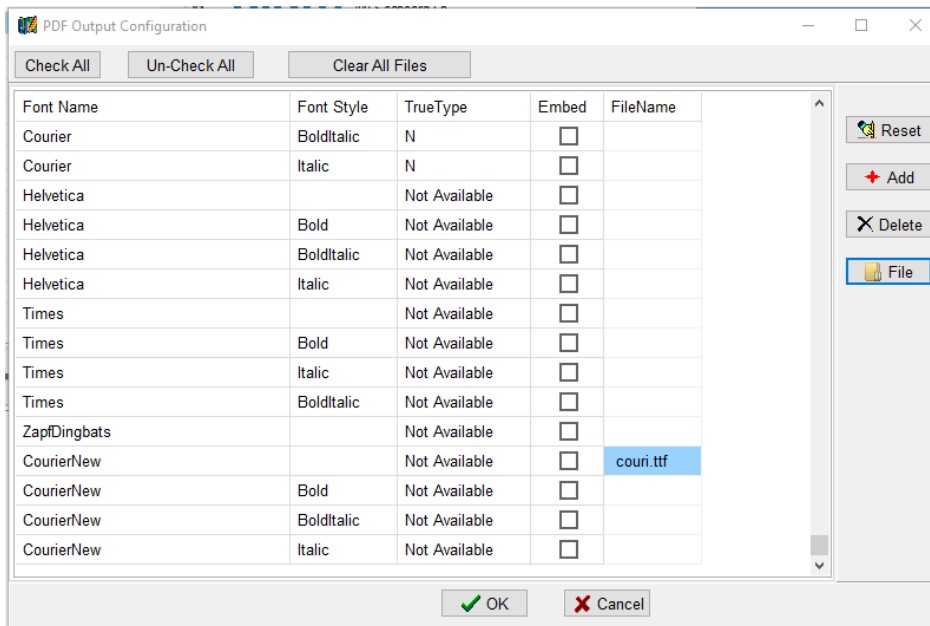


Select a font by clicking on the FileName column to highlight it, then click on the **File** button to display a list of font files to select. The user may also double-click on the File name field to display the font file list.

The current font and style will be displayed, and the closest match will be auto selected.

Double click on the file or click the OK button to select the Font file.

The filename selected has been filled in for the FileName column.



File names are required in some cases because bolding and italics can only be embedded in a PDF if the font file contains bold or italic. If the font does not contain the bold or italic characters, then embedding will not display the bold or italic properly. In some cases, the user may want to select a different font in order to obtain bold and italic. If a different font file is selected, please verify the output by generating a PDF. Fonts have

different spacing. The original Font spacing is used and may result inconsistent output

The list of font files is obtained from the %SYSTEMROOT%\Fonts\ directory. Font files must exist in this directory to be used. If the font file is selected and not available at the time the Output PDF is created the file will not be used. The System will attempt to create the PDF with existing font information instead of the file.

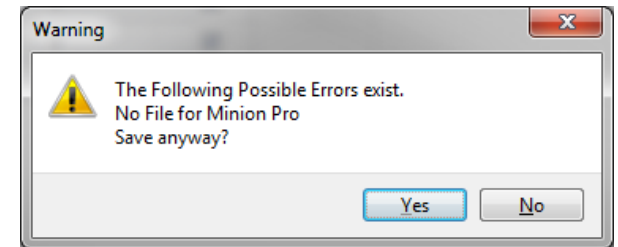
Non-True Type fonts can be embedded using the font file.

Open Type (OTF) and Postscript fonts () can be embedded.

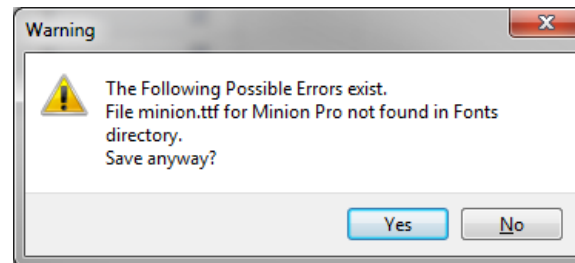
Fonts that are not listed will be embedded if possible. Open Type and Postscript fonts may not embed properly without the Font File name.

When a Font File is selected and embedded enabled, only the first 255 characters will be embedded. Unicode Characters above 255 will not embed.

If a Non True Type font is contained in the List of fonts and no Output File is selected a warning will be displayed when clicking the ok button to save the list.

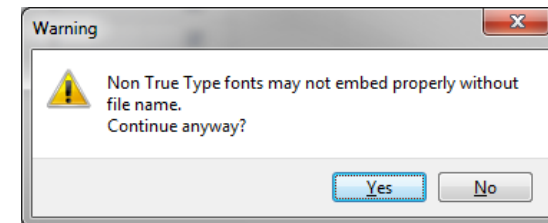


If a File is entered that does not exist in the Fonts directory then a warning will be displayed.



In both cases the user may select to save the information by selecting Yes.

If a non True Type font does not have a Font File name then the following warning will be displayed.



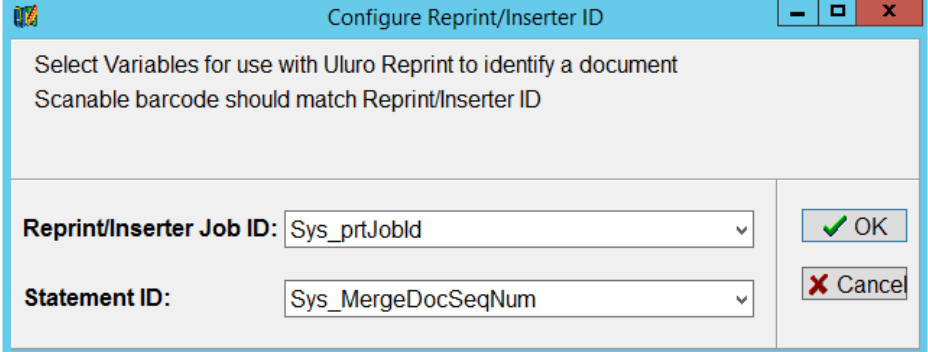
When the desired fonts and Filenames have been added click OK.

Reprint/Inserter ID

This command allows Relay UnifyReprint to correctly identify documents using a Reprint or Inserter Barcode. If this command is not present, then the sequence number will be assumed to be forward (from 1 to number of documents printed) and the Job ID will be the Prtjobid (Sys_PrtJobid).

This command can be accessed by clicking the + on the Doc tab of the Map Commands window and selecting Reprint/Inserter ID.

When the Command is added there are two variables that will be requested. The **Reprint/Inserter Job ID** will be the Job ID part of the link to the current document. The **Statement ID** will be the Statement part of the link to the current document.



Configure Reprint/Inserter ID

Select Variables for use with Uluro Reprint to identify a document
Scanable barcode should match Reprint/Inserter ID

Reprint/Inserter Job ID: Sys_prtJobid

Statement ID: Sys_MergeDocSeqNum

OK Cancel

The variables used for these values should contain the full Barcode sections. For DRS the barcode part for Jobid is determined by the Mode selected. The default is 6 characters, left zero padded. An example would be '000123' for jobid 123. For DRS the barcode part for statementid is determined by the Mode selected. The default is 6 characters, left zero padded. An example would be '002345' for statement 2345. For DRS the full barcode would be '000123002345' for the statement.

The variables used should include the zero padding and correct size.

To use reverse sequencing for DRS, add the Reprint/Inserter ID command and change the Statement ID to either Sys_RevMergeDocSeqNum or Sys_RevDocSeqNum.

For non-DRS set the values to the desired fully padded variables. These variables can be set in a conditional to change the values based on the desired Reprint/Inserter barcode. Make sure the Reprint/Inserter barcode matches the values from the variables. The last value of the variables per document will be used. This means the variables should only be set once per document.

These values must match the Barcode if the Relay Unify Reprint program will be used. These values will be copied into the PrtJobDoc table after printing. This allows Relay UnifyReprint to identify a document based on the JobID and StatementID portions of the barcode. Relay Unify Reprint currently only allows selection of documents for reprint by scanning the DRS barcode, Document Id, or 'S'+submission id+'D'+docno.

PDF Separation Color List

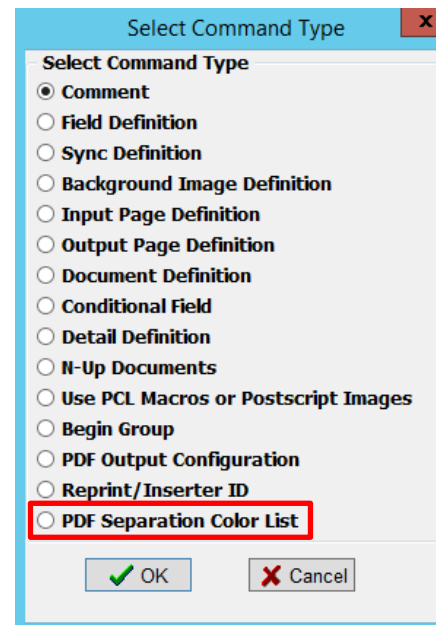
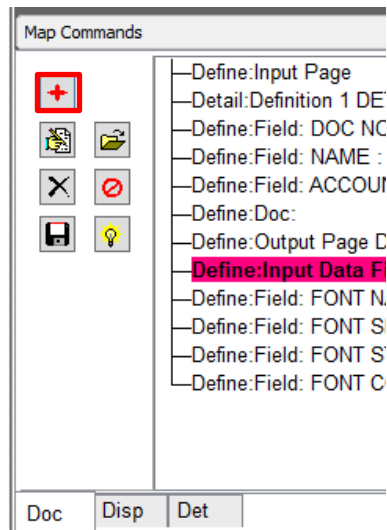
PDF Separation Colors are available in Relay Unify uCompose, UBrkpackapp.exe, RPPrintapp.exe and PNGDLL.dll Version 6.2.1911.1 and above. Maps with PDF Separation colors that are edited or processed by versions earlier than 6.2.1911.1 will not use PDF Separation Colors. If the Map is saved with an earlier version, the saved map will not contain PDF Separation colors.

Separation Color can be used to print using an alternative color or to define a unique ink such as magnetic ink for MICR printing.

The PDF created with Separation colors will not be PDF A.

The PDF Separation Color List command can be accessed from the Document Map Commands window in Relay Unify uCompose. From the Doc tab in the Map Commands window, click on the red plus sign button. Select PDF Separation Color List.

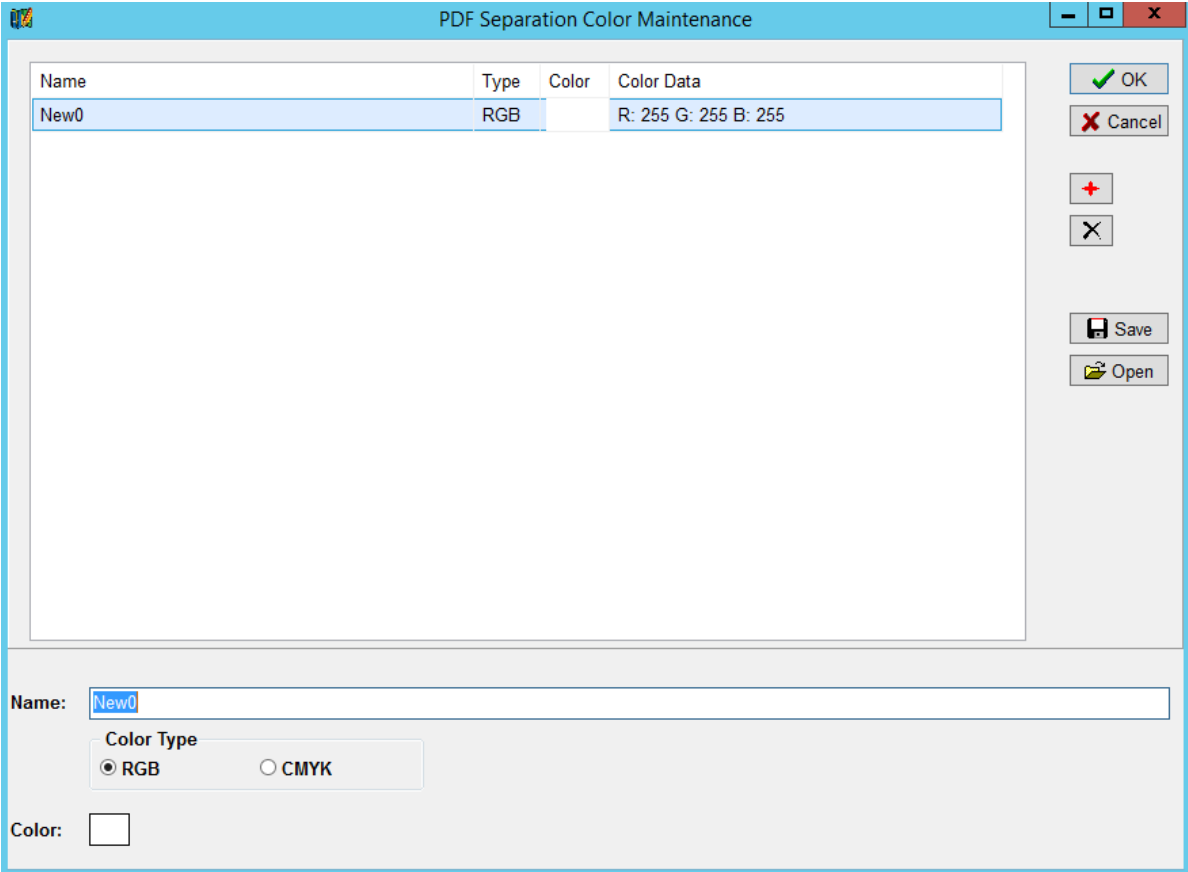
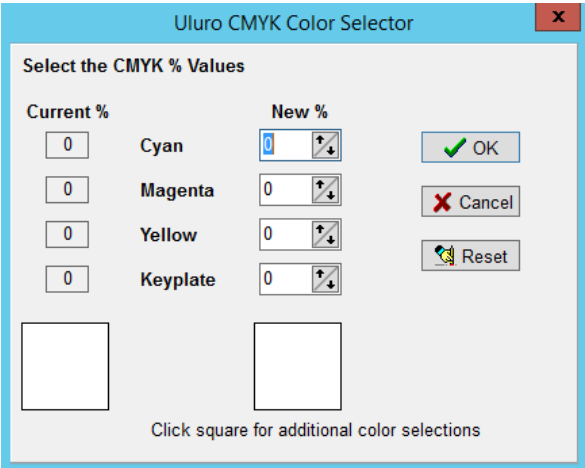
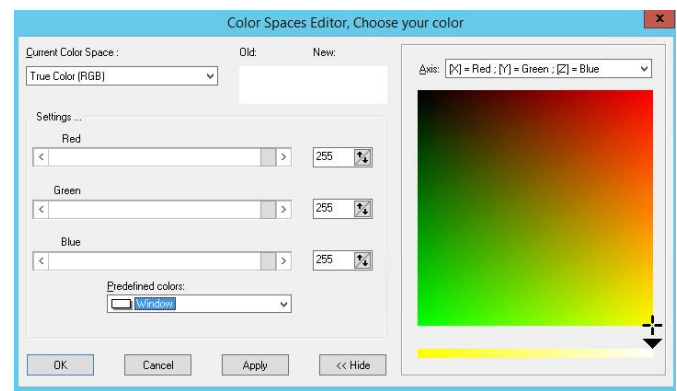
This will display the PDF Separation Color Maintenance window.



The **Name** for the Color separation must be unique.

Select one of the **Color Types**, either RGB and CMYK. The colors in the PDF will be based on these color types.

To Change the **Color**, click the Color square at the bottom of the screen. Depending on the color type selected, the program will display one of the following the color editors.



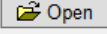
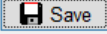
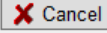
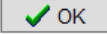
Click on the red plus sign to add as many colors as desired.

Colors can be deleted using the delete button.

The PDF Color Separation List can be saved and opened. Click the Save button to save the colors as a Separation Color List (.SCL) file. Or use the Open button to load in a saved .SCL file.

PDF Separation Color Maintenance

Name	Type	Color	Color Data
Green	RGB		R: 080 G: 229 B: 000
RedCMYK	CMYK		C: 0.00 M: 0.85 Y: 0.97 K: 0.18
Blue	RGB		R: 000 G: 000 B: 255



Name:

Blue

Color Type

☒ RGB ☐ CMYK

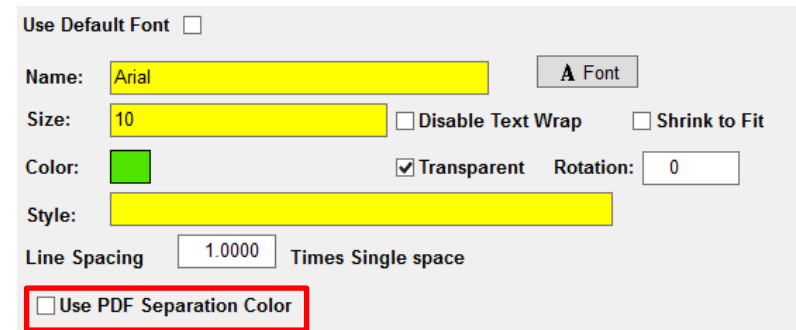
Color:



Mapping Command Changes

If a map contains a PDF Separation Color List, the following commands have a setting to allow using PDF Separation Colors: Field Mapping, Variable Mapping, Line Mapping and Word Wrap Paragraph.

If “Use on Print (Relay Unify NativePDF)” or “Use on Web (PDF or PNG)” or “Print on Campaign Onsert” is checked, the **Use PDF Separation Color** setting will be visible. If checked, more settings become available.



Use Default Font ☐

Name:

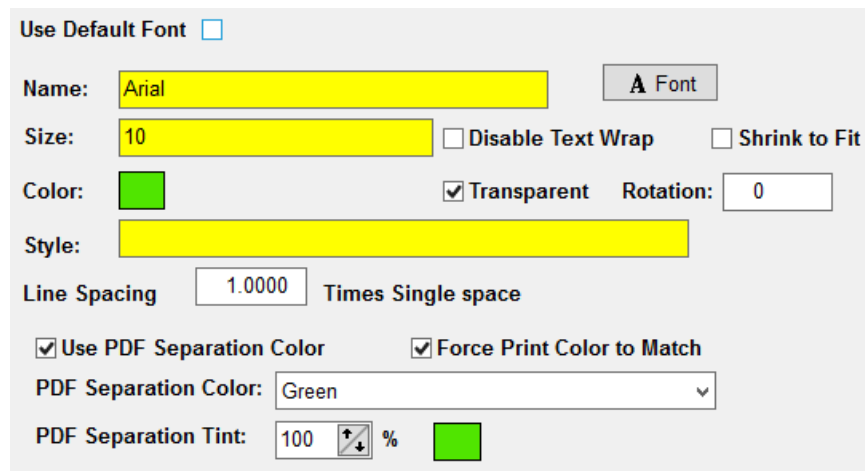
Size: ☐ Disable Text Wrap ☐ Shrink to Fit

Color: ☒ Transparent Rotation:

Style:

Line Spacing Times Single space

☐ Use PDF Separation Color



Use Default Font ☐

Name:

Size: ☐ Disable Text Wrap ☐ Shrink to Fit

Color: ☒ Transparent Rotation:

Style:

Line Spacing Times Single space

☒ Use PDF Separation Color ☒ Force Print Color to Match

PDF Separation Color:

PDF Separation Tint: %

Within the command, uncheck the Use Default Font checkbox.

Checking the **Use PDF Separation Color** will display the ability to Select a PDF Separation Color, set the PDF Separation Tint and force print color to match.

Select a color from the dropdown list for **PDF Separation Color** from the colors set up in the Separation Color List for the map.

Set the **PDF Separation Tint**. This is the % of the Separation color to use to determine how much ink is printed on the page. Enter a value from 0 to 100%.

Checking the **Force Print Color to Match** will cause the print (Non-PDF output) to occur in the selected separation color. Note that the Tint will not be used in Non-PDF Output.



Tips:

If the Font Color and Separation Color selected are different, the Separation Color will print on the PDF Output and the Font Color will print on all other types of output.

Display Tab

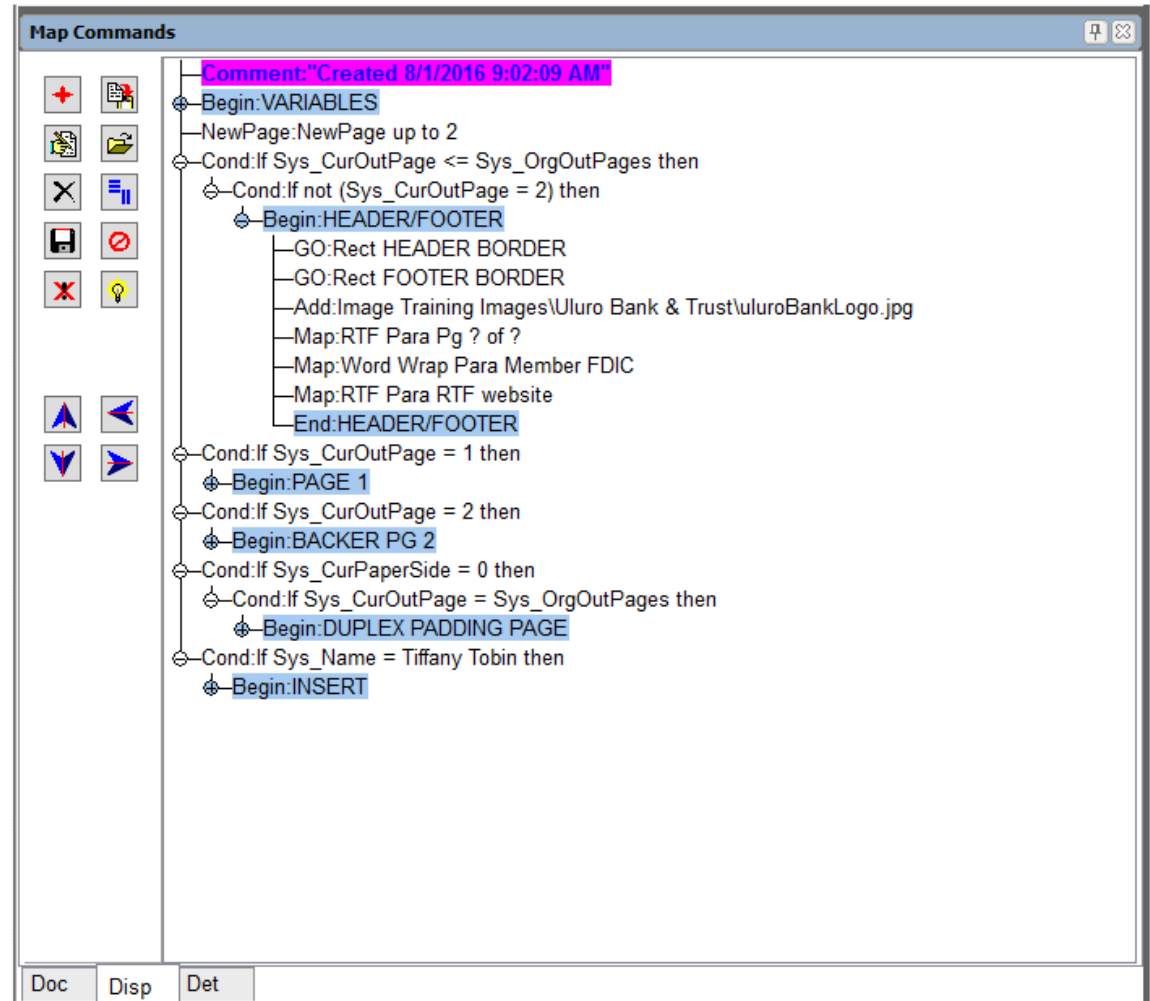
The Display tab displays commands that define the output display of the document.

The order of these commands is important. The drawing occurs in the order that the commands are displayed from top to bottom. This results in layers. The affect is that the commands lower in the list are drawn on top of the command drawn earlier (above the current command). If a mapping is created and is not visible it may have another command drawn on top. Move the command down until it is displayed in the output.

Detail commands are drawn after all other commands on the Page unless the DoDetail comand is called.

When commands are added they will be added either before or after the currently selected command (depending on the Settings on the Options Ribbon bar group).

To edit a command, select the command and either double-click on the command or click the edit button.



Comment

The Comment command allows a comment to be added to the Command List for clarification and organization of the commands. This is helpful for when multiple users work on a map, or someone needs to make edits later.

The Comment command can be accessed in 2 ways. The 1st is to click Comment from the Ribbon bar Disp. The 2nd is to Click the + on the Display tab of the Map Commands window, then select Comment from the list.

Enter the Comment that will be displayed within the Map Commands list.

The value can be entered in the field or by clicking on the Ellipsis button to pull up the edit form.

In this form the user can enter data that can contain multiple lines. Check **Keep Line Breaks** to retain the Line Breaks. If Keep Line Breaks is not checked the multiple lines will be combined with a space.

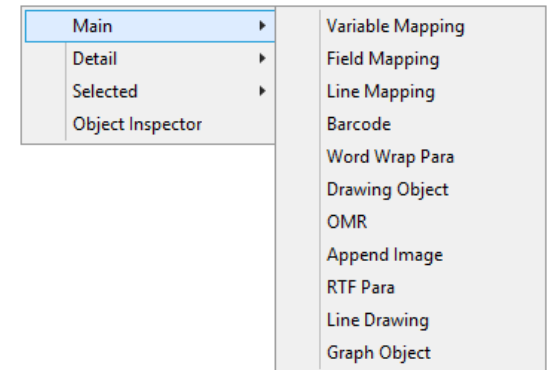
Enter the Comment and Click OK to Save. Click Cancel to cancel the changes to the comment. Comments are displayed by default in Yellow on the Map Commands List.

Comments do not display or print.

Field Mapping

This command is to output the value of a field. If it needs to be embedded in text, then the [RTF Paragraph](#) command will need to be used instead.

The Field mapping command can be accessed in 4 ways. The 1st is to click Field from the Ribbon bar Disp. The 2nd is to Click the + on the Display tab of the Map Commands window, then select Field Mapping from the list.



The 3rd is to right-click on the Output Window and from the Pop-up menu select Main then Field Mapping. The advantage of using this method is the Field Mapping will default to the selected location.

XML Data	
User Fields	Sys Fields
Variables	
Search for BALANCE	
Fieldname	Value
SYNC1	
SYNC2	
SYNC3	
ACCOUNT	1010123456789
ADDR1	c/o Bill Tidwell
ADDR2	200 Seaboard Dr
ADDR3	Franklin, TN 37067
BALANCE	295.55
DUE DATE	1/16/2019

The 4th is to select a field from the Fields or System List on the Input form. Once selected the Field can be dragged onto the Output form and dropped.

The advantage of this is it is quick to select the field and then position the field. Once it is dropped the field mapping can be edited to change font, color, Format etc.

A screenshot of the 'Field Mapping' dialog box. It has a title bar with standard window controls. The 'Field' dropdown is set to 'BALANCE' and the 'Money' format is selected. The 'Position' is set to 'Fixed Value'. The 'X' and 'Y' coordinates are 1.417 and 1.604 respectively. The 'Alignment' section has radio buttons for Left (selected), Center, Right, and Decimal. The 'Format' field is empty. There are three checkboxes: 'Use on Print (Non Uluro NativePDF)' (checked), 'Use on Print (Uluro NativePDF)' (checked), and 'Use on Web (PDF or PNG)' (checked). The 'HTML Link' field is highlighted in yellow. The 'Use Default Font' checkbox is checked. At the bottom, there is a section for 'Position' and 'Parameter Type' set to 'Variable', with dropdowns for 'X' and 'Y'.

Options 1 – 3 will bring up the Field Mapping command form.

The **Field** can be selected from the dropdown. Once selected the Field Type will be displayed directly to the right.

The **Position** is in inches and can be set using the **X** and **Y** values. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window, the X and Y values will be populated automatically with the values from where the cursor was located. The Position can be entered using a Fixed Value for X and Y, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X and Y values will become dropdowns to select the variable/field that contains the X/Y value.

The **Alignment** of the output can be set using:

Left – This sets the output starting position on the Left side. This is normal Left to right drawing.

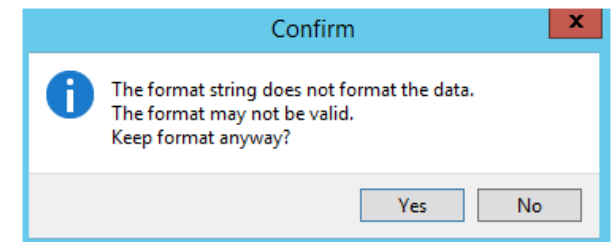
Right – This sets the output starting position on the right side. This starts on the Right and draws to the left.

Center – This sets the output starting position to the center of the text.

Decimal – This sets the output starting position to the first decimal point from the left.

Enter a formatting string in the **Format** field. This allows text to be added to the output or the data format to be changed. The field type is important when using the format options. If the Format is not valid for the Field Type, then the format will be ignored. If the format does not appear to be correct the confirmation window will be displayed.

Please reference the [Formatting](#) section for how to format the different Field Types.



If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

HTML Links will appear on the PNG created during web viewing. When the User cursor floats over the HTML Link command the cursor will change to a hand. The user may click on the link and the action will occur. To accomplish this, an image Map file is created along with the PNG file. The image map file defines the areas on the PNG image and the action to be performed.

The Ellipsis button can be used to set up the HTML link.

User Entered URL is for simple links. Select User Entered URL for the **Select HTML Link Type**. Select HTTP:// or HTTPS:// for the **URL Type**, then enter the URL. An example would be <https://www.pitneybowes.com/us>.

Use the **Test** button to see the result by clicking on the HTML link.

Check Image are links that will call an external system to generate check images. These links require specific information in order to call the external system. The five pieces of information at the top specify the required data. The four pieces of information at the bottom are optional depending on the external system that will generate the check images. If unsure it is always best to provide the information if possible.

The required items must be linked to a variable specified and set before the mapping is called. The optional items may be linked to a variable.

The screenshot shows the 'Set HTML Link' dialog box. The 'Select HTML Link Type' dropdown is set to 'Click Through'. The 'URL Type' dropdown is set to 'http://'. The 'Enter URL' text area contains 'www.pitneybowes.com/us'. There are 'OK', 'Cancel', and 'Test' buttons.

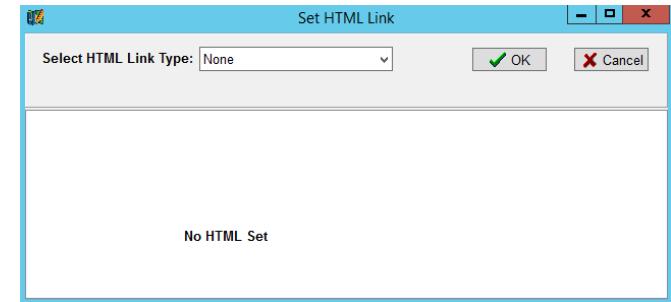
Click Through are also simple links with the exception that Relay Unify will track who and when the web user clicks on the link. Select HTTP:// or HTTPS:// and enter the URL. An example would be <https://www.pitneybowes.com/us>

The test click through is not tracked.

The screenshot shows the 'Set HTML Link' dialog box. The 'Select HTML Link Type' dropdown is set to 'User Entered URL'. The 'URL Type' dropdown is set to 'http://'. The 'Enter URL' text area contains 'www.pitneybowes.com/us'. There are 'OK', 'Cancel', and 'Test' buttons.

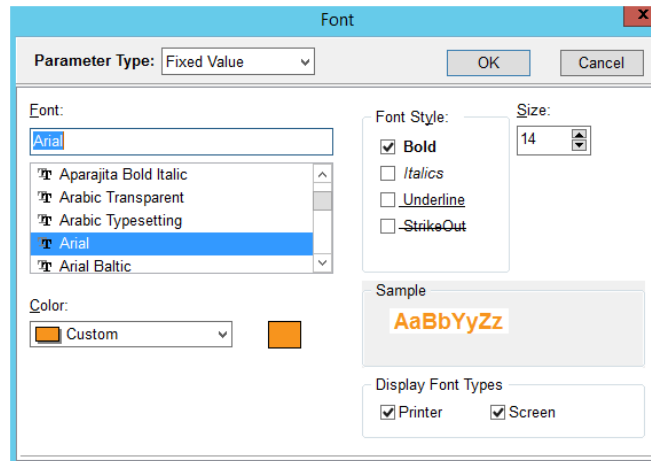
The screenshot shows the 'Set HTML Link' dialog box. The 'Select HTML Link Type' dropdown is set to 'Check Image'. The 'Enter the Variable for the Check Image' section contains several dropdown menus: Transaction # (DET1 TRANSNO), Check # (DET1 CHECK NUMBER), Posting Date (DET1 CHECK DATE), Account # (ACCOUNT NUMBER), and Amount (DET1 CHECK AMOUNT). The 'Optional' section contains: Sub Account (DET1 SUBACCTNO), Application ID (DET1 APPID), Trans Type (DET1 TRANSTYPE), and Routing # (empty). There are 'OK', 'Cancel', and 'Test' buttons.

The default setting for HTML Link is None. This means no HTML link has been set up.



The **Use Default Font** check box determines if the default font (from the Output Page Definition) is used or if a different font is used. When the Use Default Font checkbox is unchecked the Font parameters are displayed. Click the **Font** button to change the font.

This will display a standard Windows font selection dialog. Select the desired Font, Style, Size and Color.



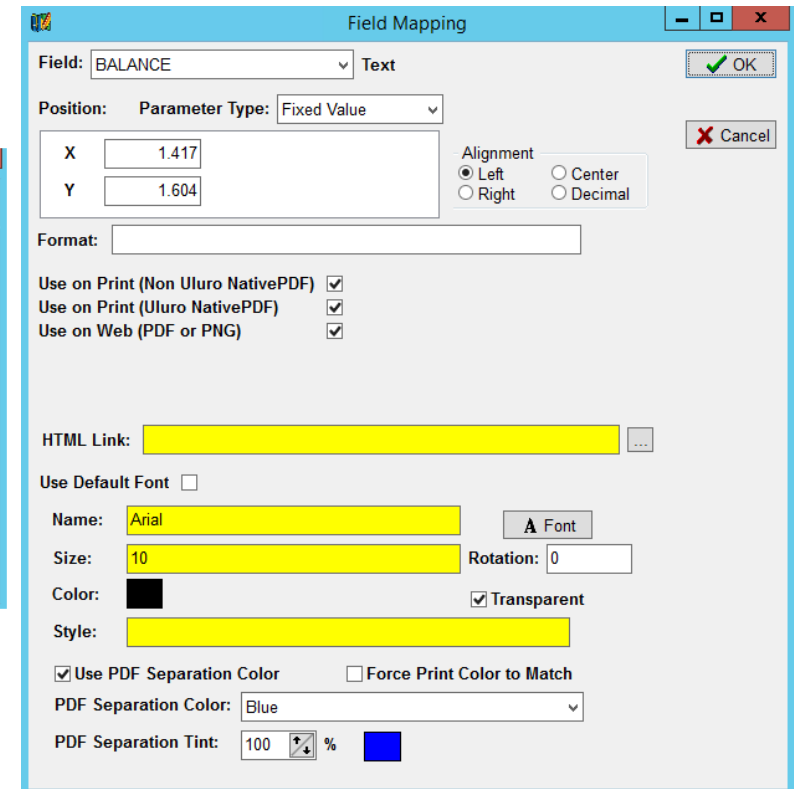
The fonts must still be installed on the server/machine running Relay Unify uCompose.

The Color can also be changed by clicking on the Color Square.

For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.

The **Rotation** is in Degrees (0 to 360). If a negative rotation is entered, it is converted to a positive by adding 360 degrees until it comes in the range of 0 to 360.

To have the font Transparent, check the **Transparent** checkbox. If unchecked the font will have a white background. If any other color background is desired, then create a drawing object of the desired color and make the font transparent.



If “Use on Print (Relay Unify NativePDF)” or “Use on Web (PDF or PNG)” or “Print on Campaign Onsert” is checked, and “Use Default font” is unchecked, the **Use PDF Separation Color** setting will be visible. If checked, the Separation Color List setup in the Doc tab of the mapping commands will be used.

Checking the **Use PDF Separation Color** will display the ability to Select a PDF Separation Color, set the PDF Separation Tint and force print color to match.

Select a color from the dropdown list for **PDF Separation Color** from the colors set up in the Separation Color List for the map.

Set the **PDF Separation Tint**. This is the % of the Separation color to use to determine how much ink is printed on the page. Enter a value from 0 to 100%.

Checking the **Force Print Color to Match** will cause the print (Non-PDF output) to occur in the selected separation color. Note that the Tint will not be used in Non-PDF Output.

Use Default Font ☐

Name:

Size: Rotation:

Color: ☒ Transparent

Style:

☒ Use PDF Separation Color ☐ Force Print Color to Match

PDF Separation Color:

PDF Separation Tint: %



Tips:

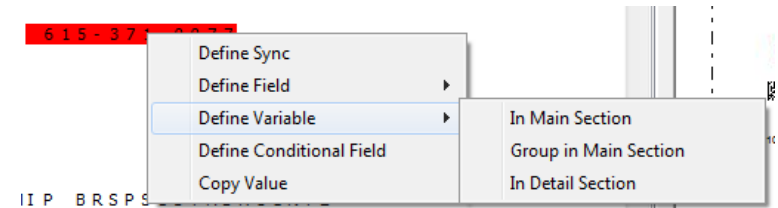
If the Font Color and Separation Color selected are different, the Separation Color will print on the PDF Output and the Font Color will print on all other types of output.

Variables

The Define Variable command allows a variable to be defined. Variables are temporary storage for information. The options for defining a variable are like the options for a Field with a few differences. Variables will hold the final values of functions. Variables can change values within a document. Variables are not saved to the Database.

The command can be accessed in 3 ways. The 1st is to click on the Define Variable from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select Variables. The 3rd way is to select an area on the Input data and right click to display the popup menu. Select Define Variable, then either In Main Section or Group in Main Section.

For a single variable in Main Section the Edit Variable form will be displayed.



Occurrence

Occurrence defines which page to locate the variable.

First does not mean page 1. Selecting First will locate the variable in the First input page that results in a value field.

Last does not mean last page. Selecting Last will locate the last input page that results in a value for the variable.

Page will display a spin edit that allows setting the Input Page number to use for the selection. The range is 0 to 9999. When set the value is selected only from the defined Input Page. The value of 0 means the current input page.

Var Page will display a dropdown of variables to select the variable determining when the definition should take place. This allows a variable to be defined on different pages.

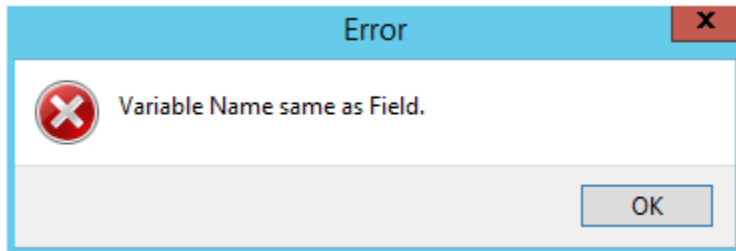
Use Output page # functions similar to var page in that it will use the output page to define the variable. When the variable is used on page 2 it will pull the value from input page 2. On page 3, the value on input page 3 will be used. This has the

same effect if checked as Var Page selecting Sys_CurOutPage to determine the definition.

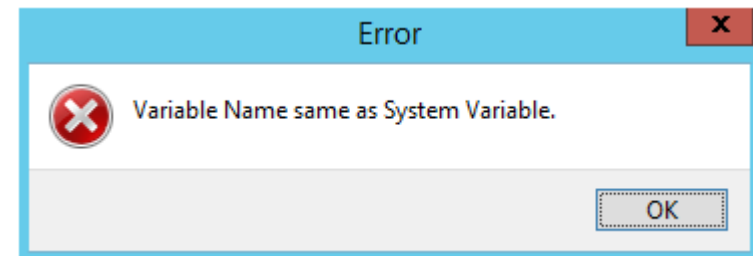
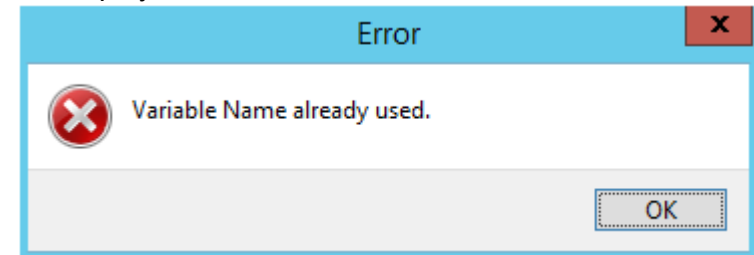
Variable Name

Variable Name is the Name the user selects for the variable. The Variable Name must be unique within the map and cannot be the same as any other Field of Variable used in the Map. If the name is used by a Variable an error will be displayed.

If the name is already used as a field an error will be displayed.



If the name is a System Variable, then an error will be displayed.



Value Type

Value Type specifies how to store the data for the variable.

Text – contains text data (i.e. "This is text").

Real – contains numbers that can be expressed with a decimal (i.e. 186.254).

Date – contains date and time information (i.e. "01/01/2009 12:24pm") When Date is selected an additional entry area for Input format will be display.

The **Format** entry allows the definition of how the input date is represented.

'd' = displays the day number without a leading zero (1 - 31)

'dd' = displays the day number with a leading zero (01 - 31)

A dialog box titled "Edit Variable" with a blue header bar. It contains a "Variable Name:" label followed by a text input field. Below this is a "Value Type" section with six radio buttons: "Text", "Real", "Date" (which is selected), "Integer", "Currency", and "Boolean". At the bottom, there are two rows: "Function:" with a dropdown menu and a text input field, and "Format:" with a text input field.

'ddd' = displays the three-letter day abbreviation (Sun - Sat)
'dddd' = displays the full day name (Sunday - Saturday)
'ddddd' = displays the 'Short Date' (m/d/yyyy)
'dddddd' = displays the 'Long Date' (dddd, mmmm dd, yyyy)
'm' = displays the month number without a leading zero (1 - 12)
'mm' = displays the month number with a leading zero (01 - 12)
'mmm' = displays the three-letter month abbreviation (Jan - Dec)
'mmmm' = displays the full month name (January - December)
'yy' = displays the 2-digit year
'yyyy' = displays the full, 4-digit year

Relay Unify will attempt to convert the dates using the format and slight variations. If the date cannot be converted, then the date will be blank.

Integer – contains number that can be expressed without a decimal (i.e. 186).

Currency – contains numbers that represent money (i.e. \$25.25).

Boolean – contains Y or N (true or false) (Yes or No).

Function

Function allows the data to be modified before being stored. The Functions available will depend on the Value Type. Some functions may require an extra parameter. The extra parameter is entered to the right of the Function.

Functions for Text are:

Trim – removes leading and trailing whitespace characters. This will include tabs, CR, control Characters, as well as space. For most Text fields it is desirable to trim the data before storage. No extra parameter is necessary.

Ltrim – removes leading whitespace characters. No extra parameter is necessary.

Rtrim – removes trailing whitespace characters No extra parameter is necessary.

Remove Zeros – removes leading zeros from the data. As an example, if the data contains 00000123, **Remove Zeros** will cause the stored value to be 123. No extra parameter is necessary.

Reverse text – This will allow the first text block to be removed from the beginning and added to the end. The delimiter is contained in the extra parameter block. If no value is placed in the parameter block, then a space is assumed. As an example, if the Incoming text is “Smith, Robert M” then **Reverse Text** with a parameter of “,” will store the value “Robert M Smith”.

Functions for Real and Currency are:

X – This allows multiplication of the value by the extra parameter.

/ - This allows division of the value by the extra parameter.

+ - This allows addition of the value with the extra parameter.

Function for Date are:

+ - This allows adding days to the Value. The number of days are in the extra parameter.

Function for Integer are:

X – This allows multiplication of the value by the extra parameter.

/ - This allows division of the value by the extra parameter

+ - This allows addition of the value with the extra parameter.

Mod – This allows determining the Modulo (remainder after integer division). The extra parameter is the Divisor. An example of this is 9 Mod 7. The result would be 2 ($9 / 7 = 1$ with remainder of 2).

There are no Functions for Boolean values.

Field Type

The selection for Field type changes based on the Input data.

Non-PDF data files

Position

Position defines a variable occurring at a set position defined as X position, Y position, Delimiter, and length. The system will look for the data at the **X and Y position** defined. If **Delimiter** is included, it will stop when the delimiter is reached or the **Length** of characters (whichever is less).

If the data is selected in the Data window, click the **Retrieve** button to obtain the currently selected area. Clicking the **Highlight** button will select the area defined in the Variable on the data window. The user can then adjust the Position values for the desired area.

The screenshot shows a dialog box for configuring a 'Position' field type. On the left, under 'Field Type', the 'Position' radio button is selected. The main area contains: 'X Position' set to 1, 'Y Position' set to 1, an empty 'Delimiter' text box, and 'Length' set to 6. There are 'Retrieve' and 'Highlight' buttons. At the bottom, a note says 'For Case Insensitive, surround Regular Expression with /.../i'. At the very bottom are 'OK' and 'Cancel' buttons.

Test

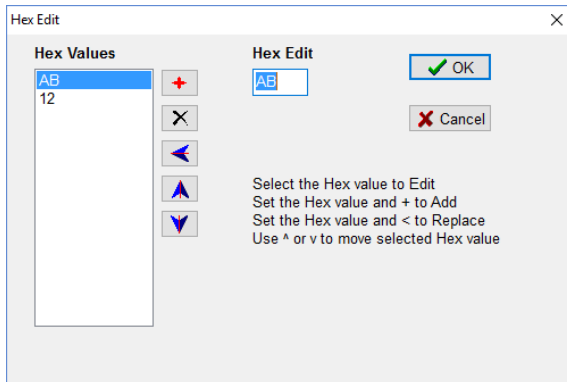
Test defines a variable using a test for a specific value using a Regular Expression defined as **Test Text**, X offset, Y offset, Delimiter, and length. The system will look for the Test Text. If found, the data will be retrieved **X (X offset) characters** from the start of the Test Text and **Y (Y Offset) lines** from the Test Text. If **Delimiter** is included, it will stop when the delimiter is reached or the **Length** of characters (whichever is less).

The screenshot shows a dialog box for configuring a 'Test' field type. On the left, under 'Field Type', the 'Test' radio button is selected. The main area contains: 'Test Text' with the value '^Date' and a search icon, 'X offset' set to 5, 'Y Offset' set to 0, an empty 'Delimiter' text box, and 'Length' set to 10. There are 'Retrieve' and 'Highlight' buttons. At the bottom, a note says 'For Case Insensitive, surround Regular Expression with /.../i'. At the very bottom are 'OK' and 'Cancel' buttons.

Delimited

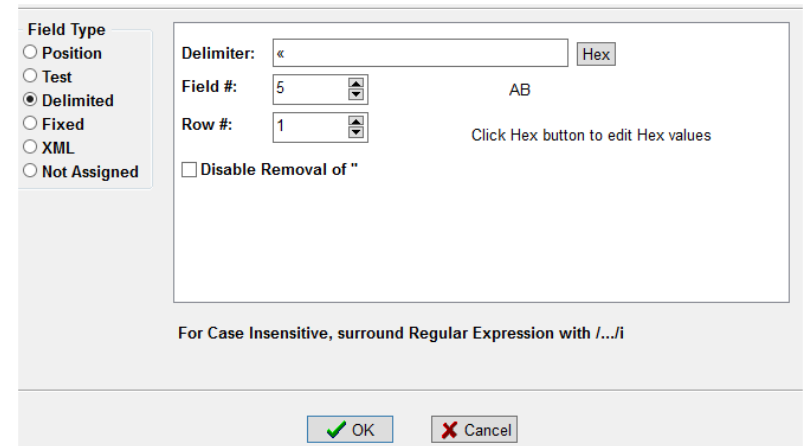
Delimited defines a variable by selecting the information from a delimited set of data (comma, tab, etc.) by Row and Field #.

Enter the **Delimiter** for the data. For tab use \t. Then enter the **Field #** (column number) and **Row #** from the data. The first field is field # 1.



Hex Values can be entered by clicking on the **Hex** button. This will display the Hex editor form. The Hex Values list will contain the Hex values that make up the delimiter. When the Hex Value is selected in the Hex Values list, it will be transferred to the Hex Edit entry field. Change the Value in the Hex Edit entry field.

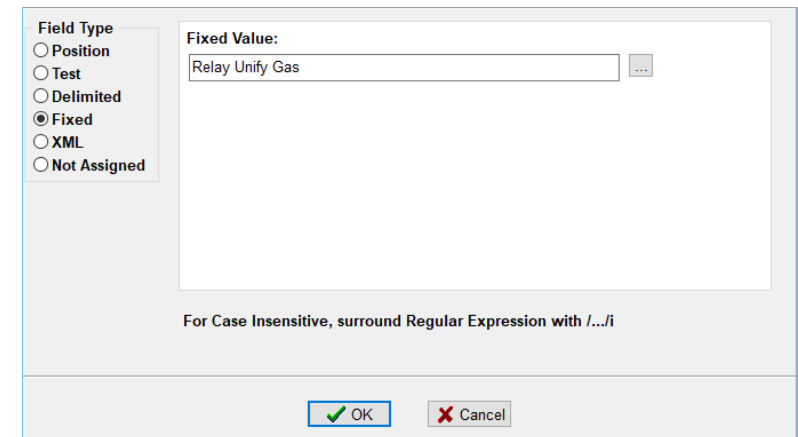
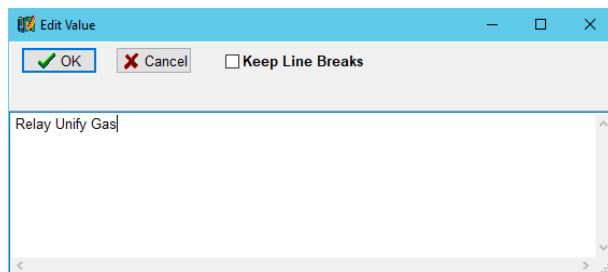
Once added, the Hex Value will be displayed in the command below the Hex button.

The Field Type dialog box is shown. On the left, 'Delimited' is selected under 'Field Type'. On the right, 'Delimiter:' is set to '<' and 'Field #' is '5'. Below that, 'Row #' is '1'. A 'Hex' button is next to the delimiter field. A note says 'Click Hex button to edit Hex values'. There is a checkbox for 'Disable Removal of "' which is unchecked. At the bottom, there are 'OK' and 'Cancel' buttons.

Fixed

Fixed defines a field as a Fixed value entered in Relay Unify uCompose. Use the Ellipsis button to bring up an editor.

In this form the user can enter data that can contain multiple lines. Check **Keep Line Breaks** to retain the Line Breaks. If Keep Line Breaks is not checked the multiple lines will be combined with a space.

The Field Type dialog box is shown. On the left, 'Fixed' is selected under 'Field Type'. On the right, 'Fixed Value:' is set to 'Relay Unify Gas'. There is an ellipsis button next to the text field. At the bottom, there are 'OK' and 'Cancel' buttons.

XML

XML defines a variable from XML data to be accessed. XML data can be entered either by specifying the Pos, Node and Attribute or by entering the XPath Query. XPath Queries are methods of extracting data from XML data. XPath Query will not be explained in this document. A search of the Internet will provide documentation and examples of XPath Queries.

The **Node** contains the node path. The node path tells the system how to find the desired node. Each tag is separated from its parent with >>. The **Attribute** is the selected attribute of the selected node.

Clicking on the **Retrieve XML** button will pull in the Node for the XML node that is selected in the Data Window.

A XPath query can be used in the **XPath** text block. The Node and Attribute are not used if XPath is specified. If the user has XPath and Node the user will receive an error. If the user has XPath and Attribute there will be an error.

Once the node and attribute are found, all the data is returned by the system unless the delimiter and/or the length is provided. A length of 0 and delimiter of blank will return all the data. If a **length** is provided, then the returned data contains at most the specified number of characters. If a **delimiter** is specified, then the data is returned up to the specified delimiter. If both delimiter and length are specified, then the data is returned to the delimiter and then the maximum specified characters are returned.

Not Assigned

Not Assigned defines a variable that has a value of blank.

This allows the variable to be defined at a later time, possibly after a calculation or formatting change.

The screenshot shows a dialog box for configuring an XML field. On the left, under 'Field Type', the 'XML' radio button is selected. The main area contains fields for 'Node' (with the value 'xml>>row>>TAX'), 'Attribute' (empty), 'XPath' (empty), 'Delimiter' (empty), and 'Length' (set to 0). Each of these fields has a small '...' button to its right. A 'Retrieve XML' button is located below the 'Length' field. At the bottom of the dialog, there is a note: 'For Case Insensitive, surround Regular Expression with /.../'. At the very bottom are 'OK' and 'Cancel' buttons.

The screenshot shows a dialog box for configuring a 'Not Assigned' field. On the left, under 'Field Type', the 'Not Assigned' radio button is selected. The main area is a large empty box with the text 'This variable is not assigned' centered at the top. At the bottom of the dialog, there is a note: 'For Case Insensitive, surround Regular Expression with /.../'. At the very bottom are 'OK' and 'Cancel' buttons.

PDF data files

Position

Position defines a PDF variable occurring at a set position defined in a Rectangle on the PDF page with **Top-Left X position, Y position** and **Width** and **Height** measured in PDF units. Once the Text within the Rectangle is extracted the system operates as a Test field with Test Text, X offset, Y offset, Delimiter, length and height. This defines a variable using a test for a specific value using a Regular Expression defined as **Test Text**, X offset, Y offset, Delimiter, length and height. The system will look for the Test Text. If found, the data will be retrieved **X (X offset) characters** from the start of the Test Text and **Y (Y Offset) lines** from the Test Text. If **Delimiter** is included, it will stop when the delimiter is reached or the **Length** of characters (whichever is less). The **Height** can be set to retrieve multiple lines.

If the data is selected in the Data window, click the **Retrieve** button to obtain the currently selected area. Clicking the **Highlight** button will select the area defined in the Field on the data window. The user can then adjust the Position values for the desired area.

The dialog box is titled 'Field Type' and has three radio buttons: 'Position' (selected), 'Fixed', and 'Not Assigned'. The 'Position' section contains the following fields: 'Top-Left' with 'X' (306) and 'Y' (33) sub-fields, 'Width-Height' with 'Width' (134) and 'Height' (30) sub-fields, a 'Retrieve' button, a 'Highlight' button, a 'Read Barcode' checkbox, a 'Test Text' field with an ellipsis button, 'X offset' (0) and 'Y Offset' (0) fields with up/down arrows, a 'Delimiter' field, 'Length' (0) and 'Height' (1) fields with up/down arrows. At the bottom, there is a note: 'For Case Insensitive, surround Regular Expression with /.../i' and 'OK'/'Cancel' buttons.

Fixed

Fixed defines a PDF variable as a Fixed value entered in Relay Unify uCompose. Use the Ellipsis button to bring up an editor.

In this form the user can enter data that can contain multiple lines. Check **Keep Line Breaks** to retain the Line Breaks. If Keep Line Breaks is not checked the multiple lines will be combined with a space.

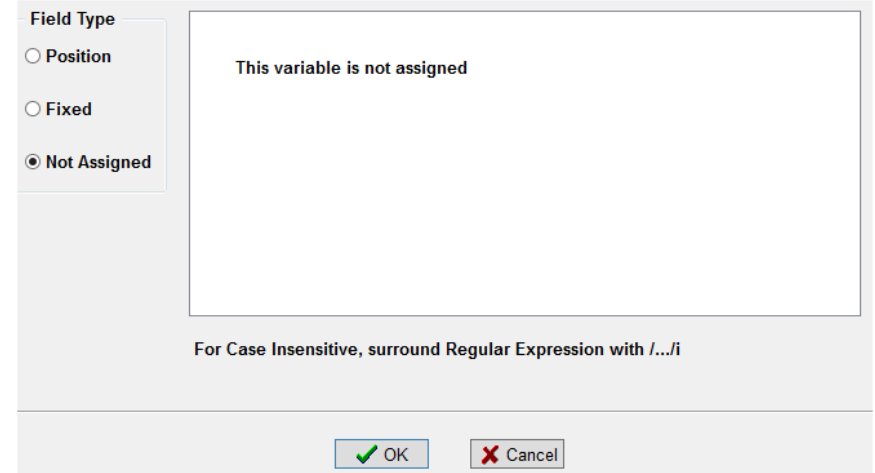
The dialog box is titled 'Edit Value' and has three buttons: 'OK' (green checkmark), 'Cancel' (red X), and 'Keep Line Breaks' (checkbox). Below the buttons is a text area containing the text 'Pitney Bowes'.

The dialog box is titled 'Field Type' and has three radio buttons: 'Position', 'Fixed' (selected), and 'Not Assigned'. The 'Fixed' section contains a 'Fixed Value' field with the text 'Pitney Bowes' and an ellipsis button. At the bottom, there is a note: 'For Case Insensitive, surround Regular Expression with /.../i' and 'OK'/'Cancel' buttons.

Not Assigned

Not Assigned defines a PDF variable that has a value of blank.

This allows the variable to be defined at a later time, possibly after a calculation or formatting change.



The screenshot shows a dialog box titled 'Field Type' with three radio button options: 'Position', 'Fixed', and 'Not Assigned'. The 'Not Assigned' option is selected. To the right of the options is a large text area containing the text 'This variable is not assigned'. Below the text area, a note states 'For Case Insensitive, surround Regular Expression with /.../i'. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

Field Type

- ☐ Position
- ☐ Fixed
- ☒ Not Assigned

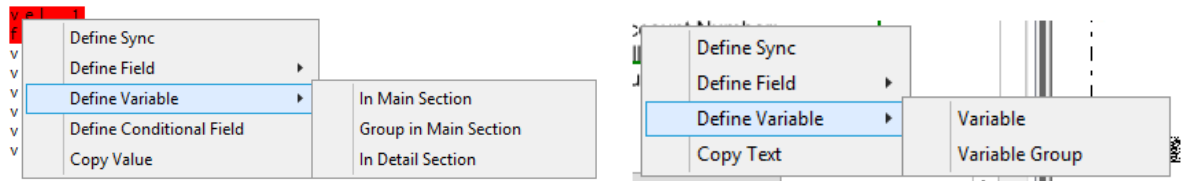
This variable is not assigned

For Case Insensitive, surround Regular Expression with /.../i

OK Cancel

Variable Group

A Group of variables can be defined by selecting an area on the Data tab in the Data Window and then right-clicking. Select Define Variable and then Group in Main Section (non-PDF Input) or Variable Group (PDF Input). This is not available for XML input.

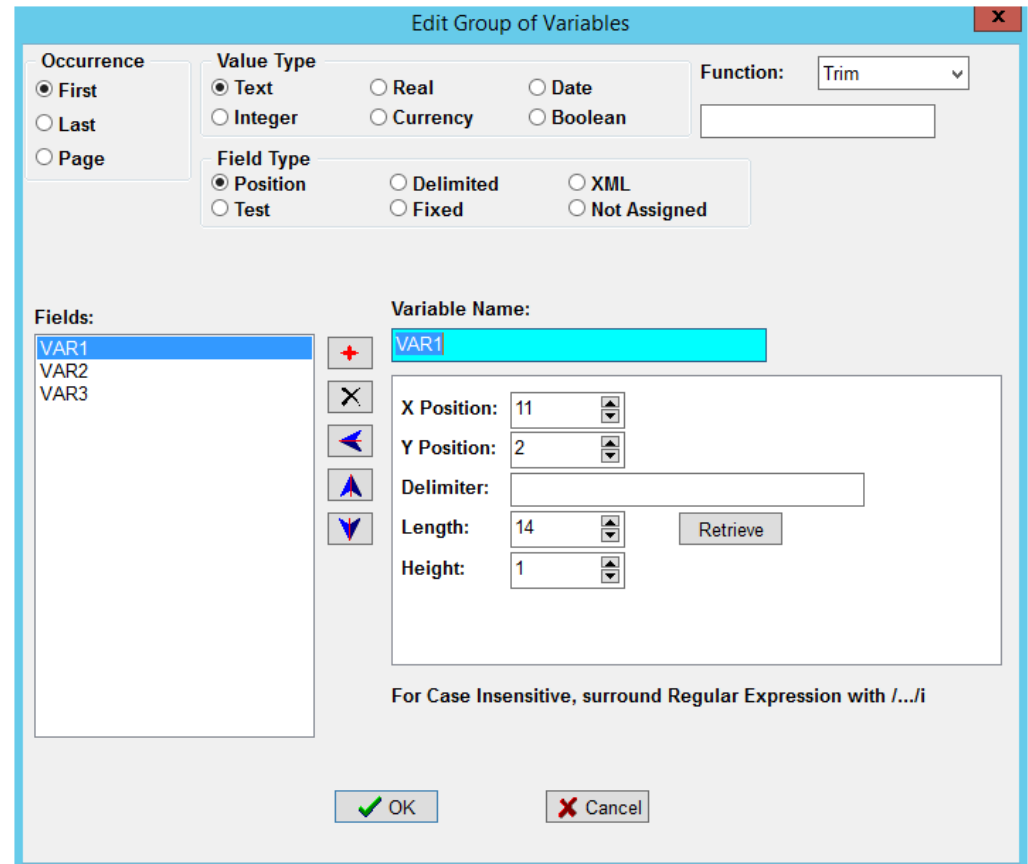


This will display the Edit Group of Variables form with the Variables defaulted to Position for the Field Type.

The List of defaulted variables is displayed based on the selection of data with VAR1 selected. As each variable is selected in the Fields list the values used to define the Variable are displayed on the right. Edit the Values and click the Replace (left facing arrow) button to replace the Variable with the current definition.

If the Occurrence, Value Types, and various settings will be the same for several variables, this can help save time by defining several at once.

Once the Variables are saved the system will reparse the data and the value of the Variables will be displayed on the Variables tab in the Data Window.



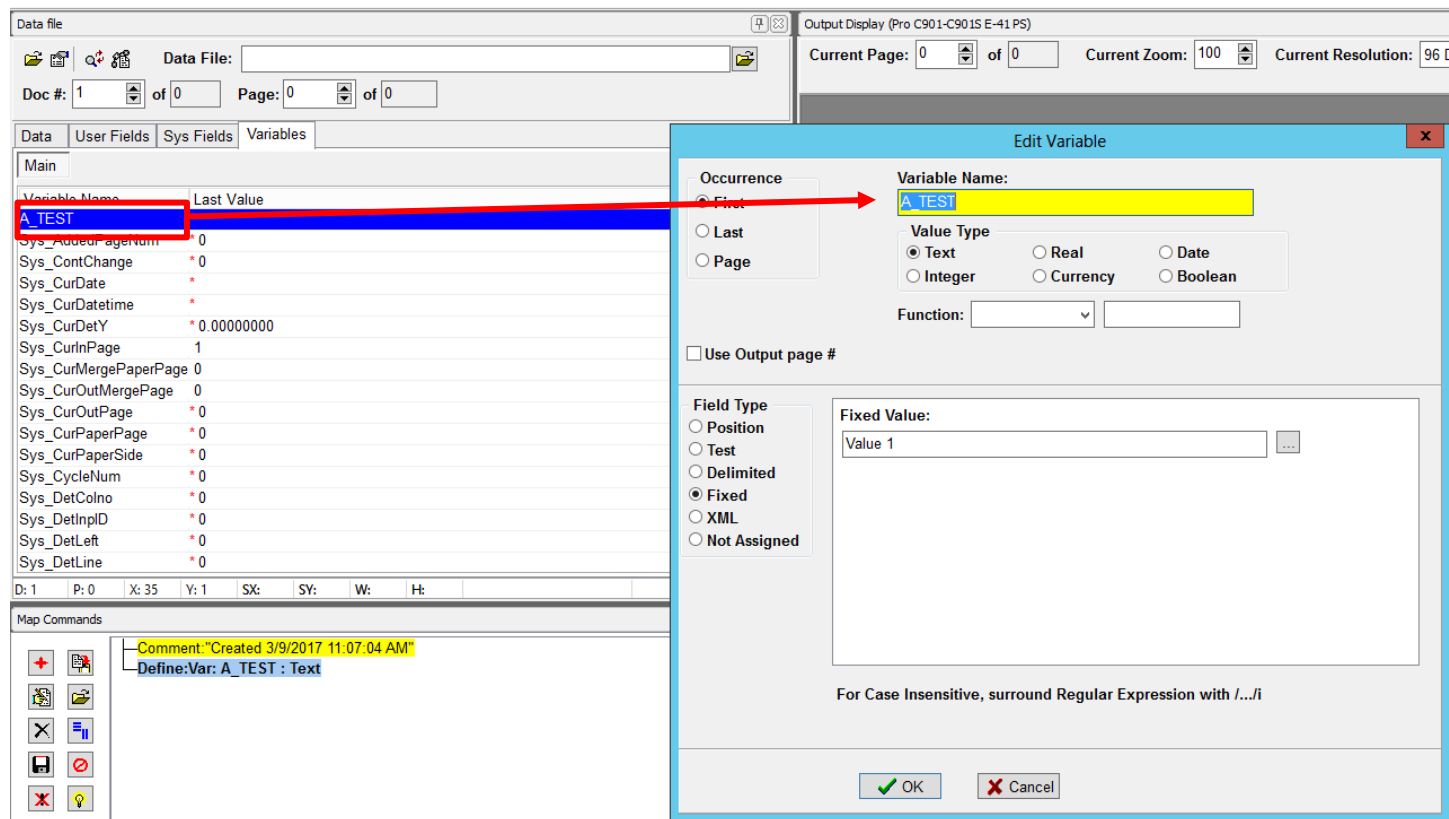
Editing a Variable Definition

Once the Variables are saved the system will reparse the data and the value of the Variables will be displayed on the Variables tab in the Data Window.

Variables can be edited from the Data Window. Select the variable to edit and double click the variable name. This will pull up the edit variable window so that the properties of the variable definition can be edited.

The name cannot be edited.

This only applies to User Variables.

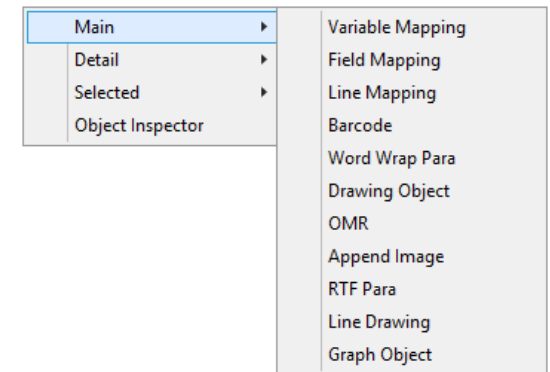


Variable Mapping

This command is to output the value of a variable. If it needs to be embedded in text, then the [RTF Paragraph](#) command will need to be used instead.

The Variable mapping command can also be accessed in 4 ways. The 1st is to click the Variable from the Ribbon bar Disp. The 2nd is to Click the + on the Display tab of the Map Commands window, then select Variable Mapping from the list.

The 3rd is to right –click on the Output Window and from the Pop-up menu select Main then Variable Mapping. The advantage of using this method is the Variable Mapping will default to the selected location.



Data	User Fields	Sys Fields	Variables
Variable for : Main			
Variable Name	Last Value		
DO NOT MAIL	*		
METER ID	*		
SCAN LINE	*		
SERVICE ID	*		
Sys_AddedPageNum	0		
Sys_ContChange	0		
Sys_CurDate	3/4/2019		
Sys_CurDatetime	3/4/2019 5:45:35 PM		
Sys_CurDetY	4.97300000		
Sys_CurlnPage	1		

The 4th is to select a field from the Variables tab in the Data Window.

Once a variable is selected, it can be dragged onto the Output form and dropped.

The advantage of this is it is quick to select the variable and then position the variable. Once it is dropped the variable mapping can be edited to change font, color, format etc.

Options 1 – 3 will bring up the Variable Mapping command form.

The **Variable** can be selected from the dropdown. Once selected the **Variable Type** will be displayed below the Position.

The **Position** is in inches and can be set using the **X** and **Y** values. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window, the X and Y values will be populated automatically with the values from where the cursor was located. The Position can be entered using a Fixed Value for X and Y, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X and Y values will become dropdowns to select the variable/field that contains the X/Y value.

Position: Parameter Type: Variable ▼

X	▼
Y	▼

Variable Mapping

Variable: Sys_CurDate ▼ OK Cancel

Position: Parameter Type: Fixed Value ▼

X	1.948
Y	2.188

Alignment: ☒ Left ☐ Center ☐ Right ☐ Decimal

Variable Type: Date

Format:

Use on Print (Non Uluro NativePDF) ☒

Use on Print (Uluro NativePDF) ☒

Use on Web (PDF or PNG) ☒

HTML Link: ...

Use Default Font ☒

The **Alignment** of the output can be set using:

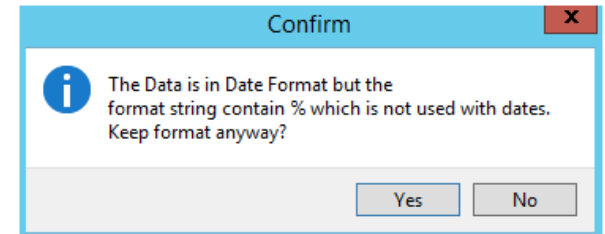
Left – This sets the output starting position on the Left side. This is normal Left to right drawing.

Right – This sets the output starting position on the right side. This starts on the Right and draws to the left.

Center – This sets the output starting position to the center of the text.

Decimal – This sets the output starting position to the first decimal point from the left.

Enter a formatting string in the **Format** field. This allows text to be added to the output or the data format to be changed. The field type is important when using the format options. If the Format is not valid for the Field Type, then the format will be ignored. If the format does not appear to be correct the confirmation window will be displayed.



Please reference the [Formatting](#) section for how to format the different Field Types.

If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

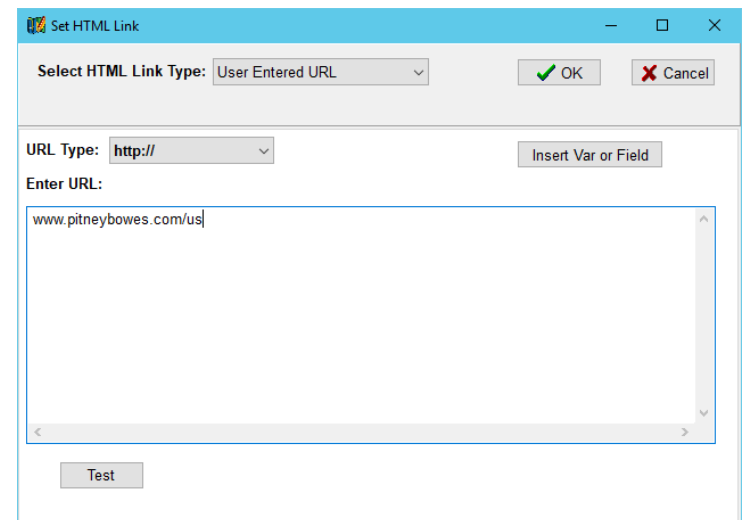
If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

HTML Links will appear on the PNG created during web viewing. When the User cursor floats over the HTML Link command the cursor will change to a hand. The user may click on the link and the action will occur. To accomplish this, an image Map file is created along with the PNG file. The image map file defines the areas on the PNG image and the action to be performed.

The Ellipsis button can be used to set up the HTML link.

User Entered URL is for simple links. Select User Entered URL for the **Select HTML Link Type**. Select HTTP:// or HTTPS:// for the **URL Type**, then enter the URL. An example would be <https://www.pitneybowes.com/us>.

Use the **Test** button to see the result of clicking on the HTML link.



Check Image are links that will call an external system to generate check images. These links require specific information in order to call the external system. The five pieces of information at the top specify the required data. The four pieces of information at the bottom are optional depending on the external system that will generate the check images. If unsure it is always best to provide the information if possible.

The required items must be linked to a variable specified and set before the mapping is called. The optional items may be linked to a variable.

The screenshot shows the 'Set HTML Link' dialog box. The 'Select HTML Link Type' dropdown is set to 'Click Through'. There are 'OK' and 'Cancel' buttons. Below, the 'URL Type' dropdown is set to 'http://'. An 'Insert Var or Field' button is present. The 'Enter URL:' text box contains 'www.pitneybowes.com/us'. A 'Test' button is at the bottom.

Click Through are also simple links with the exception that Relay Unify will track who and when the web user clicks on the link. Select HTTP:// or HTTPS:// and enter the URL. An example would be <https://www.pitneybowes.com/us>

The test click through is not tracked.

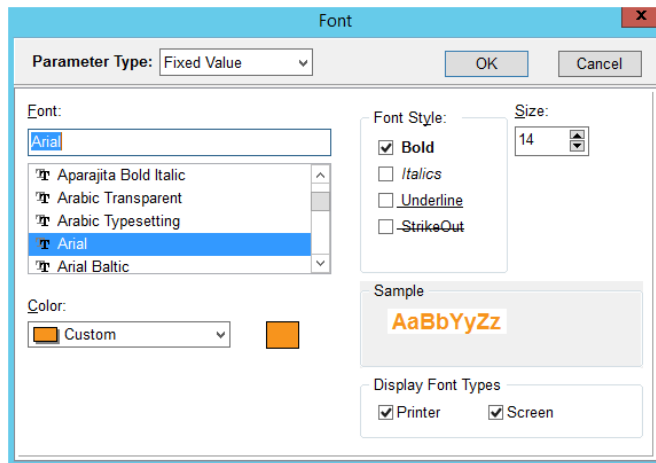
The default setting for HTML Link is None. This means no HTML link has been set up.

The screenshot shows the 'Set HTML Link' dialog box with 'Check Image' selected. It has 'OK' and 'Cancel' buttons. The section 'Enter the Variable for the Check Image' contains five dropdowns: 'Transaction #' (DET1 TRANSNO), 'Check #' (DET1 CHECK NUMBER), 'Posting Date' (DET1 CHECK DATE), 'Account #' (ACCOUNT NUMBER), and 'Amount' (DET1 CHECK AMOUNT). A note says 'May be the same as Transaction #'. The 'Optional' section has four more dropdowns: 'Sub Account' (DET1 SUBACCTNO), 'Application ID' (DET1 APPID), 'Trans Type' (DET1 TRANSTYPE), and 'Routing #'.

The screenshot shows the 'Set HTML Link' dialog box with 'None' selected in the 'Select HTML Link Type' dropdown. It has 'OK' and 'Cancel' buttons. The main area of the dialog is empty, with the text 'No HTML Set' centered at the bottom.

The **Use Default Font** check box determines if the default font (from the Output Page Definition) is used or if a different font is used. When the Use Default Font checkbox is unchecked the Font parameters are displayed. Click the **Font** button to change the font.

This will display a standard Windows font selection dialog. Select the desired Font, Style, Size and Color.



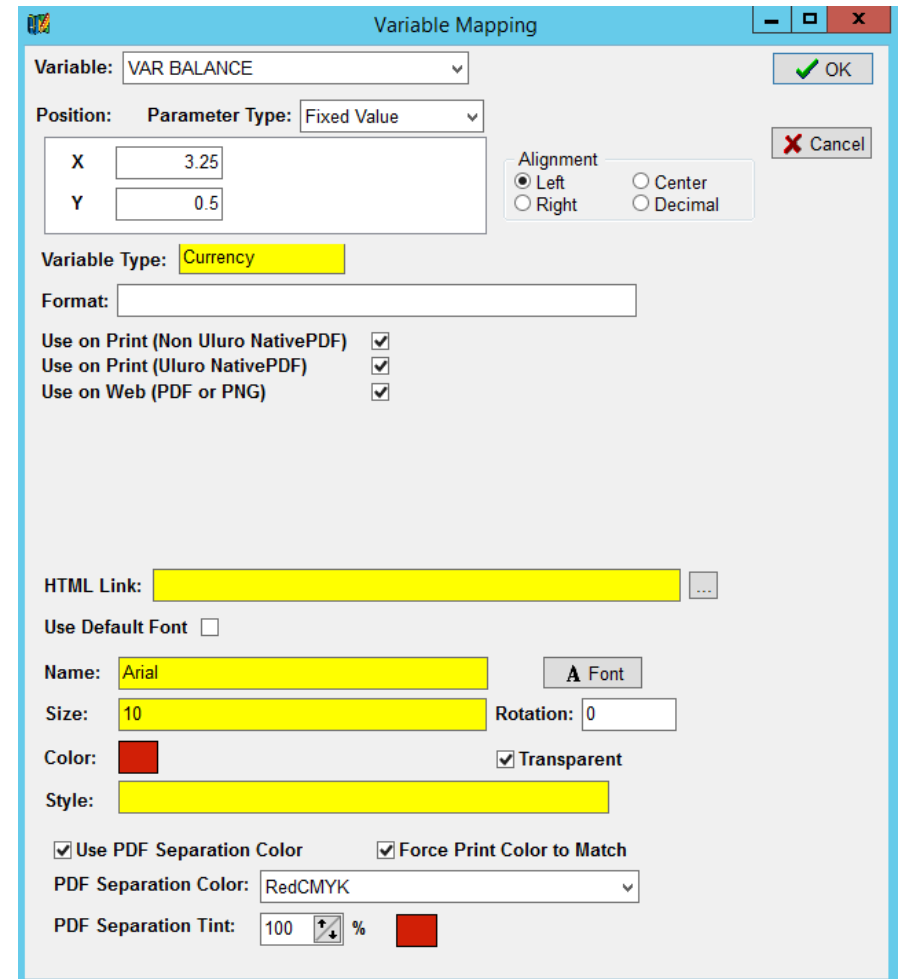
The fonts must still be installed on the server/machine running Relay Unify uCompose.

The Color can also be changed by clicking on the Color Square.

For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.

The **Rotation** is in Degrees (0 to 360). If a negative rotation is entered, it is converted to a positive by adding 360 degrees until it comes in the range of 0 to 360.

To have the font Transparent, check the **Transparent** checkbox. If unchecked the font will have a white background. If any other color background is desired, then create a drawing object of the desired color and make the font transparent.



If “Use on Print (Relay Unify NativePDF)” or “Use on Web (PDF or PNG)” or “Print on Campaign Onsert” is checked, and “Use Default font” is unchecked, the **Use PDF Separation Color** setting will be visible. If checked, the Separation Color List setup in the Doc tab of the mapping commands will be used.

Checking the **Use PDF Separation Color** will display the ability to Select a PDF Separation Color, set the PDF Separation Tint and force print color to match.

Select a color from the dropdown list for **PDF Separation Color** from the colors set up in the Separation Color List for the map.

Set the **PDF Separation Tint**. This is the % of the Separation color to use to determine how much ink is printed on the page. Enter a value from 0 to 100%.

Checking the **Force Print Color to Match** will cause the print (Non-PDF output) to occur in the selected separation color. Note that the Tint will not be used in Non-PDF Output.

Use Default Font ☐

Name:

Size: Rotation:

Color: ☒ Transparent

Style:

☒ Use PDF Separation Color ☐ Force Print Color to Match

PDF Separation Color:

PDF Separation Tint: %



Tips:

If the Font Color and Separation Color selected are different, the Separation Color will print on the PDF Output and the Font Color will print on all other types of output.

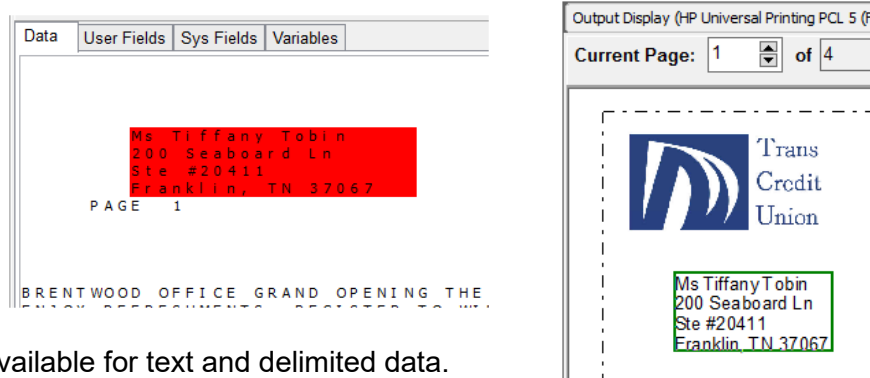
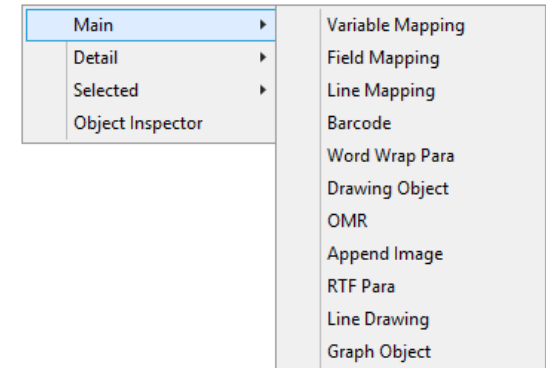
Line Mapping

Line mapping allows input data to be directly mapped to the output.

The Line mapping command can be accessed in 4 ways. The 1st is to click the Line from the Ribbon bar Disp. The 2nd is to Click the + on the Display tab of the Map Commands window, then select Line Mapping from the list.

The 3rd is to right-click on the Output Window and from the Pop-up menu select Main then Line Mapping. The advantage of using this method is the Line Mapping will default to the selected location.

The 4th is to select the line(s) in the Data from the Data Window. Then click on the area selected and drag to the output form and drop. The advantage of this is that selection of the data and positioning it is simple.



This is only available for text and delimited data.

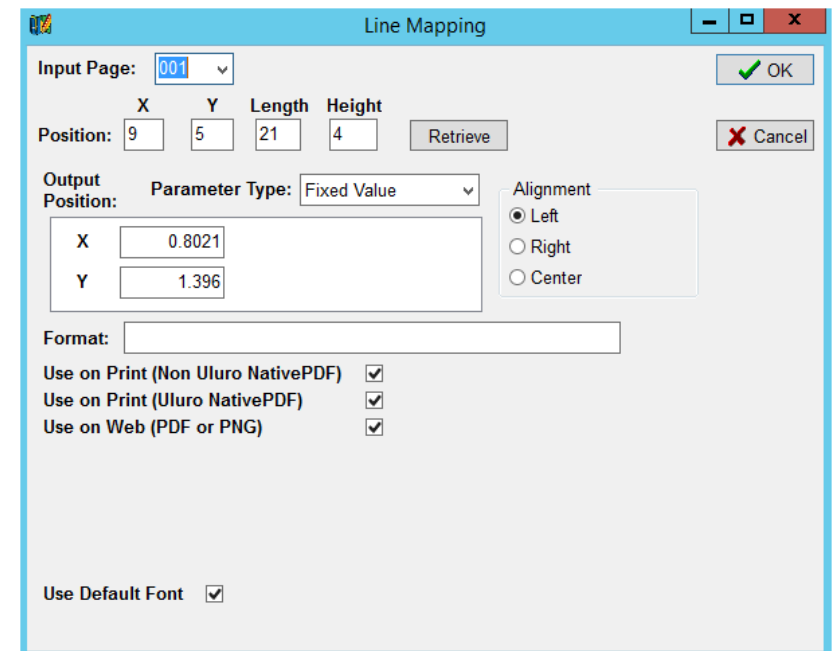
Once the Line Mapping Command is created it can be edited. The first three options will open a blank edit form.

The **Input Page** is the Input Page number that is being mapped.

If the line mapping was made directly from the Data Window, the **Position** values will already be filled in to represent the data that was highlighted in the Data Window.

The **X position** is the starting character position in the data.

The **Y position** is the starting Line number of the data.



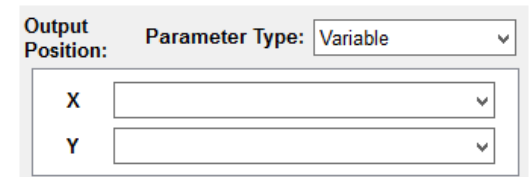
The **Length** is the Character length selected from the data.

The **Height** is the Number of Lines selected from the data.

If the Data Window has lines selected then clicking the **Retrieve** button will obtain the values for X, Y, Length, Height from the selected input.

The **Output Position** X and Y specify the starting location in inches. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window or was dragged there, the X and Y values will be populated automatically with the values from where the cursor was located, or the command is currently located.

The Position can be entered using a Fixed Value for X and Y, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X and Y values will become dropdowns to select the variable/field that contains the X/Y value.



Output Position:	Parameter Type: Variable ▼
X	▼
Y	▼

The **Alignment** of the output can be set using:

Left – sets the output starting position on the Left side. This is normal Left to right drawing.

Right – sets the output starting position on the right side. This starts on the Right and draws to the left.

Center – sets the output starting position to the center of the text.

Enter a formatting string in the **Format** field. This allows text to be added to the output or the data format to be changed. The field type is important when using the format options. If the Format is not valid for the Field Type, then the format will be ignored. Only %s can be used since the lines are always text. XML data cannot map lines. The Formatting Prefixes #U, #L, and #M can also be used.

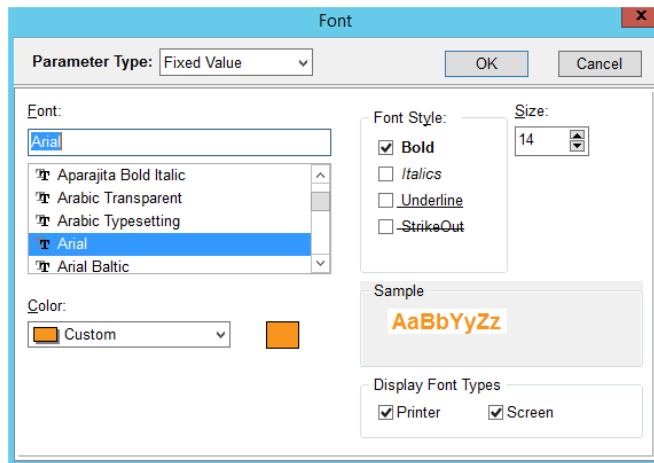
If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

The **Use Default Font** check box determines if the default font (from the Output Page Definition) is used or if a different font is used. When the Use Default Font checkbox is unchecked the Font parameters are displayed. Click the **Font** button to change the font.

This will display a standard Windows font selection dialog. Select the desired Font, Style, Size and Color.



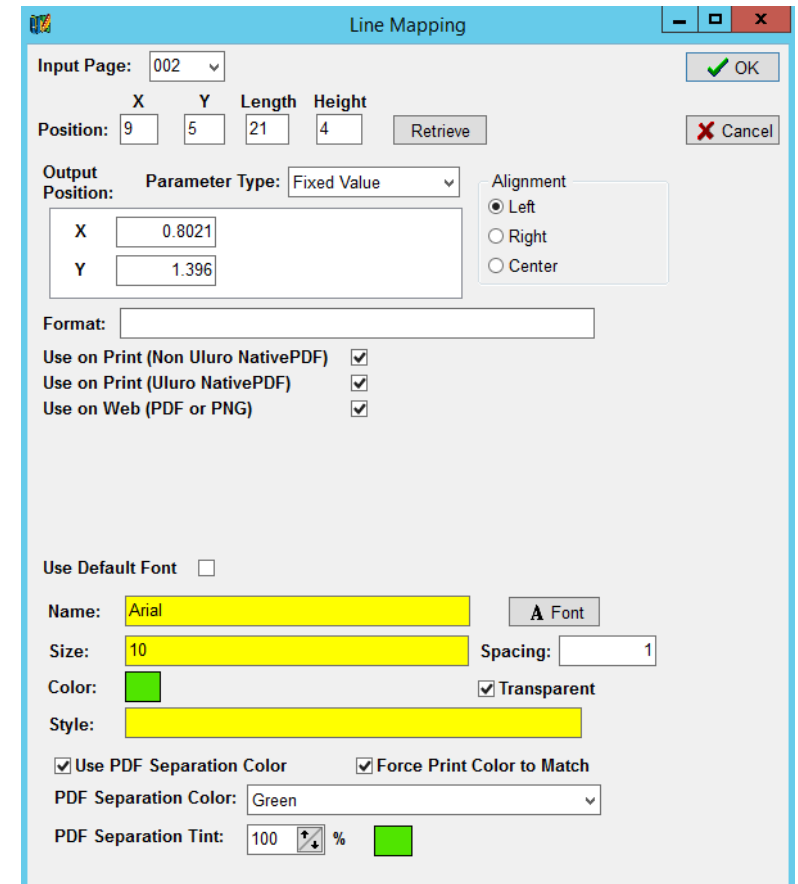
The fonts must still be installed on the server/machine running Relay Unify uCompose.

The Color can also be changed by clicking on the Color Square.

For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.

The line spacing can be changed by the **Spacing** parameter. A Value of 1 is normal single space. The spacing can be reduced by changing to a decimal value between 0 and 1. The line spacing can be increased by changing to a decimal value greater than 1.

To have the font Transparent, check the **Transparent** checkbox. If unchecked the font will have a white background. If any other color background is desired, then create a drawing object of the desired color and make the font transparent.



If “Use on Print (Relay Unify NativePDF)” or “Use on Web (PDF or PNG)” or “Print on Campaign Onsert” is checked, and “Use Default font” is unchecked, the **Use PDF Separation Color** setting will be visible. If checked, the Separation Color List setup in the Doc tab of the mapping commands will be used.

Checking the **Use PDF Separation Color** will display the ability to Select a PDF Separation Color, set the PDF Separation Tint and force print color to match.

Select a color from the dropdown list for **PDF Separation Color** from the colors set up in the Separation Color List for the map.

Set the **PDF Separation Tint**. This is the % of the Separation color to use to determine how much ink is printed on the page. Enter a value from 0 to 100%.

Checking the **Force Print Color to Match** will cause the print (Non-PDF output) to occur in the selected separation color. Note that the Tint will not be used in Non-PDF Output.

Use Default Font ☐

Name:

Size: Rotation:

Color: ☒ Transparent

Style:

☒ Use PDF Separation Color ☐ Force Print Color to Match

PDF Separation Color:

PDF Separation Tint: %



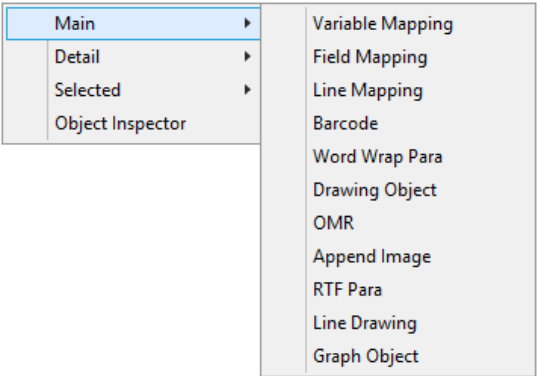
Tips:

If the Font Color and Separation Color selected are different, the Separation Color will print on the PDF Output and the Font Color will print on all other types of output.

Word Wrap Paragraph

The Word Wrap Paragraph allows text to be formatted into a paragraph area with the text wrapped to fit the area. The Word Wrap Paragraph differs from the RTF Paragraph in that the text will wrap to fit an area; the text will be truncated in the RTF Paragraph if it does not fit into the area.

This command can be accessed in 3 ways. The 1st is to click the Word Wrap Para. From the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select Word Wrap Para. The 3rd is to right-click on the Output and selecting the Word Wrap Para under the Main options from the Pop-up menu. The advantage of using the last method is the Word Wrap Para Mapping will default to the selected location.



Once the command is created it can be edited to change the parameters.

The Word Wrap Paragraph can be assigned a **Name**. This will be displayed in the command list to help identify the command.

Set the data from a Variable, Field, or fixed text from the **Parameter Type** dropdown.

If field or variable are selected, select the field/variable that contains the data to be output using the Word Wrap Paragraph.

If fixed is selected, clicking on the Ellipsis (...) will display the edit value form.

This allows a paragraph to be entered. Check the **Keep Line Breaks** check box to retain line breaks entered on this page. Leaving the box unchecked will remove any line breaks.

Variable or fields can be inserted by clicking the **Insert Var or Field** button.

This will display the Select Field or Variable form. Choose Variable or Field and select the desired Variable or Field using the dropdown. Then click the OK button to insert the Variable or field. Fields or Variables may be manually entered as well. They should be surrounded by <# >. At the Time of print the actual values will be substituted.

The 'Select Field or Variable' dialog box has a title bar with a standard icon and window controls. It contains two sections: 'Insert Selects' with radio buttons for 'Variable' (selected) and 'Field', and a 'Field' section with a dropdown menu showing 'ACCOUNT NUMBER'. The 'Variable' section has a dropdown menu showing 'BC_BARCODE'. At the bottom are 'OK' and 'Cancel' buttons.

The 'Select Field or Variable' dialog box is identical to the previous one, but the 'Field' radio button is selected, and the 'Variable' dropdown menu is empty.

The 'Edit Value' dialog box has a title bar with a standard icon and window controls. It contains a 'Keep Line Breaks' checkbox which is checked. There is an 'Insert Var or Field' button. The main text area contains the text 'Enter the text that will be displayed in the Word Wrap Paragraph command.' followed by 'Line 2' and 'Line 3' on separate lines. At the bottom are 'OK' and 'Cancel' buttons.

The 'Edit Value' dialog box is identical to the previous one, but the text area now contains the text 'The account number is <#ACCOUNT NUMBER>|'.

The **Output Position** X and Y specify the starting location in inches. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window or was dragged there, the X and Y values will be populated automatically with the values from where the cursor was located, or the command is currently located.

The Position can be entered using a Fixed Value for X and Y, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X and Y values will become dropdowns to select the variable/field that contains the X/Y value.

The 'Output Position' dialog box has a title bar with a standard icon and window controls. It contains a 'Parameter Type' dropdown menu showing 'Fixed Value'. Below it are two input fields: 'X' with the value '0.4583' and 'Y' with the value '0.4271'.

The 'Output Position' dialog box is identical to the previous one, but the 'Parameter Type' dropdown menu shows 'Variable'. The 'X' and 'Y' input fields are now dropdown menus.

The width and height define the command's overall width and height in inches. The **Width** and **Height** values specify the dimensions of the word wrap paragraph on the output. These can be edited here or using the cursor once the command is on the output. To use the cursor, select one of the dimensions or the corner to change both simultaneously.

Width Height

Param Type: Fixed Value

3.2708

Width Height

Param Type: Fixed Value

1.4792

The Width and Height can be entered using a Fixed value or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the values will become dropdowns to select the variable/field that contains the width/height value.

Width Height

Param Type: Variable

[Dropdown menu]

Width Height

Param Type: Field

[Dropdown menu]

Output Display (HP Universal Printing PCL 5 (FILE))

Current Page: 1 of 4 Current Zoom: 100

Enter the text that will be displayed in the Word Wrap Paragraph command.

Line 2

Line 3

The account number is 1010123456789

Special Formatting can be entered into the Word Wrap Paragraph to change some of the ways the paragraph is drawn.

These formatting options are:

- <span - to start the new formatting.
- <\span> - to end the new formatting.
- Style= - start of Style changes.
- Within the syle the following can be used.
- :Bold – to start bolding.
- :Italic – to start italic.
- :Underline – to start underlining.
- :Line-through – to start strikeout.

Any or all of these can be entered.

Background-color:#XXXXXX; – to set the background color, with the color following.

Color:#XXXXXX; - to set the font color, with color following.

The color is a 4-byte hexadecimal number with the 3 low bytes Blue, Green and Red respectably. For example, 00 BB GG RR. For Red the value would be hexadecimal 00 00 00 FF or 255 decimal.

Using the following `<span style="color:#0000ff;"> this is red <\span>` will result in the text “this is red” in red.

To bold the text add :bold to the style as `<span style="color:#0000ff;:BOLD"> this is red <\span>`

If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

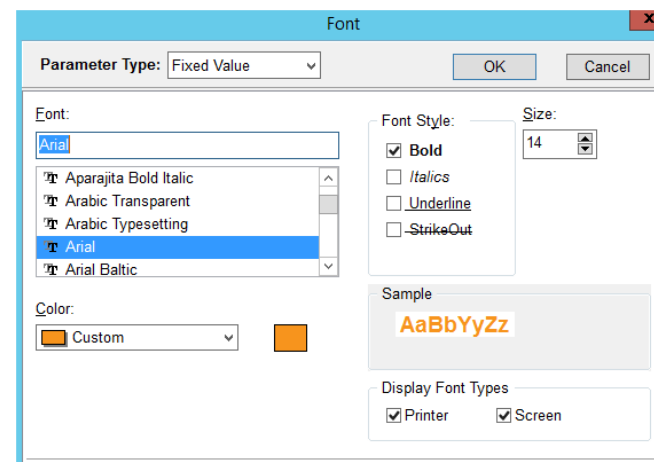
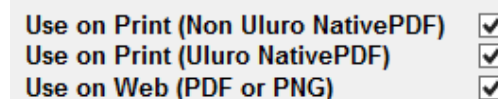
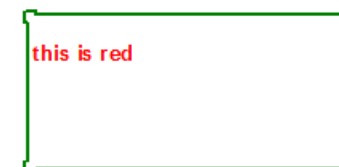
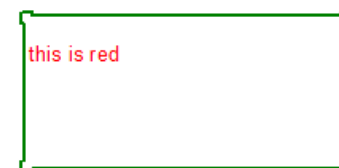
If All Text Does Not Fit Generate a warning or exception. If the **Warning** setting is checked, it will write a record into the submission transaction table stating that the text did not fit in the area. The submission will continue to process. If **Exception** is checked, the record will still be written in the table but the submission will error during Breakpack and not continue to process. The records can be accessed in uSetup and uControl within the submission transaction details.

The **Use Default Font** check box determines if the default font (from the Output Page Definition) is used or if a different font is used. When the Use Default Font checkbox is unchecked the Font parameters are displayed. Click the **Font** button to change the font.

This will display a standard Windows font selection dialog. Select the desired Font, Style, Size and Color.

The fonts must still be installed on the server/machine running Relay Unify uCompose.

The Color can also be changed by clicking on the Color Square.

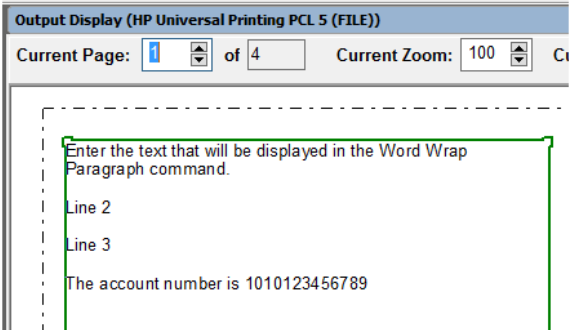


For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.

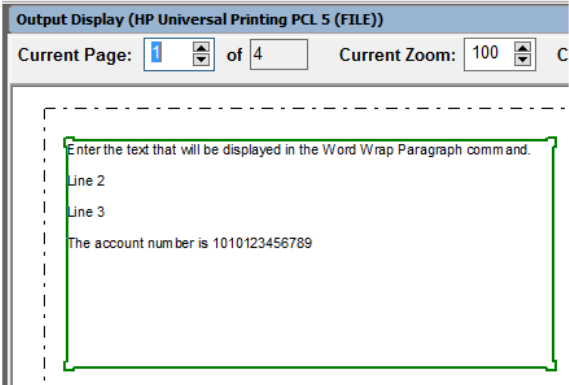
If **Disable Text Wrap** is checked, then the text will not be wrapped. It will appear just as it was entered in the edit form or as it is in the variable/field.

If **Shrink to Fit** is checked, this will shrink the text in the command down to the **Min** amount (font size) entered. If the font is the minimum size and the text does not fit, it will be truncated.

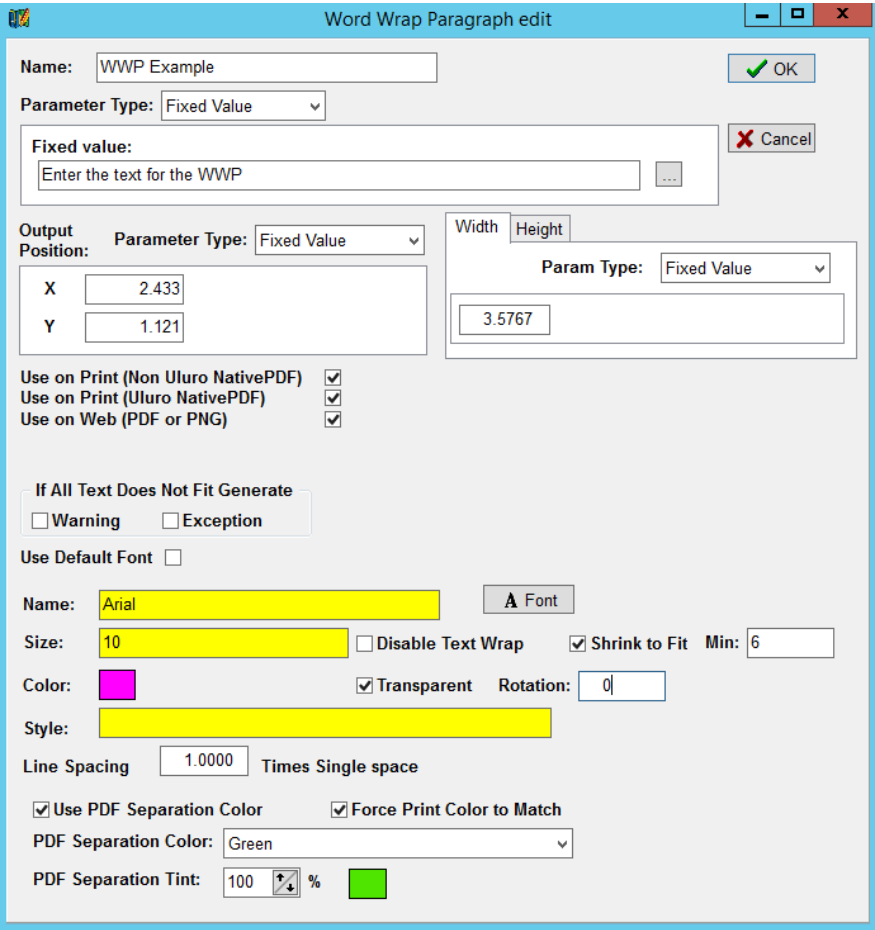
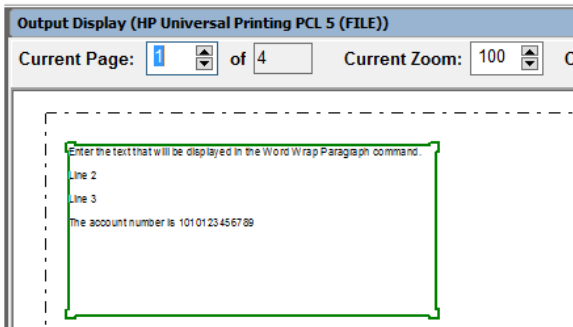
Disable Text Wrap unchecked and Shrink to Fit unchecked:



Disable Text Wrap checked and Shrink to Fit checked:



Disable Text Wrap checked, Shrink to Fit checked, and the width and height made smaller to show the effects on the font size:



The **Rotation** is in Degrees (0 to 360). If a negative rotation is entered, it is converted to a positive by adding 360 degrees until it comes in the range of 0 to 360.

To have the font Transparent, check the **Transparent** checkbox. If unchecked the font will have a white background. If any other color background is desired, then create a drawing object of the desired color and make the font transparent.

The line spacing can be changed by the **Line Spacing** parameter. A Value of 1 is normal single space. The spacing can be reduced by changing to a decimal value between 0 and 1. The line spacing can be increased by changing to a decimal value greater than 1.

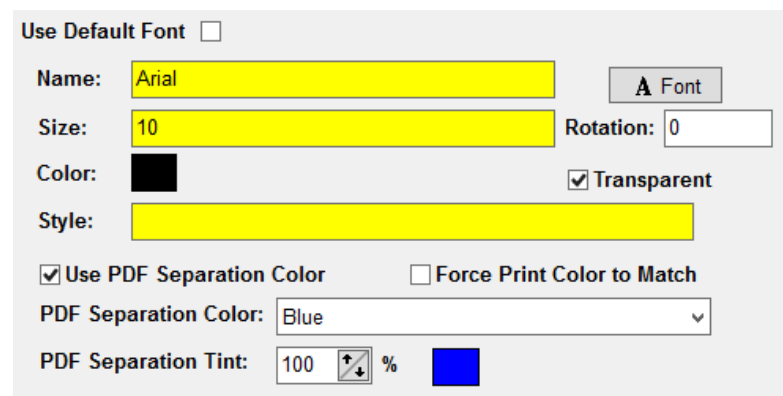
If “Use on Print (Relay Unify NativePDF)” or “Use on Web (PDF or PNG)” or “Print on Campaign Onsert” is checked, and “Use Default font” is unchecked, the **Use PDF Separation Color** setting will be visible. If checked, the Separation Color List setup in the Doc tab of the mapping commands will be used.

Checking the **Use PDF Separation Color** will display the ability to Select a PDF Separation Color, set the PDF Separation Tint and force print color to match.

Select a color from the dropdown list for **PDF Separation Color** from the colors set up in the Separation Color List for the map.

Set the **PDF Separation Tint**. This is the % of the Separation color to use to determine how much ink is printed on the page. Enter a value from 0 to 100%.

Checking the **Force Print Color to Match** will cause the print (Non-PDF output) to occur in the selected separation color. Note that the Tint will not be used in Non-PDF Output.



Use Default Font ☐

Name:

Size: Rotation:

Color: ☒ Transparent

Style:

☒ Use PDF Separation Color ☐ Force Print Color to Match

PDF Separation Color:

PDF Separation Tint: %



Tips:

If the Font Color and Separation Color selected are different, the Separation Color will print on the PDF Output and the Font Color will print on all other types of output.

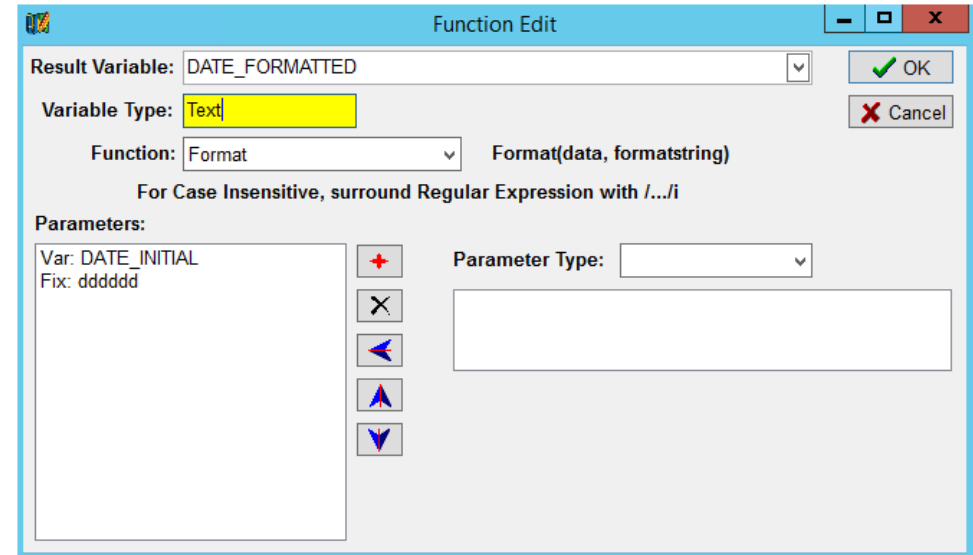
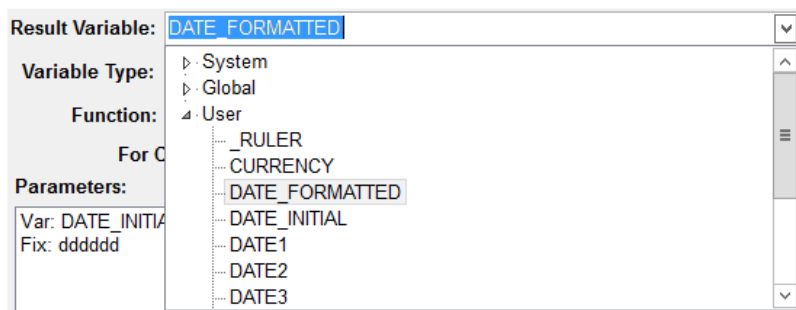
Functions

The Function command allows the result of a function to be assigned to a variable. This is commonly used to format dates, money, perform calculations such as adding a late fee, among many other applications.

This command can be accessed in 2 ways. The 1st is to click Function from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select Functions.

Both options will display the Function Edit form.

The **Result Variable** can be a System, Global, or User Variable. Select the variable from the dropdown that will contain the resulting value after the function is performed. This is typically a variable that has been created and has a Field Type of Not Assigned. Best practice is to let the function assign the value to a variable that is not assigned; avoid changing the value of a variable multiple times throughout a document. A date for example may be in the format of mm/dd/yyyy in the data. The date coming from the data may be a variable named Date_Initial. The resulting variable once formatted correctly would be named Date_Formatted. Date_Formatted can then undergo another function (using a new resulting variable to describe the function) or be assigned to a field. This allows the user to diagnose issues within the map easier and keeps each step/variable value separate.

The Function Edit dialog box is shown with a light blue title bar. It contains the following fields: 'Result Variable' with a dropdown menu showing 'DATE_FORMATTED'; 'Variable Type' with a dropdown menu showing 'Text' (highlighted in yellow); 'Function' with a dropdown menu showing 'Format'; and a text field for the function signature 'Format(data, formatstring)'. Below these is a note: 'For Case Insensitive, surround Regular Expression with /.../'. The 'Parameters' section has a list box with 'Var: DATE_INITIAL' and 'Fix: dddddd'. To the right of the list box are five buttons: a red '+' button, a black 'X' button, and three blue arrow buttons (left, up, down). To the right of the list box is a 'Parameter Type' dropdown menu and a large empty text area. At the top right are 'OK' and 'Cancel' buttons.This is a partial view of the Function Edit dialog box. The 'Result Variable' dropdown shows 'DATE_FORMATTED'. The 'Variable Type' dropdown shows a tree view with 'System', 'Global', and 'User' categories. The 'Function' dropdown shows 'Format'. The 'Parameters' section shows 'Var: DATE_INITIAL' and 'Fix: dddddd'. A list box on the right shows a scrollable list of variables: '_RULER', 'CURRENCY', 'DATE_FORMATTED', 'DATE_INITIAL', 'DATE1', 'DATE2', and 'DATE3'.

The **Variable Type** will be filled in based on the Value Type of the Result Variable selected. This cannot be edited. This will change as the result variable changes.

The **Function** dropdown will contain the available functions based on the Result Variable Type. The table below describes the Function Availability by Result Variable type.

Function	Result Variable Type						Parameters	
	Text	Real	Integer	Currency	Date	Boolean	Min	Max
Abs		Y	Y	Y			1	1
Assign	Y	Y	Y	Y	Y	Y	1	1
Blank						Y	1	1
CustomCheckDigit	Y						2	2
DateDiff		Y	Y				2	2
Delimited Data	Y						3	3
Evaluate	Y	Y	Y	Y	Y	Y	1	1
Exp		Y					1	1
File Exists	Y					Y	1	1
Format	Y						2	2
In						Y	2	2
Int		Y					1	1
Julian	Y	Y	Y				1	1
Length		Y	Y				1	1
Ln		Y					1	1
Log		Y	Y				1	1
Ltrim	Y						1	1
Max		Y	Y	Y			1	99
Min		Y	Y	Y			1	99
Mod			Y				1	2
Mod10	Y						3	3
NotAssign						Y	1	1
Not Blank						Y	1	1
Not SameText						Y	2	2
Power		Y					2	2
Random		Y	Y	Y			1	1

Regexp	Y					Y	2	2
Remove Zeros	Y						1	1
Reverse Text	Y						1	2
Round		Y		Y			2	2
Rtrim	Y						1	1
SameText						Y	2	2
Sqr		Y					1	1
Sqrt		Y					1	1
Substring	Y						3	3
To_Currency				Y			1	1
To_Date					Y		1	1
To_Int			Y				1	1
To_Real		Y					1	1
To_Str	Y						1	1
Trim	Y						1	1
Trunc			Y				1	1
ULREncode	Y						1	1
+	Y	Y	Y	Y			1	99
/		Y	Y	Y			2	2
*		Y	Y	Y			2	2
-		Y	Y	Y			2	2
=						Y	2	2
<						Y	2	2
>						Y	2	2
<=						Y	2	2
>=						Y	2	2
<>						Y	2	2
+Days					Y		2	2
+Months					Y		2	2
+Time					Y		2	2

The available functions are:

Abs

Absolute value of the parameter.

Result = Abs(param_1)

Assign

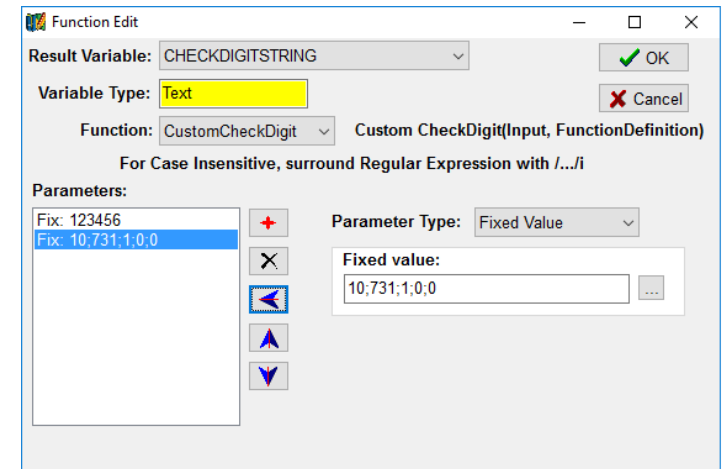
Assign will assign the parameter to the Result variable.

Result = param_1

Blank

Is the parameter blank.

Result = (param_1 = blank)



CustomCheckDigit

Customize the checksum algorithm for creating checkdigits.

This function requires two parameters, the first being the input text (which can be a field, variable, or even a fixed value) and the second being a string that specifies which algorithm to use to calculate checkdigits. The second string can either be the name of the algorithm or a semicolon-delimited set of values specifying the parameters of the algorithm. Editing either will launch the Build Your Own Checkdigit Algorithm form.

If the name of the algorithm is known and it is supported, the user can select it from the dropdown list in the upper left-hand corner. On the right side, the user can test as many different number combinations as needed to make sure it is the correct checksum algorithm.

If a custom algorithm is needed, select Make Your Own. It's best to do this after selecting one of the prebuilt algorithms that is like what is intended.

Specify the modulus (the number by which the division is being done to get the remainder once the digits are weighted), the weights (used in the second step of the calculation), the direction of evaluation (doesn't matter when there are no weights, but matters a lot when there are), the way the weighted digits are added up to get the number that will be divided by the modulus, and the way the final checkdigit is generated.

Best practice would be to test custom algorithms with a large enough test dataset to make certain the algorithm is correct.

DateDiff

The numeric difference between 2 date parameters in days.

Result = DateDiff(Param_2 – Param_1)

Delimited Data

Extract the data from a delimited text. Parameter 1 is the delimited text data. Parameter 2 is the Delimiter. For tab use \t. Parameter 3 is the field number.

Result = Delim(param_1, param_2, param_3)

Evaluate

Evaluates a text expression. This allows freeform entry of Equations. Variables can be used in the Equation in the Form <#VarName>. An example of a valid equation would be 15 + 25. The result would be 40.

Result = Evaluate(param_1)

Exp

Exponent of the Parameter base e.

Result = e^param_1

File Exists

Does the file specified in Parameter exist? Parameter 1 should contain the full path to the file.

Result = fileexists(param_1)

Format

Format Parameter 1 using the value in Parameter 2.

Result = format(param_1,param_2)

In

Is Parameter 1 in the ; separated list in Parameter 2

Result = Param_1 in Param_2

Int

Return the Integer value of Parameter.

Result = Int(Param_1)

Julian

Return the Number of Days since the start of the year for Date Parameter.

Result = Julian(Param_1)

Length

Number of characters in parameter.

Result = length(Param_1)

Ln

Base e Log of Parameter.

Result = ln(Param_1)

Log

Base 10 Log of Parameter.

Result = log(Param_1)

Ltrim

Remove leading spaces and control characters from Parameter. This will include tabs, CR, control Characters, as well as space. For most Text fields it is desirable to trim the data before storage.

Result = ltrim(Param_1)

Max

Max value in parameter lists.

Result = Max(Param_1, Param_2, .. Param_x)

Min

Min value in parameter lists.

Result = Min(Param_1, Param_2, .. Param_x)

Mod

Remainder after division of Parameter 1 by Parameter 2.

Result = Param_1 mod Param_2

Mod10

Mod 10 Checksum. Parameter 1 is number, parameter 2 is direction, and parameter 3 is weight. Direction is 0 (start from right) or 1 (start from left). Weight is 0 (start with 1 for weight) or 1 (start with 2 for weight) or 3-9 (start with indicated value and alternate with 1). Only the Check digit is created.

Result = Mod10(Param_1, Param_2, Param_3)

NotAssign

Assign will not assign the parameter to the Result variable.

Result = param_1

Not Blank

Is parameter 1 not blank.

Result = (Param_1 <> blank)

Not SameText

Is parameter 1 not the same as parameter 2 (not case sensitive).

Result = Not sametext(Param_1, Param_2)

Power

Parameter 1 raised to the power of Parameter 2.

Result = Param_1 ^ Param_2.

Random

Randomly generate a number greater than or equal to 0 and less than the number for parameter 1. If parameter 1 is 3 the number will be either 0, 1, or 2.

Result = Random(Param_1)

Regexp

Regular expression in parameter 2 applied to parameter 1.

Result = Param_1 regexp Param_2.

Remove Zeros

Remove leading 0's from parameter.

Result = RemZeros(Param_1).

Reverse Text

Reverse text in parameter 1 by delimiter in parameter 2. If parameter 2 is blank, then Space is used as delimiter. Only the 1st delimiter is used.

Result = RevText(Param_1, Param_2)

Round

Round parameter 1 to Parameter 2 decimals

Rounding uses "Banker's Rounding". This means that values exactly halfway between 2 values rounds to even number. Negative values for Param_2 rounds to right of Decimal. Positive values for Param_2 rounds to left of Decimal.

Result = param_1 round param_2

Rtrim

Remove trailing spaces and control characters from the parameter. This will include tabs, CR, control Characters, as well as space. For most Text fields it is desirable to trim the data before storage.

Result = rtrim(param_1)

SameText

Is parameter 1 the same as parameter 2 (not case sensitive).

Result = sametext(Param_1, Param_2)

Sqr

Square of Parameter

Result = Param_1 ^ 2

Sqrt

Square Root of Parameter

Result = $\sqrt{Param\_1}$

Substring

Substring of Parameter 1 starting at Parameter 2 for length of Parameter 3

Result = Substring(Param_1, Param_2, Param_3)

To_Currency

Convert Parameter 1 to Currency.

Result = To_Cur(Param_1)

To_Date

Convert Parameter 1 to Date

Result = To_Date(Param_1)

To_Int

Convert Parameter 1 to integer

Result = To_Int(Param_1)

To_Real

Convert Parameter 1 to Real

Result = To_Real(Param_1)

To_Str

Convert Parameter 1 to String

Result = To_Str(Param_1)

Trim

Remove Leading and Trailing spaces and control characters. This will include tabs, CR, control Characters, as well as space. For most Text fields it is desirable to trim the data before storage.

Result = Trim(Param_1)

Trunc

Truncate Parameter 1 to an integer by dropping everything to the right of the decimal.

Result = Trunc(Param_1)

ULREncode

Convert the Parameter to a URLEncoded String for use in web URL.

Result = URLEncode(Param_1)

+

Add parameter list. For text this will concatenate the values; For integer, real, and currency it will add the values.

Result = Param_1 + Param_2+...Param_x

/

Divide Parameter 1 by Parameter 2

Result = Param_1 / Param_2

*

Multiply Parameter 1 with Parameter 2

Result = Param_1 * Param_2

—

Subtract Parameter 2 from Parameter 1

Result = Param_1 – Param_2

=

Is Parameter 1 equal to Parameter 2

Result = (Param_1 eq Param_2)

<

Is Parameter 1 less than Parameter 2

Result = (Param_1 < Param_2)

>

Is Parameter 1 greater than Parameter 2

Result = (Param_1 > Param_2)

<=

Is Parameter 1 less than or equal to Parameter 2

Result = (Param_1 <= Param_2)

>=

Is Parameter 1 greater than or equal to Parameter 2

Result = (Param_1 >= Param_2)

<>

Is Parameter 1 not equal to Parameter 2

Result = (Param_1 Not Eq Param_2)

+Days

Add Parameter 2 days to Parameter 1 date. To subtract days, use a negative value for Parameter 2.

Result = Param_1 +days Param_2

+Months

Add Parameter 2 months to Parameter 1 date. To subtract months, use a negative value for Parameter 2.

Result = Param_1 +Months Param_2

+Time

Add Parameter 2 time (in hours) to Parameter 1 date. To subtract time (in hours), use a negative value for Parameter 2.

Result = Param_1 +Time Param_2

Format with #B

There is the ability to format numeric/currency values without coercing blank to "0". There was a change to allow the use of #B before % in Mapping Format String to indicate to output blank if 0. This is available for:

%d integer

%f Fixed Float

%g General floating point

%n Number floating point

%u unsigned integer

%x hexadecimal

%m Money

It allows Labels before and after. For example, Total #B%d gallons will result in "Total 100 gallons" if 100 is the value. If the Value is 0 the output will be "Total gallons" (one space instead of a number).

Formatting Strings

Additional Format Strings are available for Changing the Case of a string.

There is the ability to use "[LMU]%" format strings with labels like the "B%m" format string.

Text variables can be made lower/mixed/upper case with one of the following format strings:

#L%*s* #M%*s* #U%*s*

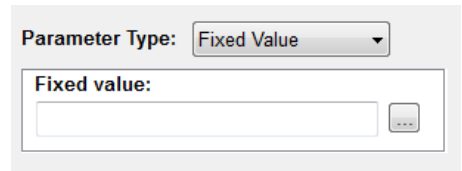
Text variables can also be formatted to have labels with the following format string:

This is a label: [%*s*]

The two formats can be combined.

Based on the function selected, the **Parameters** required will be displayed to the right of the function dropdown. The order of the Parameters is important for most functions. The parameters will need to be listed in the Parameter Display in the order designated. Parameters can be Fixed Value, Variable, or Field. When the Parameter type is changed the available selection changes.

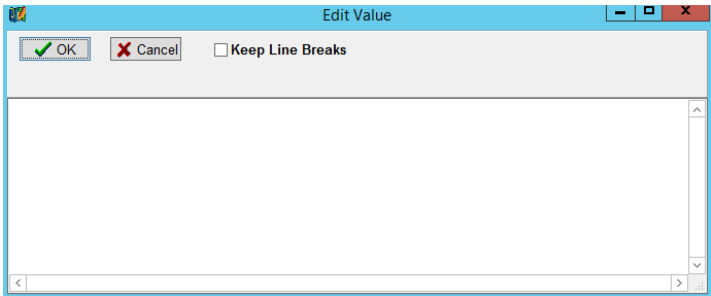
Fixed Value allows the user to enter the parameter value or use the ellipsis button to use the edit form. In this form the user can enter data that can contain multiple lines. Check **Keep Line Breaks** to retain the Line Breaks. If Keep Line Breaks is not checked the multiple lines will be combined with a space.



Parameter Type: Fixed Value

Fixed value:

[Text input field with ellipsis button]

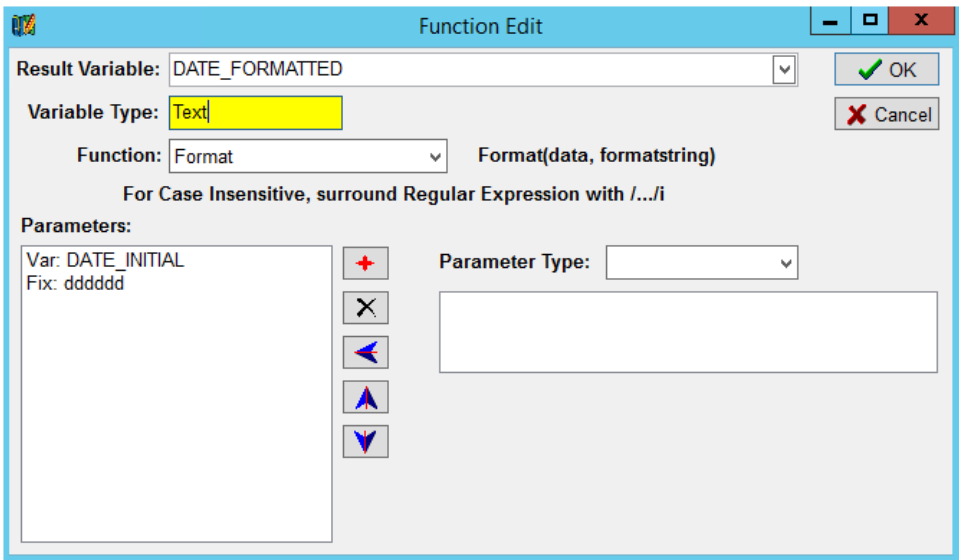


Edit Value

OK Cancel Keep Line Breaks

[Large text area for editing]

The Variable and field options will display a dropdown of all variables/fields that have been defined in the map. This allows a variable/field to be assigned a new value depending on the results of a function.



Function Edit

Result Variable: DATE_FORMATTED

Variable Type: Text

Function: Format Format(data, formatstring)

For Case Insensitive, surround Regular Expression with /.../i

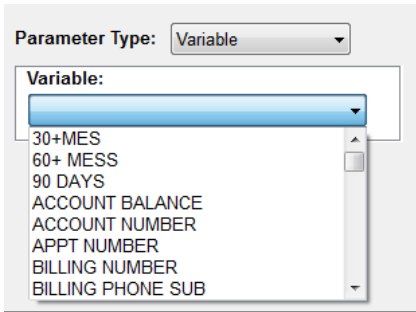
Parameters:

Var: DATE_INITIAL
Fix: dddddd

Parameter Type: [Dropdown]

[List of action buttons: Add, Remove, Up, Down]

OK Cancel

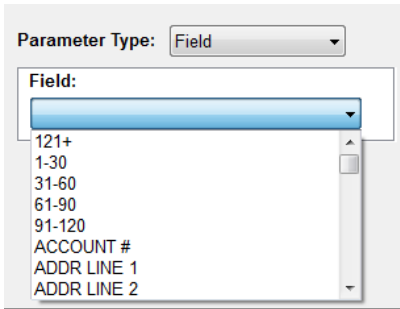


Parameter Type: Variable

Variable:

[Dropdown menu]

- 30+MES
- 60+ MESS
- 90 DAYS
- ACCOUNT BALANCE
- ACCOUNT NUMBER
- APPT NUMBER
- BILLING NUMBER
- BILLING PHONE SUB



Parameter Type: Field

Field:

[Dropdown menu]

- 121+
- 1-30
- 31-60
- 61-90
- 91-120
- ACCOUNT #
- ADDR LINE 1
- ADDR LINE 2

Assign Field

The Assign Field command allows a field to be assigned a value based on the result of a function.

This command can be accessed in 2 ways. The 1st is to click Assign Field from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select Assign Field.

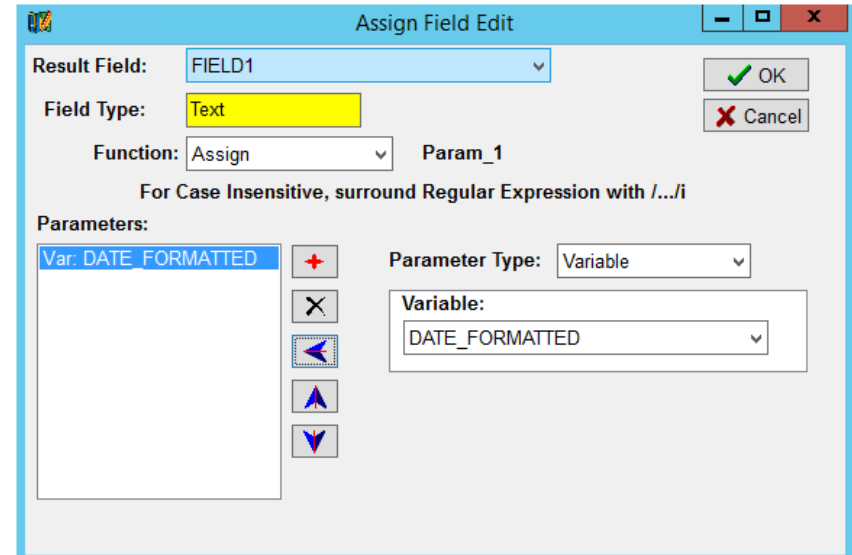
Both options will display the Assing Field Edit form.

The **Result Field** can be any User Field. Select the field from the dropdown that will contain the resulting value after the assign field is performed. The list will contain only user Fields. To have the value assigned to a System Field make sure the Field has the System Field Link set. This is typically a field that has been created and has a Field Type of Not Assigned.

When the Field is selected the **Field type** will be displayed. The list of available functions depends on the Field Type.

The **Function** dropdown will contain the available functions based on the Result Field Type. These are the same functions as in the Functions command.

Please reference the [Functions](#) command for information on the Functions and Parameters.



The image shows the 'Assign Field Edit' dialog box. It has a title bar with standard window controls. The 'Result Field' is set to 'FIELD1'. The 'Field Type' is 'Text'. The 'Function' is 'Assign' and the 'Param_1' is 'Param_1'. Below this, a note says 'For Case Insensitive, surround Regular Expression with /.../i'. The 'Parameters' section shows a list with 'Var: DATE_FORMATTED' selected. To the right of the list are buttons for adding (+), removing (X), and navigating (left and right arrows). On the far right, the 'Parameter Type' is 'Variable', and a 'Variable:' dropdown shows 'DATE_FORMATTED'. At the bottom right are 'OK' and 'Cancel' buttons.

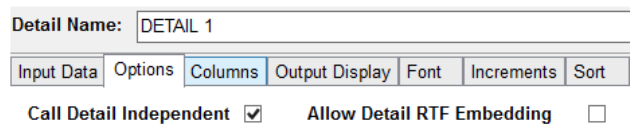
DoDetail

The DoDetail command manually calls a detail section(s) at any point. The detail is called at the end of the display commands by default. This is helpful for total page count, calculations, things needed in another detail section, things needed within the display commands, or for output definition.

The DoDetail command allows the selected detail to be executed when specified (where this command is located within the Display Map Commands) instead of at the end of the page.

This command can be accessed in 2 ways. The 1st is to click on DoDetail from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select DoDetail.

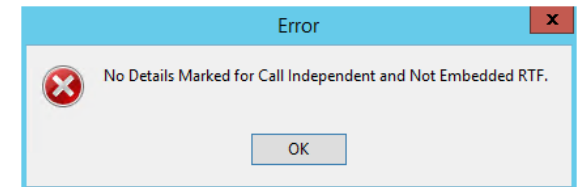
Only Details marked as Call Independently can be selected in the DoDetail command. If there are not details marked for Call Independently and not Embedded RTF, then the error will be displayed.



Detail Name:

Input Data Options Columns Output Display Font Increments Sort C

Call Detail Independent ☒ Allow Detail RTF Embedding ☐

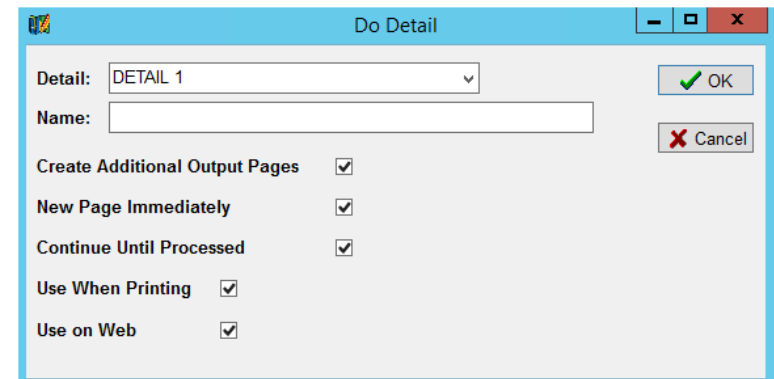


The **Detail** is the Detail section that will be executed. The dropdown will list all detail sections that have been set up to be called independently.

The **Name** can be used to name the command. This will be displayed in the Display tab Map Commands.

When checked, **Create Additional Output Pages** a new page will be created if the Detail runs out of room on the page and additional detail lines are available. When unchecked, if there are any additional detail lines to process a new page will not be automatically created.

When checked, **New Page Immediately** will force a new page before the next command then start a new output page immediately. When unchecked, then it will start a new output page after the current page is completed. This setting only appears if Create Additional Output Pages is checked.



Do Detail

Detail:

Name:

Create Additional Output Pages ☒

New Page Immediately ☒

Continue Until Processed ☒

Use When Printing ☒

Use on Web ☒

OK Cancel

When Checked, **Continue Until Processed** will continue with the processing of the Detail lines until all detail lines are processed. This would not process any additional commands outside of the detail section until all detail lines are processed. When unchecked, when the current page is finished the system will wait until the DoDetail is called again before continuing. This setting only appears if both Create Additional Output Pages and New Page Immediately are checked.

If checked, **Use When Printing** will enable the DoDetail during printing. Uncheck this to save time generating the print file if the information in the detail section being called is saved as a field or variable. For example, if the DoDetail command is calling a detail section for the purpose of

calculations, and the totals are stored as fields during Breakpack, there is no need to generate them again at the time of print. If they are used to output on a page prior to having the information, this setting should be checked.

If checked, **Use on Web** will enable the DoDetail during web display (and PDF's). Uncheck this to save time generating the web display of the document if the information in the detail section being called is saved as a field or variable. For example, if the DoDetail command is calling a detail section for the purpose of calculations, and the totals are stored as fields during Breakpack, there is no need to generate them again at the time of web display. If they are used to output on a page prior to having the information, this setting should be checked.

Conditional

The Conditional command allows for Comparisons and branching based on the results of the test. This functions like an If statement in a programming language.

This command can be accessed in 2 ways. The 1st is to click Conditional from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select Conditional.

Parameter types may be Fixed, Variable, or Field.

Fixed allows the user to enter a fixed value. If field or variable are selected, select the field/variable from the dropdown to be used in the comparison test of this conditional.

Only the command immediately following the Conditional will be executed if the statement is true. If the Statement is false, it will not be executed (unless the Not checkbox is checked). For a group of commands executed, use a group after the Conditional. The conditional will then be applied to the entire group of commands being executed or not.

Select the **1st Parameter Type** and enter the value or select the variable/field. Select a **Condition** for the compare. Select the **2nd Parameter Type** and enter the value or select the variable/field.

If the **Not** Checkbox is selected, the results are converted to the negated value. If the result is true it is converted to false. If the result is false it is converted to true. This is useful for creating an If else capability. For this create the condition desired for true. The command after the Conditional will be executed if the statement is true. Duplicate the Condition command and select the Not checkbox. The command after the conditional will be executed if the statement is false.

Available conditions are:

Assign

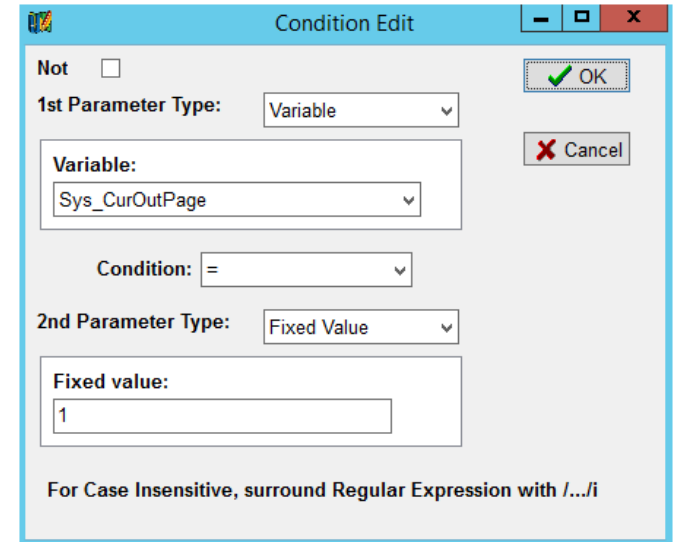
The first parameter is assigned a value

NotAssign

The first parameter is not assigned a value

=

The 2 parameters must be equal (for Text they must be identical)



>

The first parameter to be greater than the 2nd

<

The first parameter is less than the 2nd

<>

The 2 parameters are not equal

<=

The first parameter is less than or equal to the 2nd

>=

The first parameter is greater than or equal to the 2nd

SameText

The 2 parameters are the same ignoring case

Blank

The first parameter is blank

Not Blank

The first parameter is not blank

Not SameText

The 2 parameters are not the same ignoring case

RegExp

Is the regular expression in Parameter 2 found in Parameter 1

In

Is Parameter 1 in the ; separated list in Parameter 2

File Exists

Does the file specified in Parameter 1 exist? Parameter 1 should contain the full path to the file.

Barcode

This command allows the user to output a barcode based on a fixed value, Variable, or Field.

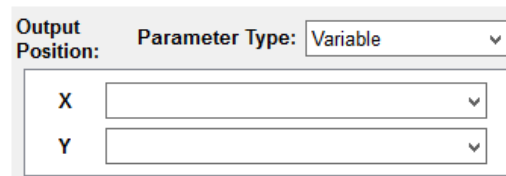
This command can be accessed in 3 ways. The 1st is to click Barcode from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select Barcode. The 3rd is to right-click on the Output and select Barcode under the Main options from the Pop-up menu. The advantage of using the last method is the Barcode will default to the selected location.

Once the command is created it can be edited to change the parameters.

The **Parameter Type** is where the data in the barcode is coming from and can be a Fixed Value, Variable, or Field. Select the appropriate type and enter the value or select the variable/field from the dropdown.

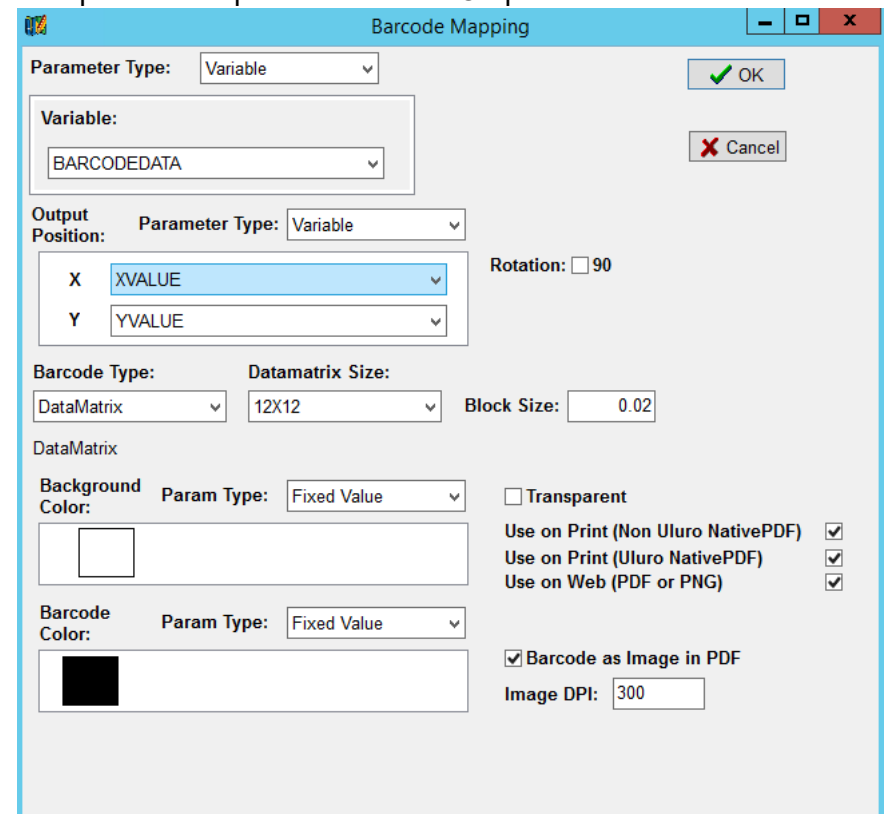
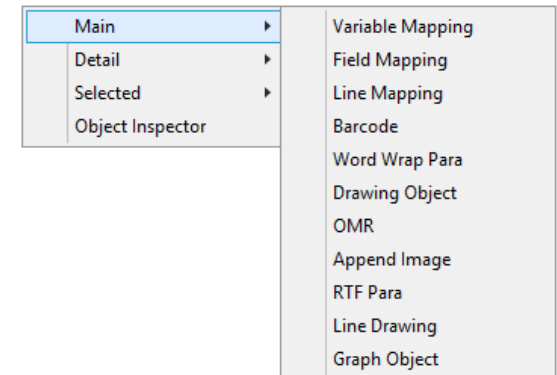
The **Output Position** X and Y specify the starting location in inches. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window or was dragged there, the X and Y values will be populated automatically with the values from where the cursor was located, or the command is currently located.

The Position can be entered using a Fixed Value for X and Y, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X and Y values will become dropdowns to select the variable/field that contains the X/Y value.



Select the **Barcode Type**. This will determine the type of barcode displayed on the output. The barcodes available are:

Ean 8	ABC Codabar
Ean 13	2/5 Datalogic
Codabar	2/5 Interleaved
Code 39S	2/5 Matrix
Code 39E	2/5 Industrial
Code 93	2/5 IATA
Code 128	2/5 Invert



ITF
ISBN
ISSN
ISMN
UPC-A
UPC-E0

UPC-E1
UPC Shipping
JAN8
JAN13
MSI Plessey
PostNet

OPC
Ean 128
GS1-128
25 Coop
Code 11
PZN

PDF 417
DataMatrix
QRCode

Some Barcode Types have the size determined by the Datamatrix Size and Block Size while others have an X and Y value for Size. The **Datamatrix Size** determines how many blocks are within the barcode. Select the desired values or Auto for the system to select the best for the other settings. The **Block Size** is for the entire barcode size in inches; this is not the size of each block within the barcode. The **X** and **Y** value for **Size** are also in inches and represent the width (X) and Height (Y) for the barcode. If the PostNet barcode is selected, the X and Y values are not visible because they are automatically set to the USPS requirements.

If the sizes entered are not large enough the barcode will not display correctly and may not be readable when printed. Best practice would be to test print to verify that the barcode is readable by the Barcode Reader.

Enter the **Rotation** in Degrees (Counterclockwise) or check the Rotation box to rotate the barcode 90 degrees. These two options will depend on the Barcode Type that has been selected.

The **Background Color** and **Barcode Color** can be entered using a **Parameter Type** of Fixed Value, Variable or Field. If Variable or field are selected, the color value will become a dropdown to select the variable/field that contains the color value. If Fixed Value is selected, change the Color for the background by clicking on the Color Rectangle. This will display a color selection window. Select the color and click OK. This will change the Color Rectangle to the color selected.

Check the **Transparent** checkbox to make the Background Color transparent.

If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

Small images, especially Black and White images can be highly compressed in the output PDF. By using images, the size can be reduced. This is especially true if there are many barcodes and if barcode values are the same. Check the **Barcode as Image in PDF** to output the barcodes as

Output Position: Parameter Type: Variable Size: X 0 Y 0 Rotation: 0

X Y

Barcode Type: Code 39S Code 39 Standard

Output Position: Parameter Type: Fixed Value Size: X 0.6458 Y 1.823 Rotation: 90

Barcode Type: DataMatrix Datamatrix Size: Auto Block Size: 0.015

DataMatrix

Color

Basic colors:

Custom colors:

Define Custom Colors >>

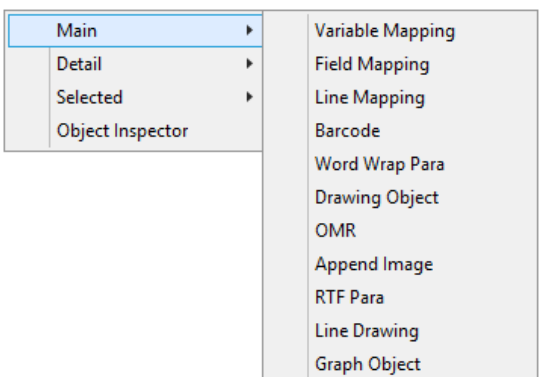
OK Cancel

images in the output PDF to reduce the size of the output PDF file. Once the setting is checked, select the desired DPI for the image. If the barcode is Black and White, then a 1-bit image will be used.

OMR

This command allows for the display of OMR Marks for a Document.

The command can be accessed in 3 ways. The 1st is to click OMR from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select OMR. The 3rd is to right-click on the Output and select OMR under the Main options from the Pop-up menu. The advantage of using the last method is the OMR will default to the selected location.



Once the command is created it can be edited to change the parameters.

Each OMR mark must be defined separately. Once defined the OMR marks may be saved and loaded.

Set the **Side** of the Page for the OMR mark to be printed. This will be Front, Back or Both.

Set the **Direction** of the OMR marks. This will be Top to Bottom or Bottom to Top.

Set the **Start X** position in Inches from the Left.

Set the **Start Y** position in inches from the Top.

For Each mark define the **Y Offset** (how far from the Start Y to begin), the **Width** of the Mark in inches, the **Height** of the mark in inches, and a **Description** of the Mark.

Define which page the mark prints on using the **Print on Page** checkboxes.

The **Use** dropdown defines how the marks are used, or when the mark prints.

Always will always print the mark.

Number of Pages, Page # (current page number), Doc #, and Cycle Count (outputs a cycle count 1 to Max Value) will require a Max Value and Bit Value. Enter the Maximum value expected and then define which bit causes the mark to print. The Maximum value is used with the mod function to force the value always less than or equal to the maximum value.

Since OMR marks represent binary data, the user must encode non-binary data (such as Page count) in Binary first.

As an example, the page number could be represented by 3 OMR marks. Mark 1 is bit 1, Mark 2 is bit 2 and Mark 3 is bit 4. The page count would then be represented as:

1 = 001
2 = 010
3 = 011
4 = 100
5 = 101
6 = 110
7 = 111

This is shown in the following 3 images.

The screenshot shows the OMR software interface. At the top, there are settings for 'Side' (Front), 'Direction' (Top to Bottom), 'Start X' (0.0729), and 'Start Y' (5.469). There are buttons for 'Sample', 'Load', and 'Save'. On the right, there are checkboxes for 'Use on Print (Non Uluro NativePDF)', 'Use on Print (Uluro NativePDF)', and 'Use on Web (PDF or PNG)', all of which are checked. There are 'OK' and 'Cancel' buttons.

Below these settings is a table with columns: 'Mark #', 'Y Offset', 'Width', 'Height', and 'Description'. The table has one row: '3:Page Count 1' with Y Offset 0.5, Width 0.4, and Height 0.0625. The description is 'Page Count 1'.

To the left of the table is a list of marks: '1:Read Verify', '2:End of Subset', '3:Page Count 1' (highlighted), '4:Page Count 2', '5:Page Count 4', and '6:test'.

To the right of the table is a 'print on page' section with a 'Use' dropdown set to 'Page #'. Below this is a 'Max Value' field set to 7 and a 'Bit Value' section with checkboxes for bits 1 through 512. Bit 1 is checked.

OMR

Side: Front ☒ OK

Direction: Top to Bottom ☒ Use on Print (Non Uluro NativePDF)

Start X: 0.0729 ☒ Use on Print (Uluro NativePDF)

Start Y: 5.469 ☒ Use on Web (PDF or PNG)

Mark #	Y Offset	Width	Height	Description
1:Read Verify	0.75	0.4	0.0625	Page Count 2
2:End of Subset				
3:Page Count 1				
4:Page Count 2				
5:Page Count 4				
6:test				

print on page ☒ All ☐ Last

Use

Max Value Bit Value

☐ 1 ☒ 2 ☐ 4 ☐ 8 ☐ 16 ☐ 32 ☐ 64 ☐ 128 ☐ 256 ☐ 512

OMR

Side: Front ☒ OK

Direction: Top to Bottom ☒ Use on Print (Non Uluro NativePDF)

Start X: 0.0729 ☒ Use on Print (Uluro NativePDF)

Start Y: 5.469 ☒ Use on Web (PDF or PNG)

Mark #	Y Offset	Width	Height	Description
1:Read Verify	1	0.4	0.0625	Page Count 4
2:End of Subset				
3:Page Count 1				
4:Page Count 2				
5:Page Count 4				
6:test				

print on page ☒ All ☐ Last

Use

Max Value Bit Value

☐ 1 ☐ 2 ☒ 4 ☐ 8 ☐ 16 ☐ 32 ☐ 64 ☐ 128 ☐ 256 ☐ 512

If the Use is Value of, this is value of a variable. Encode the Number in a variable to binary and output the mark.

The screenshot shows the configuration window for a mark named 'test'. The 'Mark #' list on the left includes '1:Read Verify', '2:End of Subset', '3:Page Count 1', '4:Page Count 2', '5:Page Count 4', and '6:test'. The 'Y Offset' is 1.25, 'Width' is 0.4, and 'Height' is 0.0625. The 'Use' dropdown is set to 'Value of'. The 'Variable' dropdown is set to 'Sys_DocSeqNum'. The 'Max Value' is 7. The 'Bit Value' list has '1' checked, and '2' through '17' are unchecked.

Mark #	Y Offset	Width	Height	Description
1:Read Verify	1.25	0.4	0.0625	test

print on page

☒ All
☐ Last

1
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10
☐ 11
☐ 12
☐ 13
☐ 14
☐ 15
☐ 16
☐ 17

Use

Value of

Variable

Sys_DocSeqNum

Max Value

7

Bit Value

☒ 1
☐ 2
☐ 4
☐ 8
☐ 16
☐ 32
☐ 64
☐ 128
☐ 256
☐ 512

If the Use is Variable Changes, the mark will be output when the Value of the selected variable changes.

The screenshot shows the configuration window for a mark named 'test'. The 'Mark #' list on the left includes '1:Read Verify', '2:End of Subset', '3:Page Count 1', '4:Page Count 2', '5:Page Count 4', and '6:test'. The 'Y Offset' is 1.25, 'Width' is 0.4, and 'Height' is 0.0625. The 'Use' dropdown is set to 'When Changes'. The 'Variable' dropdown is set to 'Sys_CurPaperPage'. The 'print on page' list has '1' checked, and '2' through '17' are unchecked.

Mark #	Y Offset	Width	Height	Description
1:Read Verify	1.25	0.4	0.0625	test

print on page

☐ All
☐ Last
☒ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10
☐ 11
☐ 12
☐ 13
☐ 14
☐ 15
☐ 16
☐ 17

Use

When Changes

Variable

Sys_CurPaperPage

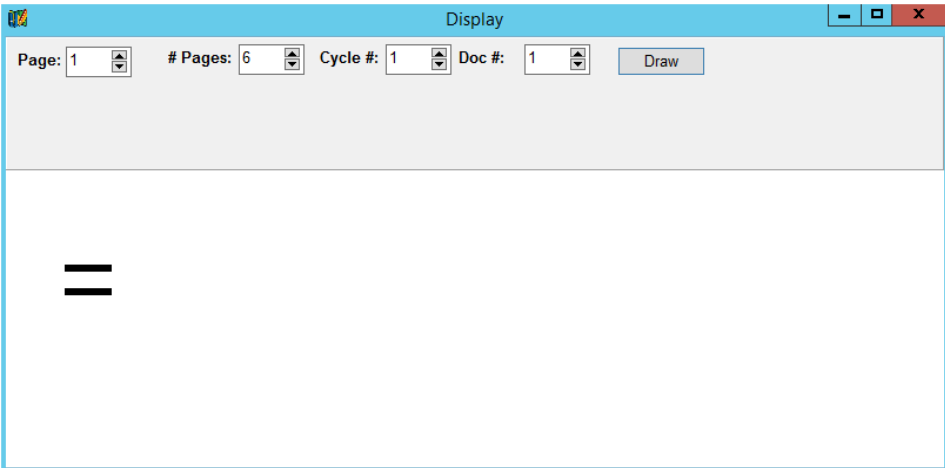
If the Use is When Equals, the mark will be output when the variable selected equals the set value.

The screenshot shows a configuration window for marks. On the left, a list of marks is shown: 1:Read Verify, 2:End of Subset, 3:Page Count 1, 4:Page Count 2, 5:Page Count 4, and 6:test. Mark 6 is selected. To the right of the list are fields for Y Offset (1.25), Width (0.4), and Height (0.0625), and a Description field containing 'test'. Below these are two sections: 'print on page' and 'Use'. The 'print on page' section has a list of checkboxes from 1 to 17, with checkbox 1 checked. The 'Use' section has a dropdown menu set to 'When equals', a 'Variable' dropdown set to 'Sys_CurPaperPage', and a 'Value' text box containing '1'.

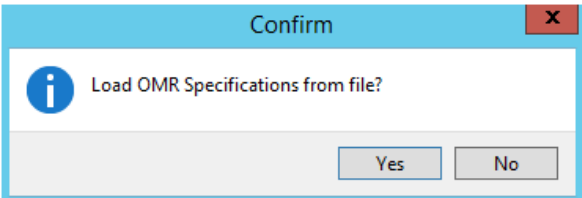
Clicking the **Sample** button displays a sample of the Defined OMR.

The screenshot shows a 'Display' window with a header bar. Below the header, there are four input fields: 'Page: 6', '# Pages: 1', 'Cycle #: 1', and 'Doc #: 1'. To the right of these fields is a 'Draw' button. The main area of the window is a large white rectangle. On the left side of this rectangle, there are three horizontal black lines, representing the OMR marks.

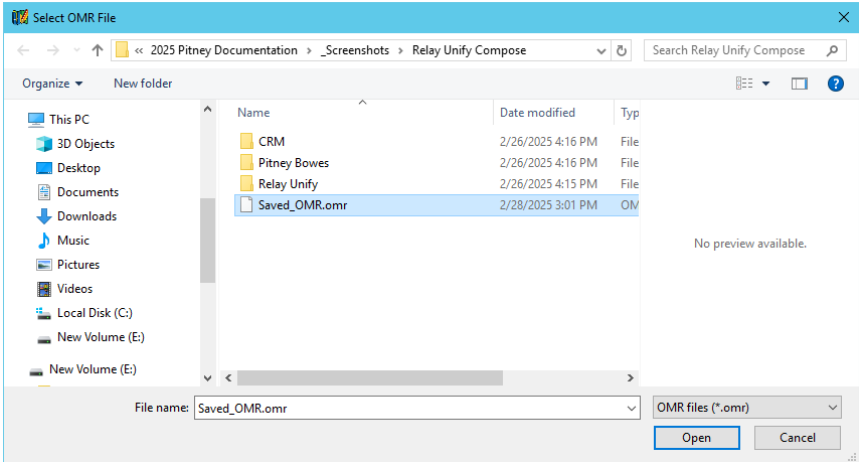
Change the Page, #Pages, Cycle #, and Doc # values and click the Draw button to see the resulting OMR displayed.



There will be a confirmation message displayed. Click Yes to continue and load in an OMR definition. Click No to cancel.



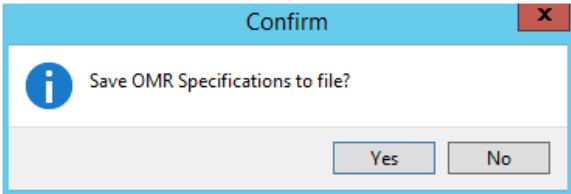
Select the desired definition file and click open.

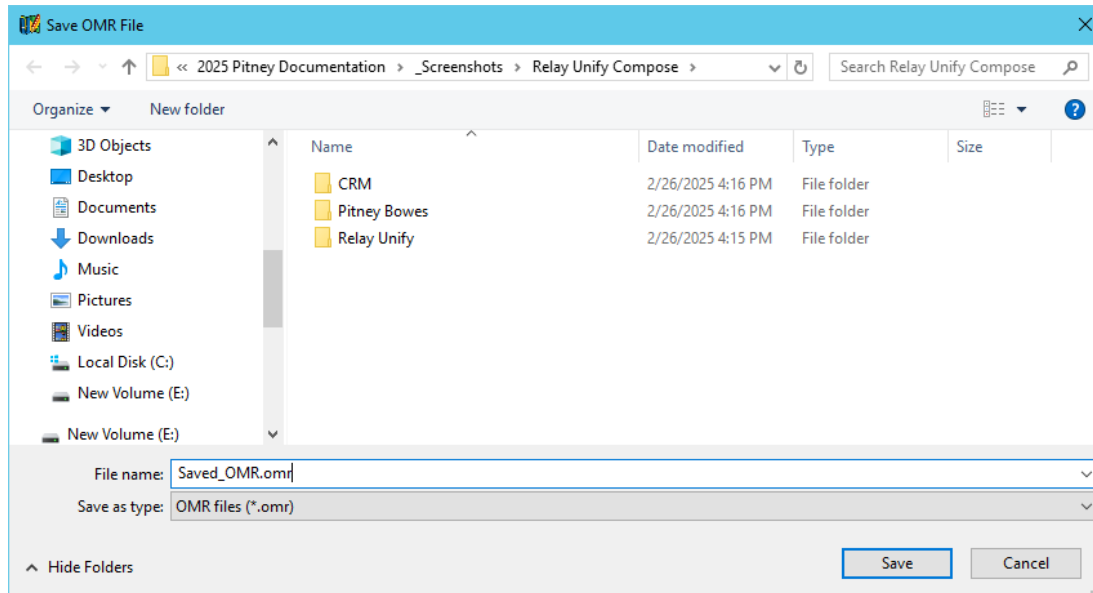


The **Load** button allows a Saved OMR definition to be loaded.

The **Save** button allows an OMR definition to be saved to the file system for reuse. Click Yes to save the OMR or No to cancel.

Navigate to the desired directory and enter the Name of the File. The default extension is .omr.





If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

Append Image

The Append Image Command allows defining of an image to output.

The command can be accessed in 3 ways. The 1st is to click Append Image from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select Append Image. The 3rd is to right-click on the Output and select Append Image under the Main options from the Pop-up menu. The advantage of using the last method is the image will default to the selected location.

Once the command is created it can be edited to change the parameters.

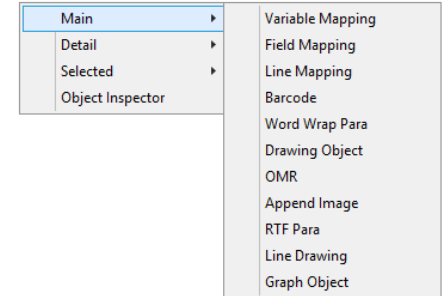
The **Parameter Type** is where the image is coming from and can be a Fixed Value, Variable, or Field. Select the appropriate type and enter the value or select the variable/field from the dropdown.

The Fixed Value is for the full UNC path to the image on the server that will be processing the map. If the **Relative To** checkbox is checked, this will be a relative path to the directory listed. The Ellipsis can be used to browse for the file.

When the image is selected the **Image Type** will be determined based on the File Extension and a preview of the image will be displayed.

Relay Unify can accept images in the following formats:

- BMP – Bitmap image.
- JPG – Jpeg image compressed image
- WMF – Windows Meta File Image
- PNG – PNG image
- TIF – Tagged Image Format (single Page only)
- PDF – PDF Image from a page in the pdf
- Auto is for allowing the image type to be determined from the file extension.



Parameter Type: ☒ Relative to \\TRANSQA2\SUBMIT\IMAGES\

Variable:

Add Image to Page

Parameter Type: ☒ Relative to \\TRANS-QA3\SUBMIT\IMAGES\

Fixed value: ...

Image Type
☐ BMP ☒ PNG ☐ Auto
☐ JPG ☐ TIF
☐ WMF ☐ PDF

Output Position:

☒ Scale ☐ Size ☐ Max Size

Scale:
Res:

Use on Print (Non Uluro NativePDF) ☐
Use on Print (Uluro NativePDF) ☒
Use on Web (PDF or PNG) ☒

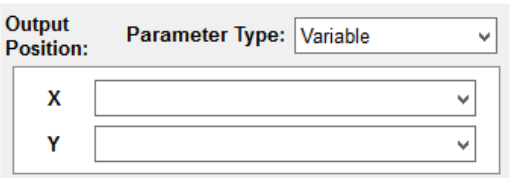
8 Bit Color ☐
GrayScale ☐
1 Bit ☐

Additional PDF
JPG Compression:

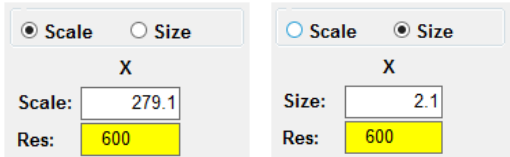
HTML Link:

The **Output Position** X and Y specify the starting location in inches. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window or was dragged there, the X and Y values will be populated automatically with the values from where the cursor was located, or the command is currently located.

The Position can be entered using a Fixed Value for X and Y, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X and Y values will become dropdowns to select the variable/field that contains the X/Y value.

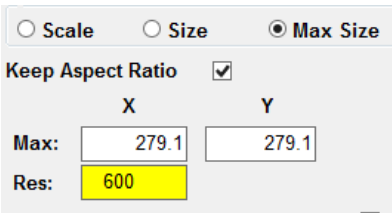


The image can be sized using the **Scale**, **Size**, or **Max Size** options. For Scale, the X entered for Scale will be the percent to size the image. For Size, the X entered for Size (width) will be the inches to size the image.



The **Res** or Resolution values are based on the currently selected printer resolution in DPI. If they are RED, then the Current printer Resolution does not match the resolution the Command was last saved at. On the Creation of the command, they will always be Red. Once the Command is saved, they will be Yellow. They cannot be adjusted. This setting allows the System to compensate for a printer with a different resolution than the one it was created with. If the Resolution is saved, the scaling factor can be recalculated to keep the images the same.

The ability to resize images by width and height independent of the original ratios is done through Max Size. The **Max Size** setting is for Image Types other than PDF and Auto. This allows setting the Max X and Y size of an image. **Keep Aspect Ratio** will maintain the aspect ratio of the image when resizing. If unchecked, the image will be sized to the X and Y sizes defined (except for PDF and Auto images).



If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

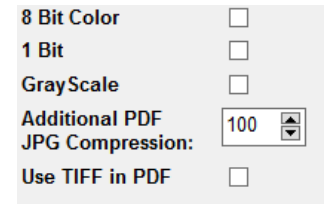
If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

Check the **8 Bit Color** if the image should be converted to 8 Bit color from the default of 24-bit color. This will make the image smaller when being sent to the printer and increase printing speed but may distort the colors.

Check the **1 Bit** box if the image should be converted to 1 Bit. This is the same as black and white.

Check the **GrayScale** box if the image should be converted to GrayScale.

A screenshot of a settings panel for image conversion. It contains five rows of controls: '8 Bit Color' with an unchecked checkbox, '1 Bit' with an unchecked checkbox, 'GrayScale' with an unchecked checkbox, 'Additional PDF JPG Compression:' with a numeric spinner set to 100, and 'Use TIFF in PDF' with an unchecked checkbox.

Normally Relay Unify will not recompress a JPG image. There have been instances where the uncompressed JPG image is very large. With a small amount of Compression, the image may be acceptable and will result in a much smaller PDF. The **Additional PDF JPG compression** can be set from 1 to 100. Value of 100 means No additional compression (highest quality). Value of 1 means maximum compression (lowest quality). The correct setting will require testing and adjustment to obtain acceptable results (compression vs quality). If the JPG is not compressed, then using 80 for additional compression may be a good starting point.

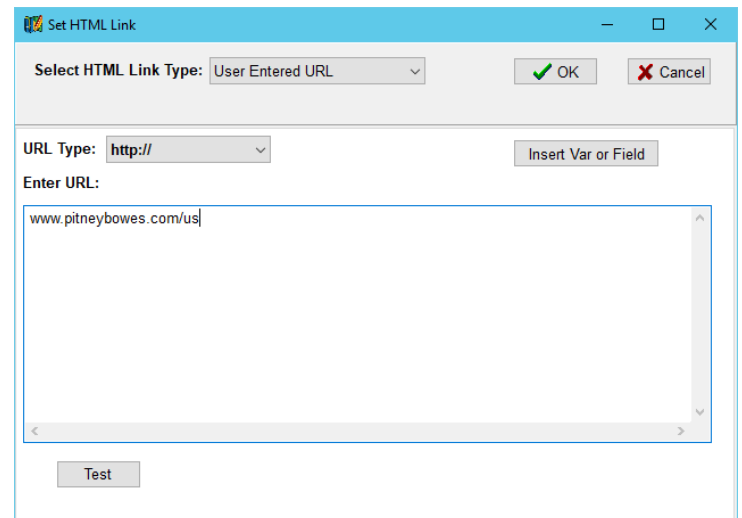
If the Image Type is TIFF, there will be an additional setting that appears, Use TIFF in PDF. When **Use TIFF in PDF** is checked, the TIFF image will be placed directly in the PDF Output. If this is unchecked the 1 Bit color will be ignored when putting the Image in the PDF and no modifications will be made to the TIFF image. Using this setting will increase processing and printing speeds.

HTML Links will appear on the PNG created during web viewing. When the User cursor floats over the HTML Link command the cursor will change to a hand. The user may click on the link and the action will occur. To accomplish this, an image Map file is created along with the PNG file. The image map file defines the areas on the PNG image and the action to be performed.

The Ellipsis button can be used to set up the HTML link.

User Entered URL is for simple links. Select User Entered URL for the **Select HTML Link Type**. Select HTTP:// or HTTPS:// for the **URL Type**, then enter the URL. An example would be <https://www.pitneybowes.com/us>.

Use the **Test** button to see the result of clicking on the HTML link.

A screenshot of a 'Set HTML Link' dialog box. At the top, 'Select HTML Link Type:' is set to 'User Entered URL' with 'OK' and 'Cancel' buttons. Below, 'URL Type:' is set to 'http://' with an 'Insert Var or Field' button. The 'Enter URL:' section contains a text area with 'www.pitneybowes.com/us'. At the bottom is a 'Test' button.

Check Image are links that will call an external system to generate check images. These links require specific information in order to call the external system. The five pieces of information at the top specify the required data. The four pieces of information at the bottom are optional depending on the external system that will generate the check images. If unsure it is always best to provide the information if possible.

The required items must be linked to a variable specified and set before the mapping is called. The optional items may be linked to a variable.

The screenshot shows the 'Set HTML Link' dialog box. At the top, 'Select HTML Link Type:' is set to 'Click Through'. Below this, 'URL Type:' is set to 'http://'. The 'Enter URL:' text area contains 'www.pitneybowes.com/us'. There is an 'Insert Var or Field' button to the right of the URL type dropdown. At the bottom left is a 'Test' button.

Click Through are also simple links with the exception that Relay Unify will track who and when the web user clicks on the link. Select HTTP:// or HTTPS:// and enter the URL. An example would be <https://www.pitneybowes.com/us>

The test click through is not tracked.

The default setting for HTML Link is None. This means no HTML link has been set up.

The screenshot shows the 'Set HTML Link' dialog box with 'Check Image' selected. It has several dropdown menus for required variables: Transaction # (DET1 TRANSNO), Check # (DET1 CHECK NUMBER), Posting Date (DET1 CHECK DATE), Account # (ACCOUNT NUMBER), and Amount (DET1 CHECK AMOUNT). A note next to the Check # dropdown says 'May be the same as Transaction #'. Below these are optional variables: Sub Account (DET1 SUBACCTNO), Application ID (DET1 APPID), Trans Type (DET1 TRANSTYPE), and Routing #.

The screenshot shows the 'Set HTML Link' dialog box with 'Select HTML Link Type:' set to 'None'. The main area of the dialog is empty, with the text 'No HTML Set' centered at the bottom.

If the Use PS command has been enabled, then there will also be an option to **Send as Reusable PS**. This will cache the image once in the Print stream and send the image as a reference when needed. This will speed up the Print and reduce the Print Stream size.

Use on Print (Non Uluro NativePDF)☐

Use on Print (Uluro NativePDF)☒

Use on Web (PDF or PNG)☒

Send as PCL Macro☐

8 Bit Color☐

If the Use PCL command has been enabled, then there will also be an option to **Send as PCL Macro**. This will cache the image once in the Print Stream and send the image as a PCL Macro call when needed.

When using the Send as Reusable PS or Send as PCL Macro only one can be set. For Send as Reusable PS the printer must be a Post Script printer and the Print Driver must be set to Post Script Level 3. For Send as PCL Macro the print driver must be HP LaserJet 5 only.

Use on Print (Non Uluro NativePDF)☐

Use on Print (Uluro NativePDF)☒

Use on Web (PDF or PNG)☒

Send as Reusable PS☐

8 Bit Color☐

If the image is a PDF, there are some additional options available.

The **Disable White Background** setting can be used but will have no effect if Relay Unify Native Output is the output or Copy Page to New PDF is checked. If Disable White Background is checked, if there is a background already in the existing PDF, the background will exist in the new PDF.

The **PDF Page** determines which page of the PDF will be output. This can be a Fixed Value, Variable, or Field. If Variable or field are selected, the value will become a dropdown to select the variable/field that contains the page number.

PDF Page: Variable

Add Image to Page

Parameter Type: Fixed Value

Relative to \\TRANS-QA3\SUBMIT\IMAGES\

Fixed value:

Tyler\PIB1.png

Image Type

☐ BMP

☐ PNG

☐ Auto

☐ JPG

☐ TIF

☐ WMF

☒ PDF

Output Position: Parameter Type: Fixed Value

X

0

Y

0

☒ Scale

☐ Size

X

Scale: 100

Res: 600

Use on Print (Non Uluro NativePDF)☐

Use on Print (Uluro NativePDF)☒

Use on Web (PDF or PNG)☒

Send as PCL Macro☐

Disable White Background☐

8 Bit Color☐

GrayScale☐

1 Bit☐

Additional PDF

JPG Compression: 100

PDF Page: Fixed Value

1

Copy Page to New PDF☒

Check objects for Reuse☒

Default PDF Rendering☐

White Drawings Transparent☐

Print as Image☐

If at Least

0

Images on page

Replace Fonts

☒ No Replacements

☐ With Same Font

☐ Using Font Map

Font Map

OK

Cancel

HTML Link:



If **Copy Page to New PDF** is checked, Relay Unify will copy the original PDF page to the output PDF page. The PDF's are copied into the new output PDF and objects are duplicated unless the **Check objects for Reuse** is checked. When checked it will compare the Fonts, Forms, and Images and if they are *identical*, it will add only once per PDF. *Identical* requires that the names and all sub-objects be identical. This would only normally happen if a large PDF is split into multiple smaller PDFs.

The rendering of the PDF as an image can be turned off by unchecking **Default PDF Rendering**. If this is unchecked, several other options will be available. When the output is not going to Relay Unify Native PDF either the Default PDF Rendering will occur or the settings available with the Default PDF Rendering unchecked will occur.

The **White Drawings Transparent** setting can be used but will have no effect if Relay Unify Native Output is the output or Copy Page to New PDF is checked. If checked, it will attempt to make white areas of the PDF transparent. This does not work on White areas of images within the PDF. This only works for Text Areas. Images that are white will still output as white.

If **Print as Image** is checked, the PDF will be processed as an image if the image count parameter is met. **If at Least Images on Page** value is what determines which pages will process as images. Use the arrows to adjust the value. This can be useful if 1) An image exists on the PDF that may not process correctly when printed, or 2) The PDF contains check images. In some cases, these check images can take a long time to process when printing. By utilizing this setting, pages that fit these criteria will process at a faster speed.

Replace Fonts can be set to three different settings. **No Replacements** outputs the pdf using the original Embedded fonts. If the embedded fonts are bitmap, then the Output file size can be larger than when Rendered as an Image. **With Same Font** will output the PDF using Fonts on the Local computer instead of the original Embedded fonts. This will reduce the output file size, but the fonts may not exactly match the original embedded fonts. **Using Font Map** allows manual selection of the Replacement Fonts. This will reduce the output file size, but the fonts may not exactly match the original embedded fonts.

When substituting fonts each character is positioned incrementally in the output. Unchecking the **Incremental Char Position** will position only the line in the Output file. This can reduce the file size, but on long lines the text may no longer match the original Input PDF.

When Using Font Map is selected, click on the Font Map edit box (...) to display the Font Mappings\Font Substitution form.

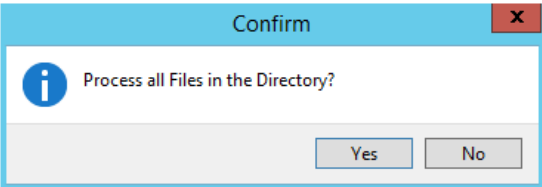
Click the ellipsis button to select the PDF file in **Select PDF**. Select the path and a PDF.

The screenshot shows a settings dialog box for PDF processing. At the top, 'PDF Page:' is set to 'Fixed Value' with a dropdown arrow. Below it is a text box containing the number '1'. The 'Copy Page to New PDF' checkbox is checked. The 'Check objects for Reuse' checkbox is also checked. The 'Default PDF Rendering' checkbox is unchecked. The 'White Drawings Transparent' checkbox is unchecked. The 'Print as Image' checkbox is unchecked, and the 'If at Least Images on page' value is set to '0' with a spinner control. Under the 'Replace Fonts' section, 'No Replacements' is selected with a radio button, 'With Same Font' is unselected, and 'Using Font Map' is unselected. At the bottom, there is a 'Font Map' label followed by an ellipsis button (...).

The user will be asked if all PDF's should be processed. Select Yes to process all PDF's and No to process only the one PDF.

Clicking the **Clear List** button will clear the already entered data.

Click the **Build List** button to process. There will be a confirmation message. Click Yes to Continue and No to cancel.



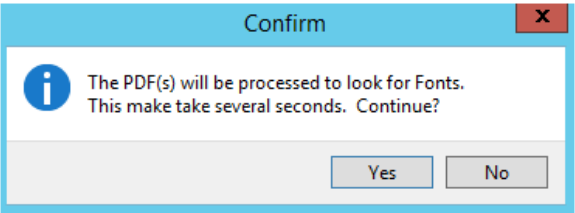
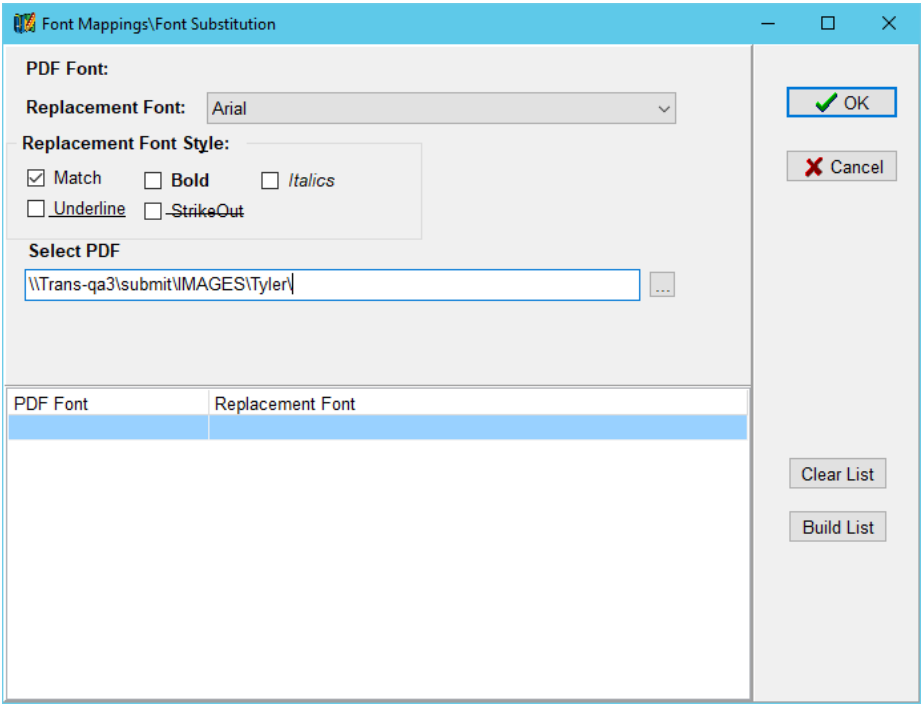
A List of the Fonts and suggested Substitutions will be displayed.

Select each font and change the **Replacement Font** if desired.

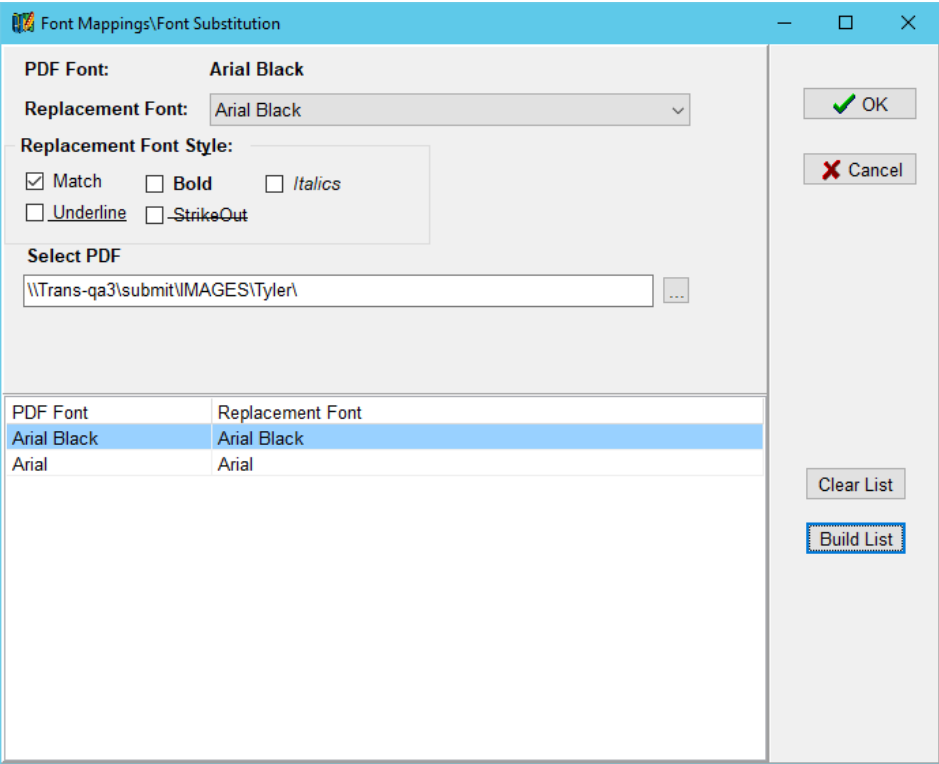
Change the **Replacement Font Style** if desired.

When finished Click OK.

When the PDF output is created the Fonts will be substituted.



It is possible to copy the command and use one method for printing and another method for Web Presentment.



Drawing Object

This command allows simple drawing of various polygons and lines.

The command can be accessed in 3 ways. The 1st is to click the Drawing Object from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select Drawing Object. The 3rd is to right-click on the Output and select Drawing Object under the Main options from the Pop-up menu. The advantage of using the last method is the Drawing Object will default to the selected location.

Once the command is created it can be edited to change the parameters.

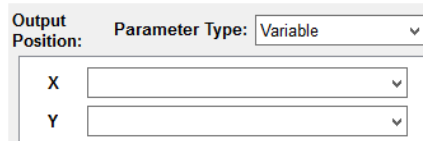
The **Drawing Object** can be an Arc, Polygon, or Rectangle. Arc is a circle or part of a circle. Polygon is a drawing from point to point ending at the starting point. Rectangle is a rectangle with a set size and height.

Select the desired shape. Based on the selection, the Parameter Type section will change to include the necessary parameters for that object.

The **Name** is Drawing Object by default but can be edited to a more descriptive name. This name will be part of the name for the command in the Map Commands window.

The **Output Position** X and Y specify the starting location in inches. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window or was dragged there, the X and Y values will be populated automatically with the values from where the cursor was located, or the command is currently located.

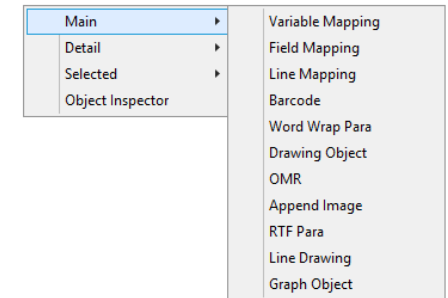
The Position can be entered using a Fixed Value for X and Y, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X and Y values will become dropdowns to select the variable/field that contains the X/Y value.



Output Position: Parameter Type: Variable

X: [dropdown]

Y: [dropdown]



Main ▸

Detail ▸

Selected ▸

Object Inspector

Variable Mapping

Field Mapping

Line Mapping

Barcode

Word Wrap Para

Drawing Object

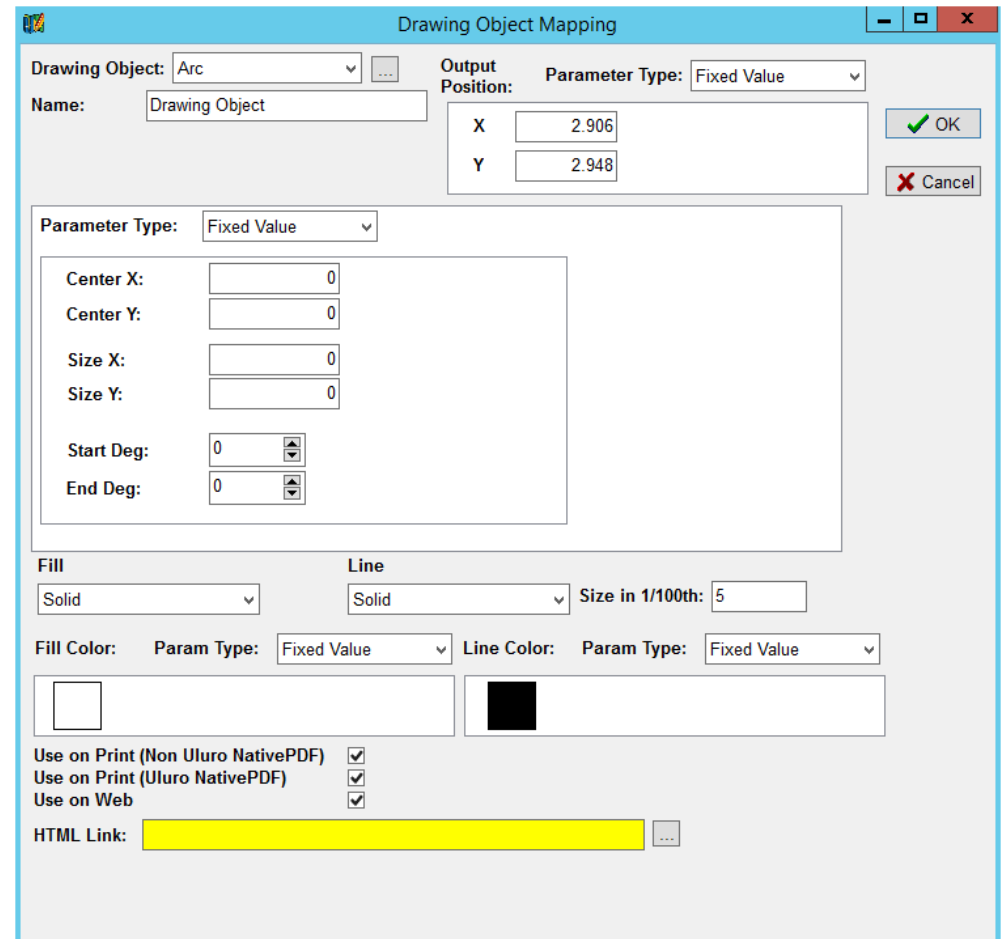
OMR

Append Image

RTF Para

Line Drawing

Graph Object



Drawing Object Mapping

Drawing Object: Arc

Name: Drawing Object

Output Position: X: 2.906 Y: 2.948

Parameter Type: Fixed Value

Parameter Type: Fixed Value

Center X: 0

Center Y: 0

Size X: 0

Size Y: 0

Start Deg: 0

End Deg: 0

Fill: Solid

Line: Solid

Size in 1/100th: 5

Fill Color: Param Type: Fixed Value

Line Color: Param Type: Fixed Value

Use on Print (Non Uluro NativePDF) [checked]

Use on Print (Uluro NativePDF) [checked]

Use on Web [checked]

HTML Link: [yellow box]

Arc

Arc is a circle or part of a circle.

The arc can be created using a **Parameter Type** of Fixed Value, Variable, or Field. If Variable or field are selected, the values to create the arc will become dropdowns to select the variable/field that contains each value.

Parameter Type: Variable

Center X:

Center Y:

Size X:

Size Y:

Start Deg:

End Deg:

Drawing Object: Arc

Name: DRAWING OBJECT

Output Position: X 1.073 Y 0.8855

Parameter Type: Fixed Value

Center X: 0

Center Y: 0

Size X: 0.5

Size Y: 0.5

Start Deg: 0

End Deg: 270

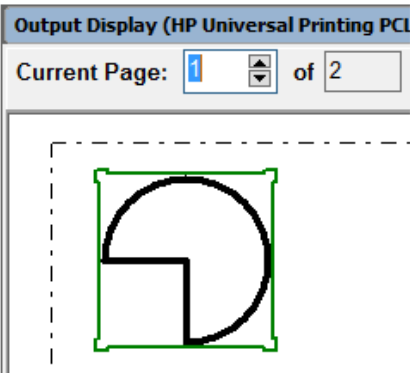
All parameter values must be in inches except Start Deg and End Deg.

Select or enter the center point by providing values for **Center X** and **Center Y**.

The Size of the Arc is determined using the Size X and Size Y values. The **Size X** value is the horizontal radius. The **Size Y** value is the vertical radius.

The **Starting Degree** and **Ending Degree** values are in degrees. Use the arrows to adjust the value or enter a value.

The 0 degree starts on the left and is clockwise (0 is 9:00, 90 is 12:00 etc.)



Polygon

Polygon is a drawing from point to point ending at the starting point.

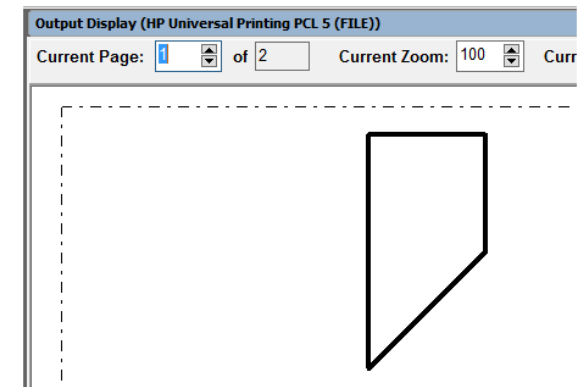
The polygon can be created using a **Parameter Type** of Fixed Value, Variable, Field, or Variable List. If Variable, Field, or Variable List are selected, the values to create the polygon will become dropdowns to select the variable/field/list that contains each value. For Variable List, the values come from variables that begin with the same text and end with numbers. Examples would be XPoint001, XPoint002, ... XPoint010. This would show in the Variable List as XPoint. The Points will be applied to the Polygon in Numeric order from low to high.

The screenshot shows the Polygon configuration dialog. On the left, a list of points is displayed: Fixed:0.0000;0.0000, Fixed:0.0000;2.0000, Fixed:1.0000;1.0000, Fixed:1.0000;0.0000, and Fixed:0.0000;0.0000. To the right of the list are five buttons: a red plus sign (Add), a black X (Remove), a blue left arrow (Update), a blue up arrow (Move Up), and a blue down arrow (Move Down). Further right, the Parameter Type is set to Variable, and there are two dropdown menus for X and Y.

The screenshot shows the Polygon configuration dialog. At the top, the Drawing Object is set to Polygon. The Name field contains DRAWING OBJECT. The Output Position is set to Fixed Value, and the Parameter Type is also set to Fixed Value. Below this, the X and Y coordinates are entered as 2.875 and 0.4063 respectively. In the lower section, the Points list contains: Fixed:0.0000;0.0000, Fixed:0.0000;2.0000, Fixed:1.0000;1.0000, Fixed:1.0000;0.0000, and Fixed:0.0000;0.0000. The Parameter Type is set to Fixed Value, and the X and Y coordinates are entered as 0 and 0 respectively.

For the **Points** of the polygon, enter the **X** and **Y** offset values. Enter the values and click the Add or Update (left facing arrow) button until all points are listed.

In this example, the first point is (0, 0). From there, the polygon goes to (0, 2) and so on until back at (0,0) the last point to close the polygon.



Rectangle

Rectangle is a rectangle with a set size and height.

The rectangle can be created using a **Parameter Type** of Fixed Value, Variable, or Field. If Variable or field are selected, the values to create the rectangle will become dropdowns to select the variable/field that contains each value.

Parameter Type: Variable

Width:

Height

☒ Rounded Corners

% Rounded:

10

Drawing Object: Rect

Output Position: Parameter Type: Fixed Value

Name: DRAWING OBJECT

X0.7709

Y0.4898

Parameter Type: Fixed Value

Width:2

Height:1

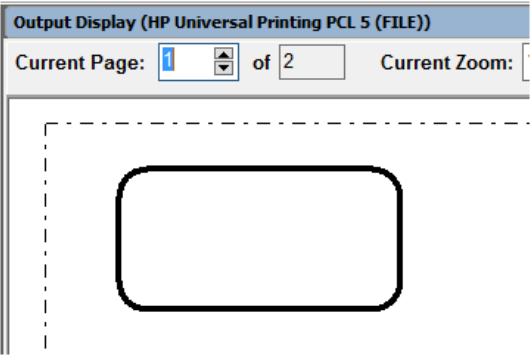
☒ Rounded Corners

% Rounded:

40

Enter the **Width** and **Height** of the Rectangle in inches.

For rounded corners on the rectangle check the **Rounded Corners** box. If Rounded Corners is checked, the percent for **% Rounded** will determine how rounded the corners will be on the output of the rectangle.



Special Drawings

The Ellipsis button next to the Drawing Object dropdown in the Drawing Object command allows the user to easily access some additional Special Drawing objects.

The Special Drawing Objects available are Box, Circle, Vertical Line, Horizontal Line, and Diagonal Line.

Box

The Box is a Polygon defined with Height and Width. This is a simple way of creating a rectangle.

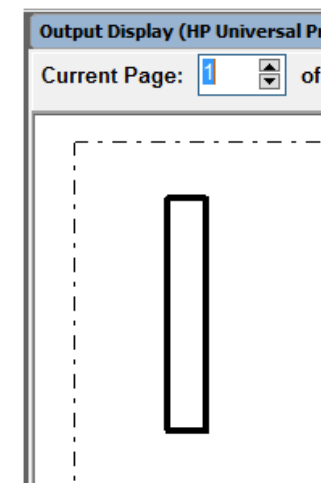
Enter the Height and Width of the box and click Ok.

This will then fill in the polygon points automatically.

The screenshot shows the 'Drawing Object' dialog box. The 'Drawing Object' dropdown is set to 'Polygon'. The 'Name' field contains 'DRAWING OBJECT'. The 'Output Position' section shows 'X' as 0.8542 and 'Y' as 0.5315. The 'Parameter Type' is set to 'Fixed Value'. Below this, the 'Points' section lists five fixed coordinates: (0.0000;0.0000), (0.0000;1.5000), (0.2500;1.5000), (0.2500;0.0000), and (0.0000;0.0000). To the right of the points list are five directional arrow buttons (up, down, left, right, and a crosshair). The 'Parameter Type' for the points is also set to 'Fixed Value', and the 'X' and 'Y' coordinates for the points are both set to 0.

The screenshot shows the 'Special Drawing Objects' dialog box. The 'Object' dropdown is set to 'Box'. The 'Height' field is set to 1.5 and the 'Width' field is set to 0.25. The 'OK' button is highlighted with a green checkmark, and the 'Cancel' button is highlighted with a red X.

Make any other edits to the command for color, position, etc. and click Ok. The box will then be displayed on the output.



Circle

The Circle has a defined radius. This is a simplified version of creating a circle using the arc drawing.

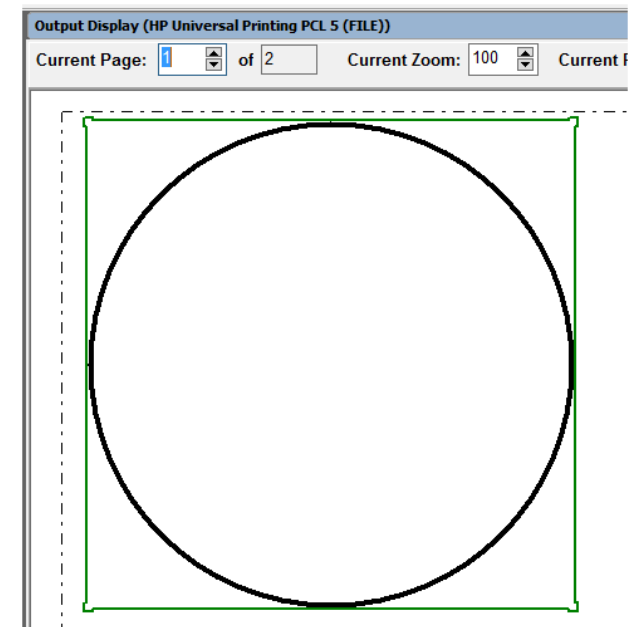
Enter the radius for the circle.

This will then fill in the arc parameter values automatically.

Drawing Object:	Arc	...	Output Position:	Parameter Type:	Fixed Value
Name:	DRAWING OBJECT				
	X	2.49		Y	2.271
Parameter Type: Fixed Value					
Center X:	0				
Center Y:	0				
Size X:	2				
Size Y:	2				
Start Deg:	0				
End Deg:	360				

Special Drawing Objects		OK	Cancel
Object:	Circle		
Radius:	2.0		

Make any other edits to the command for color, position, etc. and click Ok. The circle will then be displayed on the output.



Vertical Line

Vertical Line is a line with only a defined height.

Enter the Height (length) for the line.

This will then fill in the polygon values automatically with one of the points being (0, 0).

Drawing Object: Polygon

Name: DRAWING OBJECT

Output Position:

Parameter Type: Fixed Value

X2.49

Y2.271

Points:

Fixed:0.0000;0.0000

Fixed:0.0000;1.0000

Parameter Type: Fixed Value

X0

Y0

Special Drawing Objects

Object: Vertical Line

OKCancel

Height: 1. 0

Make any other edits to the command for color, position, etc. and click Ok. The line will then be displayed on the output.

Output Display (HP Universal Printing PCL 5 (FILE))

Current Page: 1 of 2

Current Zoom:

Horizontal Line

Horizontal Line is a line with only a defined width.

Enter the Width (length) for the line.

This will then fill in the polygon values automatically with one of the points being (0, 0).

Drawing Object: Polygon

Name: DRAWING OBJECT

Output Position: X 1.334 Y 0.7502

Parameter Type: Fixed Value

Points: Fixed:0.0000;0.0000 Fixed:1.0000;0.0000

Parameter Type: Fixed Value

X 0 Y 0

Special Drawing Objects

Object: Horizontal Line

OK Cancel

Width: 1. 0

Make any other edits to the command for color, position, etc. and click Ok. The line will then be displayed on the output.

Output Display (HP Universal Printing PCL 5 (FILE))

Current Page: 1 of 2

Current Zoo

Diagonal Line

Diagonal Line is a line with a defined height, width, and direction.

Enter the Height and Width of the line.

The Direction can be from Top left to Bottom Right or Bottom Left to Top Right.

This will then fill in the polygon values automatically with one of the points being (0, 0).

Drawing Object: Polygon

Output Position: Parameter Type: Fixed Value

Name: DRAWING OBJECT

Points:
Fixed:0.0000;0.0000
Fixed:0.5000;1.5000

X1.355

Y0.6356

Parameter Type: Fixed Value

X0

Y0

Special Drawing Objects

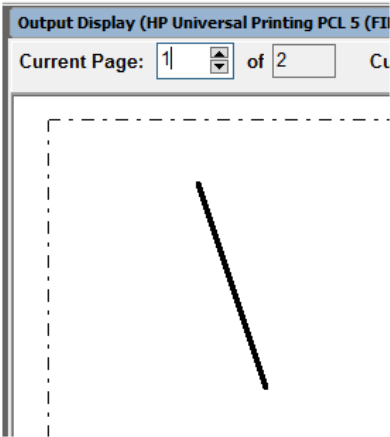
Object: Diagonal Line

Height: 1.5

Width: 0.5

Direction: Top Left to Bottom Right

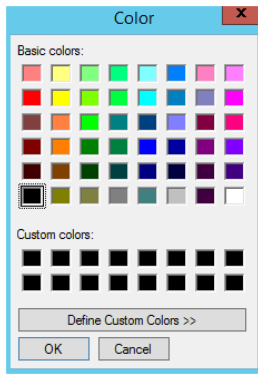
Make any other edits to the command for color, position, etc. and click Ok. The line will then be displayed on the output.



Once the shape dimensions have been created, the color can be customized.

The **Fill** refers to the color inside the boundaries of the drawing object. The **Line** refers to the border or outline of the drawing object.

Both the Fill and Line color can be changed and are done in the same manner. The **Fill Color** and **Line Color** can be a Fixed Value, Variable, or Field. If using a Fixed Value, click on the Color Rectangle to select the color. This will display a color selection window. Select the color and click OK. This will change the Color Rectangle to the color selected.



If Variable or field are selected as the **Param Type**, the color value will become a dropdown to select the variable/field that contains the color value.

Fill		Line		Size in 1/100th:
Solid	▼	Solid	▼	5
Fill Color:	Param Type: Fixed Value ▼	Line Color:	Param Type: Fixed Value ▼	
				
Use on Print (Non Uluro NativePDF) ☒ Use on Print (Uluro NativePDF) ☒ Use on Web ☒ HTML Link: ...				

Fill		Line		Size in 1/100th:
Solid	▼	Solid	▼	5
Fill Color:	Param Type: Variable ▼	Line Color:	Param Type: Field ▼	
				

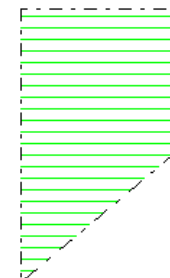
The **Fill** dropdown options list the way the color will fill the drawing object. The **Line** dropdown options are ways the line creating the drawing object can look.

In the example below, the Fill is Horizontal, and the Line is Dash-Dot.

Settings:

Fill		Line		Size in 1/100th:
Horizontal	▼	Dash-Dot	▼	1
Fill Color:	Param Type: Fixed Value ▼	Line Color:	Param Type: Fixed Value ▼	
				

Result:



The **Size in 1/100th** determines the thickness of the line creating the drawing object. This value is in 1/100th of an inch. If the Line Style selected contains a Dot or Dash the size must be 1 to see the dots and dashes.

If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non Relay Unify NativePDF)** box.

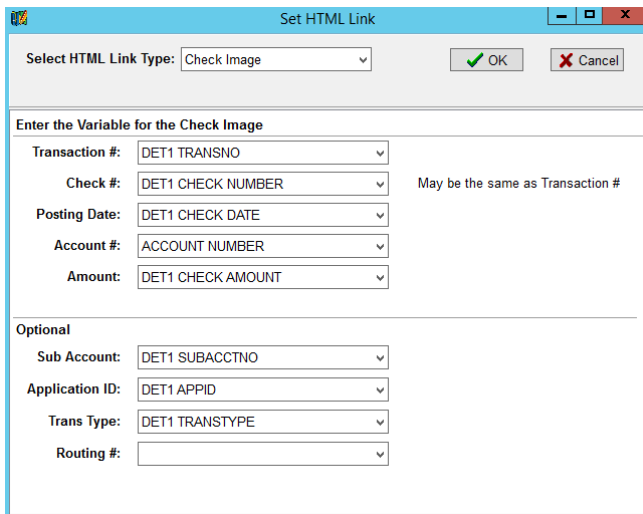
If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

HTML Links will appear on the PNG created during web viewing. When the User cursor floats over the HTML Link command the cursor will change to a hand. The user may click on the link and the action will occur. To accomplish this, an image Map file is created along with the PNG file. The image map file defines the areas on the PNG image and the action to be performed.

The Ellipsis button can be used to set up the HTML link.

User Entered URL is for simple links. Select User Entered URL for the **Select HTML Link Type**. Select HTTP:// or HTTPS:// for the **URL Type**, then enter the URL. An example would be <https://www.pitneybowes.com/us>.

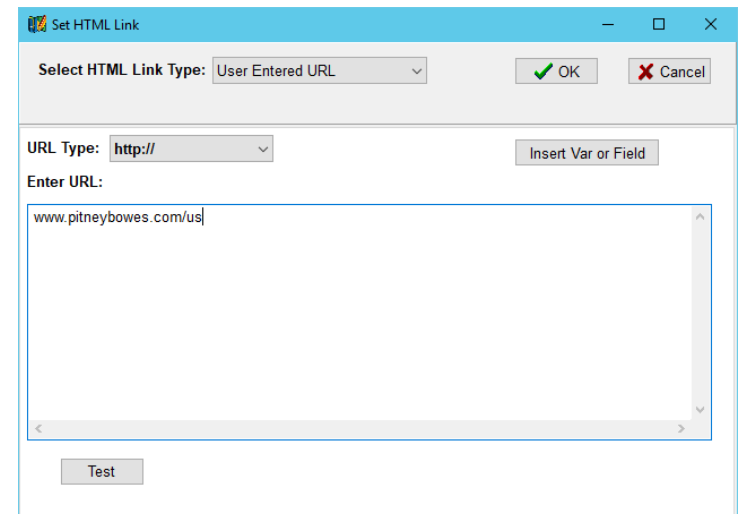


The screenshot shows the 'Set HTML Link' dialog box. The 'Select HTML Link Type' dropdown is set to 'Check Image'. Below this, there are several input fields for variables: Transaction # (DET1 TRANSNO), Check # (DET1 CHECK NUMBER), Posting Date (DET1 CHECK DATE), Account # (ACCOUNT NUMBER), and Amount (DET1 CHECK AMOUNT). A note indicates that the Check # may be the same as the Transaction #. There is also an 'Optional' section with fields for Sub Account (DET1 SUBACCTNO), Application ID (DET1 APPID), Trans Type (DET1 TRANSTYPE), and Routing #.

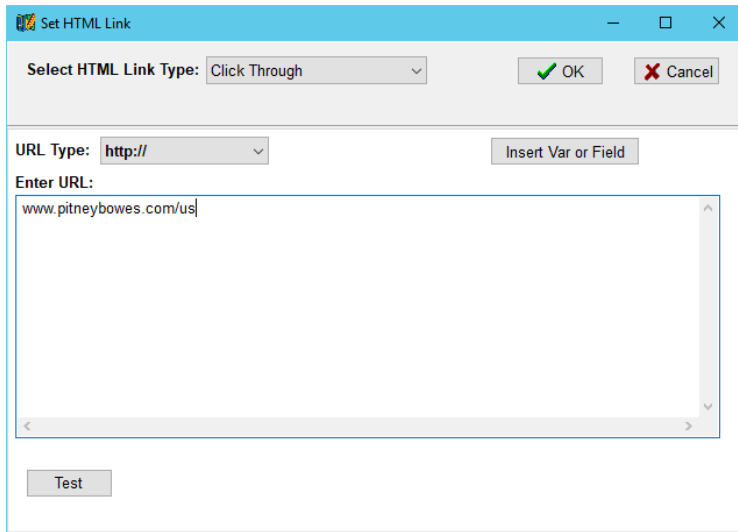
Use the **Test** button to see the result of clicking on the HTML link.

Check Image are links that will call an external system to generate check images. These links require specific information in order to call the external system. The five pieces of information at the top specify the required data. The four pieces of information at the bottom are optional depending on the external system that will generate the check images. If unsure it is always best to provide the information if possible.

The required items must be linked to a variable specified and set before the mapping is called. The optional items may be linked to a variable.



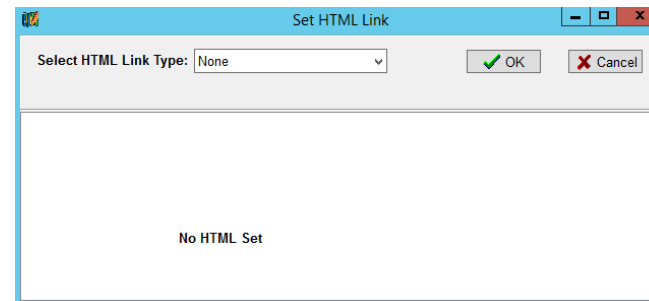
The screenshot shows the 'Set HTML Link' dialog box. The 'Select HTML Link Type' dropdown is set to 'User Entered URL'. The 'URL Type' dropdown is set to 'http://'. The 'Enter URL' text area contains the text 'www.pitneybowes.com/us'. There are 'OK', 'Cancel', and 'Test' buttons.



Click Through are also simple links with the exception that Relay Unify will track who and when the web user clicks on the link. Select HTTP:// or HTTPS:// and enter the URL. An example would be <https://www.pitneybowes.com/us>

The test click through is not tracked.

The default setting for HTML Link is None. This means no HTML link has been set up.



Once any of the drawing objects have been created and are on the output, they can easily be moved to change the position by using the cursor. The dimensions can be adjusted by drawing on the green outline or corner to adjust all dimensions at once.

Graph Object

The Graph Object command allows the user to create a graph(s) to represent data.

The command can be accessed in 3 ways. The 1st is to click Graph Object from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select Graph Object. The 3rd is to right-click on the Output and select Graph Object under the Main options from the Pop-up menu. The advantage of using the last method is the graph will default to the selected location.

Once the command is created it can be edited to change the parameters.

The **Name** can be edited to provide a more descriptive name for the command. This name will be part of the name for the command in the Map Commands window.

The width and height define the command's overall width and height in inches. The **Width** and **Height** values specify the dimensions of the graph on the output. These can be edited here or using the cursor once the command is on the output. To use the cursor, select one of the dimensions or the corner to change both simultaneously.

Width Height

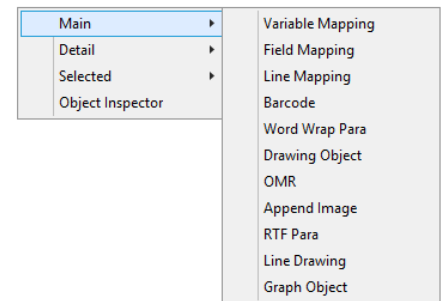
Param Type: Fixed Value

3.2708

Width Height

Param Type: Fixed Value

1.4792



Graph Object Maintenance

Name:

Output Position: Parameter Type: Fixed Value

X 0

Y 0

HTML Link:

Use on Print (Non Uluro NativePDF) ☒
Use on Print (Uluro NativePDF) ☒
Use on Web (PDF or PNG) ☒

Graphs:

General Effects Legend Walls Axis

Chart Title: Font ☒ Transparent

☐ Shadow ☒

☐ Border ☒

Line Style ☒ ☐ ☐ ☐

Size 1 Round 0

The Width and Height can be entered using a Fixed value or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the values will become dropdowns to select the variable/field that contains the width/height value.

A screenshot of a dialog box with two tabs: 'Width' and 'Height'. The 'Param Type' dropdown is set to 'Field'. Below the dropdown is a text input field.

A screenshot of a dialog box with two tabs: 'Width' and 'Height'. The 'Param Type' dropdown is set to 'Variable'. Below the dropdown is a text input field.

The **Output Position** X and Y specify the starting location in inches. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window or was dragged there, the X and Y values will be populated automatically with the values from where the cursor was located, or the command is currently located.

The Position can be entered using a Fixed Value for X and Y, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X and Y values will become dropdowns to select the variable/field that contains the X/Y value.

A screenshot of a dialog box titled 'Output Position'. It has a 'Parameter Type' dropdown set to 'Variable'. Below it are two dropdowns for 'X' and 'Y'.

If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

HTML Links will appear on the PNG created during web viewing. When the User cursor floats over the HTML Link command the cursor will change to a hand. The user may click on the link and the action will occur. To accomplish this, an image Map file is created along with the PNG file. The image map file defines the areas on the PNG image and the action to be performed.

The Ellipsis button can be used to set up the HTML link.

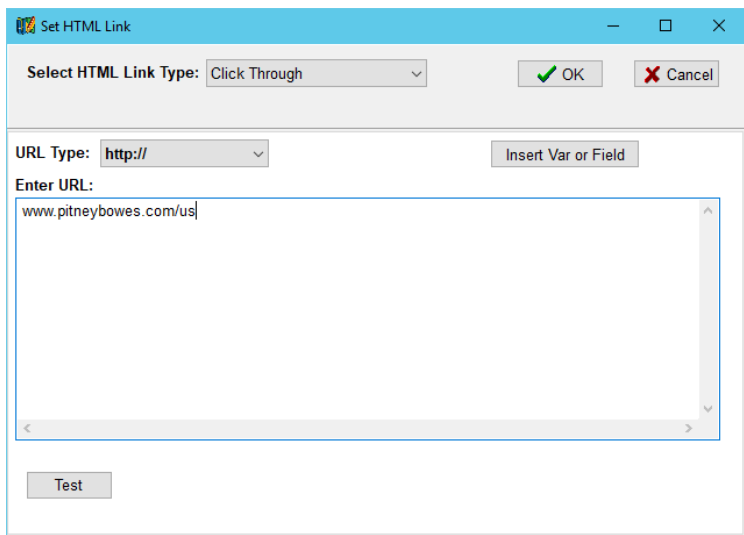
User Entered URL is for simple links. Select User Entered URL for the **Select HTML Link Type**. Select HTTP:// or HTTPS:// for the **URL Type**, then enter the URL. An example would be <https://www.pitneybowes.com/us>.

Use the **Test** button to see the result of clicking on the HTML link.

A screenshot of a dialog box titled 'Set HTML Link'. It has a 'Select HTML Link Type' dropdown set to 'User Entered URL'. There are 'OK' and 'Cancel' buttons. Below is a 'URL Type' dropdown set to 'http://'. There is an 'Insert Var or Field' button. Below that is a text input field for 'Enter URL:' containing 'www.pitneybowes.com/us'. At the bottom is a 'Test' button.

Check Image are links that will call an external system to generate check images. These links require specific information in order to call the external system. The five pieces of information at the top specify the required data. The four pieces of information at the bottom are optional depending on the external system that will generate the check images. If unsure it is always best to provide the information if possible.

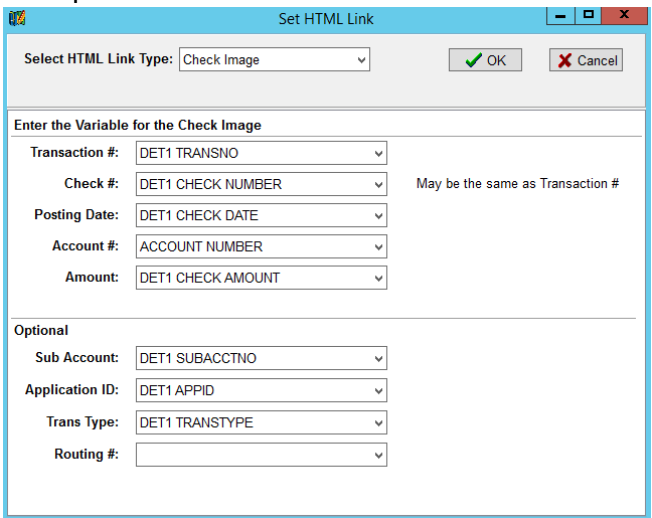
The required items must be linked to a variable specified and set before the mapping is called. The optional items may be linked to a variable.



The 'Set HTML Link' dialog box is shown with 'Click Through' selected in the 'Select HTML Link Type' dropdown. The 'URL Type' is set to 'http://'. The 'Enter URL' text area contains 'www.pitneybowes.com/us'. There are 'OK', 'Cancel', and 'Test' buttons.

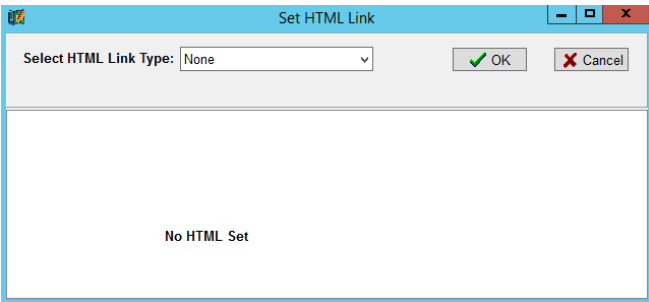
Click Through are also simple links with the exception that Relay Unify will track who and when the web user clicks on the link. Select HTTP:// or HTTPS:// and enter the URL. An example would be <https://www.pitneybowes.com/us>

The test click through is not tracked.



The 'Set HTML Link' dialog box is shown with 'Check Image' selected in the 'Select HTML Link Type' dropdown. The 'Enter the Variable for the Check Image' section contains five required fields: 'Transaction #' (DET1 TRANSNO), 'Check #' (DET1 CHECK NUMBER), 'Posting Date' (DET1 CHECK DATE), 'Account #' (ACCOUNT NUMBER), and 'Amount' (DET1 CHECK AMOUNT). There is also an 'Optional' section with 'Sub Account' (DET1 SUBACCTNO), 'Application ID' (DET1 APPID), 'Trans Type' (DET1 TRANSTYPE), and 'Routing #'. There are 'OK' and 'Cancel' buttons.

The default setting for HTML Link is None. This means no HTML link has been set up.



The 'Set HTML Link' dialog box is shown with 'None' selected in the 'Select HTML Link Type' dropdown. The main area is empty, and the text 'No HTML Set' is displayed at the bottom. There are 'OK' and 'Cancel' buttons.

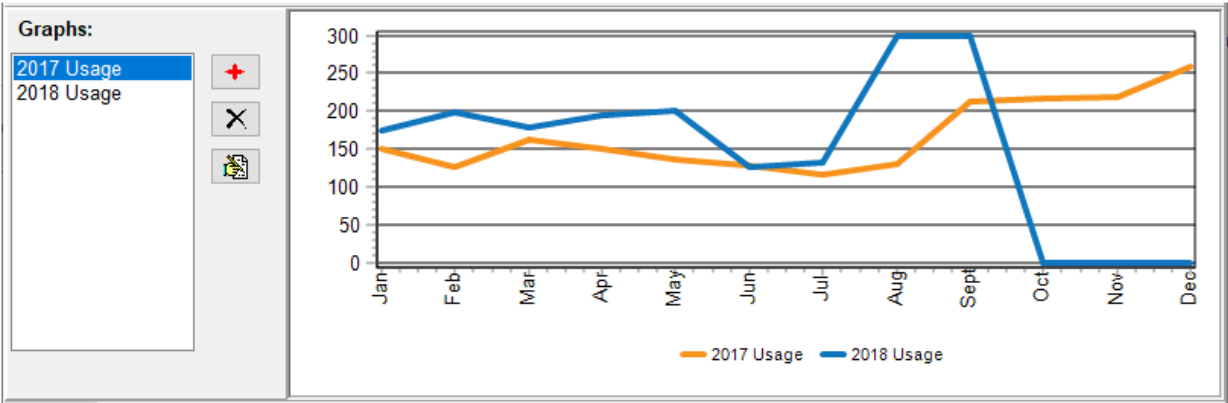
The Graphs section on the command is for defining the graphs. Each Graph Object can contain one or more individual graphs. This can allow a history graph and current graph to be displayed on top of each other.

The Graphs in the Graph Object will be listed on the left and previewed on the right. Click on a graph in the list then the Edit or Delete button to edit or delete the graph. Additional graphs can be added by clicking the Add button.

To begin, click the Add button. This will display the Graph Edit form to define or edit the graph. Clicking the edit button from the Graph Object command will also bring up the Graph Edit form.

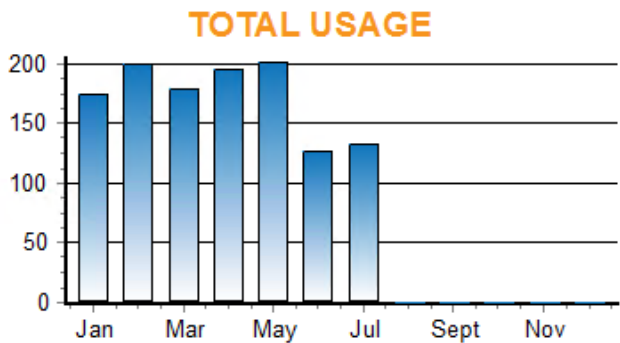
If it is a new graph that is being created, the Select Graph type form will be displayed first.

Select the desired graph type to represent the data.

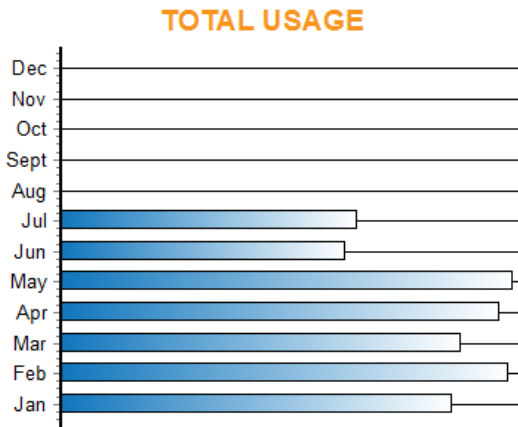


The "Select Graph Type" dialog box has a title bar with a close button (X). It contains a section titled "Graph Type" with six radio button options: "Vertical Bar" (selected), "Horizontal Bar", "Line", "Point", "Pie", and "Area". To the right of these options are two buttons: "OK" with a green checkmark icon and "Cancel" with a red X icon.

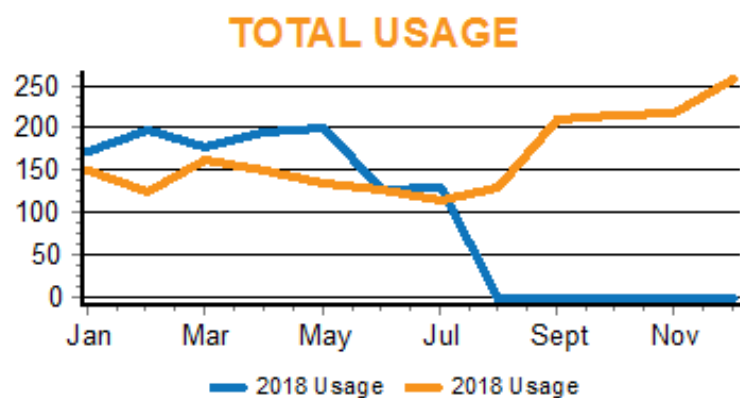
The Vertical bar graph displays data as vertical bars.



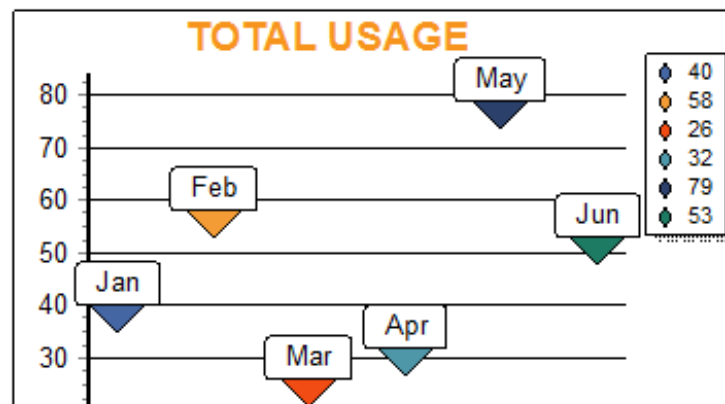
The Horizontal bar graph displays data as horizontal bars.



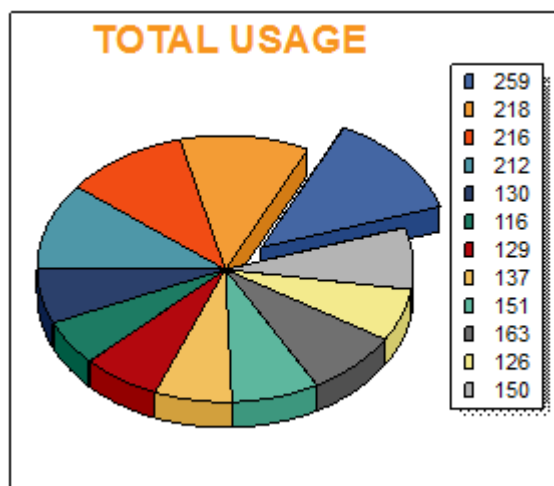
The Line graph displays data as lines.



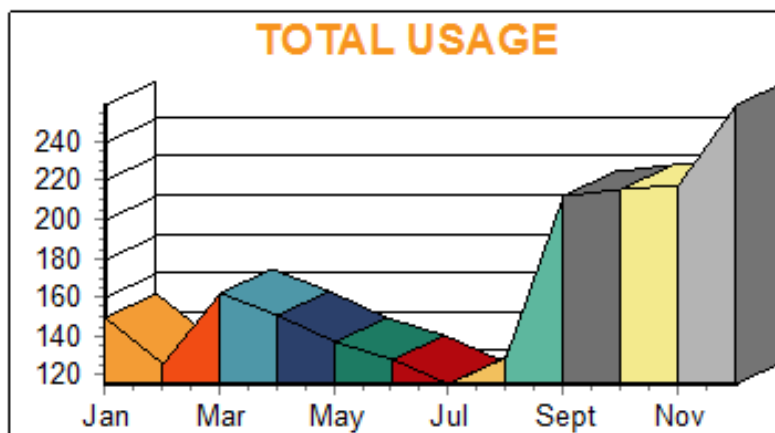
The Point graph displays data as non-connected points.



The Pie graph displays data as a pie where each slice represents the percentage of the overall amount.



The Area graph displays data as areas under a line.



All six of the Graph types will display the Graph Edit form. Initially this will be blank. The settings on each of the tabs will depend on the Graph Type previously selected.

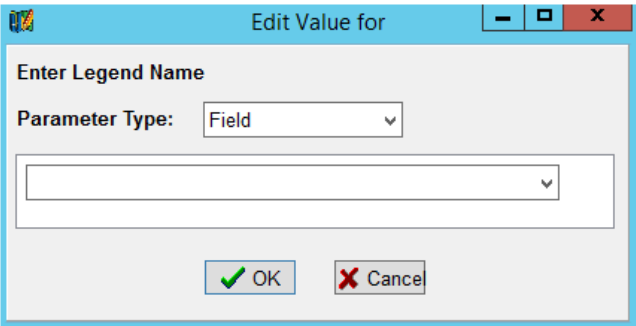
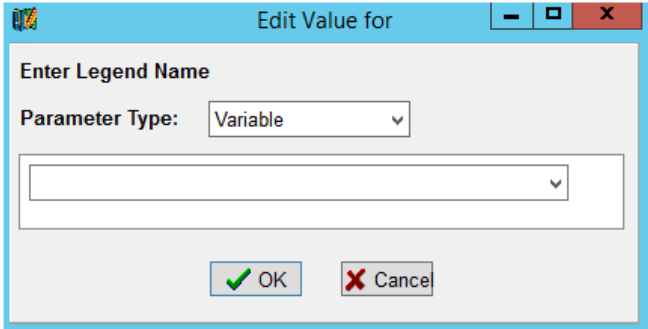
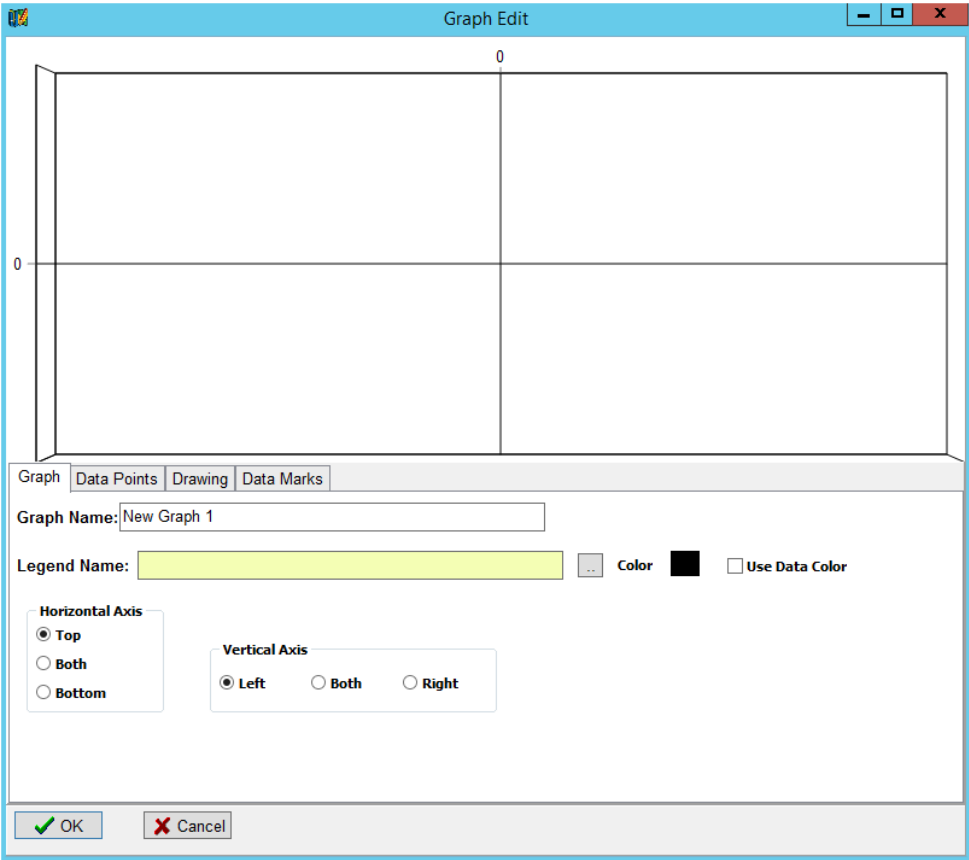
The Graph Type cannot be edited. A new graph will need to be added, and the old graph deleted.

Graph

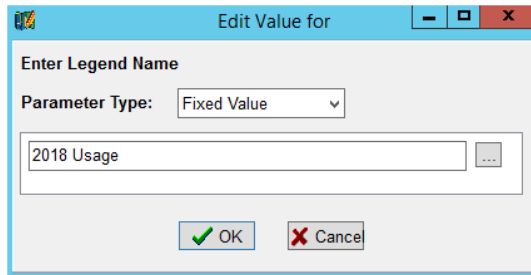
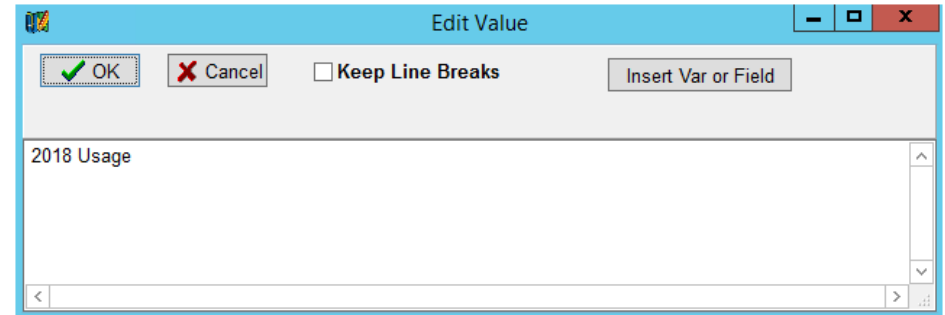
This tab allows setting general parameters for the graph.

The **Graph Name** is to differentiate each graph within the command. This name is for Display only in the List of graphs on the Graph Object Maintenance Form.

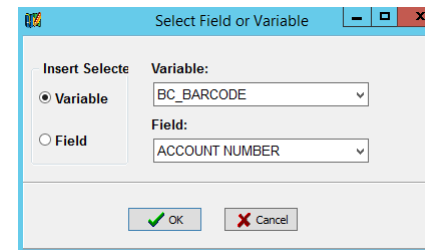
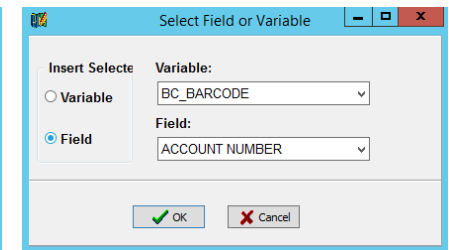
The **Legend Name** can be used to identify multiple graphs within the object, such as on a line graph. It can also be used to title the graph such as Total Usage in the example images. To edit, click the Ellipsis button to the right of the Legend Name field. This will display the Edit Value form. This allows the Value for the selected graph field to be set to either a Fixed Value, Variable, or Field. If Variable or Field are selected, a dropdown to select the variable/field will be displayed. Select the variable or field that contains the Legend Name.



If entering a Fixed Value, type in the value or click on the ellipsis button for the Edit Form.

A dialog box titled "Edit Value for" with a blue header. It contains a label "Enter Legend Name" above a text input field containing "2018 Usage". To the right of the input field is an ellipsis button "...". Above the input field is a "Parameter Type:" label with a dropdown menu set to "Fixed Value". At the bottom are "OK" and "Cancel" buttons.A dialog box titled "Edit Value" with a blue header. It has "OK", "Cancel", and "Keep Line Breaks" checkboxes at the top. Below is a large text area containing "2018 Usage". At the bottom right is an "Insert Var or Field" button.

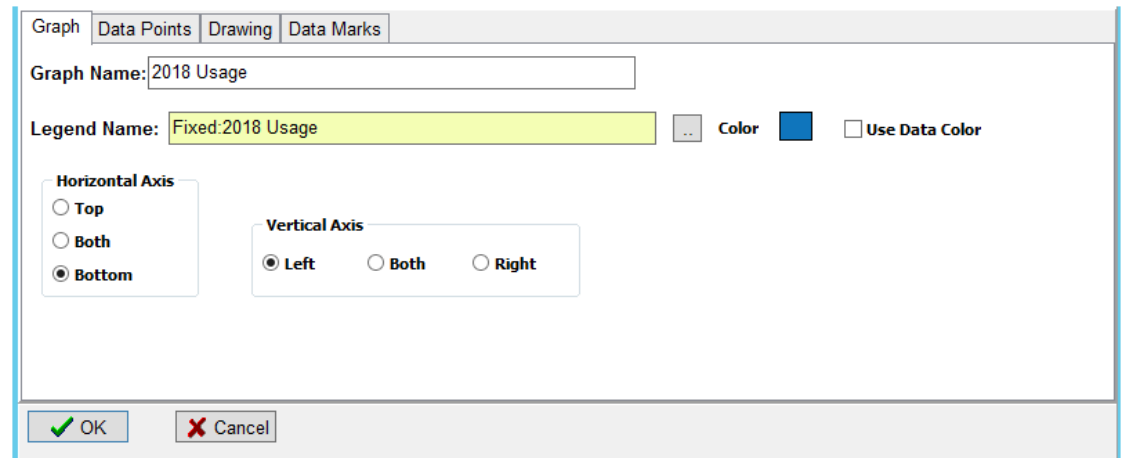
This allows text to be entered. Check the **Keep Line Breaks** check box to retain line breaks entered on this page. Leaving the box unchecked will remove any line breaks. Variable or fields can be inserted by clicking the **Insert Var or Field** button. This will display the Select Field or Variable form. Choose Variable or Field and select the desired Variable or Field using the dropdown. Then click the OK button to insert the Variable or field. Fields or Variables may be manually entered as well. They should be surrounded by `<# >`. At the Time of print the actual values will be substituted.

A dialog box titled "Select Field or Variable" with a blue header. It has "Insert Selects" with radio buttons for "Variable" (selected) and "Field". To the right are two dropdown menus: "Variable:" set to "BC_BARCODE" and "Field:" set to "ACCOUNT NUMBER". At the bottom are "OK" and "Cancel" buttons.A dialog box titled "Select Field or Variable" with a blue header. It has "Insert Selects" with radio buttons for "Variable" and "Field" (selected). To the right are two dropdown menus: "Variable:" set to "BC_BARCODE" and "Field:" set to "ACCOUNT NUMBER". At the bottom are "OK" and "Cancel" buttons.

Once the Legend Name has been filled in, it will be a Read only field highlighted in Yellow. To edit, click on the ellipsis button.

The **Color** square displays the color of the Legend Name. To change, click on the Color square. This will display the standard color selection window. Select the desired color and click ok to change. Check the **Use Data Color** checkbox to use the Color assigned to the Data (if all data points are the same color). This allows the Legend Name to be colored the same as the data.

Horizontal Axis determines where the Horizontal axis will be displayed. The Horizontal Axis will display the Values for the data. The horizontal can be displayed at the Top, Bottom or Both top and Bottom. This setting will not affect a Pie graph.

A dialog box for graph configuration with tabs: "Graph", "Data Points", "Drawing", and "Data Marks". The "Graph" tab is active. It contains a "Graph Name:" field with "2018 Usage". Below is a "Legend Name:" field with "Fixed:2018 Usage" in yellow, followed by a color square (blue) and a "Use Data Color" checkbox. At the bottom are "Horizontal Axis" and "Vertical Axis" sections with radio buttons. "Horizontal Axis" has "Top", "Both", and "Bottom" (selected). "Vertical Axis" has "Left" (selected), "Both", and "Right". At the bottom are "OK" and "Cancel" buttons.

Vertical Axis determines where the Vertical Axis will be displayed. The Vertical Axis displays the Height Values for the data. The Vertical axis can be displayed on the Left, Right or Both Left and Right sides. This setting will not affect a Pie graph.

Data Points

The Data Points tab allows entering the Data Points for the Graph.

The **Data Type** is where the values to create the graph will be coming from and can be a Fixed Value, Variable, Field, Variable List, or Field List.

The Variable List are values contained in a List of Variables. Each variable will begin with the same text and end with a number. The list is sorted by the value of the Number when creating the Graph.

The Field List are values contained in a List of Fields. Each field will begin with the same text and end with a number. The list is sorted by the value of the Number when creating the Graph.

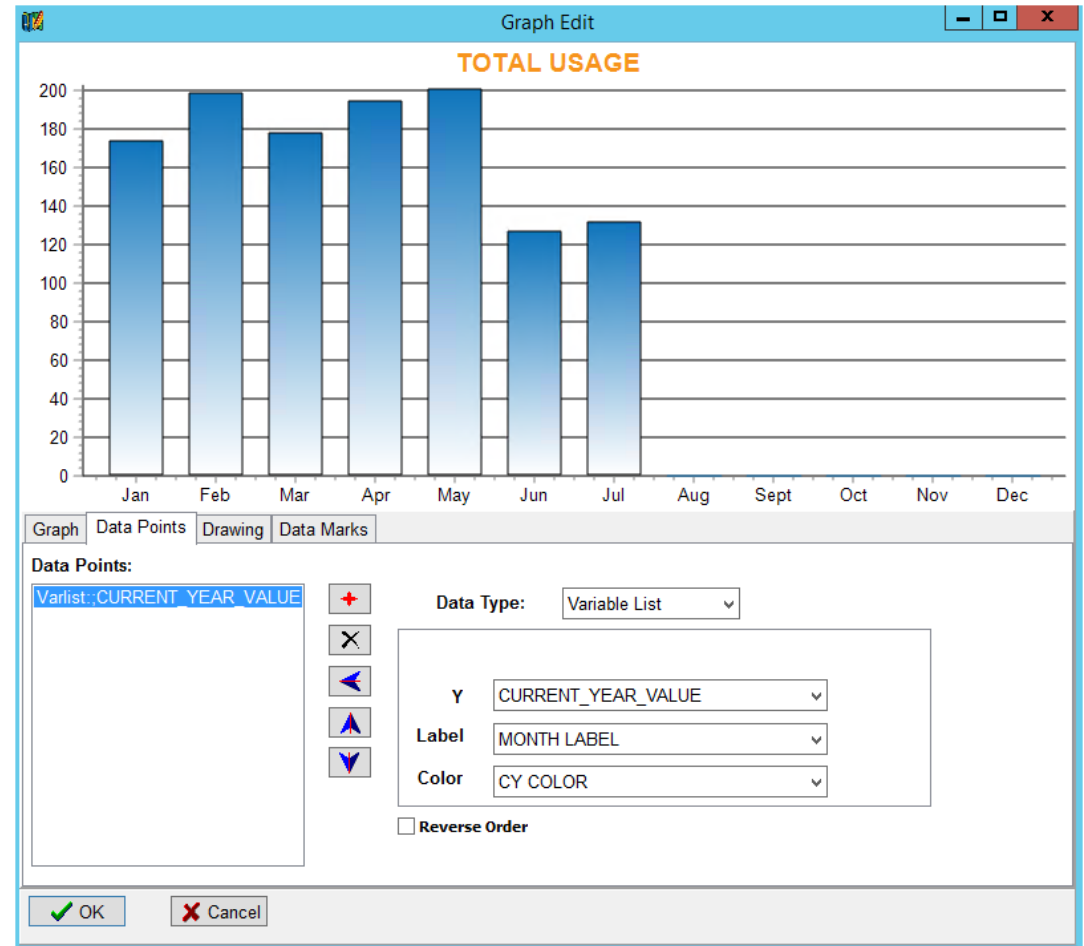
The easiest way to enter the data is to use either the Variable list or Field list. First, define the Variable or Field for each value in the Map. Make sure the name is the same with only the numeric portion different. Then select Variable List or Field list and select the List variable for each parameter.

Depending on the graph type, the parameters will vary.

The **Y** Value is the Vertical Axis value for the bar height in a Vertical Bar Graph. The Y Value is also used as the line height in a Line Graph and an Area Graph. The Y value is also used to represent the Y coordinate of a Point Graph point (X, Y).

The **X** Value is the Horizontal Axis value for the bar length in a Horizontal Line Graph. The X value is also used to represent the X coordinate of a Point Graph point (X, Y).

The **P** Value is the Pie value that will be used to calculate a percentage of the pie for that data point.



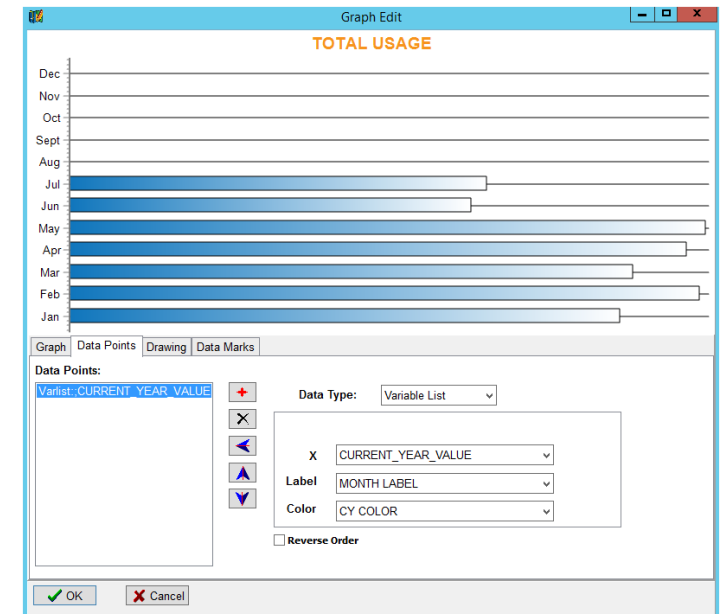
The **Label** Value is used to label the points, bars, lines, and pieces of the pie. This can be used to help label the graph in the Data Marks tab.

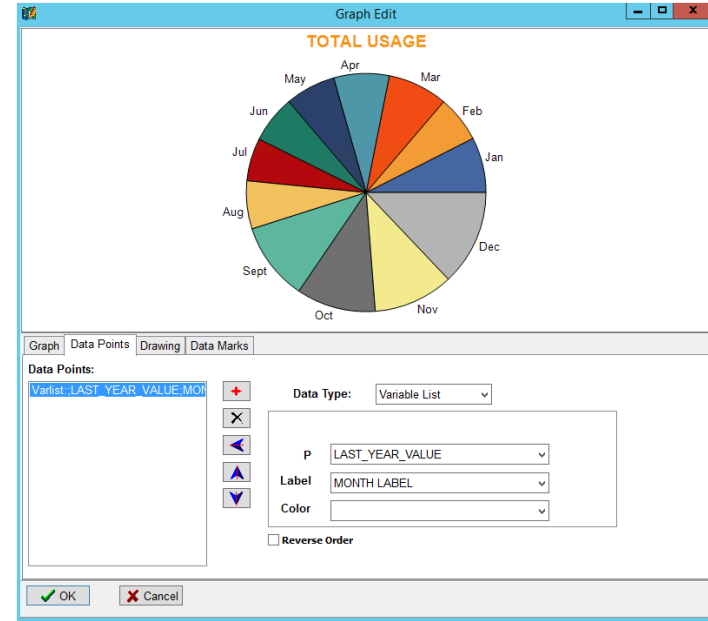
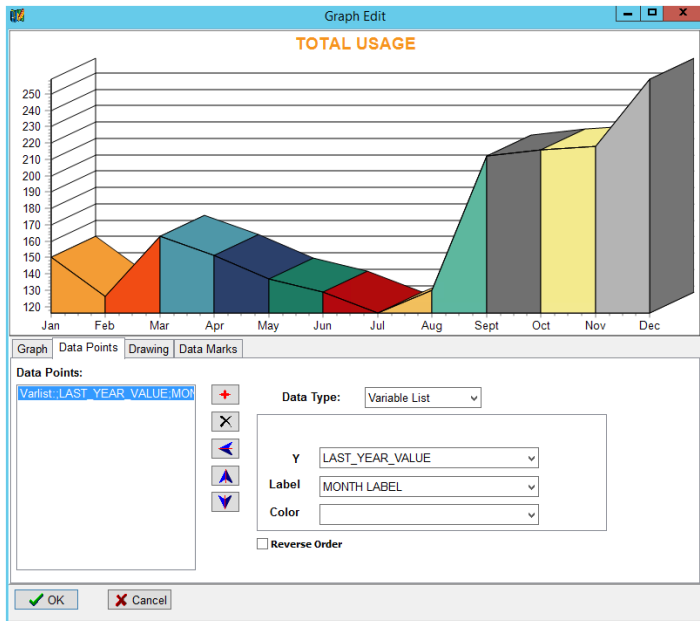
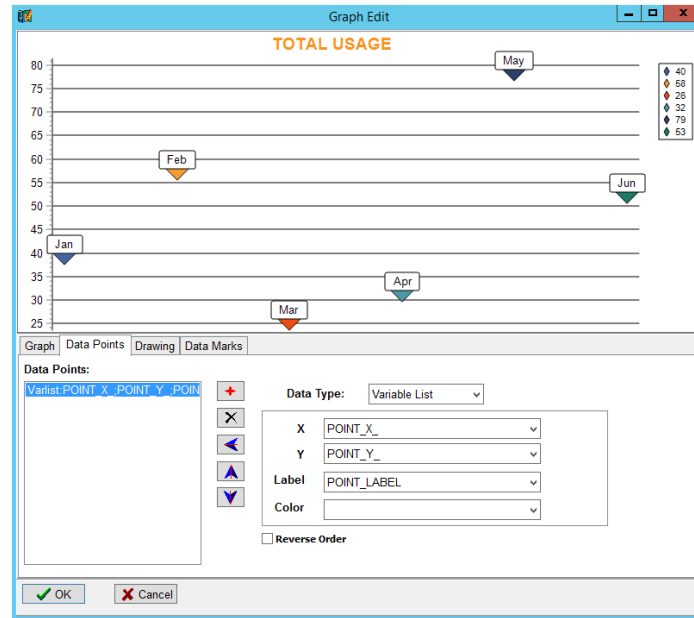
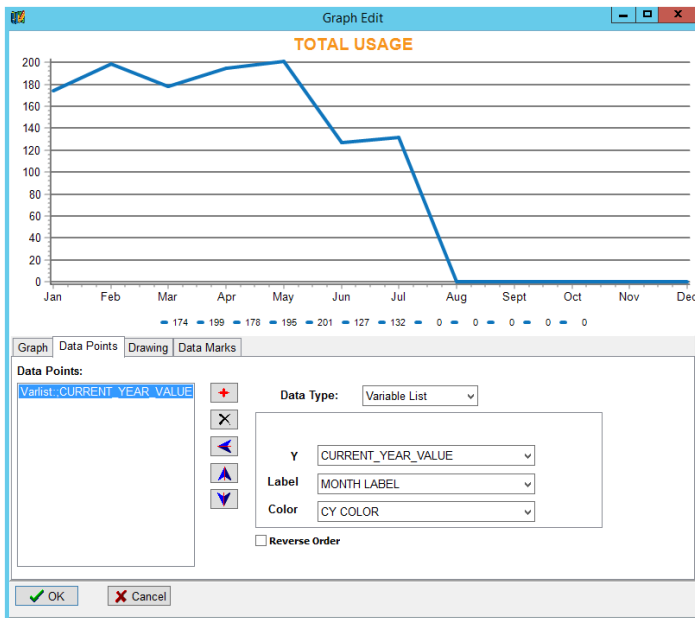
The **Color** Value is the color of the point, bar, line, or piece of the pie. If a color is not selected, then a random color will be used for the data point.

Once the data point information is entered either as a list or as an individual point, click the Add button to add it to the list of **Data Points**. If a list is used only one data point is necessary using the lists for each parameter. If the data was entered using a Fixed Value, Variable, or Field, each Data Point will need to be added individually. If Data Points are entered as individual values, the position can be modified by selecting and changing the position of the Data Point using the Move Data Point Up or Down buttons. To edit a Data Point, select it from the list, make the changes, then click on the left facing arrow to update the Data Point.

Once the data is added a preview of the Graph will be displayed.

For Variable List and Field List, the **Reverse Order** Checkbox will reverse the order of display of the Data Points. The Normal order is from lowest Numeric data point to highest data point (i.e. Current_Year_Value01, Current_Year_Value02, Current_Year_Value03, ... Current_Year_Value12). Checking Reverse Order and updating the Datapoint (click the Update button) will output using data points from highest to lowest (i.e. Current_Year_Value12, Current_Year_Value11, Current_Year_Value10, ... Current_Year_Value01).





Drawing

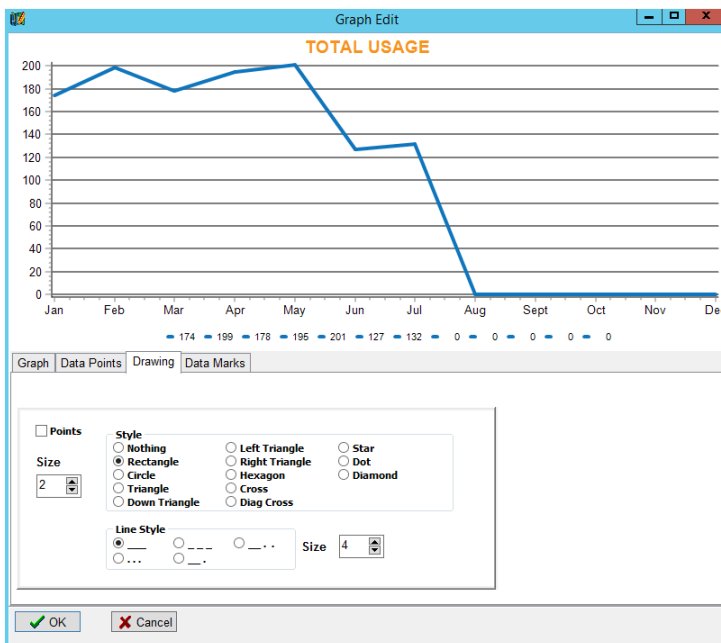
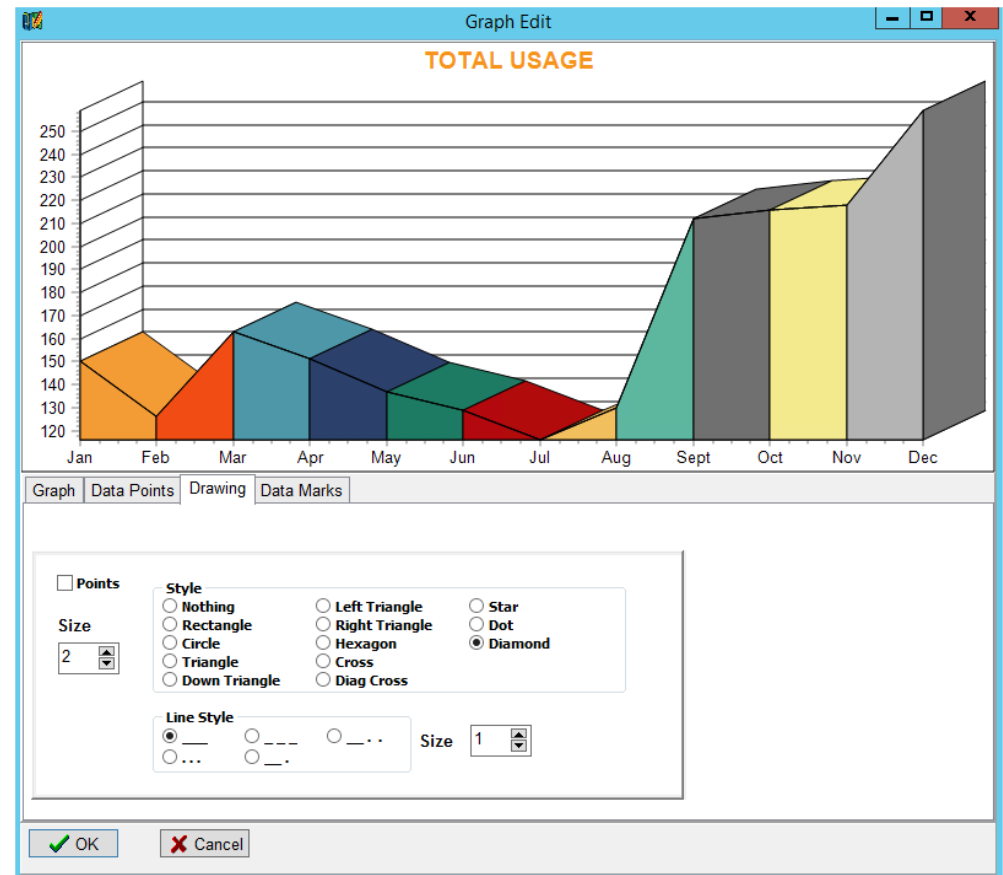
The Drawing tab allows setting the Style of the Graph. The settings on this tab will depend on the Graph Type.

As changes are made, the effects will be seen in the Graph Preview at the top of the form.

Check the **Points** checkbox to enable the Display of Data Points. The **Size** value below the Point checkbox allows the user to change the Size of the Points. Use the arrows or enter a value to adjust the size. These are available for Point, Line, and Area graphs.

The **Style** is the way the Point is displayed. Select the shape or style to be the bars or points on the graph. These settings take effect on Bar and Point graphs.

The **Line Style** changes the way the lines are drawn between the points. The **Line Size** changes the thickness of the Line. These settings are available for Line and Area graphs.

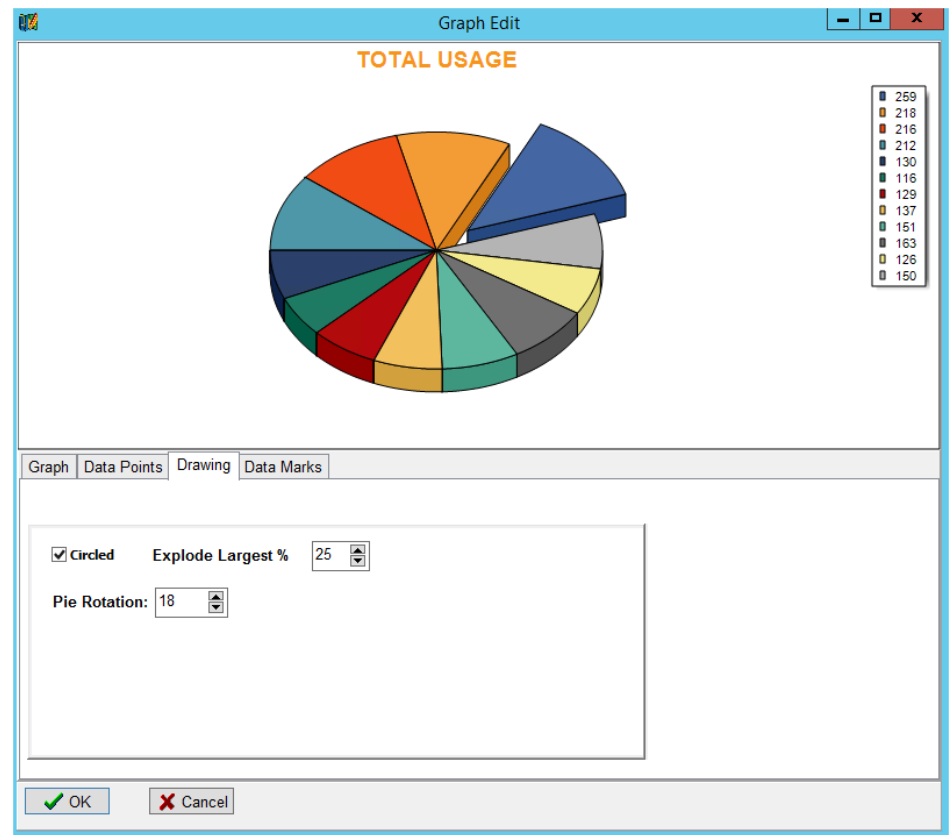
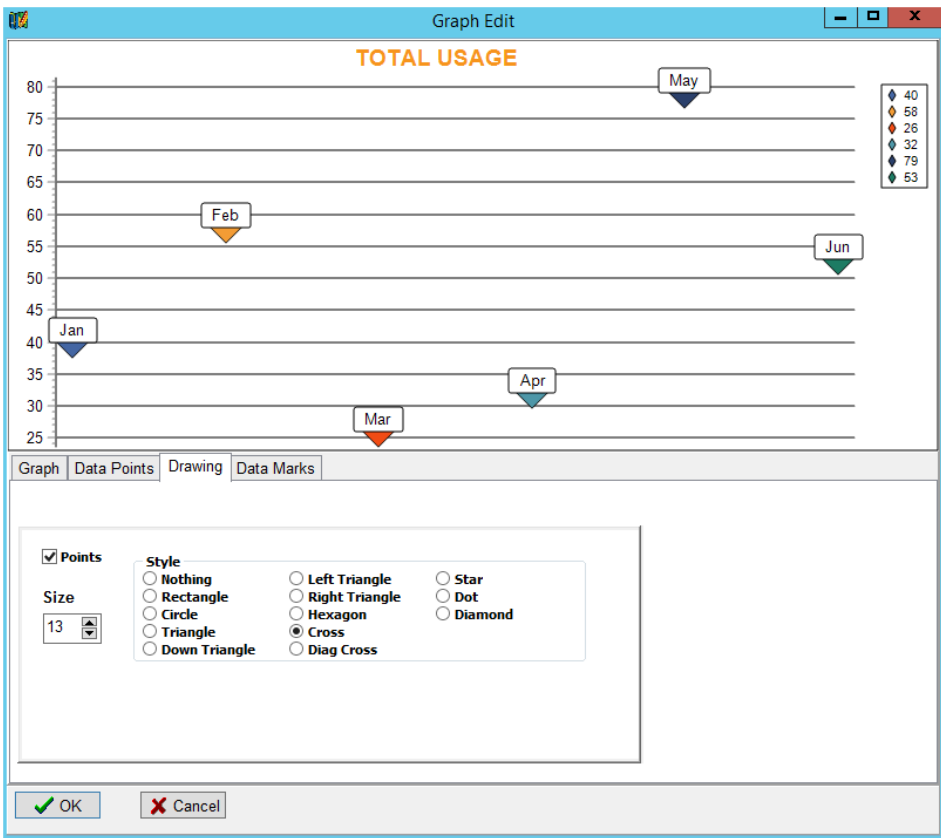


The Pie Graph has different settings on the Drawing tab.

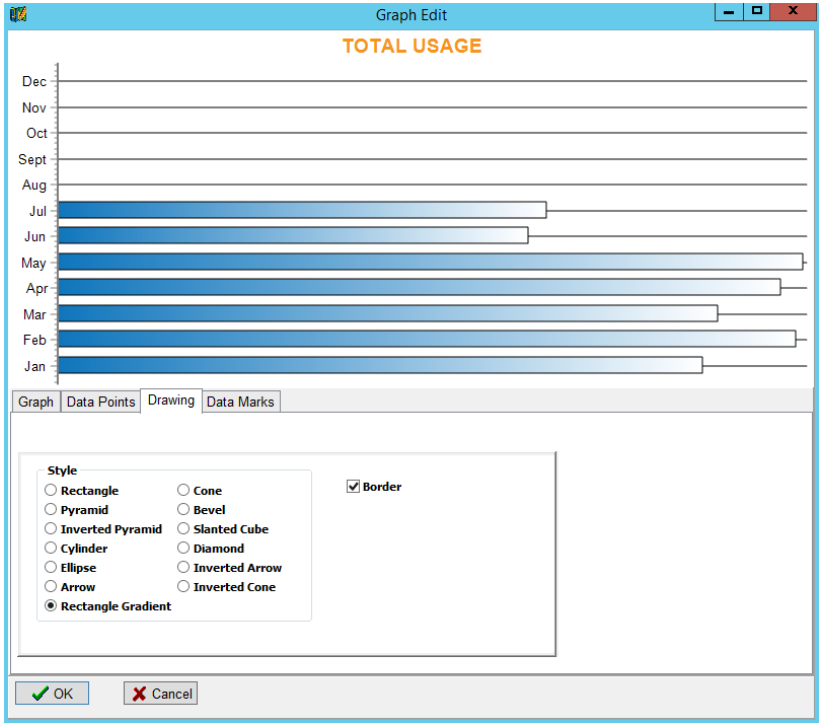
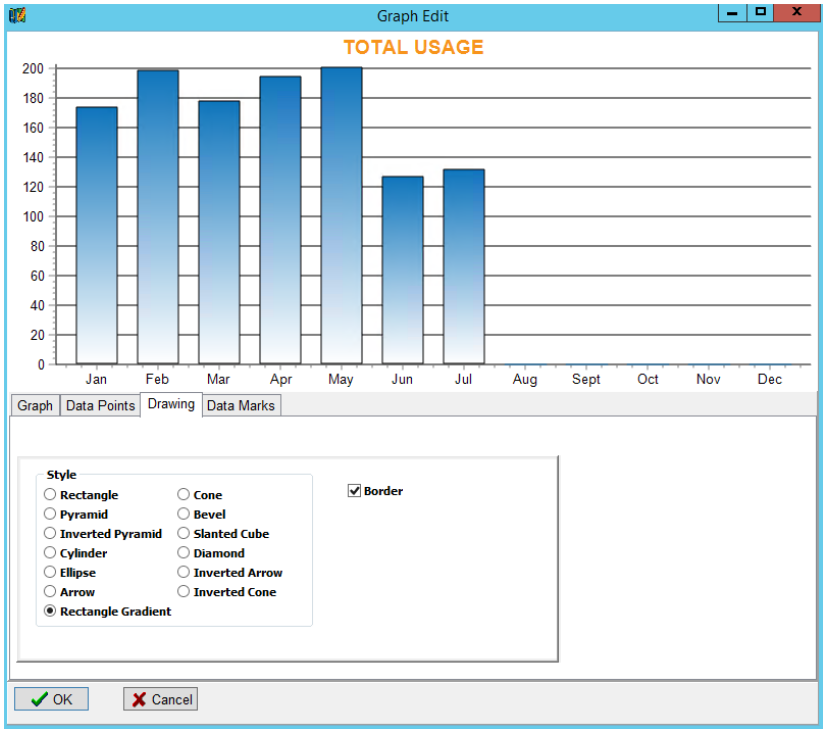
Check the **Circled** checkbox to enable the display of the Pie as a Circle. If this is unchecked, the Pie will be more oval shaped.

The **Explode Largest %** value will cause the largest pie piece to be separated from the rest of the pie. As this value gets larger, the piece will be farther from the center of the pie.

The **Pie Rotation** value will rotate the pie. The rotation is in a counterclockwise direction.



If the **Border** box is checked, there will be a border around the bars on the graph. This is available on Vertical and Horizontal Bar graphs.



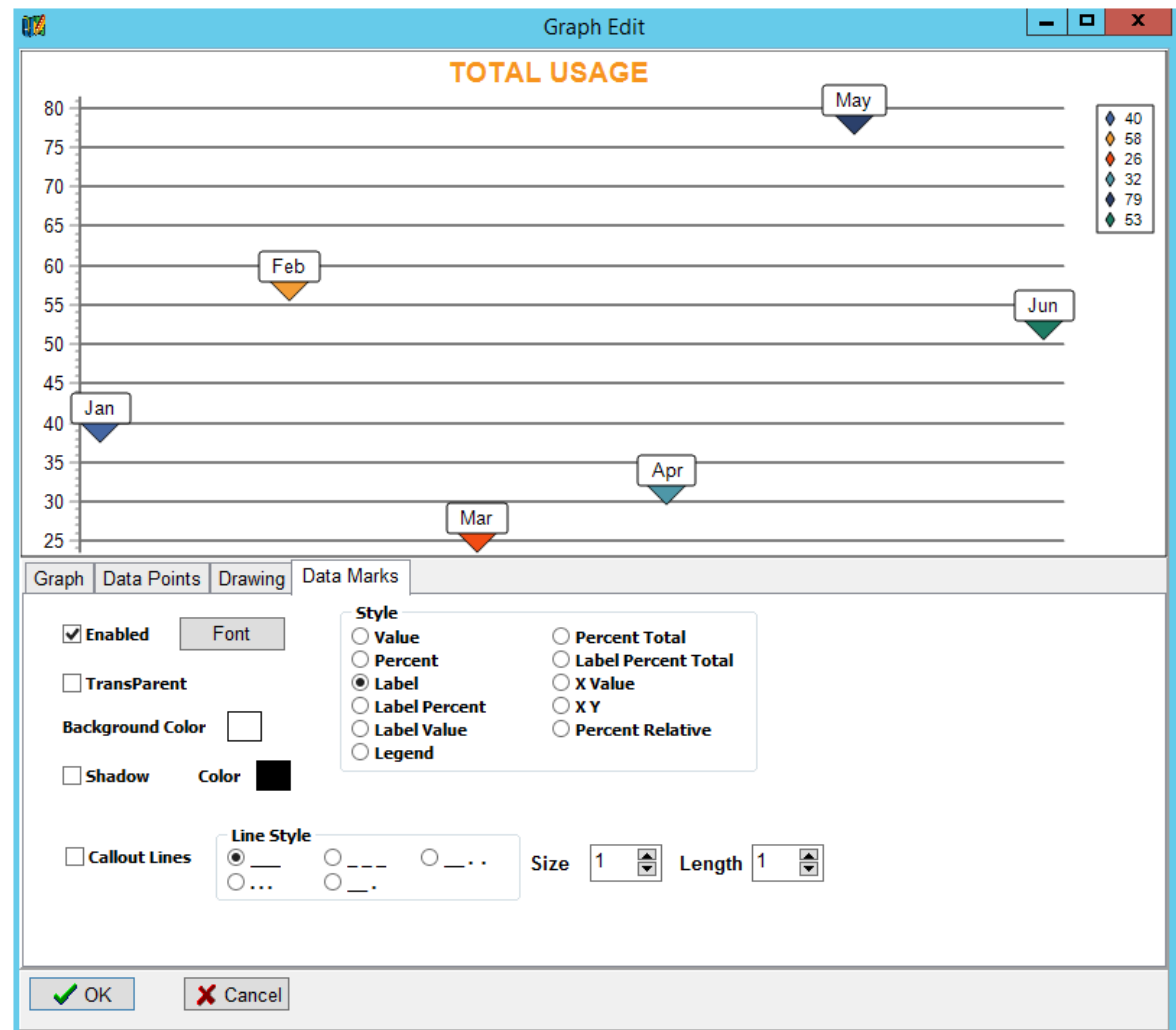
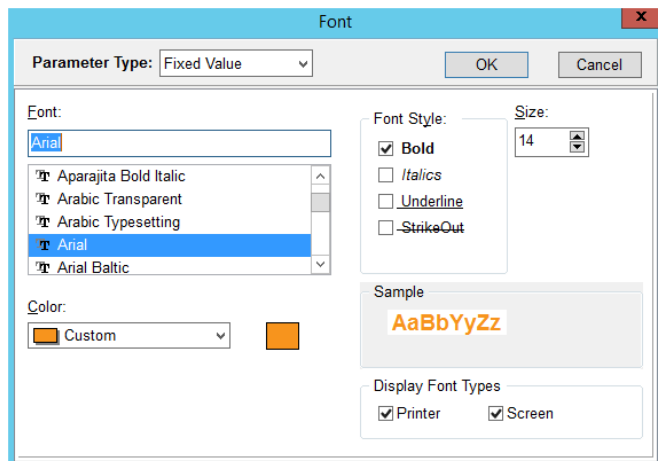
Data Marks

The Data Marks tab allows setting the Data Marks for the Graph. The settings on this tab are the same regardless of the graph type.

If **Enabled** is checked, the Data Marks will be displayed on each data point, bar, or pie. Data Marks are text labels that appear above the Bar or Point, and outside the Pie.

Click the **Font** button to set the font of the Data Marks. This will display a standard Windows font selection dialog. Select the desired Font, Style, Size and Color. The fonts must still be installed on the server/machine running Relay Unify uCompose.

For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.



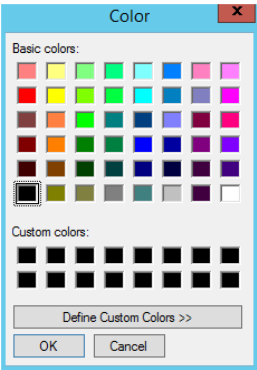
The Data Mark **Style** is the information that will be displayed on the Data Mark.

Checking the **Transparent** box will make the rectangle that contains the Data Marks transparent. Unchecked, the Data Marks will be in a Rectangle.

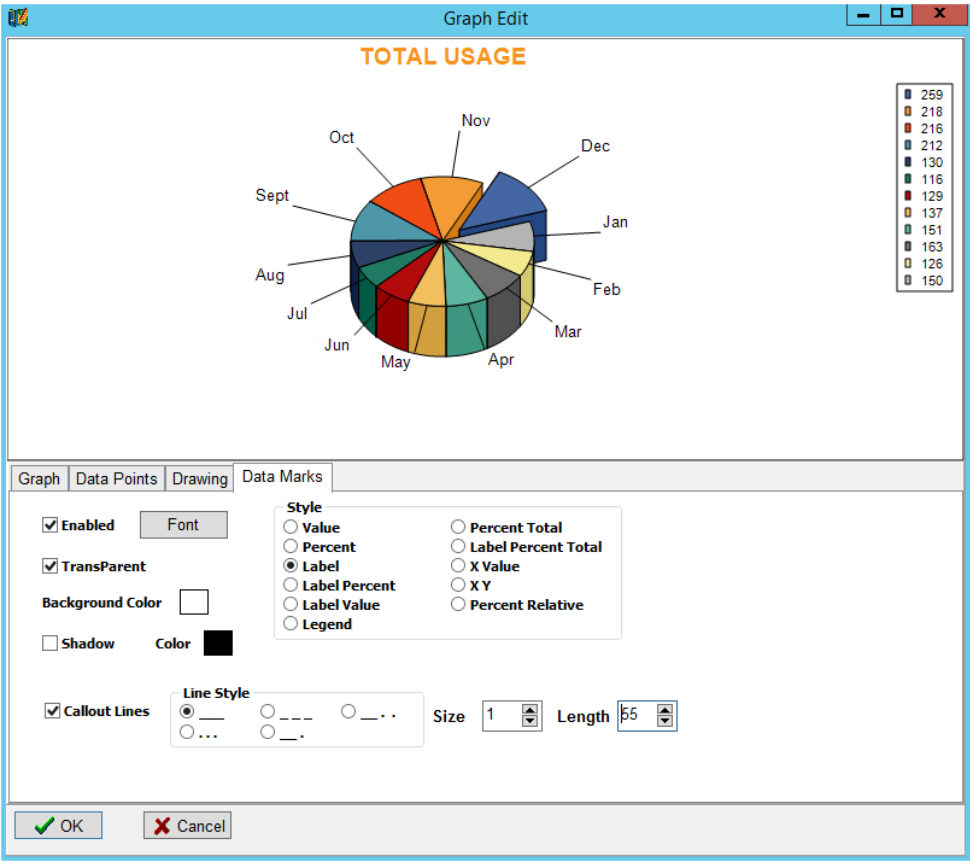
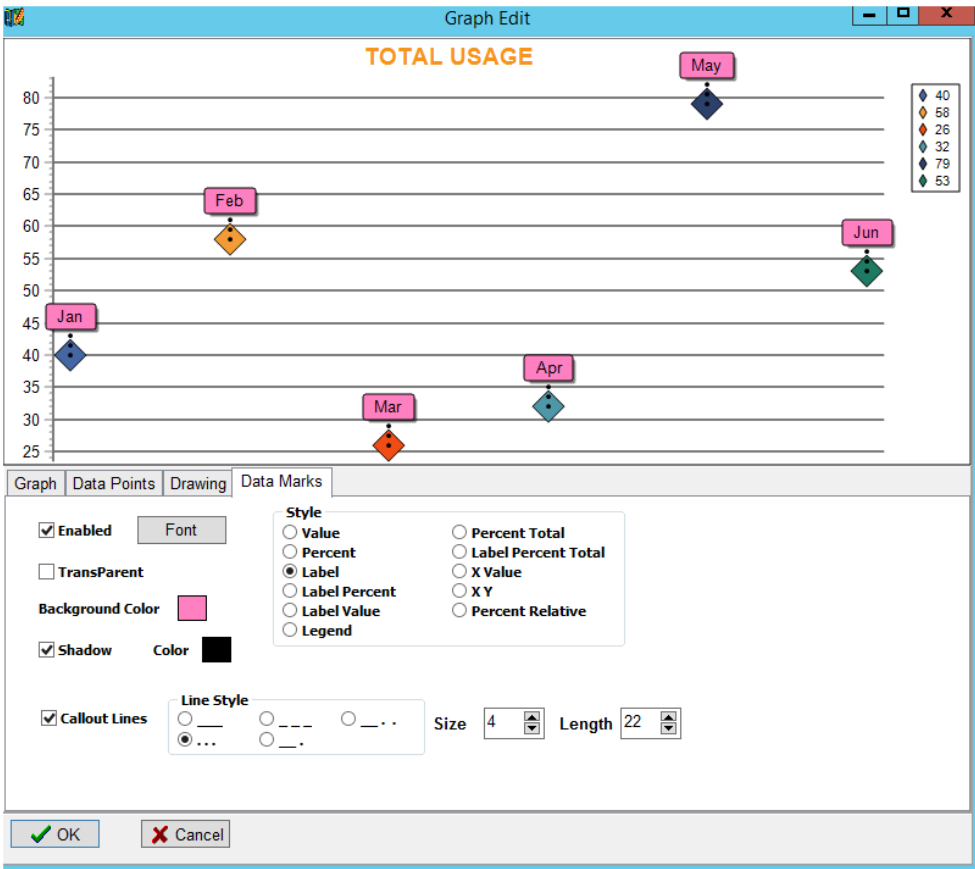
The Background Color setting only takes effect if the data marks are enabled, and the transparent box is unchecked. The **Background Color** square displays the color of the rectangle fill for the data mark. Click on the color square to display the standard color selection window to edit the color selected.

If the Data Marks are enabled and Not Transparent then a **Shadow** can be enabled around the Data Marks Rectangle by checking the Shadow checkbox. The color of the Shadow can be set by clicking on the **Color** Square.

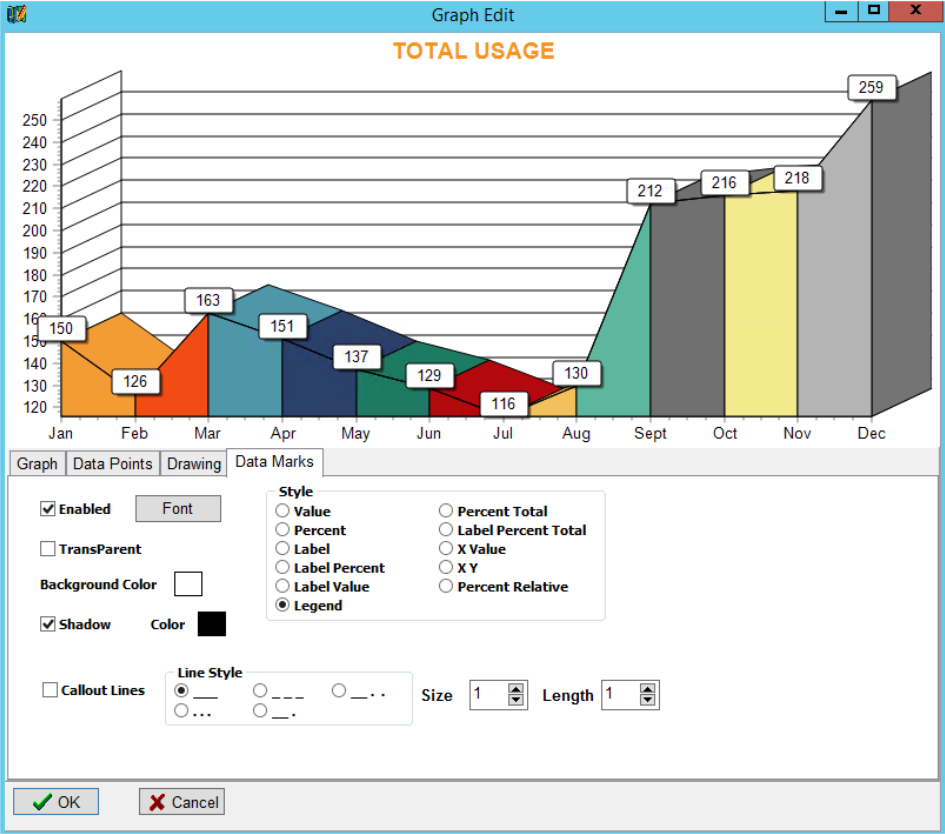
Callout Lines are lines connecting the bar, point, or pie with the Data Marks. The Callout Lines are enabled by checking the Callout Lines Checkbox. The Callout **Line Style**, Line **Size** (thickness), and Line **Length** (from the Data Point) can be set once the Callout Lines are Enabled.



Here are some examples:



When Finished with the Editing click the OK button to return to the Graph Object Maintenance Screen.



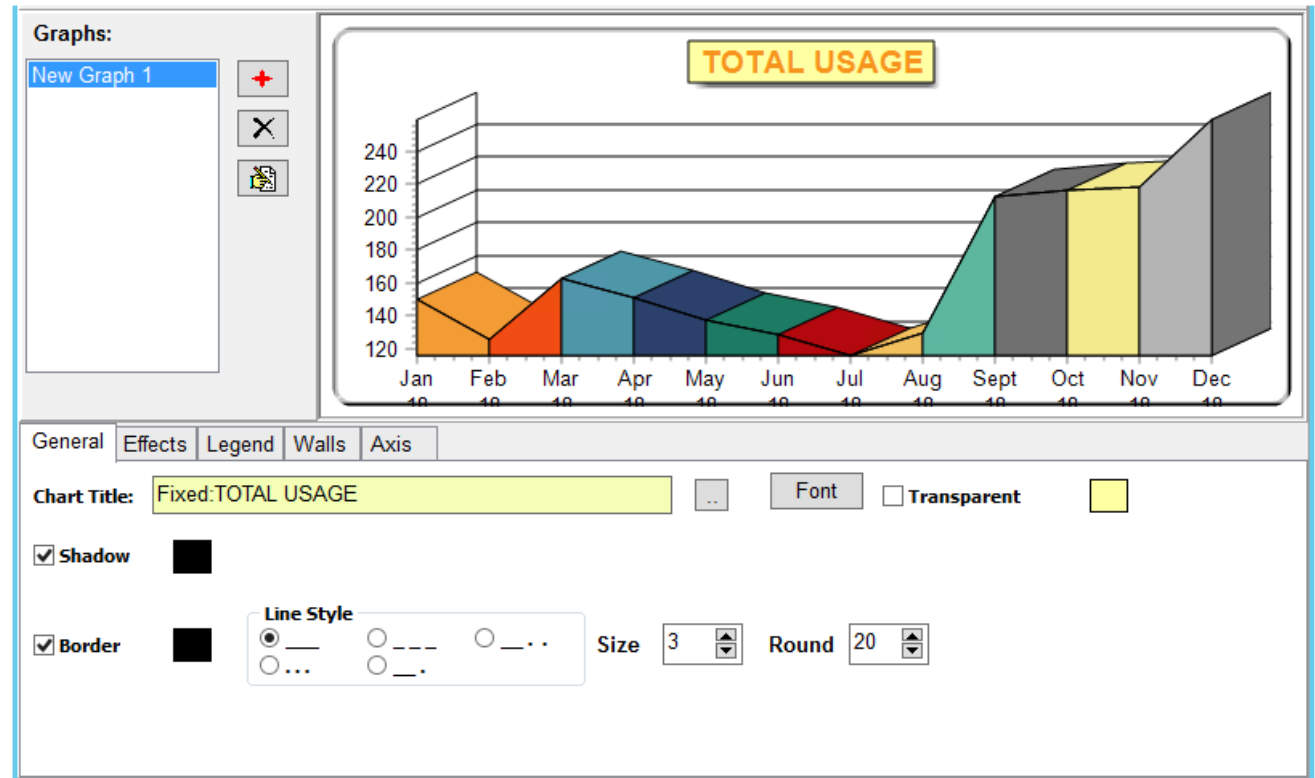
The bottom section of the command applies to all the graph types created in the command.

General

The General tab allows setting of General Graph Settings.

The **Chart Title** is the title for the graph(s) and can be set by clicking the Ellipsis next to the Chart Title field. This displays the Edit Value form. The Chart Title can be a Fixed value, Variable, or Field value. If Variable or Field are selected, a dropdown to select the variable/field will be displayed. Select the variable or field that contains the Chart Title.

Dialog box titled "Edit Value for". It contains a label "Enter Chart Title:" and a "Parameter Type:" dropdown menu set to "Variable". Below the dropdown is a text input field. At the bottom are "OK" and "Cancel" buttons.

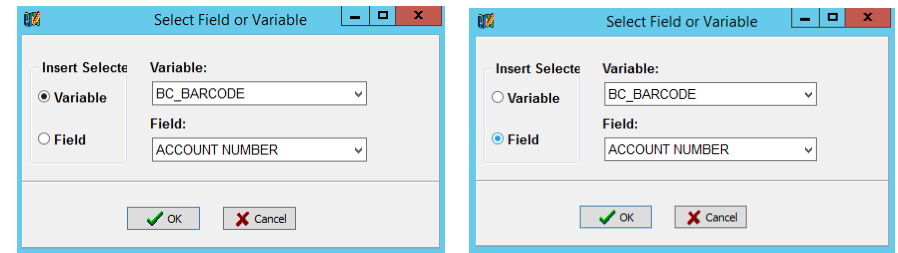


Dialog box titled "Edit Value for". It contains a label "Enter Chart Title:" and a "Parameter Type:" dropdown menu set to "Fixed Value". Below the dropdown is a text input field containing "TOTAL USAGE". At the bottom are "OK" and "Cancel" buttons.

If entering a Fixed Value, type in the value or click on the ellipsis button for the Edit Form. This allows text to be entered. Check the **Keep Line Breaks** check box to retain line breaks entered on this page. Leaving the box unchecked will remove any line breaks. Variable or fields can be inserted by clicking the **Insert Var or Field** button. This will display the Select Field or Variable form. Choose

Dialog box titled "Edit Value". It contains "OK" and "Cancel" buttons, a "Keep Line Breaks" checkbox, and an "Insert Var or Field" button. Below these is a large text area containing the text "TOTAL USAGE".

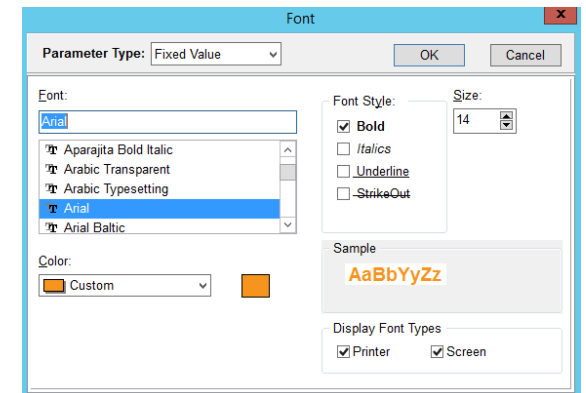
Variable or Field and select the desired Variable or Field using the dropdown. Then click the OK button to insert the Variable or field. Fields or Variables may be manually entered as well. They should be surrounded by <# >. At the Time of print the actual values will be substituted.



Once the Chart Title has been filled in, it will be a Read only field highlighted in Yellow. To edit, click on the ellipsis button.

Once the Chart Title is set, the Font of the Title can be set by clicking on the **Font** button. This displays the standard Font selection window. Select the desired Font, Style, Size and Color. The fonts must still be installed on the server/machine running Relay Unify uCompose.

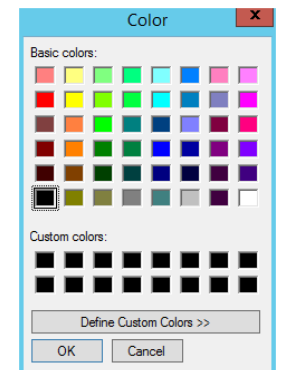
For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.



The Chart Title will be contained in a rectangle when the **Transparent** Checkbox is unchecked. If checked, the Chart Title will not be within a rectangle. With the Title set to Not Transparent, the Background color of the Chart Title Rectangle can be set by clicking on the **Color** Square to the right of the Transparent box. This will display the standard color selection window to edit the color selected.

If the Chart Title is not Transparent then the Chart Title Rectangle can have a Shadow. The **Shadow** is enabled by checking the Shadow checkbox. The **Color** of the Shadow is set by clicking on the color square next to the Shadow Checkbox. This will display the standard color selection window to edit the color selected.

A border around the Graph can be enabled by checking the **Border** Checkbox. Once enabled, the Color of the Border is set by clicking the **Color** square next to the Border checkbox. The Line **Style** for the Border can be set. The Border Line Size can be set and the Rounding of the Border. A Larger Round value will result in a more pronounced rounding.



The Border **Line Style**, Line **Size** (thickness), and Rounding can be set once the Border is enabled. The **Round** value determines how much the corners of the border are rounded. A Larger Round value will result in a more pronounced rounding.

Effects

The Effects tab allows setting special effects on the Graph, the majority of which are 3D.

If **3D** is checked the graph will appear as a 3D graphical representation. The **3d %** value sets the amount of the 3D effect.

Checking the **Orthogonal** setting will display the graph in an Orthogonal 3D mode. This presents the X axis horizontal and the Y axis vertical. The Orthogonal Angle can be adjusted using the **Ortho Angle**. This can be 0 to 180. The default is 45.

If Orthogonal is not checked, the Tilt, Rot, Elev, and Pers settings become available.

Changing **Tilt** allows the graph to be tilted clockwise around the Z- Axis (coming out of the page).

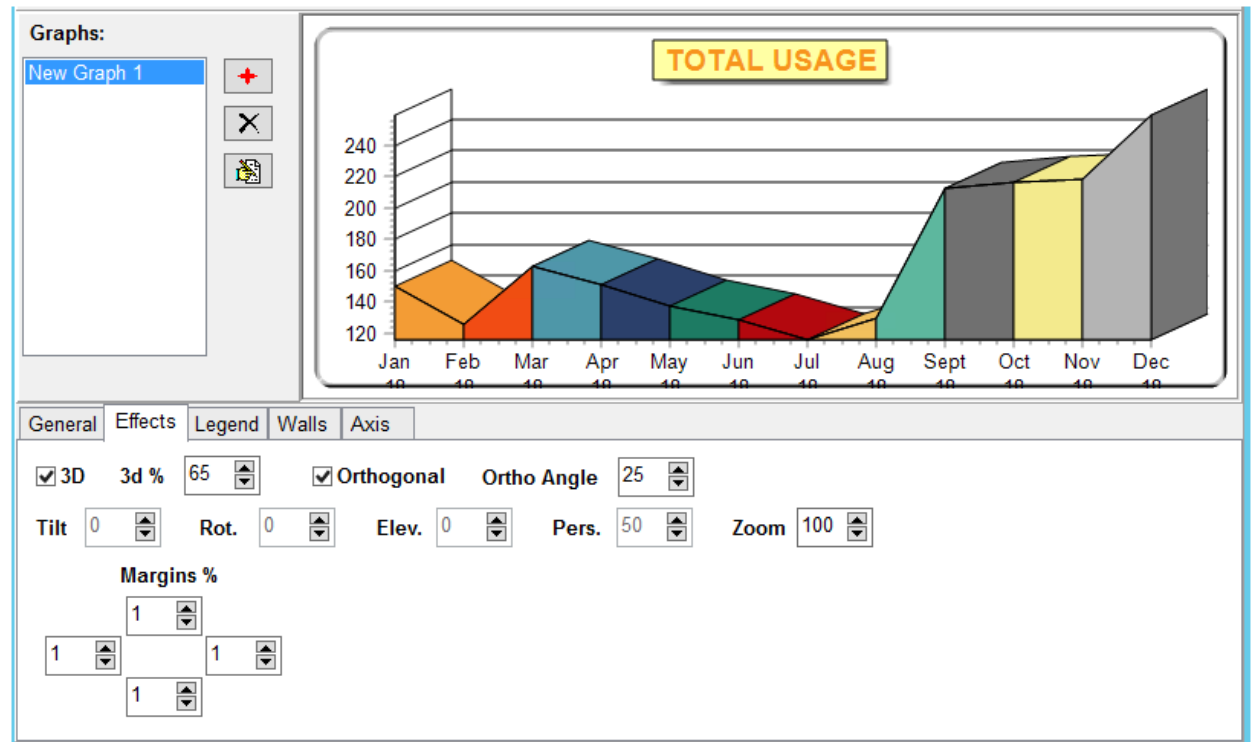
Changing **Rot** allows the graph to be rotated counterclockwise around the Y axis (from the Bottom of the page to the Top).

Changing **Elev** allows the graph to be elevated counterclockwise around the X axis (from the right side of the page to the left).

Changing **Pers** allows the graph perspective to be changed.

Changing **Zoom** allows the graph drawing point to be moved closer or further from the viewer.

The **Margins** settings change the Margin values for Top, Left, Right, and Bottom. The settings are applied within the border of the graph.

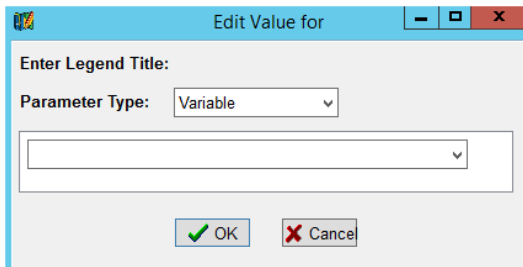


Legend

The Legend tab allows options for the Legend of the graph to be set.

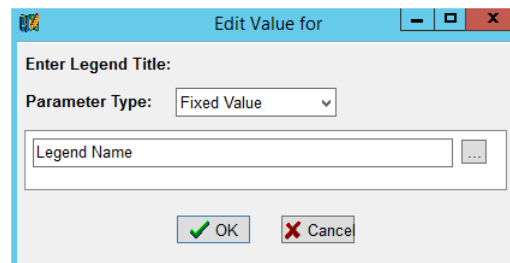
Checking the **Enabled** box will display the Legend. To hide the legend on the graph, uncheck the Enabled setting.

The Legend **Title** can be used to Name the Legend and its values. To edit, click the Ellipsis button to the right of the Legend Title field. This will display the Edit Value form. This allows the Value for the selected graph field to be set to either a Fixed Value, Variable, or Field. If Variable or Field are selected, a dropdown to select the variable/field will be displayed. Select the variable or field that contains the Legend Title.



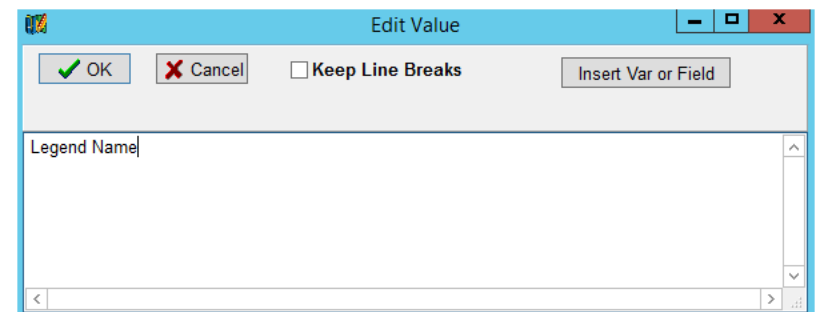
Dialog box titled "Edit Value for". It contains a label "Enter Legend Title:" and a "Parameter Type:" dropdown menu set to "Variable". Below the dropdown is a text input field. At the bottom are "OK" and "Cancel" buttons.

If entering a Fixed Value, type in the value or click on the ellipsis button for the Edit Form.

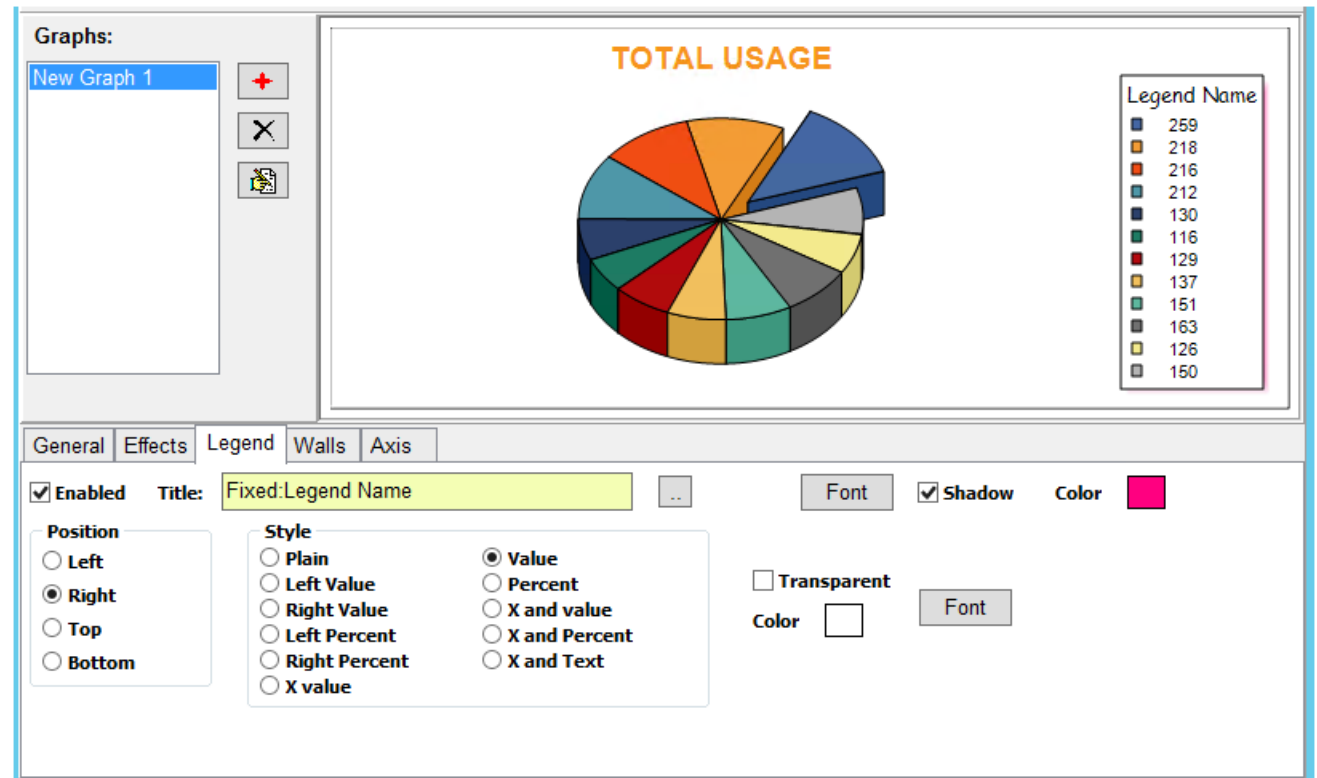


Dialog box titled "Edit Value for". It contains a label "Enter Legend Title:" and a "Parameter Type:" dropdown menu set to "Fixed Value". Below the dropdown is a text input field containing "Legend Name" and an ellipsis button. At the bottom are "OK" and "Cancel" buttons.

This allows text to be entered. Check the **Keep Line Breaks** check box to retain line breaks entered on this page. Leaving the box unchecked will remove any line breaks. Variable or fields can be inserted by clicking the **Insert Var or Field** button.



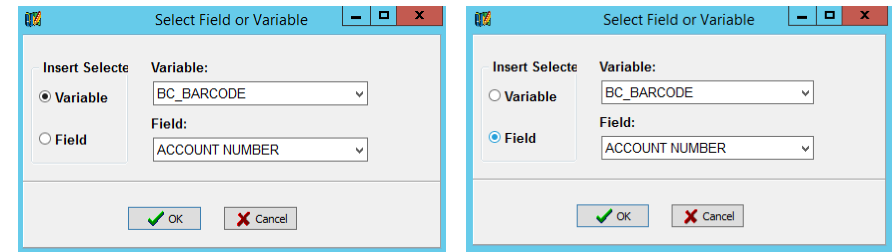
Dialog box titled "Edit Value". It contains "OK" and "Cancel" buttons, a "Keep Line Breaks" checkbox, and an "Insert Var or Field" button. Below these is a large text area containing the text "Legend Name".



The main interface shows a pie chart titled "TOTAL USAGE" with 12 segments. To the right is a legend titled "Legend Name" with 12 entries, each with a colored square and a number. Below the chart is the "Legend" tab of the settings panel. It includes a "General" tab, an "Enabled" checkbox (checked), a "Title" field with "Fixed:Legend Name" and an ellipsis button, a "Position" section with radio buttons for Left, Right (selected), Top, and Bottom, a "Style" section with radio buttons for Plain, Left Value, Right Value, Left Percent, Right Percent, X value, Value (selected), Percent, X and value, X and Percent, and X and Text, a "Font" button, a "Shadow" checkbox (checked), a "Color" button with a pink color swatch, a "Transparent" checkbox, and another "Font" button.

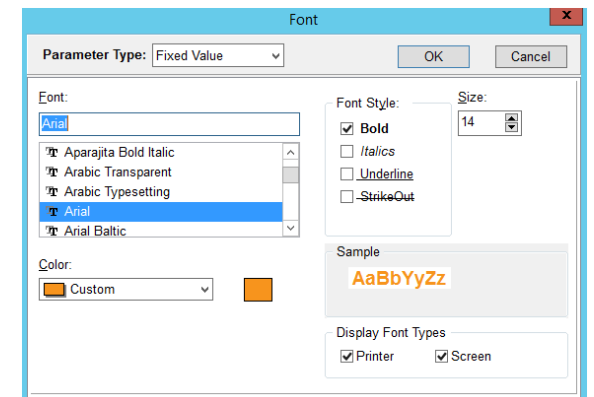
This will display the Select Field or Variable form. Choose Variable or Field and select the desired Variable or Field using the dropdown. Then click the OK button to insert the Variable or field. Fields or Variables may be manually entered as well. They should be surrounded by <# >. At the Time of print the actual values will be substituted.

Once the Legend Title has been filled in, it will be a Read only field highlighted in Yellow. To edit, click on the ellipsis button.



Once the Legend Title is set, the Font of the Title can be set by clicking on the **Font** button directly to the right of the Legend Title field. This displays the standard Font selection window. Select the desired Font, Style, Size and Color. The fonts must still be installed on the server/machine running Relay Unify uCompose.

For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.

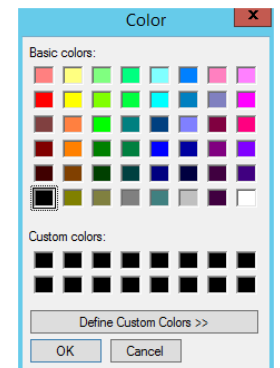


The Legend will be contained in a rectangle when the **Transparent** Checkbox is unchecked. If checked, the Chart Title will not be within a rectangle. With the Legend set to Not Transparent, the Background color of the Legend Rectangle can be set by clicking on the **Color** Square below the Transparent box. This will display the standard color selection window to edit the color selected.

If the Legend is not Transparent then the Legend Rectangle can have a Shadow. The **Shadow** is enabled by checking the Shadow checkbox. The **Color** of the Shadow is set by clicking on the color square next to the Shadow Checkbox. This will display the standard color selection window to edit the color selected.

The **Position** of the Legend can be on the left, right, top or bottom or the graph. Select the desired position of the legend.

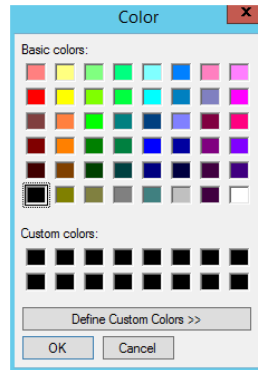
The Legend **Style** determines how the values are listed in the legend. The **Font** button by Transparent controls the Font settings for the values within the Legend.



Walls

The Walls tab allows options for the walls of the graph to be set.

On the Background tab, the **Background Color** of the graph can be changed. Click the color square to edit the color. This will display the standard color selection window to edit the color selected.



The Left, Bottom, Right, and Back Wall tabs have the same settings. They affect the Left, Bottom Right and Back walls respectively.

Checking **Visible** makes the wall visible and must be checked for the other settings to apply.

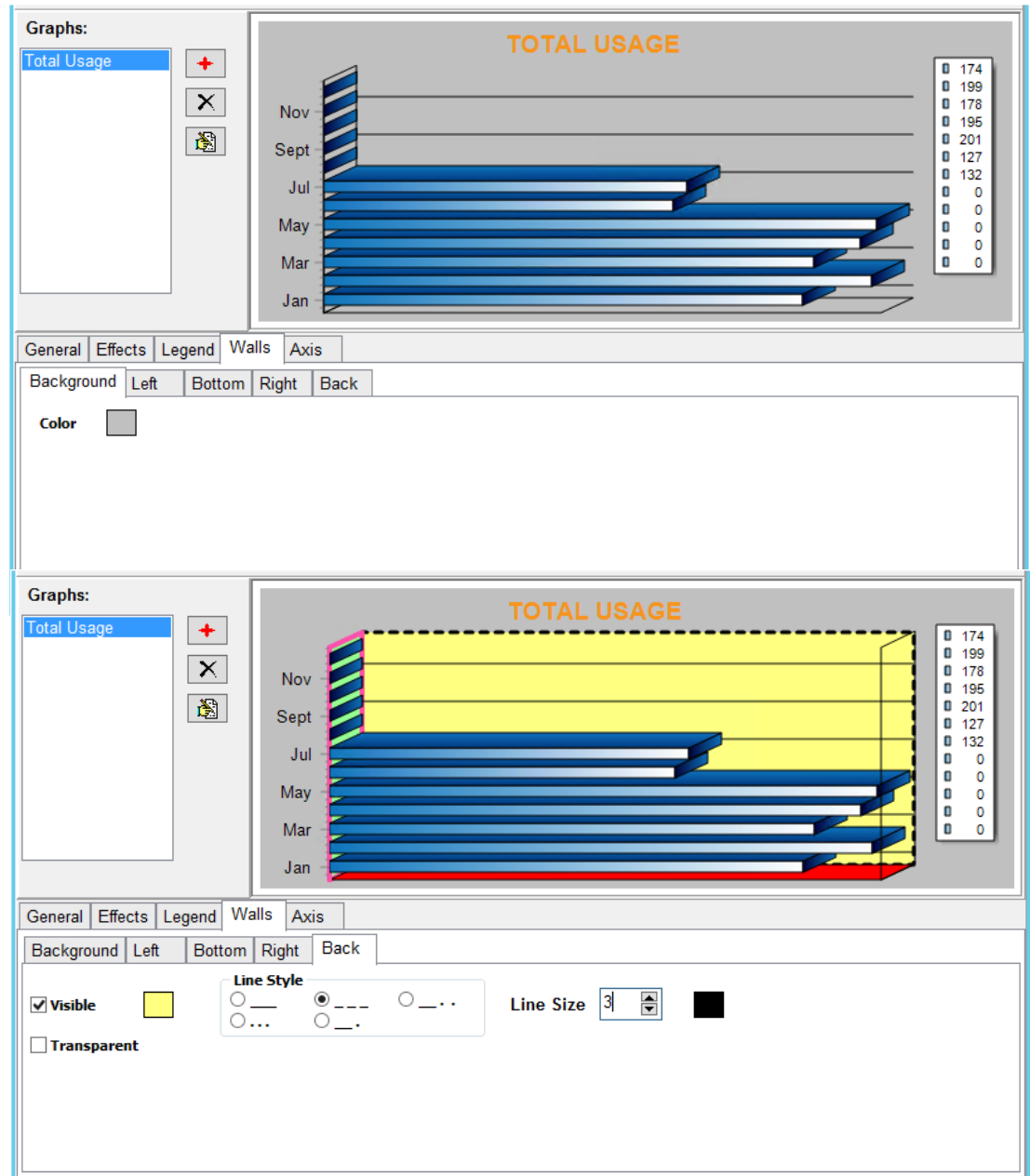
The Color of the Wall can be changed by clicking on the **Color** square. Only visible walls can have a color.

The **Transparent** checkbox makes the wall transparent (no color).

The **Line Style** changes the style of the lines that are used to draw the wall.

The **Line Size** changes the size or thickness of the lines used to draw the wall.

The **Line Color** can be changed by clicking on the Color square next to line size.



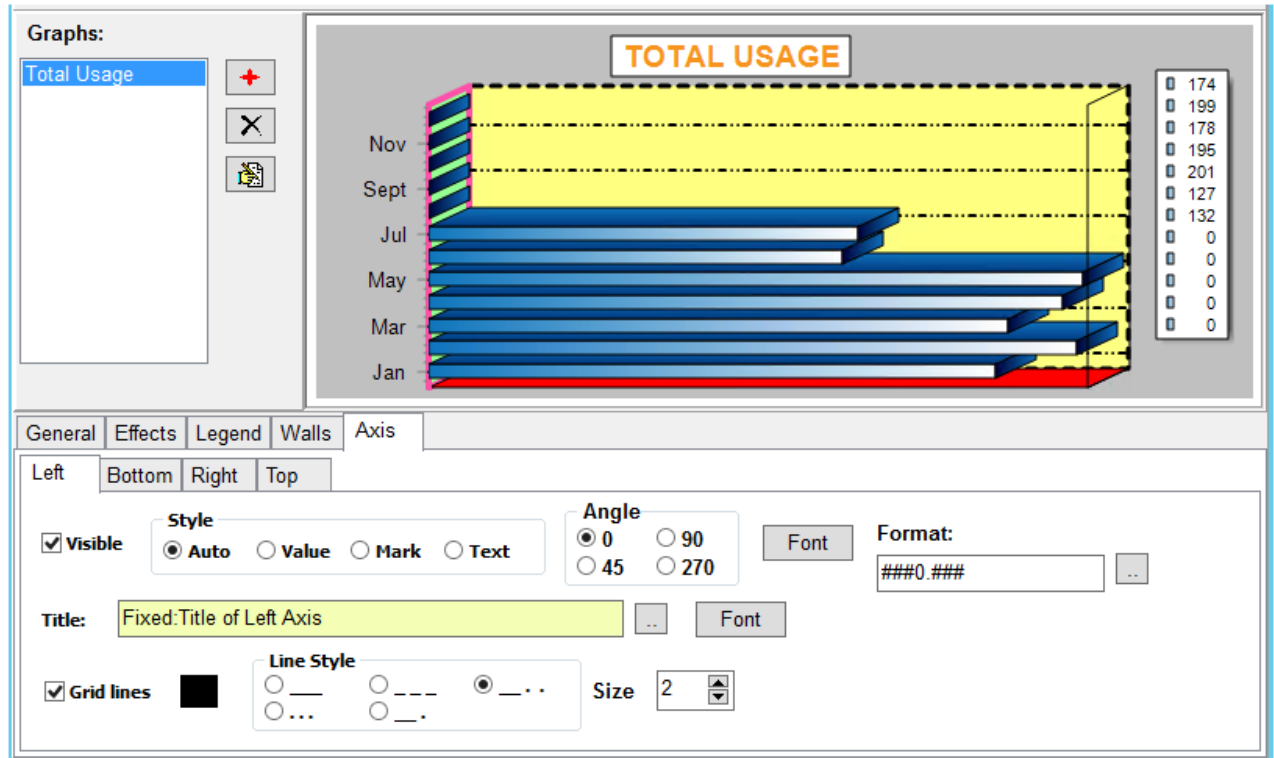
Axis

The Axis tab allows options for the Axis to be set. There are four tabs, Left, Bottom, Right, and Top. The settings on each of these four tabs are identical. They apply to the Left, Bottom, Right, and Top Axis respectively.

The **Visible** checkbox makes the axis visible.

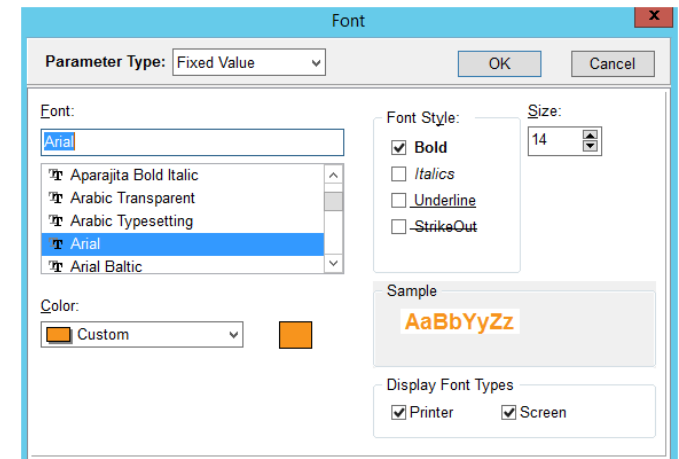
The **Style** sets the style of the data on the Axis. Auto will use the normally used settings for the graph type. Value uses the Value set in the Data Points. Mark uses the Mark value set in the Data Points. Text uses the Label set in the Data Points.

Angle sets the angle at which the Axis text is drawn.



Clicking on the Font button directly to the right of the Angle options allows setting the font for the Axis Labels. This displays the standard Font selection window. Select the desired Font, Style, Size and Color. The fonts must still be installed on the server/machine running Relay Unify uCompose.

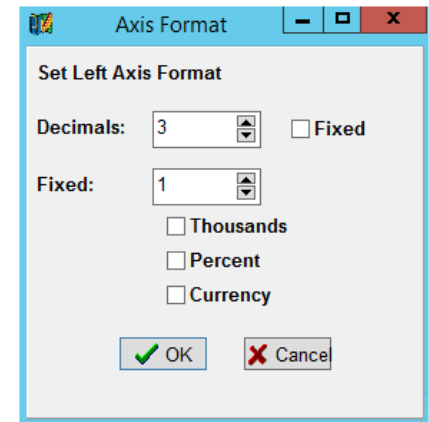
For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.



The **Format** Field allows setting the format of the Axis. Click the Ellipsis to see the Axis Format window. The **Decimals** value sets the maximum decimals used. Checking the **Fixed** box sets the minimum decimals. The **Fixed** value sets the minimum number of characters to the left of the decimal. This will Zero pad on the left if necessary.

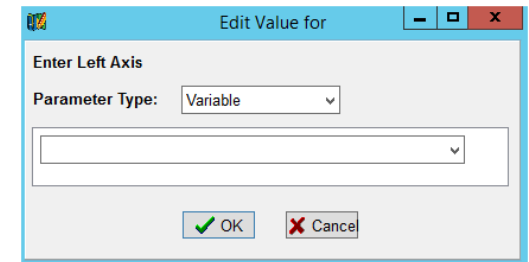
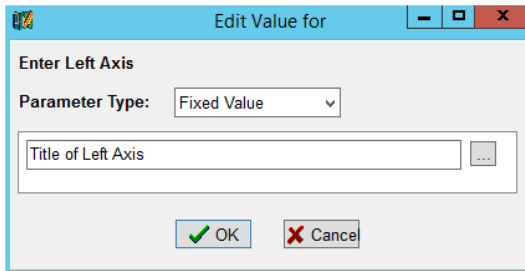
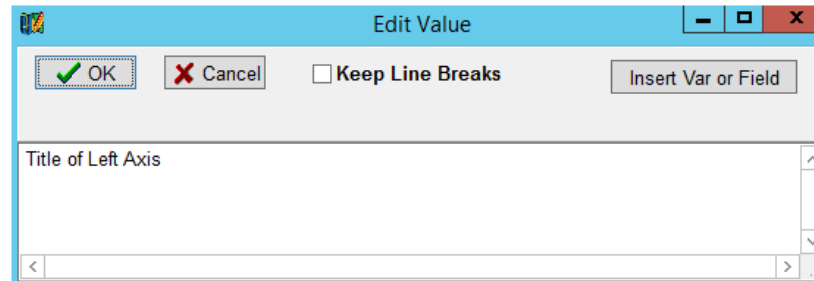
Checking **Thousands** enables the Thousands comma. Checking **Percent** enables the Percent sign. Percent cannot be used with Thousands or Currency. Checking **Currency** enables the Currency sign.

Click OK and the format reflecting the settings entered will be displayed in the Format field.

The 'Axis Format' dialog box has a title bar with a standard icon, a minus button, a maximize button, and a close button. The main area is titled 'Set Left Axis Format'. It contains two numeric input fields: 'Decimals' with the value '3' and 'Fixed' with the value '1'. To the right of the 'Decimals' field is an unchecked checkbox labeled 'Fixed'. Below the 'Fixed' field are three unchecked checkboxes: 'Thousands', 'Percent', and 'Currency'. At the bottom right are two buttons: 'OK' with a green checkmark icon and 'Cancel' with a red X icon.

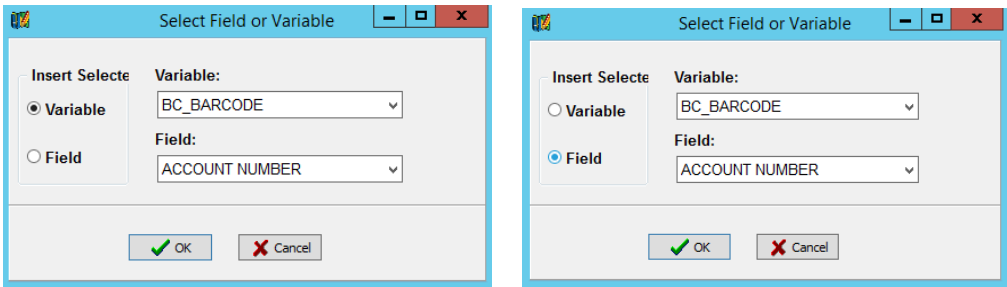
The Axis **Title** can be used to Name the Axis. To edit, click the Ellipsis button to the right of the Axis Title field. This will display the Edit Value form. This allows the Value for the selected graph field to be set to either a Fixed Value, Variable, or Field. If Variable or Field are selected, a dropdown to select the variable/field will be displayed. Select the variable or field that contains the Axis Title.

If entering a Fixed Value, type in the value or click on the ellipsis button for the Edit Form.

The 'Edit Value for' dialog box has a title bar with a standard icon, a minus button, a maximize button, and a close button. The main area is titled 'Enter Left Axis'. It contains a 'Parameter Type' dropdown menu currently set to 'Variable'. Below this is a large empty text input field. At the bottom right are two buttons: 'OK' with a green checkmark icon and 'Cancel' with a red X icon.The 'Edit Value for' dialog box has a title bar with a standard icon, a minus button, a maximize button, and a close button. The main area is titled 'Enter Left Axis'. It contains a 'Parameter Type' dropdown menu currently set to 'Fixed Value'. Below this is a text input field labeled 'Title of Left Axis' followed by an ellipsis button. At the bottom right are two buttons: 'OK' with a green checkmark icon and 'Cancel' with a red X icon.The 'Edit Value' dialog box has a title bar with a standard icon, a minus button, a maximize button, and a close button. The main area is titled 'Edit Value'. It contains three buttons at the top: 'OK' with a green checkmark icon, 'Cancel' with a red X icon, and 'Keep Line Breaks' which is unchecked. To the right of these is a button labeled 'Insert Var or Field'. Below these is a large text area labeled 'Title of Left Axis'. At the bottom are left and right arrow buttons and a small icon.

This allows text to be entered. Check the **Keep Line Breaks** check box to retain line breaks entered on this page. Leaving the box unchecked will remove any line breaks. Variable or fields can be inserted by clicking the **Insert Var or Field** button. This will display the Select Field or Variable

form. Choose Variable or Field and select the desired Variable or Field using the dropdown. Then click the OK button to insert the Variable or field. Fields or Variables may be manually entered as well. They should be surrounded by <# >. At the Time of print the actual values will be substituted.

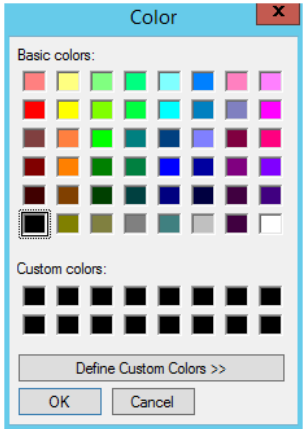


Once the Axis Title has been filled in, it will be a Read only field highlighted in Yellow. To edit, click on the ellipsis button.

The Axis Title Font can be set by clicking on the Font button next to Title. This displays the standard Font selection window.

The **Grid Lines** checkbox enables the drawing of grid lines from the Axis. The **Color** of the Grid lines is set by clicking the Color square. This will display the standard color selection window to edit the color selected.

The **Style** of the grid lines is set by the Line Style selection. The **Line Size** sets the grid line size or thickness.



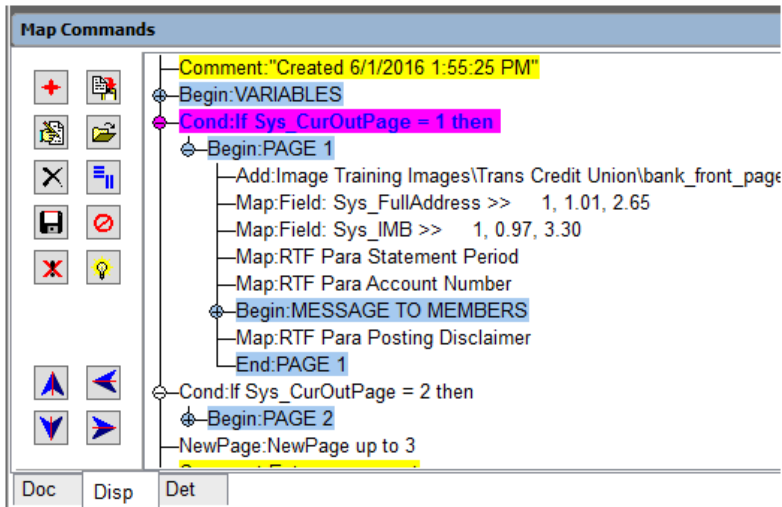
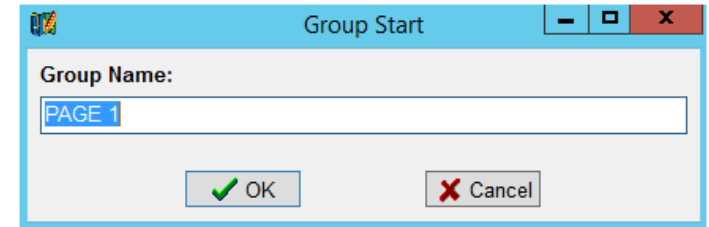
Start Group

The Group command allows grouping commands together. This is useful for groups of commands that are executed based on a condition or for creating a group of commands that may need to be moved or saved for use later.

The Field mapping command can be accessed in 2 ways. The 1st is to click on Group from the Ribbon bar Disp. The 2nd is to Click the + on the Display tab of the Map Commands window, then select Start Group from the list.

Enter the Group name.

Groups are displayed by default with a Blue background in the Command Window. Both the Start and End Commands are created.



A group defines a group of commands. If the Start Group command is the first command after a Conditional, then the commands in the Group will be processed if the conditional is true.

Groups can be added within groups as well.

New Page

The New Page command allows additional output pages to be created. These are pages that need to be created for reasons other than overflow detail lines creating additional pages.

The command can be accessed in 2 ways. The 1st is to click New Page from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select New Page.

Max Pages is the maximum number of pages for the Document. If the new page would cause the Page count to exceed the Max Pages, then the command will not execute.

Iterations are the number of New Pages to create.

If **Restart Page** is checked, it will cause the Page command execution to restart at the beginning. If unchecked, the remaining commands after the new page will be executed. Either Restart Page or After Details can be checked but not both.

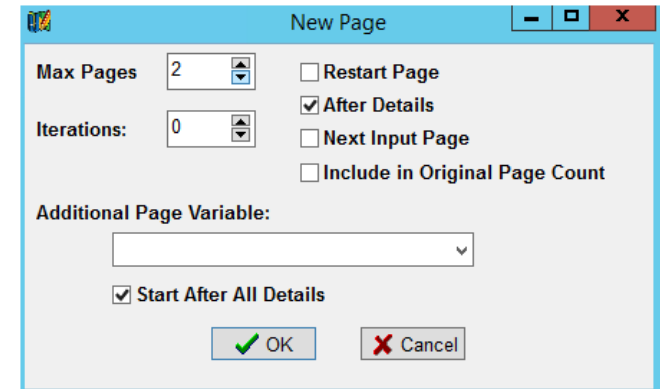
If **After Details** is checked, the new page will occur after the Details are printed on the Current Page. If unchecked, the new page will be created before the Details are printed. Either Restart Page or After Details can be checked but not both.

If **Next Input Page** is checked, this causes the New page to move to the next input page of data.

If **Include In Original Page Count** is checked, then any pages created with the New Page command will be included in the Original Page Count.

The **Additional Page Variable** is a List of Integer User Variables. The variable selected will control the number of pages inserted (up to the Max Pages value). When each new page is created the value of the Additional Page Variable will be decremented. When the Additional Page Variable reaches 0 no additional pages will be created. Set the Value of the Additional Page variable inside a conditional that executes only on page 1.

If **Start After All Details** is checked, it waits until all the Details are processed before creating the New Page.



Rich Text Paragraph

The Rich Text Paragraph or RTF command allows the user to create text or charts on the output. This command is more versatile than the Word Wrap Paragraph.

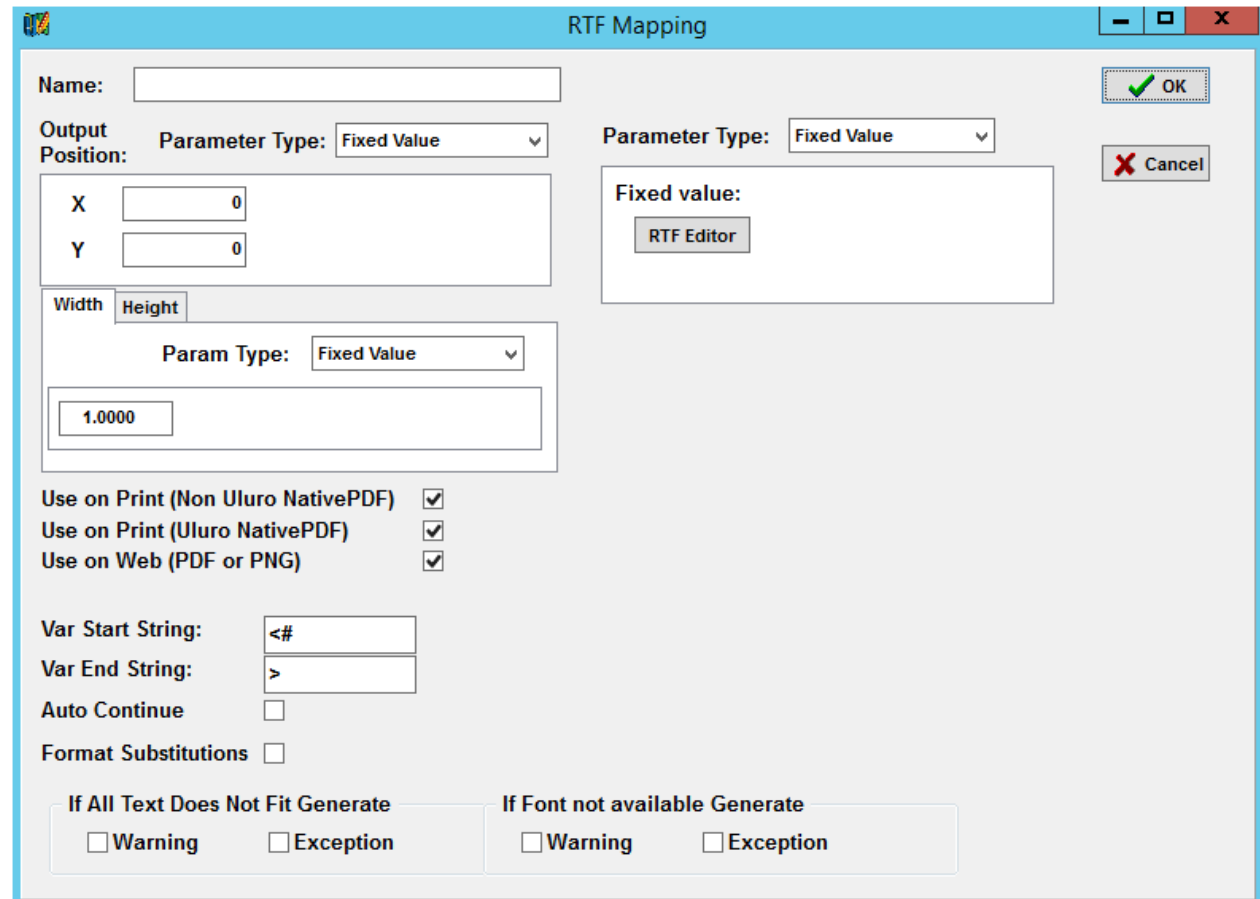
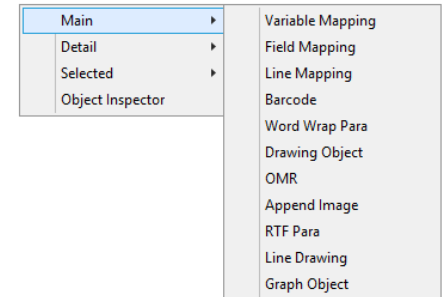
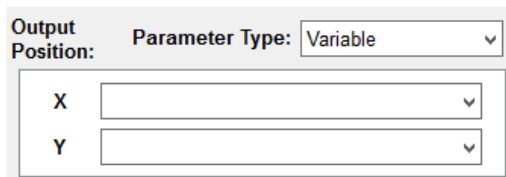
The command can be accessed in 3 ways. The 1st is to click RTF from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select RichText Para. The 3rd is to right-click on the Output and select RTF Para under the Main options from the Pop-up menu. The advantage of using the last method is the RTF will default to the selected location.

Once the command is created it can be edited to change the parameters.

The **Name** can be edited to provide a more descriptive name for the command. This name will be part of the name for the command in the Map Commands window.

The **Output Position** X and Y specify the starting location in inches. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window or was dragged there, the X and Y values will be populated automatically with the values from where the cursor was located, or the command is currently located.

The Position can be entered using a Fixed Value for X and Y, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X and Y values will become dropdowns to select the variable/field that contains the X/Y value.



The width and height define the command’s overall width and height in inches. The **Width** and **Height** values specify the dimensions of the graph on the output. These can be edited here or using the cursor once the command is on the output. To use the cursor, select one of the dimensions or the corner to change both simultaneously.

The Width and Height can be entered using a Fixed value or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the values will become dropdowns to select the variable/field that contains the width/height value.

The figure consists of four screenshots arranged in a 2x2 grid, each showing a configuration window for 'Width' and 'Height'. Each window has tabs for 'Width' and 'Height'. The top-left window shows 'Param Type' set to 'Fixed Value' with a text input field containing '3.2708'. The top-right window shows 'Param Type' set to 'Fixed Value' with a text input field containing '1.4792'. The bottom-left window shows 'Param Type' set to 'Field' with a dropdown menu. The bottom-right window shows 'Param Type' set to 'Variable' with a dropdown menu.

The RTF contents can be fixed and stored in the map or come from a Variable or Field. The **Parameter Type** will determine what contains the RTF contents.

If Fixed Value is the Parameter Type, click the **RTF Editor** button to edit the RTF Paragraph.

If Variable is the Parameter Type, the variable can contain the RTF or the RTF Filename.

For the first scenario, select the Variable that contains the RTF. Then check the **Variable Contains RTF** box to indicate the RTF is within the variable.

The figure shows two screenshots of the RTF configuration window. The top screenshot shows 'Parameter Type' set to 'Fixed Value' and a 'Fixed value' text area with an 'RTF Editor' button. The bottom screenshot shows 'Parameter Type' set to 'Variable'. It has two checkboxes: 'Variable Contains Filename' (unchecked) and 'Variable Contains RTF' (checked). Below these is a dropdown menu showing 'USAGE'.

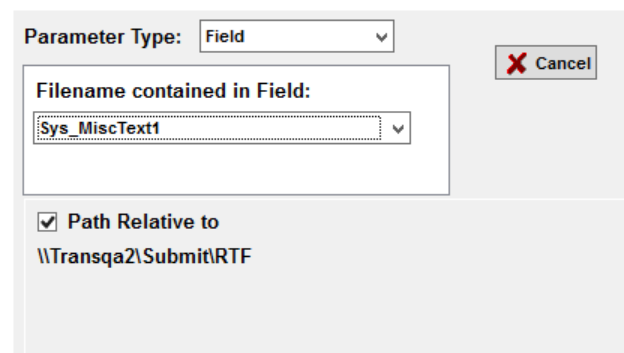
For the second scenarios, select the Variable that contains the Fielname of the RTF. Then check the **Variable Contains Filename** box to indicate the Filename is what is stored in the Variable selected. For this, there is an additional setting that will appear.

The figure shows a screenshot of the RTF configuration window with 'Parameter Type' set to 'Variable'. The 'Variable Contains Filename' checkbox is checked, and 'Variable Contains RTF' is unchecked. A dropdown menu shows 'URL'. Below this, the 'Path Relative to' checkbox is checked, and the text '\\\\Transqa2\\Submit\\RTF' is displayed. A 'Cancel' button is visible in the top right corner.

If Field is the Parameter Type, then the field selected in the dropdown will need to contain the RTF Filename.

The **Path Relative To** option should be checked if the Variable or Field contains the relative path to the RTF. If not this should be unchecked and the Variable will contain the full path to the RTF. The RTF path listed is the current Base Path which is pulled from DefRTFDir in the uSetup Processes list. If that setting is blank, then it will use the DefImgDir. If that setting is also blank, it will use the images directory under the Submit Folder.

The Path Relative To setting will only be visible if Variable Contains Filename is checked or if the Parameter Type is field. The variable or field selected in the dropdown menu should have the name of the RTF (name.rtf) in the directory setup.



If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

RTF Paragraphs can contain embedded Variables or Fields. The **Var Start String** defines the starting string that defines an Embedded Variable or Field. The **Var End String** defines the ending string that defines an Embedded Variable or Field.

If an RTF Paragraph requires more room than is available for one page checking the **Auto Continue** box will force additional pages until the entire RTF paragraph is output. With Auto Continue unchecked the RTF Paragraph will stop at one page. Checking Auto Continue will cause the RTF paragraph to increase in Height to contain the Entire RTF Data. The Height parameter will not apply.



Tips:

If an RTF is coming from a variable or field that contains the filename, the existence of the RTF is not checked during Breakpack by default.

There is a setting in the uSetup Process list, CheckRTF, that will enable the checking of RTF files during Breakpack. Set this to Y to enable. This will cause an error during Breakpack if the file does not exist. If this is set to N (blank by default) then there will be no error during Breakpack. The file will only error during print.

If Auto Continue is checked, this will check the existence of the RTFs during Breakpack since the number of pages in the document will may on the RTF.

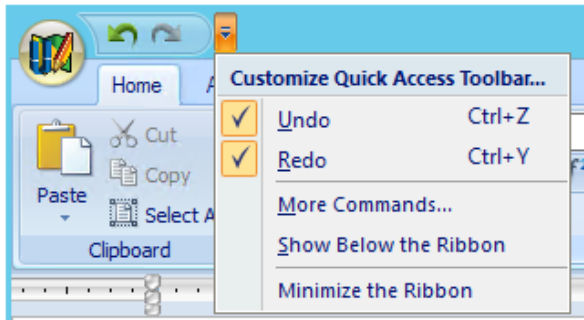
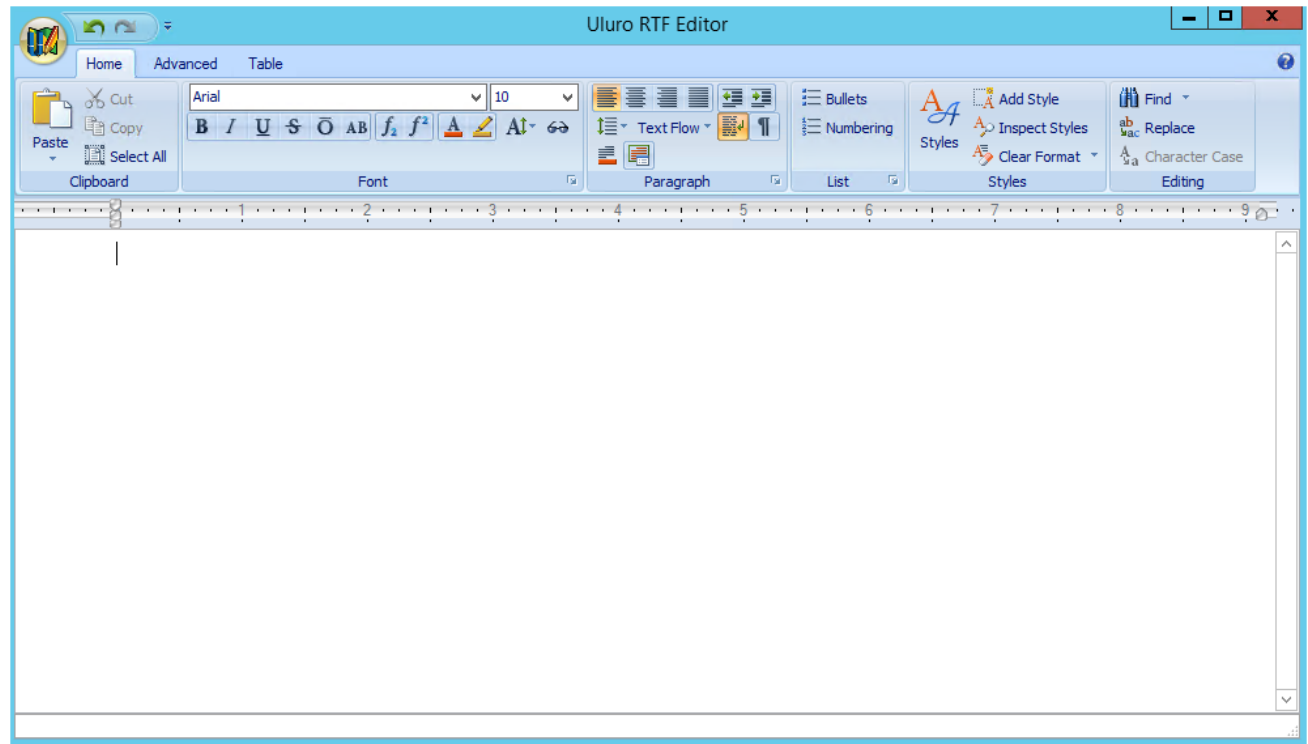
RTF Editor

The RTF Editor allows the contents of the RTF to be entered and customized.

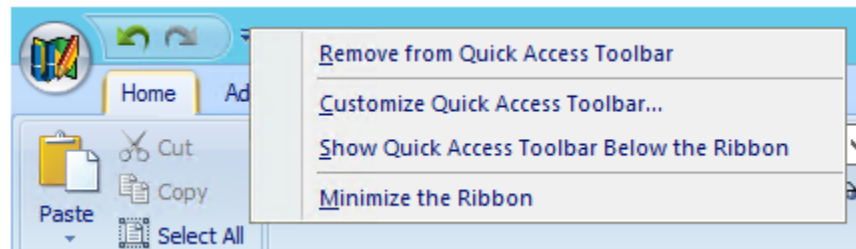
The RTF editor uses Microsoft's Word Pad Library. No CMYK color options are available within the editor, even if the Preferences in Relay Unify uCompose are setup for CMYK.

The Ribbon Bar can be moved below the Ribbon and customized.

The Undo, Redo, and Minimize options will be checked if enabled. Select again to uncheck. The Undo and Redo options hide the green arrows.



Right-clicking in the Editor will yield some additional options.



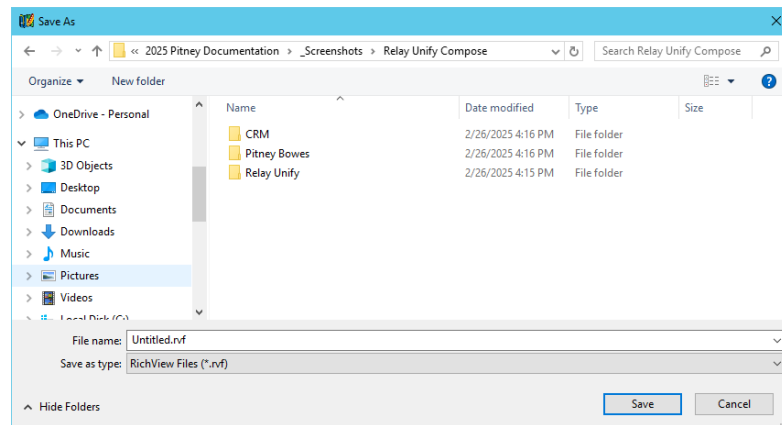
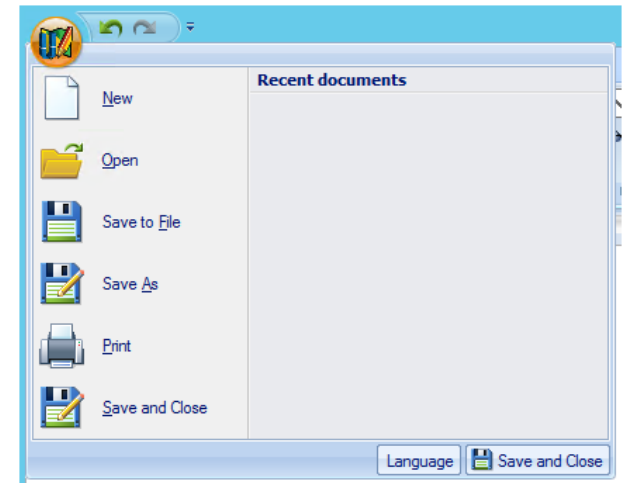
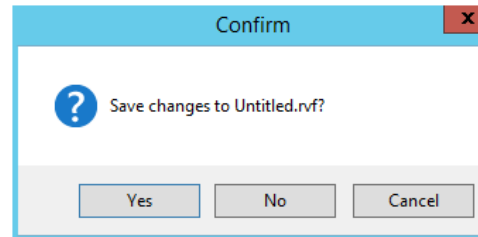
The Ribbon Bar Options are the Quick Access Menu, the Home Tab, Advanced Tab, and Table Tab.

Quick Access Menu

This menu, accessible by clicking the Relay Unify uCompose circular icon in the upper-left corner, is like a File type menu in many other programs.

New will start a new RTF. A confirmation to save the existing RTF will be displayed.

Selecting Yes will result in a Save As dialog box to save the file prior to a new blank RTF being opened.

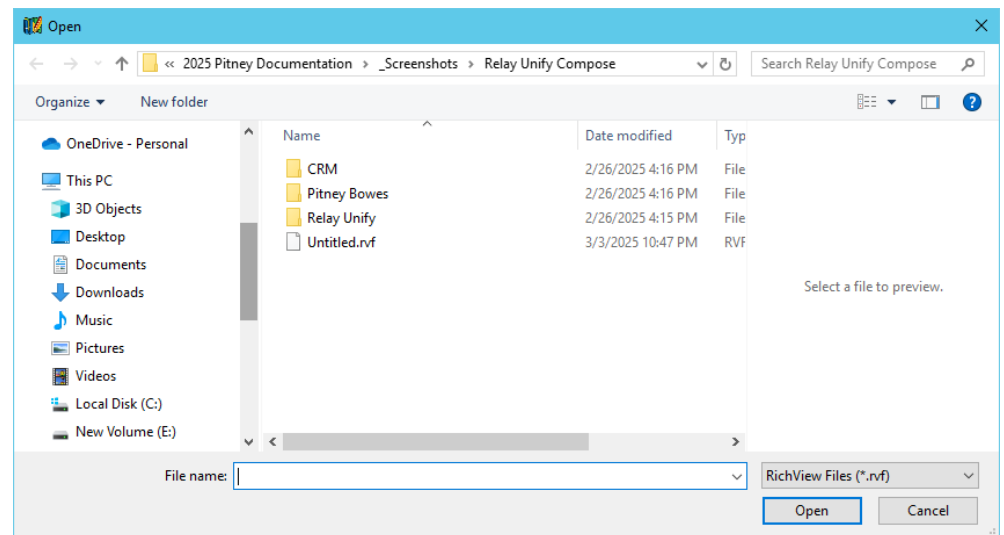


Open will allow the user to open a saved RTF. An Open dialog will be displayed to select the RTF file.

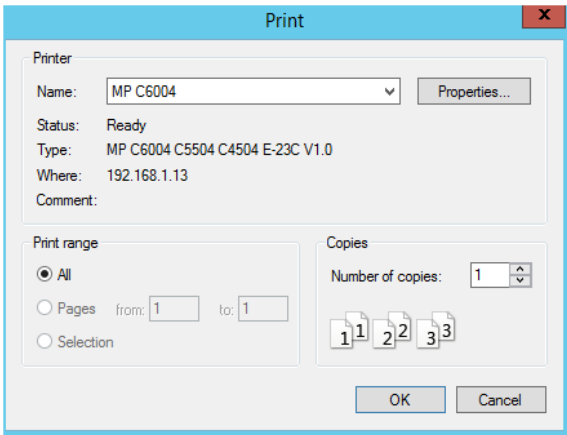
Locate the file, select the file and click the open button.

The default extension is .rvf. This is an enhanced RTF format file. The file type can be changed to .rtf or .txt.

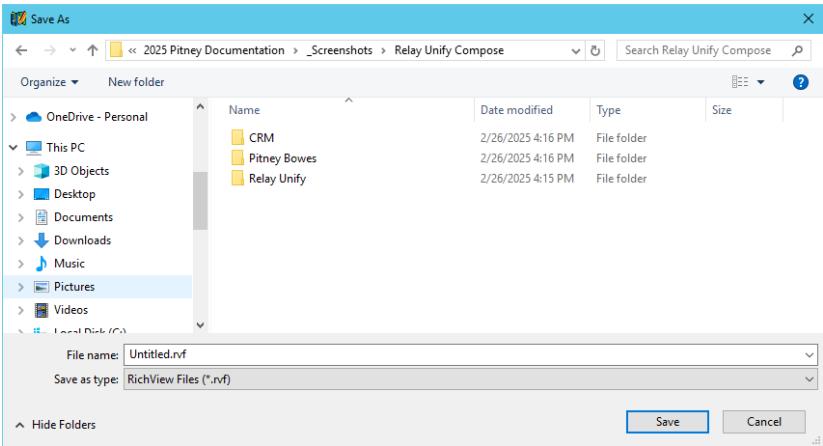
Save to File will save the RTF to a desired location. The Save As dialog box will pop up to select the filename and location. The default extension is .rvf. This is an enhanced RTF format file. The file type can be changed to .rtf or .txt.



Save As will allow the RTF to be saved or exported. A Save As dialog box will be displayed. Navigate to the location where the RTF file is to be saved and enter the new RTF name. Click the Save button.



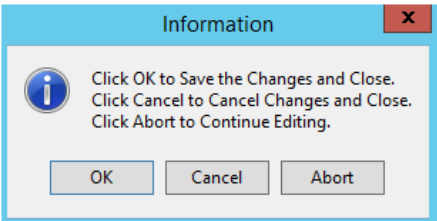
Print allows the RTF to be printed. This will display a Print dialog box to select a printer and the desired print settings. Once the print settings are entered click Ok to print.



Save and Close allows the RTF to be saved and automatically closes the editor, returning to the RTF command form. Selecting Save and Close from the menu or the Save and Close button in the Quick Access Toolbar have the same effect.

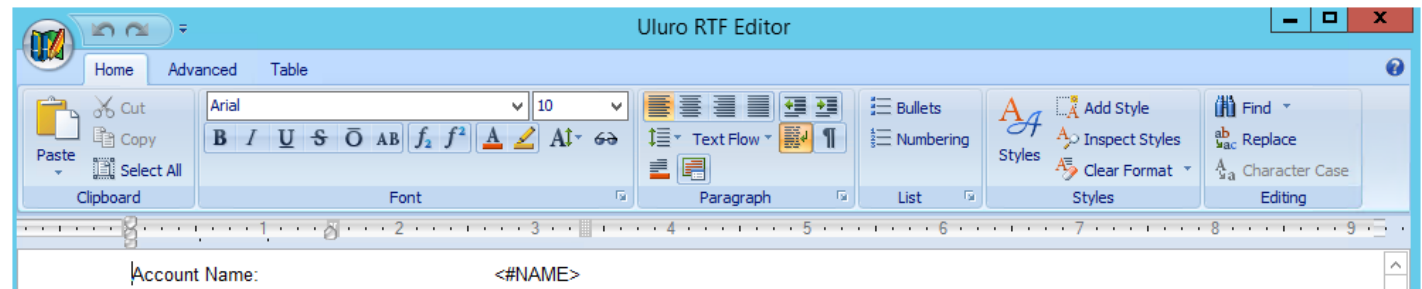
Clicking on the 'X' in the top right corner will yield a message to save the changes prior to closing if edits were made or the new RTF was never saved. Click OK to Save the RTF to the command and close the editor. Click Cancel to have any edits made not be saved. Click Abort to return to the editor.

Language allows some of the options to be converted to other Languages.



Home

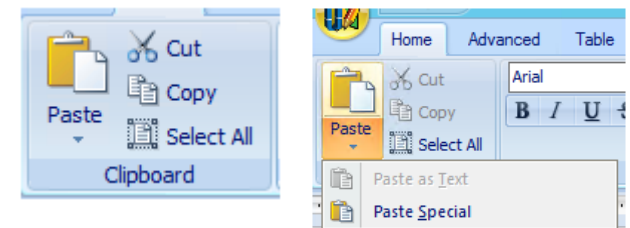
The Home group contains 5 subgroups: Clipboard, Font, Paragraph, List, Styles, and Editing.



Clipboard

This Subgroup contains Clipboard functions of Paste, Cut, Copy, and Select All.

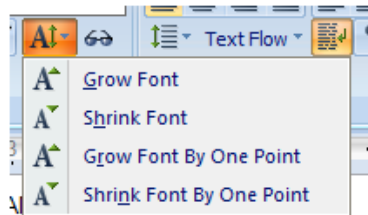
Paste has options of Paste as Text and Paste Special. Paste Special will display the available paste special options.



Font

The Font Subgroup contains options for setting the Font. These and some additional settings can also be accessed by clicking the arrow in the bottom left corner of the subgroup.

These options are Font name, Font size, Font Style, Superscript and Subscript, Font Color, Background Color, Font Size Change, and Hide text.



The Font Size Change button shows options for Grow Font, Shrink Font, Grow Font by One Point and Shrink Font by One Point.

Text can be hidden. Select the text then click on the  Hide button. Hidden Text can only be displayed by clicking the Nonprint Character button in the Paragraph subgroup. The hidden text will be underlined with a dotted line.

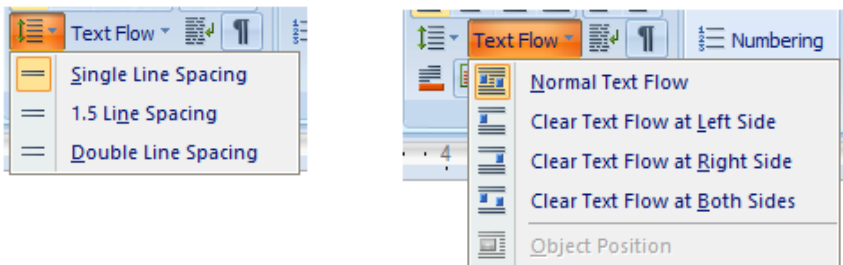
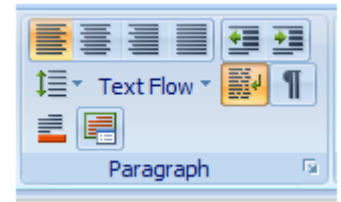
Account-Name:¶
Account-Number:¶
Service-Address:-¶
Statement-Date:-¶

Paragraph

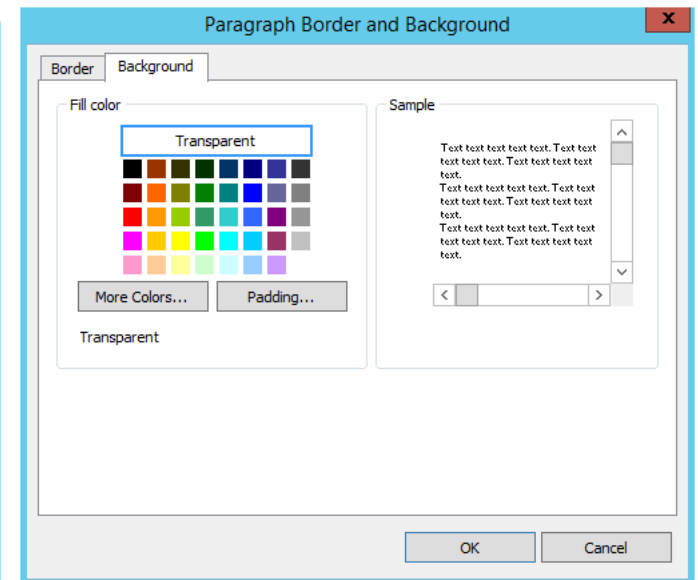
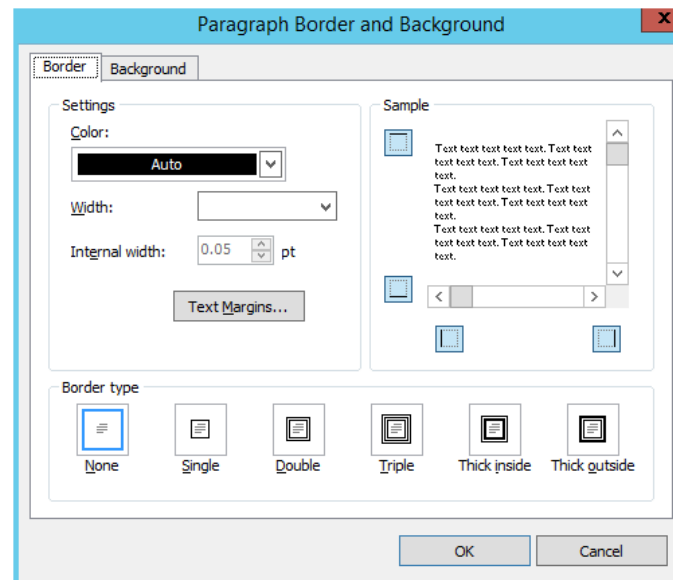
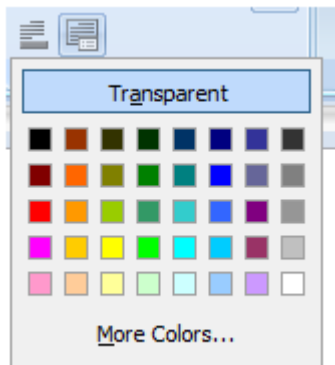
The Paragraph subgroup contains options for the current paragraph. These and some additional settings can also be accessed by clicking the arrow in the bottom left corner of the subgroup.

The top row of options are Alignment (Left, Center, Right, Justified), Decrease Indent, and Increase Indent.

The second row contains Line Spacing (Single, 1.5, Double), Text Flow for defining how text flows around pictures, Word Wrap, and Nonprinting Characters. Word Wrap can be enabled and disabled by clicking the button. When Non-Print is enabled, all characters are shown including hidden text.



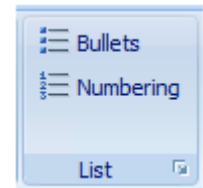
The third row contains Paragraph Background Color and Paragraph Border and Background.



List

The List subgroup contains options for Lists of data. These and some additional settings can also be accessed by clicking the arrow in the bottom left corner of the subgroup.

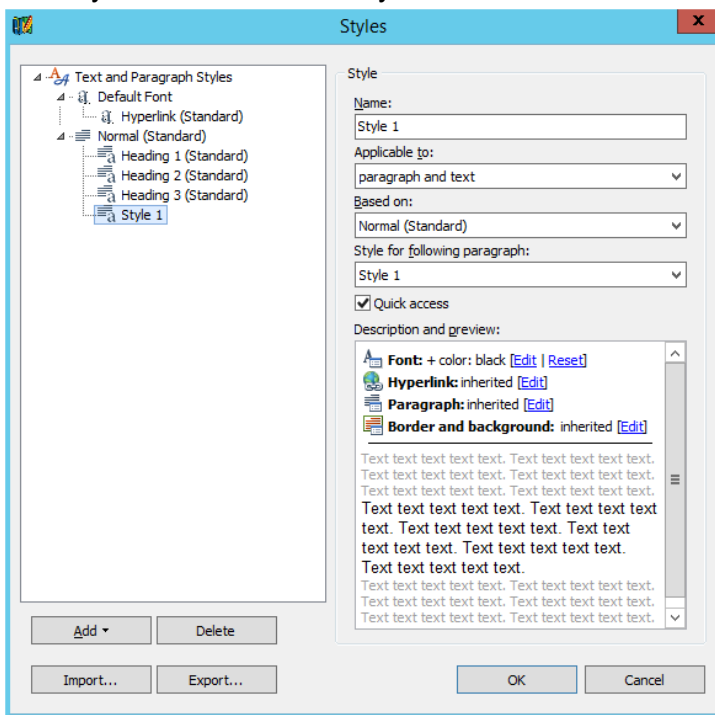
These options are Bullets and Numbering.



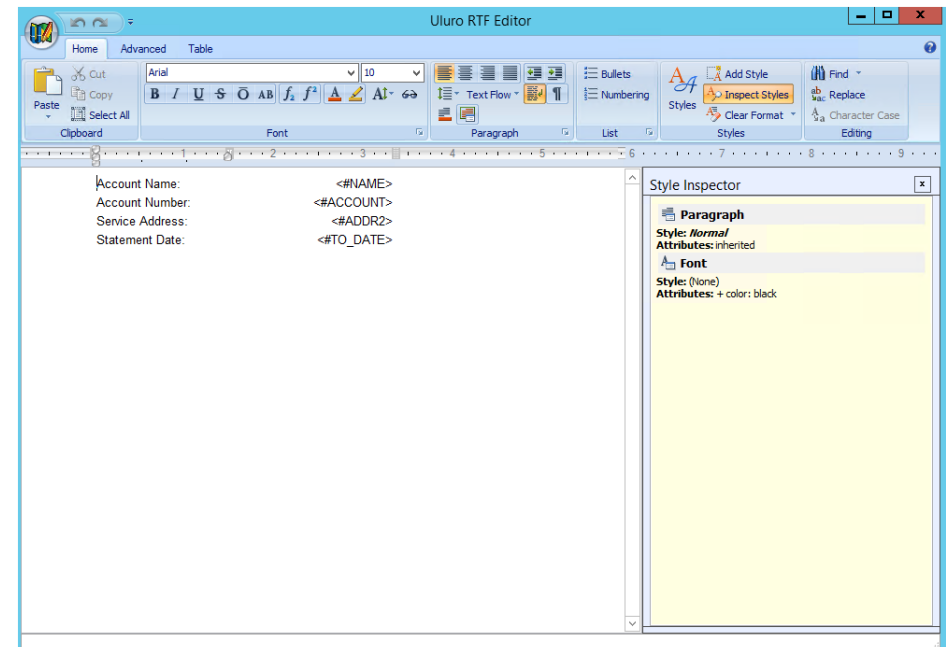
Styles

The Styles subgroup contains options for the style of the RTF.

The Styles button allows a style to be selected. The Add button pulls up the same form to add or select a style.



Inspect Styles will display a Style Inspector to the right of the RTF area. Click the button again to hide the Style Inspector.



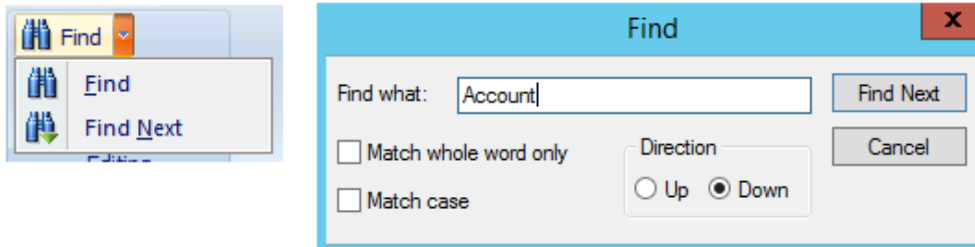
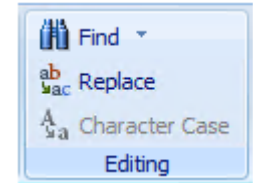
Select the text to return to its default formatting then click Clear Format.

Editing

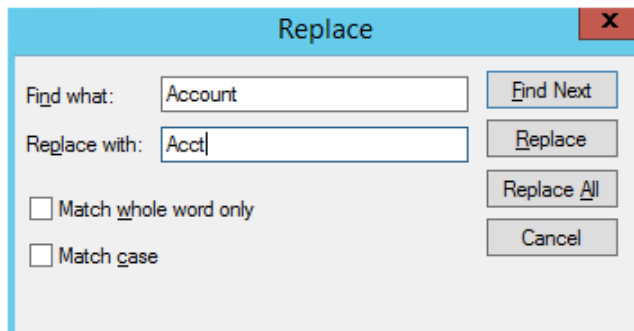
The Editing subgroup contains options for editing.

These options are Find, Replace and Character Case.

Find has the option for Find and Find Next. Find displays the Find dialog. Once text has been highlighted (or entered in the Find dialog), click Find Next to have the editor highlight the next time that text occurs.



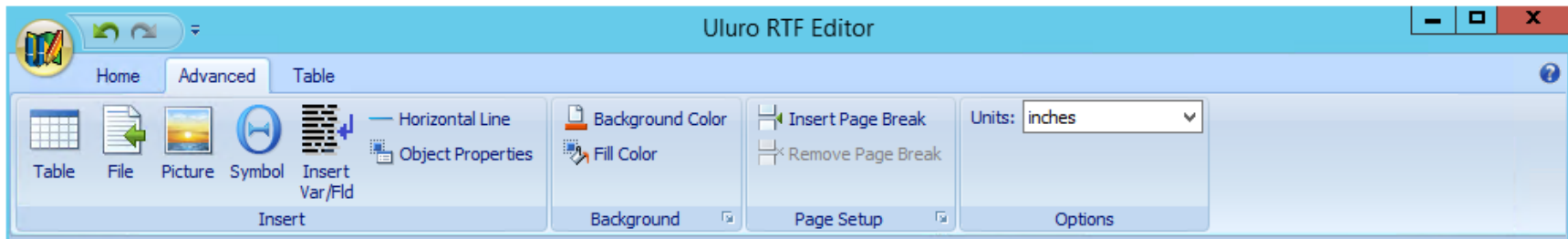
Replace displays the Replace Dialog to replace a specified text with a different text.



Character Case will cycle the Character Case of the selected text. It will cycle through Upper Case, Lower Case, and Camel Case.

Advanced

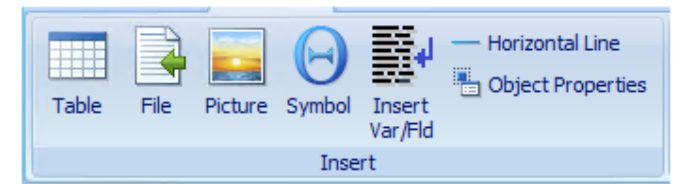
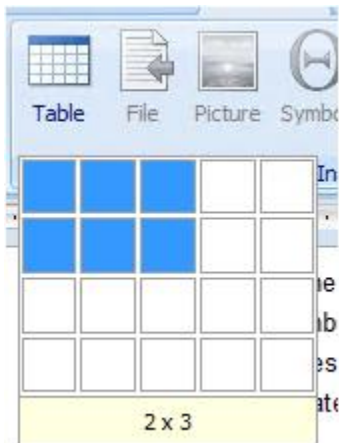
The Advanced group contains 4 subgroups: Insert, Background, Page Setup, and Options.



Insert

The Insert subgroup contains 7 options for inserting.

Table allows inserting a Table into the RTF. Selecting Table displays the Quick Table insert.

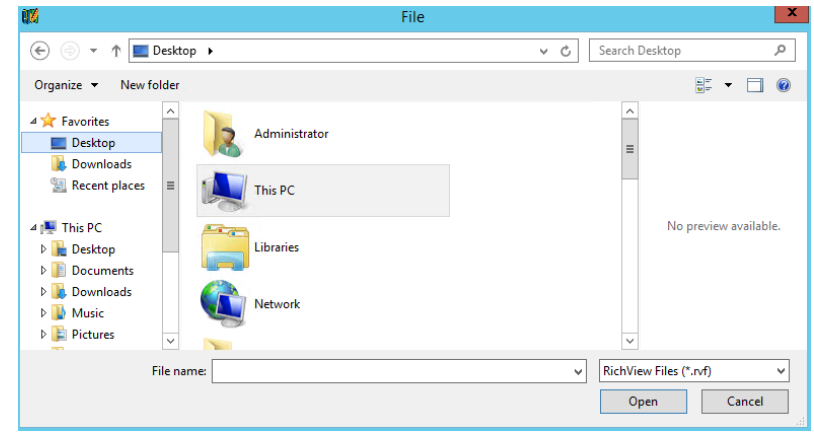


Once inserted the Table will be displayed with Borders. Use the Table Group or Table Properties menu to change the settings.

The screenshot shows a document with a table at the top. The table has two rows and three columns. Below the table, there is a form with labels and placeholder text: 'Account Name: <#NAME>', 'Account Number: <#ACCOUNT>', 'Service Address: <#ADDR2>', and 'Statement Date: <#TO_DATE>'. Below the form, there is another table with two rows and three columns.

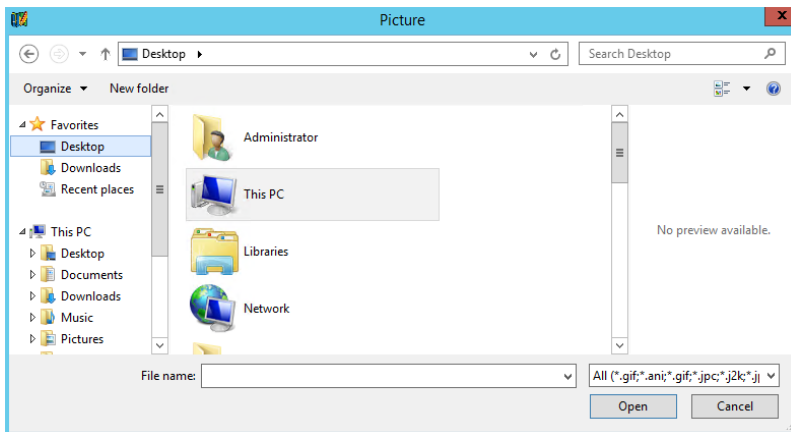
File allows inserting RTF from a file. This will display a File dialog to select the file to insert.

Once the File is selected it will be inserted into the RTF.

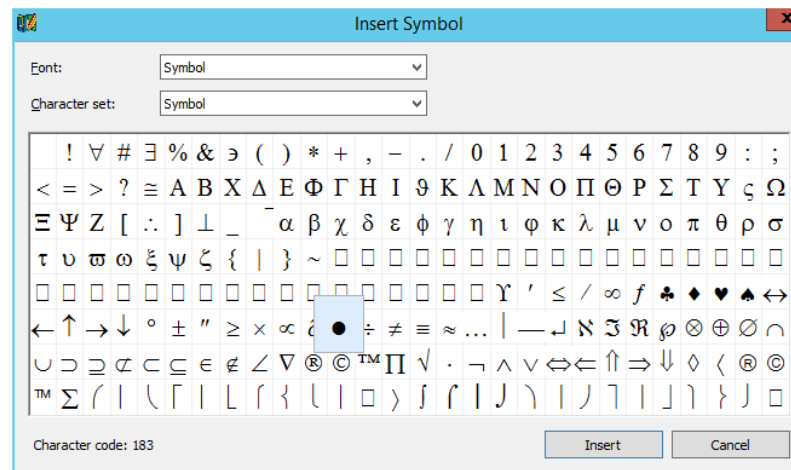


Picture allows inserting a Picture into the RTF. This will display a Picture dialog to select the picture to insert.

Once the Picture file is selected it will be inserted into the RTF.



Symbol allows inserting a symbol character.



Insert Var/Fld displays the RTF Insert Variable/Field/Detail window

The available types are:

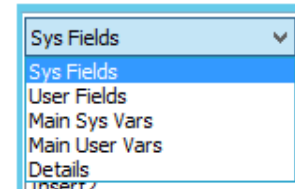
Sys Fields – The System generated Fields.

User Fields – The Fields created by the User.

Main Sys Vars – The System generated Variables in the Disp Section.

Main User Vars – The Variables created by the User in the Disp Section.

Details – Embedded Details. This will be a blank list unless a Detail Definition has been marked for Allow Detail RTF Embedding.

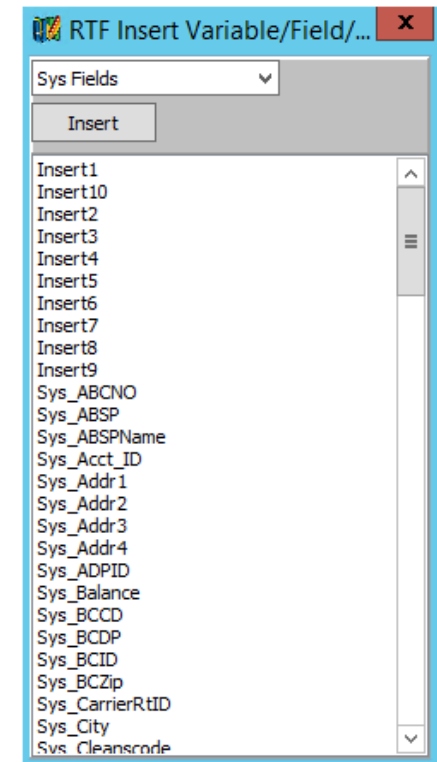


Once the type is selected the form will list the available fields or variables.

Select the variable or field and click the Insert button or double-click on the field or variable.

The variable or field will be inserted at the current cursor position.

Click. <#Sys_Acct_ID> To exp
transaction. You will not recei
on of the transaction will app

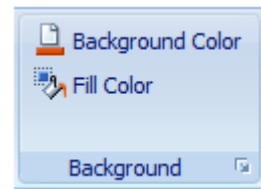


Horizontal Line will insert a Horizontal Line at the current cursor position.

Object Properties will display a form with properties of the object if an object (table or image) is selected. This form will allow some of the Object properties to be edited.

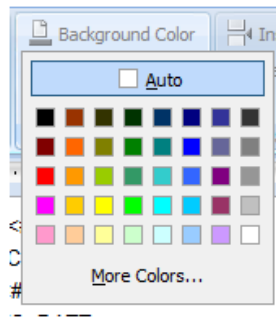
Background

The Background Subgroup contains 2 options.

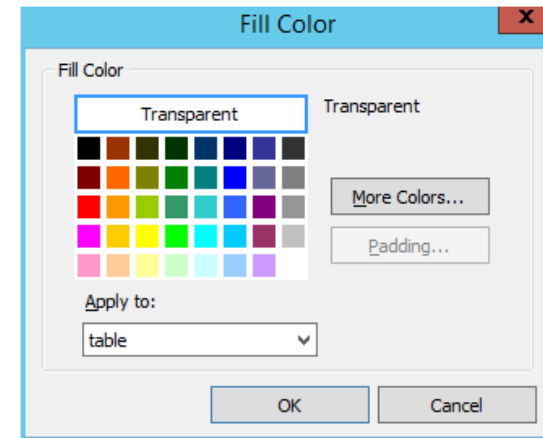


Background Color allows the color of the background to be selected.

Selecting a color will set the background color for the entire RTF.

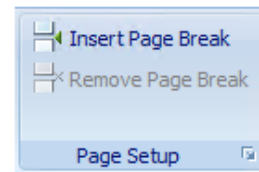


Fill Color allows selecting the background color for a



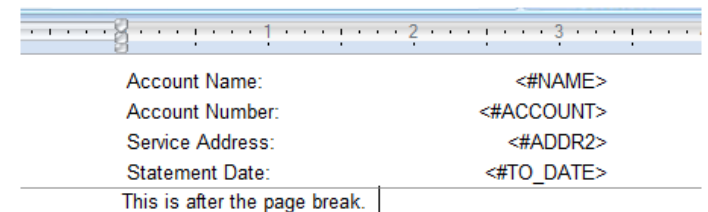
Page Setup

The Page Setup subgroup contains 2 options.



Insert Page Break will insert a page break at the current cursor position. On the output this will force a new page (if Auto Continue is checked). The Page Break will be displayed as a line in the RTF.

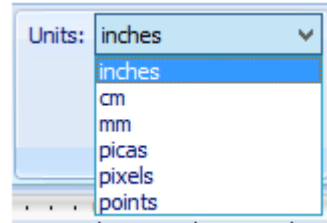
With the cursor on the line below the Page Break the Remove Page Break option is available. Selecting the Remove Page Break will remove the Page Break.



Options

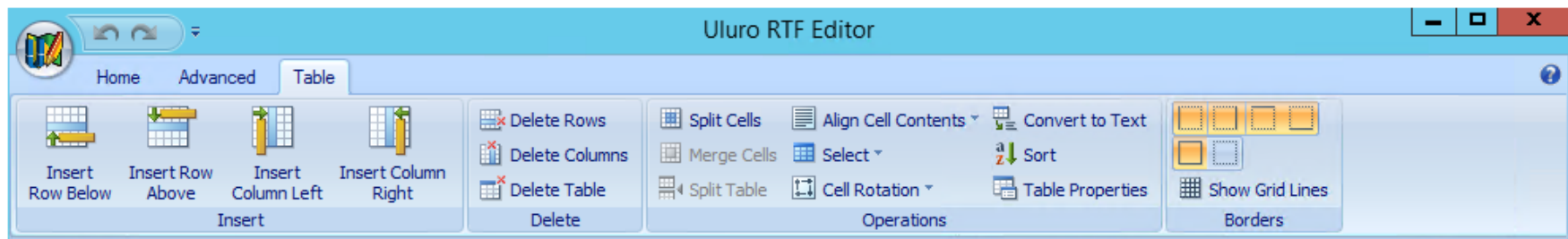
The Options subgroup contains only 1 option, Units.

Changing the Units changes the Ruler units.



Table

The Table group contains 4 subgroups: Insert, Delete, Operations, and Borders. The options in each subgroup become available once the cursor is within a cell of a table.



Insert

The Insert subgroup contains 4 options.

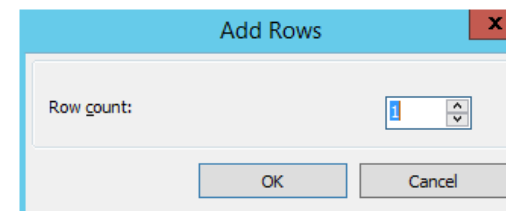
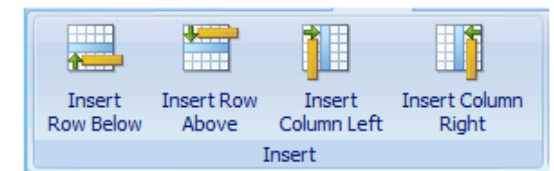
Insert Row Below will insert a row in the table below the current row. If the last row of the table is selected the Add Rows dialog will be displayed.

Insert Row Above will insert a row in the table above the current row.

Insert Column Left will insert a column in the table to the left of the current column.

Insert Column Right will insert a column in the table to the right of the current column.

For all four of the options to add a row or column, the inserted row or column will be selected once it has been added.



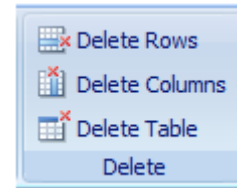
Delete

The Delete subgroup contains 3 options.

Delete Rows will delete the current row or selected rows.

Delete Columns will delete the current column or selected columns.

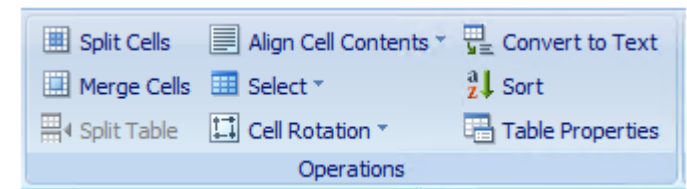
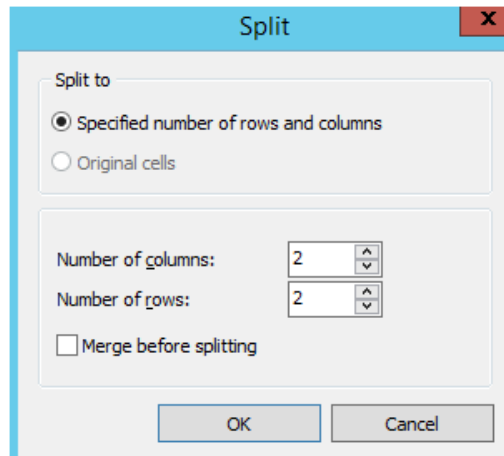
Delete Table will delete the current table.



Operations

The Operations subgroup contains 9 options.

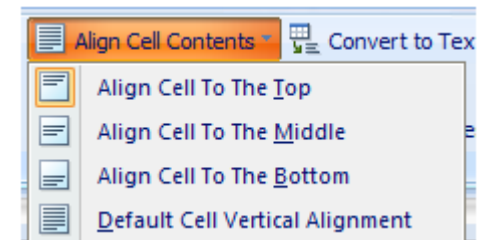
Split Cells will display the Split dialog to allow the current cell(s) to be split.



Merge Cells will merge the selected cells into one cell.

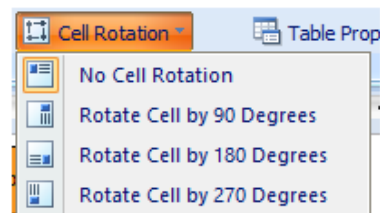
Split Table will allow the table to be split at the current row. This will create two tables from the original table.

Align Cell Contents allows the contents of the selected cells to be vertically aligned. Horizontal alignment is set in the Home Group, Paragraph subgroup.

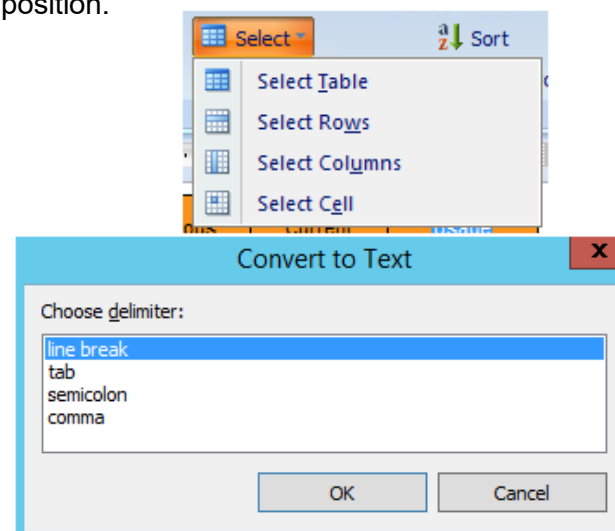


Select allows the entire Table, Rows, Columns or cell to be selected from the current cursor position.

Cell Rotation allows the contents of the cell to be rotated.



Convert to Text will convert the current table to text. This will display the Convert to Text Dialog.



Sort will display the Table Sort dialog and allows the table to be sorted.

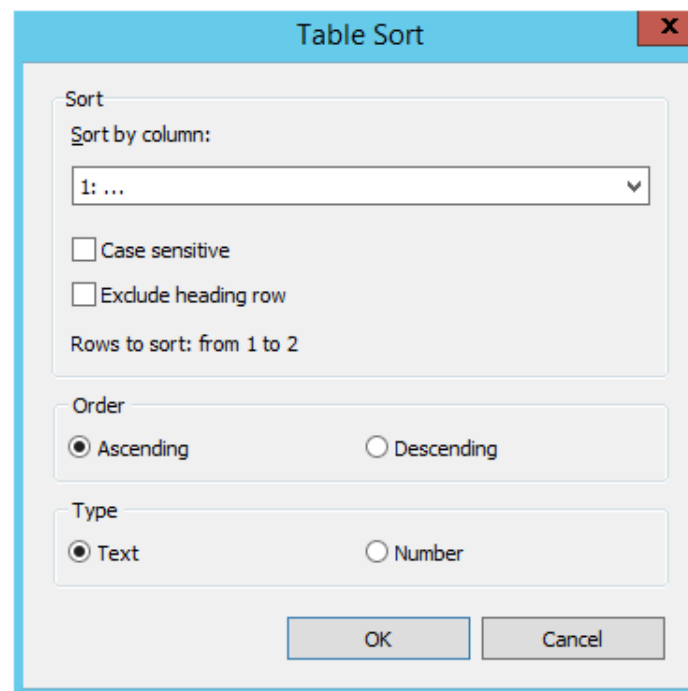
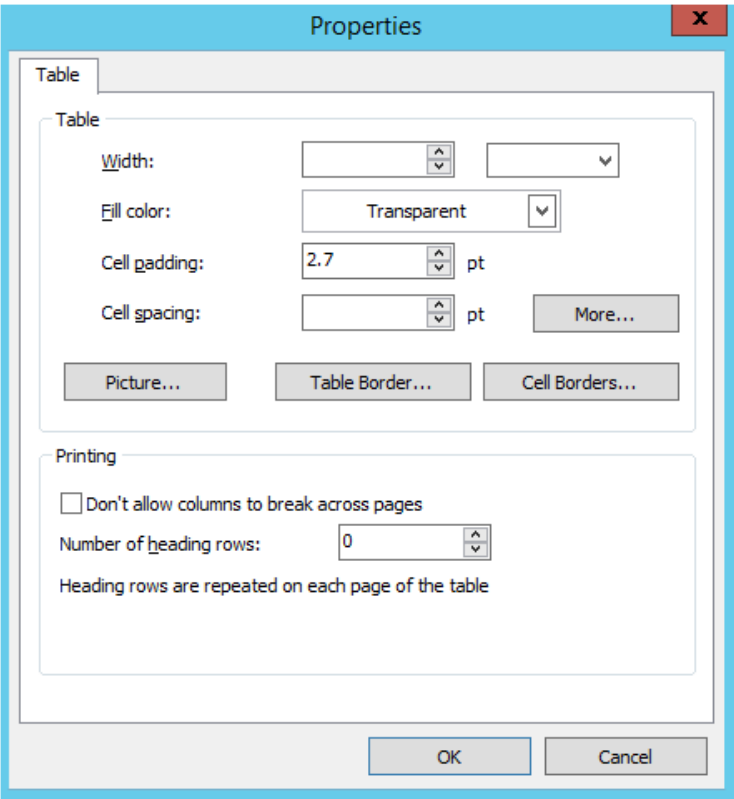


Table Properties will display the Table Properties dialog allowing the settings for the table to be changed.



Borders

The Borders subgroup contains 7 options.

When a cell(s) is selected or the cursor is within a cell, the buttons will be highlighted to show which borders of the cell are currently being is displayed. Click to show and click again to hide the borders of each cell.

The first row has optins for the Left, Right, Top, and Bottom border.

The second row will add all borders or remove all borders.

Show All Grid Lines will show the hidden borders of the table in a dotted white outline. The selected cell will also be outlined in a white dotted line.



Popup Menus

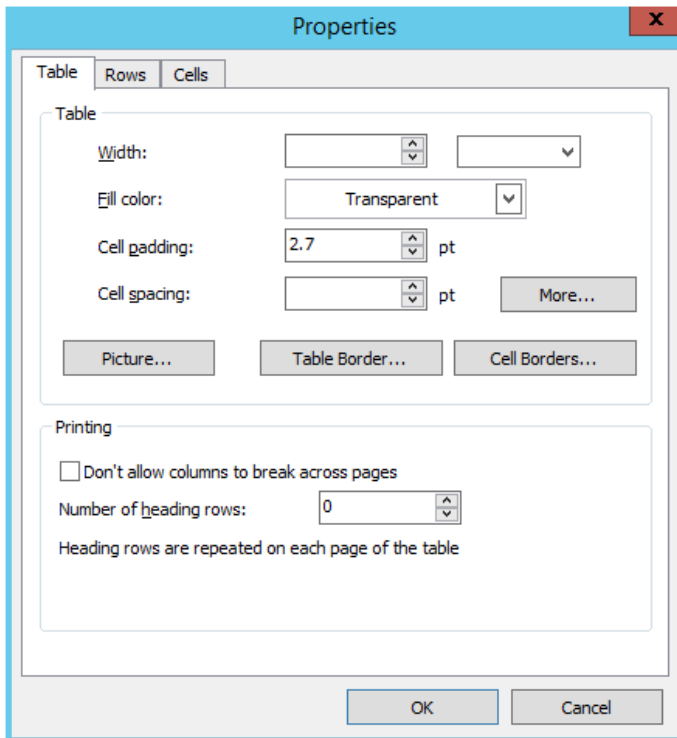
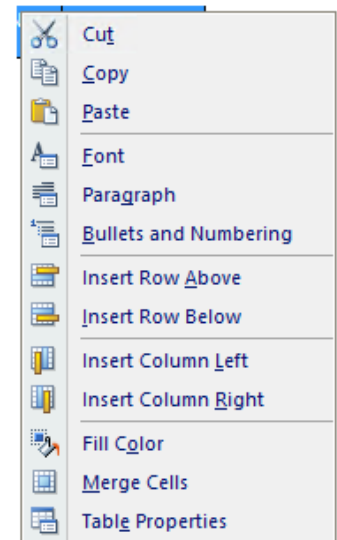
Depending on if text is selected, the cursor is within the table, or the cursor is next to the table, the popup menu will have some or all these options.

The Cut, Copy, and Paste functions are also accessible using keyboard shortcuts or from the Home tab Clipboard subgroup.

The Font, Paragraph, and Bullets and Numbering options display the dialog box that is also accessible by clicking the arrow in the bottom right corner of the Font, Paragraph, and List subgroups on the Home tab.

The four Insert row and column options can also be accessed in the Insert subgroup of the Table tab.

The Fill Color option can also be accessed from the Background subgroup on the Advanced tab.



Merge Cells and Table Properties can be accessed from the Operations subgroup on the Table tab. The Table Properties from the popup will contain tabs for the Table, Rows, and Cells. The Table tab allows changing properties of the table. The Rows tab allows changing the Vertical Alignment of the Row. The Cells tab allows changing the properties of the selected cells. Many of the options on those tabs can be accessed from the Table tab directly.

Once the RTF is complete, Save and close the RTF Editor to return to RTF Mapping Form.

RTF Mapping

Name:

Output Position:

X	4.594
Y	2.135

Width

Use on Print (Non Uluro NativePDF) ☒

Use on Print (Uluro NativePDF) ☒

Use on Web (PDF or PNG) ☒

Var Start String:

Var End String:

Auto Continue ☐

Format Substitutions ☐

If All Text Does Not Fit Generate ☐ Warning ☐ Exception

If Font not available Generate ☐ Warning ☐ Exception

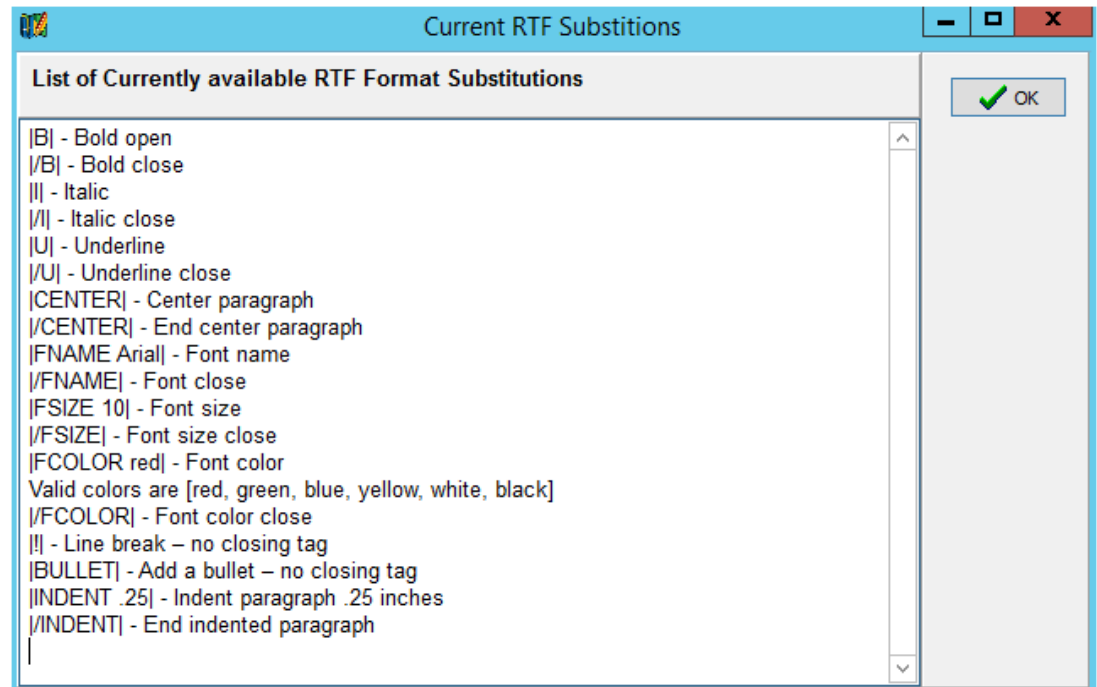
Fixed value:

Var Start String: <#

Var End String: >

Auto Continue ☐

Format Substitutions ☒ Current Substitutions



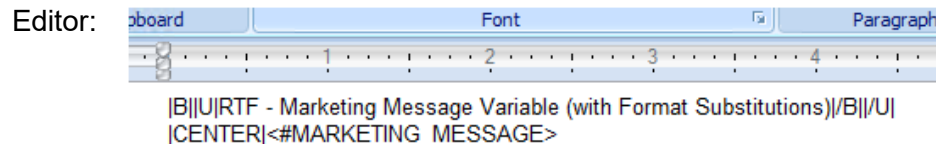
If **Format Substitutions** is checked it enables the substitutions options to be used to format the RTF. If this is checked there will be a Current Substitutions button that is displayed. Click on **Current Substitutions** to see the list of current RTF substitutions that can be used to format the text in the RTF.

If Format Substitutions is not checked, but the substitution is in the data or RTF text, then it will be output as text and not used to format.

RTF - Marketing Message Variable

[B]Joe Auto Repair[/B] is having a [I][FCOLOR RED]Buy 3 Get 1 Free [/I][FCOLOR]tyre sale until the end of July. Visit Joe Auto Repair today on 21st Street for sizes and prices.

When format substitutions is checked, the formatting can be embedded in the data or formatted in the RTF editor. This example shows both.



Output:

RTF - Marketing Message Variable (with Format Substitutions)

Joe Auto Repair is having a *Buy 3 Get 1 Free* tyre sale until the end of July. Visit Joe Auto Repair today on 21st Street for sizes and prices.

If the data contains the formatting and is being output using a variable or field mapping command, the format substitutions will not be respected and will be output as text.

[B]Joe Auto Repair[/B] is having a [I][FCOLOR RED]Buy 3 Get 1 Free [/I][FCOLOR]tyre sale until the end of July.

Warnings and Exceptions can be generated for the text and/or font in the RTF.

The Text and Font options function the same.

If the **Warning** setting is checked, it will write a record into the submission transaction table stating that the text did not fit in the area. The submission will continue to process.

If **Exception** is checked, the record will still be written in the table but the submission will error during Breakpack and not continue to process. The records can be accessed in uSetup and uControl within the submission transaction details.

RTF Mapping

Name: Energy Usage Table

Output Position: Parameter Type: Fixed Value

X	4.594
Y	2.135

Width Height

Param Type: Fixed Value

3.6563

Use on Print (Non Uluro NativePDF) ☒

Use on Print (Uluro NativePDF) ☒

Use on Web (PDF or PNG) ☒

Var Start String: ^#

Var End String: ^

Auto Continue ☐

Format Substitutions ☐

If All Text Does Not Fit Generate
☐ Warning ☐ Exception

If Font not available Generate
☐ Warning ☐ Exception

OK Cancel

Click the OK button to save the RTF Command. Click the Cancel button to cancel all changes to the RTF Command.

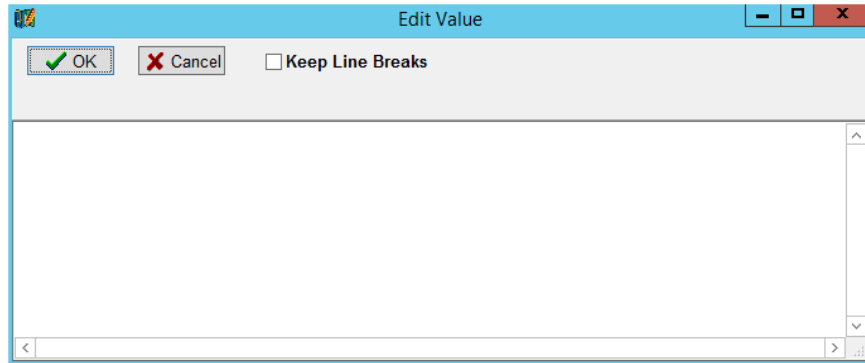
Direct To Printer

This command is typically used for sending custom commands within the PCL output file.

The command can be accessed in 2 ways. The 1st is to click Direct To Printer from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select Direct To Printer.

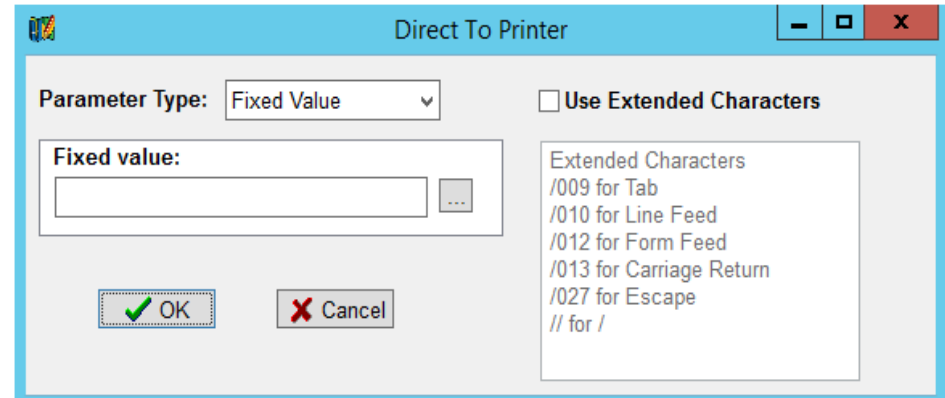
Once the command is created it can be edited to change the parameters.

The commands can be entered using a Fixed Value, or as a **Parameter Type** of Variable or Field. If Fixed Value is used, enter text into the **Fixed Value** area or click on the ellipsis button to use the edit value form.



If Variable or field are selected, the value will become a dropdown to select the variable/field that contains the commands.

Check the **Use Extended Characters** box if the text will contain the extended characters.



PDF Copy

This command allows copying the PDF input to the output using a page copy.

This command can be accessed in 2 ways. The 1st is to click PDF Copy from the Ribbon bar Disp. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select PDF Copy.

Once the command is created it can be edited to change the parameters.

Fit to Page will copy the PDF page to the current output page and will fit the PDF to the Page.

Fit to Printable will copy the PDF page to the current output page and will fit the PDF to the Printable Area. The printable area is defined by the Printer selected in Relay Unify uCompose. A dotted line will outline the printable area in the output window.

Custom fit will copy the PDF page to the current output page and allows the position and scale to be manually set. It will be sized based on the X and Y offset (from left and top) in inches and the Scaling factor.

If the **Classic** setting is checked, the PDF will be scaled based on output device resolution. This is the default for Fit to Page.

If the **By Width** setting is checked, this will make the output pdf fit in the Width of the output page. This can be used with **By Height**, which if checked will make the output PDF fit in the height of the output page. When both are used the PDF will fit within the page regardless of height and width. This can only be used with Fit to Page or Fit to Printable and is the default for Fit to Printable.

The **Page Variable** defines the Input page to output. By default this will be Sys_CurInPage but can be any integer type variable.

The **Output Position** X and Y specify the starting location in inches. This is only enabled for Custom Fit. This will correspond to the placement in the Output window. The Position can be entered using a Fixed Value for X and Y, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X and Y values will become dropdowns to select the variable/field that contains the X/Y value.

Copy PDF to Output

☒ Fit to Page ☐ Fit to Printable ☐ Custom fit

☒ Classic ☐ By Width ☐ By Height

Page Variable: Sys_CurInPage

Output Position: Parameter Type: Fixed Value

X: 0

Y: 0

Scale: 100. 0

Copy Page to New PDF ☒

Default PDF Rendering ☒

Print to Image Color ☒

Use on Print (Non Uluro NativePDF) ☒

Use on Print (Uluro NativePDF) ☒

Use on Web (PDF or PNG) ☒

Print Color Output

☒ 24 Bit Color ☐ Grayscale

☐ 8 Bit color ☐ 1 Bit (B&W)

OK Cancel

Output Position: Parameter Type: Variable

X:

Y:

The **Scale** value is the percent to scale the PDF. This is only enabled for Custom Fit.

If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

If **Copy Page to New PDF** is checked, Relay Unify will copy the original PDF page to the output PDF page. It allows mappings (including images) to be placed under the PDF. The mappings will be visible under the PDF if there are no background within the PDF.

The rendering of the PDF as an image can be turned off by unchecking **Default PDF Rendering**. If this is unchecked, several other options will be available. When the output is not going to Relay Unify Native PDF either the Default PDF Rendering will occur or the settings available with the Default PDF Rendering unchecked will occur.

If **Print to Image Color is checked**, there will be Print Color Output options that are available.

Select the **24 Bit Color** if the image should be of 24 bit. This is the default.

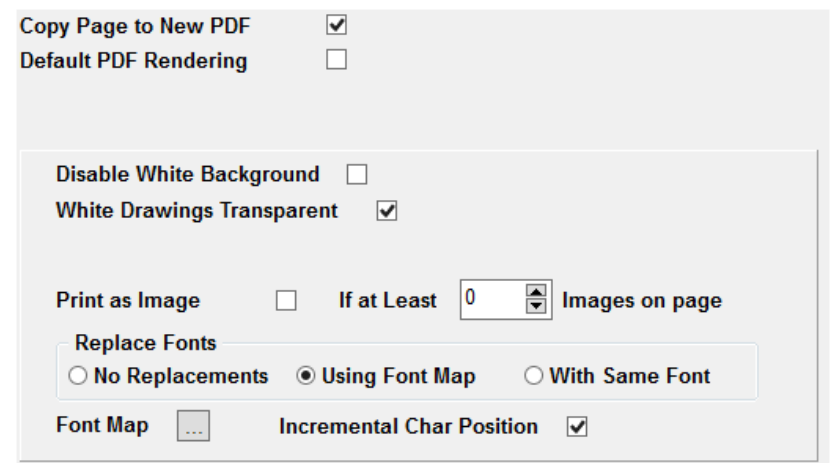
Select the **8 Bit Color** if the image should be converted to 8 Bit color from the default of 24-bit color. This will make the image smaller when being sent to the printer and increase printing speed but may distort the colors.

Select the **GrayScale** box if the image should be converted to GrayScale.

Select the **1 Bit (B & W)** box if the image should be converted to 1 Bit.

The **Disable White Background** setting can be used but will have no effect if Relay Unify Native Output is the output or Copy Page to New PDF is checked. If Disable White Background is checked, if there is a background already in the existing PDF, the background will exist in the new PDF.

The **White Drawings Transparent** setting can be used but will have no effect if Relay Unify Native Output is the output or Copy Page to New PDF is checked. If checked, it will attempt to make white areas of the PDF transparent. This does not work on White areas of images within the PDF. This only works for Text Areas. Images that are white will still output as white.



The screenshot shows a settings dialog box for Relay Unify uCompose. It contains several sections of controls:

- Copy Page to New PDF**: A checkbox that is checked.
- Default PDF Rendering**: A checkbox that is unchecked.
- Disable White Background**: A checkbox that is unchecked.
- White Drawings Transparent**: A checkbox that is checked.
- Print as Image**: A checkbox that is unchecked.
- If at Least**: A numeric input field with the value "0".
- Images on page**: A label next to the "If at Least" field.
- Replace Fonts**: A section with three radio buttons: "No Replacements" (unchecked), "Using Font Map" (checked), and "With Same Font" (unchecked).
- Font Map**: A button with three dots.
- Incremental Char Position**: A checkbox that is checked.

If **Print as Image** is checked, the PDF will be processed as an image if the image count parameter is met. If **at Least Images on Page** value is what determines which pages will process as images. Use the arrows to adjust the value. This can be useful if 1) An image exists on the PDF that may not process correctly when printed, or 2) The PDF contains check images. In some cases, these check images can take a long time to process when printing. By utilizing this setting, pages that fit these criteria will process at a faster speed.

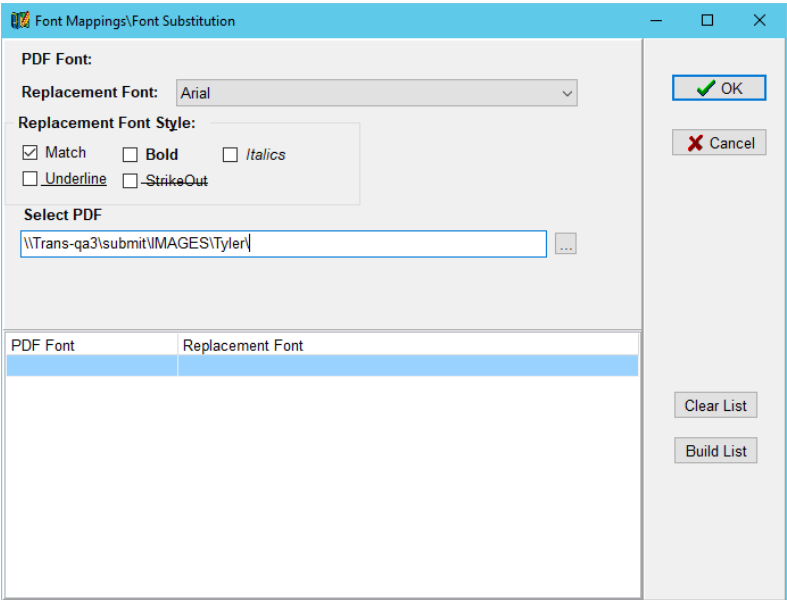
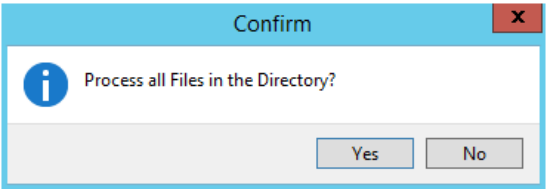
Replace Fonts can be set to three different settings. **No Replacements** outputs the pdf using the original Embedded fonts. If the embedded fonts are bitmap, then the Output file size can be larger than when Rendered as an Image. **Using Font Map** allows manual selection of the Replacement Fonts. This will reduce the output file size, but the fonts may not exactly match the original embedded fonts. **With Same Font** will output the PDF using Fonts on the Local computer instead of the original Embedded fonts. This will reduce the output file size, but the fonts may not exactly match the original embedded fonts.

When substituting fonts each character is positioned incrementally in the output. Unchecking the **Incremental Char Position** will position only the line in the Output file. This can reduce the file size, but on long lines the text may no longer match the original Input PDF.

When Using Font Map is selected, click on the Font Map edit box (...) to display the Font Mappings\Font Substitution form.

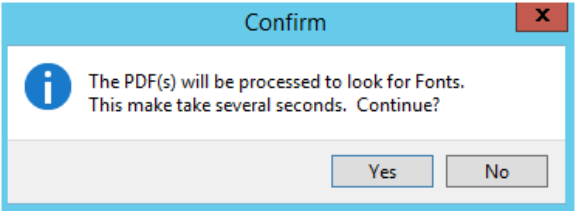
Click the ellipsis button to select the PDF file in **Select PDF**. Select the path and a PDF.

The user will be asked if all PDF's should be processed. Select Yes to process all PDF's and No to process only the one PDF.



Clicking the **Clear List** button will clear the already entered data.

Click the **Build List** button to process. There will be a confirmation message. Click Yes to Continue and No to cancel.



A List of the Fonts and suggested Substitutions will be displayed.

Select each font and change the **Replacement Font** if desired.

Change the **Replacement Font Style** if desired.

All pages of the PDF will be parsed to determine the list of Fonts used in the PDF.

After building fonts that are known will be automatically selected. The remaining must be manually selected. When outputting to a PDF the Font name and Style must be matched. If the Font name from the PDF contains the Font Style (bold, italic, underline, strikeout) then make sure these are selected in the Font Replacement list. Sometimes input PDF's may use the same font with slightly different names. All instances must be selected with a Replacement font of the font will be drawn using the embedded fonts.

Font substitution may be cleared by clicking the Clear List button or on individual fonts by clicking on the font and changing the Replacement font to blank.

When finished Click OK.

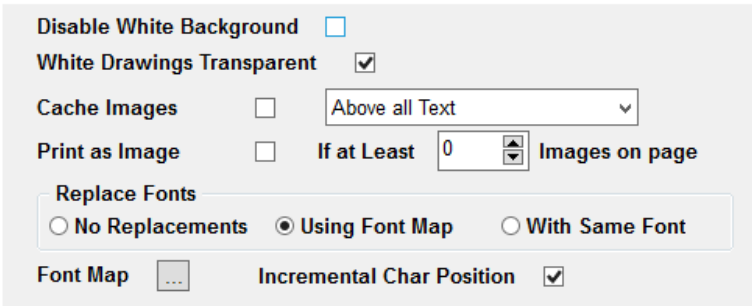
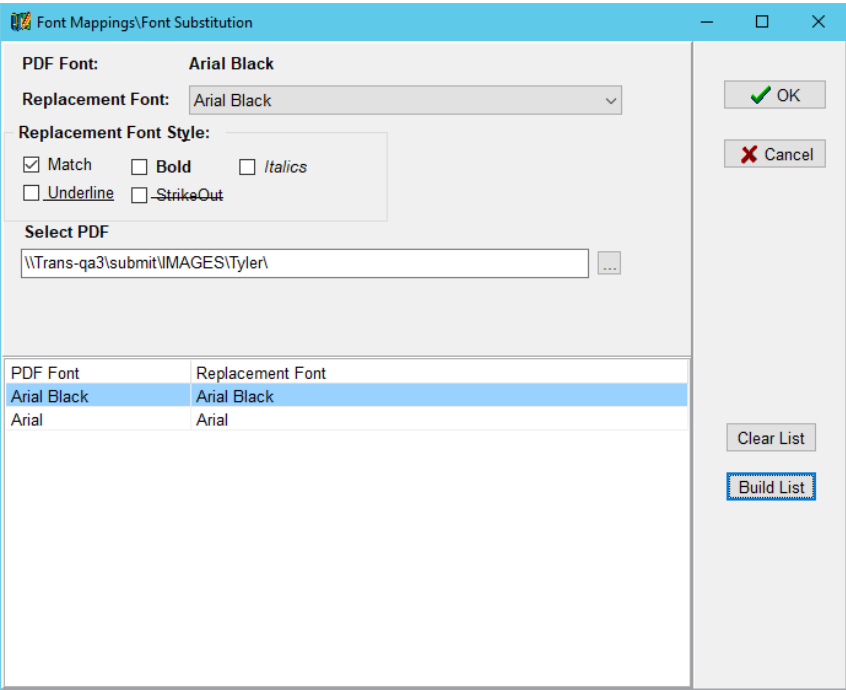
When the PDF output is created the Fonts will be substituted.

If Postscript reusable images are turned on, the **Cache Images** option is available. This allows images within the PDF to be cached. This only works on some PDF's. Select one of the options from the dropdown menu that is to the right of The Cache Images box. Caching of Images can reduce the size of the output file (pdf or Postscript) by reusing logos and other common images. With Cache Images the White Transparent checkbox must be selected.

When Below all text is selected, the images are added to the output before any text is drawn to the output. This may not work in all cases.

When Above all text is selected, the images are added to the output after all text is drawn to the output. This may not work in all cases.

When No images is selected, the images are not added to the output. This allows images to be replaced.



Save CSV Data

This command allows the user to save CSV data for a document that can be exported.

This command can be accessed by clicking on the + on the Disp tab of the Map Commands window then selecting Save CSV Data.

Only one Save CSV command can be used to define the CSV. Check the **Define the CSV** checkbox to enable the Definition. Select any System Field, User Field, System Variable, or User Variable to add to the CSV output. From the List box select the Item to be moved to the Save list and click the Right Arrow. This moves the Item to the Save list. To remove it from the save list select the item and click the left arrow. The item will be returned to the appropriate list box. To change the order of the output, select the item and use the up or down arrow to change the output order for the CSV file.

Check the **Save CSV to DB** checkbox to save the current values of the Save List items to the database.

At any location on the map the Save CSV command may be entered. The current values of the Save list items will be saved to the database during Breakpack.

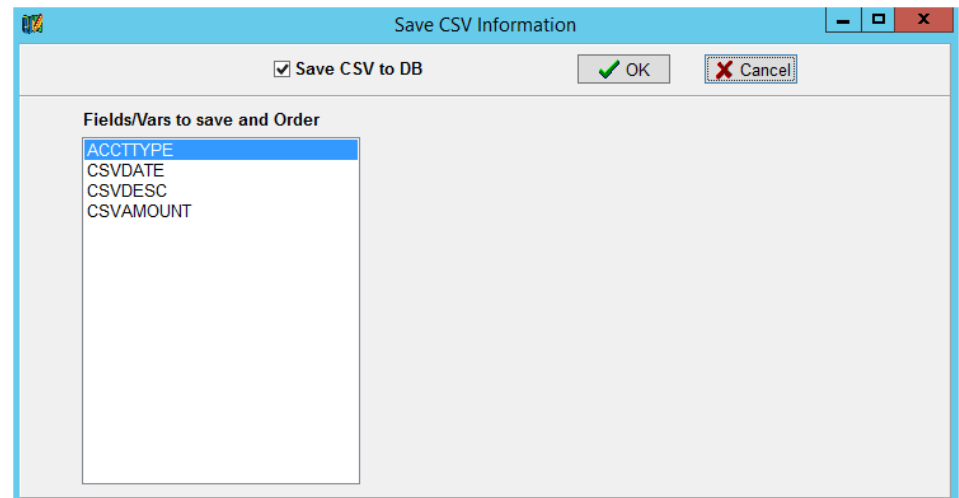
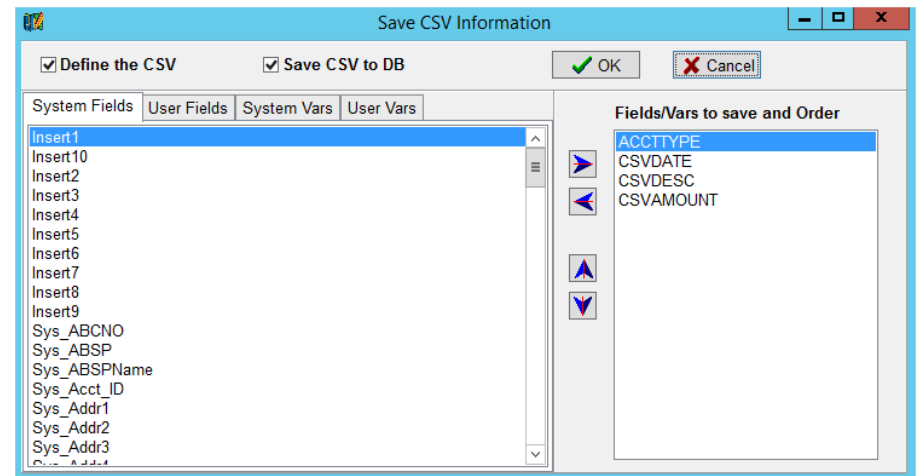
If the CSV save list has been defined, then adding a new Save CSV command will display only the List.

To save the values stored in those fields/variables later in the map, add the same command again. This time it will let the user save those previously selected variables and fields. The first command Defines the CSV and the second Saves the CSV.

Sample

CSV file:

1				
2	ACCTTYPE	CSVDATE	CSVDESC	CSVAMOUNT
3	Checking	8/19/2017	Beginning Balance	726.7
4	Checking	8/22/2017	Check 3409	-47.34
5	Checking	8/22/2017	Check 3411	-115.02
6	Checking	8/24/2017	Check 3405	-49.95
7	Checking	8/25/2017	Check 3410	53.70



Save Reconcile Data

This command allows the user to save Reconcile data for a document. This allows saving specific types of data.

This command can be accessed by clicking on the + on the Disp tab of the Map Commands window then selecting Save Reconcile Data.

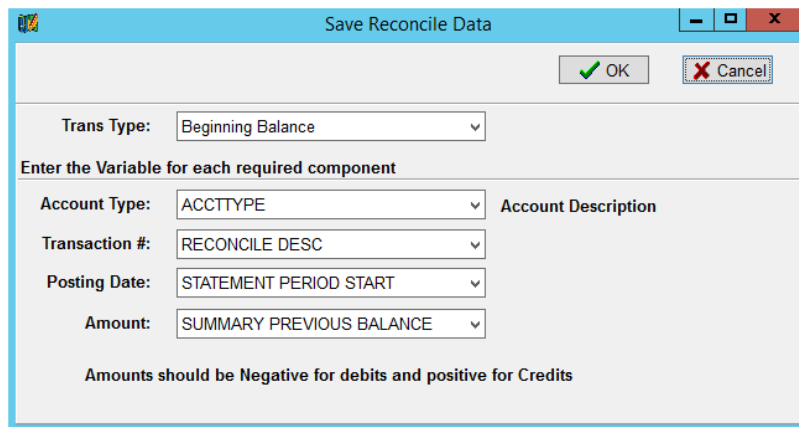
For Reconciliation there are 6 **Transaction Types**: Beginning Balance, Ending Balance, Check, Withdraw, Interest, and Adjustment. Select the Transaction type and then select the Variable that will define each entry.

Account Type should define the description of the Account. An example would be Checking, Saving, Money Market, etc.

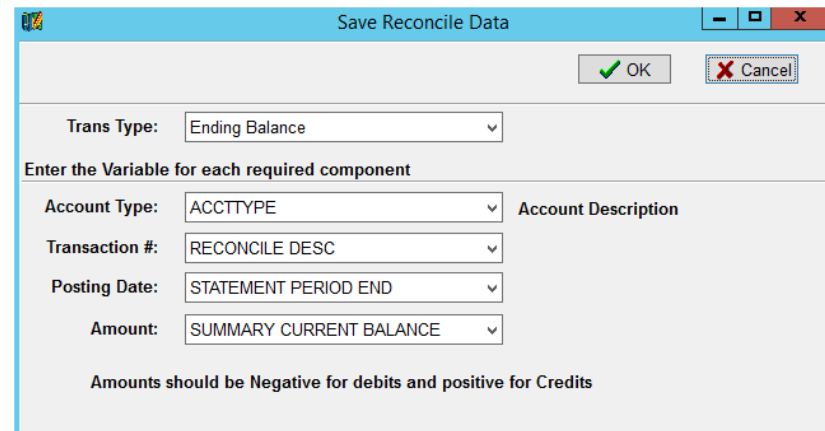
Transaction # should be some identifying information for the Transaction. This could be check number or description of the Transaction, or in Beginning Balance Trans Type this could be the text "Beginning Balance".

Posting Date should be the date of the Transaction was posted. For Beginning Balance this could be the date of the last statement.

Amount should be the amount of the Transaction. For Debits this should be negative. For Credits this should be positive.



The screenshot shows the 'Save Reconcile Data' dialog box. At the top, there are 'OK' and 'Cancel' buttons. Below them, the 'Trans Type:' dropdown menu is set to 'Beginning Balance'. A section titled 'Enter the Variable for each required component' contains four rows: 'Account Type:' with 'ACCTTYPE', 'Transaction #:' with 'RECONCILE DESC', 'Posting Date:' with 'STATEMENT PERIOD START', and 'Amount:' with 'SUMMARY PREVIOUS BALANCE'. At the bottom, a note states 'Amounts should be Negative for debits and positive for Credits'.



The screenshot shows the 'Save Reconcile Data' dialog box. At the top, there are 'OK' and 'Cancel' buttons. Below them, the 'Trans Type:' dropdown menu is set to 'Ending Balance'. A section titled 'Enter the Variable for each required component' contains four rows: 'Account Type:' with 'ACCTTYPE', 'Transaction #:' with 'RECONCILE DESC', 'Posting Date:' with 'STATEMENT PERIOD END', and 'Amount:' with 'SUMMARY CURRENT BALANCE'. At the bottom, a note states 'Amounts should be Negative for debits and positive for Credits'.

The Save Reconcile Data command can occur at any location within the Map Commands. The Reconcile data will be saved during Breakpack with the values of the variables at the time the command is executed.

Save Page

This command can be used to save any page of the document as an image to a specific file location.

The command can be accessed by clicking on the + on the Disp tab of the Map Commands window then selecting Save Page.

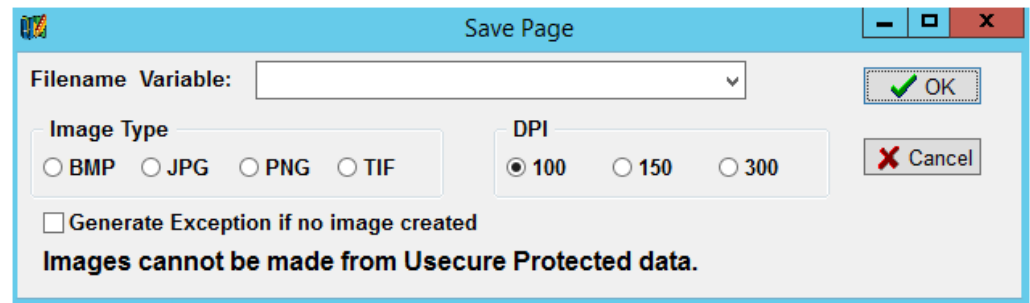
Once the command is created it can be edited to change the parameters.

The **Filename Variable** should contain the full UNC path to the file location and the filename for the image.

The **Image Type** will determine the file extension and how the image is saved.

The **DPI** setting states the DPI of the image.

If **Generate Exception if no image created** is checked, then the print job will error at the time it is processed because the filename and location does not exist. If this is unchecked, there will be an error, but processing will not stop.



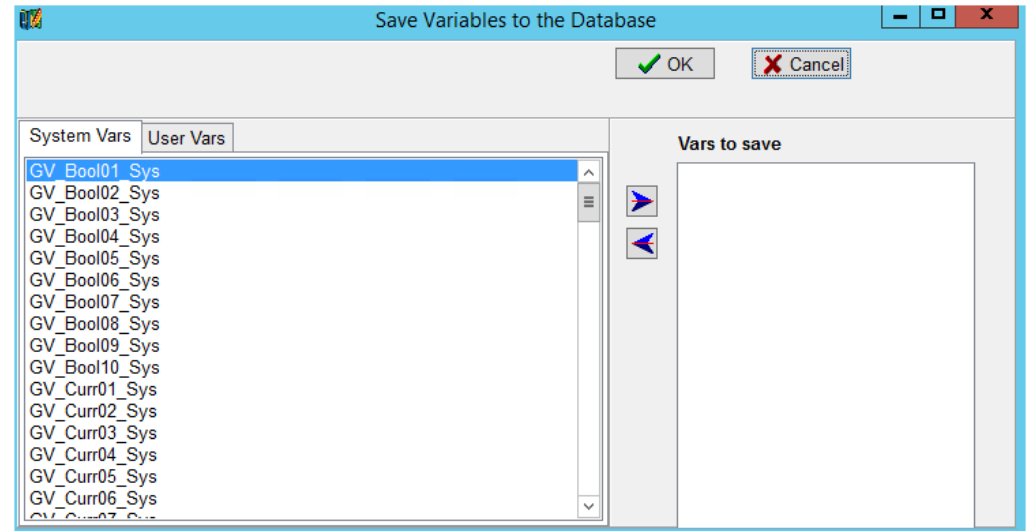
Save Vars to DB

This command can be used for check images or variable values that need to be saved to the database. These will then be searchable on the web or can be updated using a Relay Unify uBridge job.

The command can be accessed by clicking on the + on the Disp tab of the Map Commands window then selecting Save Vars to DB.

Once the command is created it can be edited to change the parameters.

Select the variables to save to the database.



Change Input Page

This command allows the current input page to be changed to a specific value or by an increment. After the change the output page may be restarted.

The command can be accessed by clicking on the + on the Disp tab of the Map Commands window then selecting Change Input Page.

This will display the Change Input Page form.

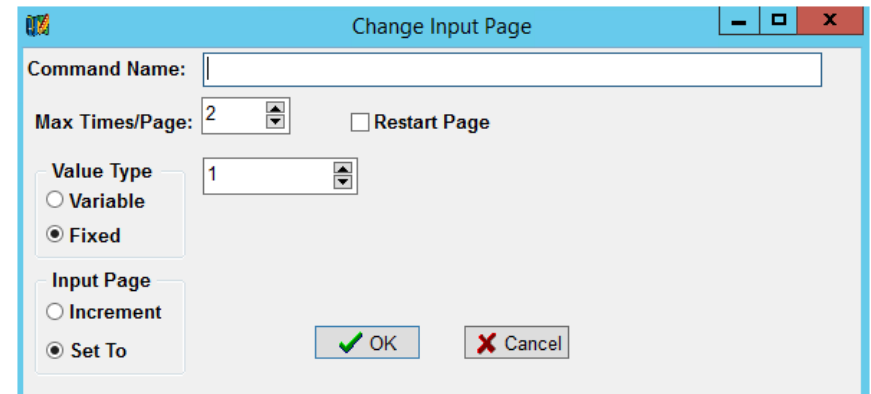
The **Command Name** is an optional name for the command. If a name is entered it will be displayed as part of the name of the command in the Map Commands window.

Max Times/Page is the Maximum times per output page that the command will execute. This will prevent an infinite loop if the Restart Page setting is checked.

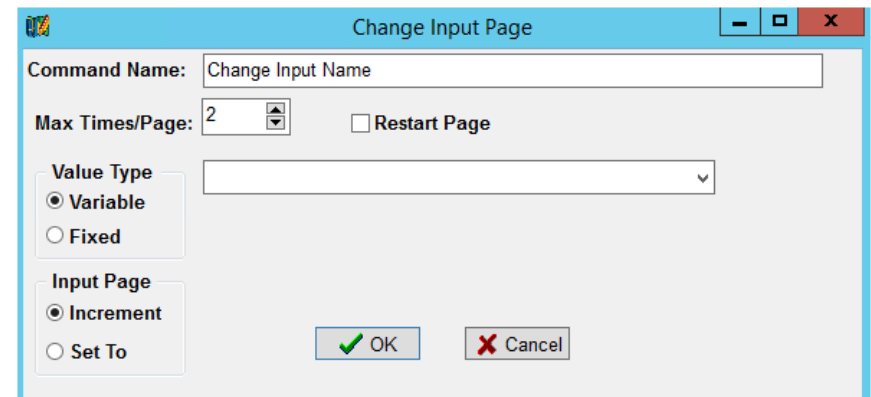
When **Restart Page** is checked, after changing the input page the remaining commands will be skipped, and output will restart with the first command in the Display list of commands.

Value Type determines the input page. This can be **Fixed** which allows entry of a fixed value to use to determine the Input page. This can also be **Variable** which allows selection of a Variable value to use to determine the Input page.

Input Page can be Increment or Set To, determining the change of the page. **Increment** will increment the current input page by the previously selected value (Value Type). **Set To** will set the current input page to the previously selected value (Value Type).



The screenshot shows the 'Change Input Page' dialog box. The 'Command Name' field is empty. 'Max Times/Page' is set to 2. The 'Restart Page' checkbox is unchecked. Under 'Value Type', the 'Fixed' radio button is selected, and the value '1' is entered in the adjacent field. Under 'Input Page', the 'Set To' radio button is selected. 'OK' and 'Cancel' buttons are at the bottom right.



The screenshot shows the 'Change Input Page' dialog box. The 'Command Name' field contains the text 'Change Input Name'. 'Max Times/Page' is set to 2. The 'Restart Page' checkbox is unchecked. Under 'Value Type', the 'Variable' radio button is selected, and a dropdown menu is shown. Under 'Input Page', the 'Increment' radio button is selected. 'OK' and 'Cancel' buttons are at the bottom right.

Page Setup

The Page Setup command allows the execution of a command (or group of commands) before an output page is started. With the Use of the Page Setup Command, Variables can be defined and calculations performed before the Output page is started. This can include the Change Input Page command and the Assign Field command. Once the Input page or the Fields are set in the Page Setup command, a condition on the Output Page Definition can be used to determine the correct page type for the output.

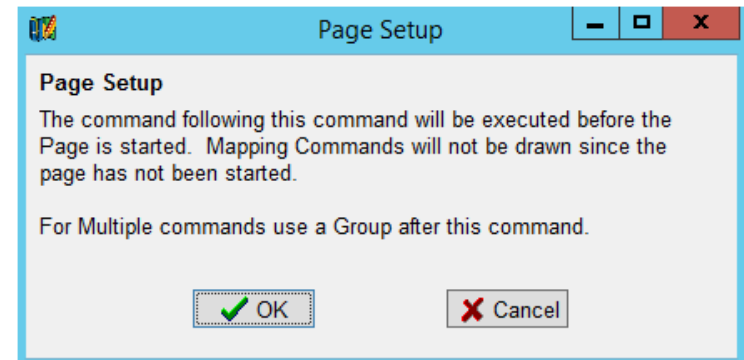
The command can be accessed by clicking on the + on the Disp tab of the Map Commands window then selecting Page Setup.

This displays information about how to use the Page Setup command. Any Non-Mapping command that immediately follows the Page Setup command will be executed before the Output Page is started.

There is nothing to change on this form. Click OK to save or Cancel to Exit.

The Page Setup command functions like a conditional and can only be attached to one command. This can be an individual command or a group containing multiple commands.

Mapping commands will not be executed since there is not an output form when the Page Setup is executed.



Call Code Group

A Code Group is a reusable group of commands that are saved to the database and referenced in a Map. The Code Group can have input and output parameters. The Code Group is accessed by name. Code Group names are not case sensitive. Input parameters must be provided. Output parameters are optional.

Any variables or command groups defined inside the Code Group are local to the Code Group and cannot be referenced outside the Code Group.

The Code Group can access system level fields or variables. The Code Group cannot access user fields or user variables except by using the input parameters.

A Code Group cannot be called in a detail section. A Code Group cannot call another Code Group. The Code Group may call the following commands:

Comment	Barcode	Save CSV data
Field Mapping	OMR	Save Reconcile data
Variable definition	Append Image	Save Page
Variable Mapping	Drawing Object	Save Variables to DB
Word Wrap Paragraph	Graph Object	Change Input Page
Functions	Start Group	Exit Code Group
Conditional	RTF Paragraph	

This command can be accessed in 2 ways. The 1st is to click Code Groups from the Ribbon bar Maps. The 2nd is to Click on the + on the Disp tab of the Map Commands window then select Call Code Group. The first option will take the user directly to the Code Group Maintenance form. The second option will take the user to the form to Call a particular code group. That option is the only way to create the call code group command within the Map Commands window.

If the code group has already been created, it will be listed in the **Available Code Groups** dropdown list. Select the code group. If not, it can be looked up in the database or created.

This code group is for outputting the address block, barcode, and IMB. The code group covers all envelope sizes, if there is a window or not, and if the address block needs to be on the top or bottom based on the folding of the page.

Code groups can be designed to encompass all scenarios or a specific scenario. They are helpful for performing calculations, address blocks, barcodes, return coupon sections, or anything that needs to be reused in multiple map files. The power of the code group is in the fact that it is created once, reused, and if edited the edit will apply to all maps calling the code group.

Once the code group is selected, the Input Parameters must be entered. Input and Output Parameters are set up within the Code Group and are not always required. These values can be from a Fixed Value, Variable, or Field. The **Input Parameters** define fields/variables within the code group. These can come from the data as a field or variable value or be entered as a fixed value, such as page height. All input parameters must be assigned. The **Output Parameters** can be pushed into a variable that is in the current map calling the code group. This allows that value, now saved in the 2D BARCODE Variable to be used throughout the map in other ways such as an RTF or Variable Mapping.

Variables from the detail sections will not be available. If variable/field are selected for the parameters, the list will match the input type for the parameter. If the Output parameter is assigned to a variable, it will contain the last value from the Code Group variable when the Code Group exits.

If the code group is not in the list, click on the ellipsis button to look up, create, or edit a code group using the Code Group Maintenance form.

Call Code Group

Available Code Groups:
Demo Envelope Window Address Block

Input Parameters Output Parameters

ENVELOPE #:Text:Fixed:10;
DISPLAY OUTLINE:Bool:Fixed:Y;
TOP OR BOTTOM:Text:Fixed:top;
PAGEHEIGHT:Real:Fixed:11.0000;

Input From:
Fixed Value
11

OK Cancel

Input From:
Variable

Input Parameters Output Parameters

BARCODEDATA:Text:Var:2D BARCODE:

Output Variable:
2D BARCODE

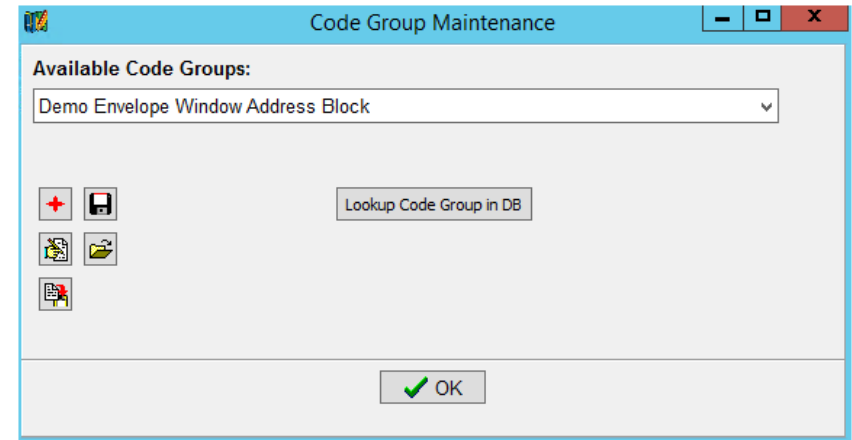
While the Code Group Maintenance form is open the Main Relay Unify uCompose form is hidden. If the Input, Output Display, or Map Command forms are separated from the Main Relay Unify uCompose form, they will remain visible but cannot be accessed.

The Available Code Group list box contains the list of Code Groups that Relay Unify uCompose knows about. This list is populated when a map is opened that contains code groups.

The **Lookup Code Group in DB** button allows access to all the Code Groups saved in the Database that Relay Unify uCompose is accessing through Database Connection. Clicking this button displays the Code Group Lookup form.

This form also allows the user to Add, Edit, Copy, Export it as a file, or Load the File.

Clicking OK will exit this form.



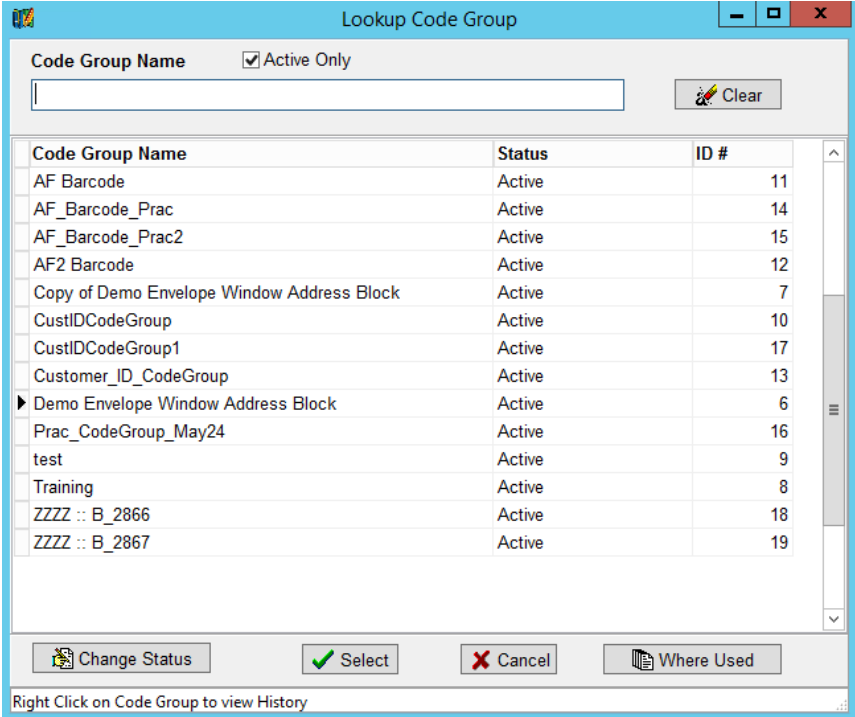
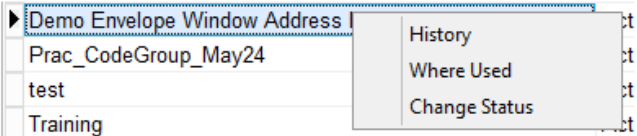
Lookup Code Group

Enter a Code Group name in the **Code Group Name** entry box to search. The Search is a partial search and will find all the Code Groups that contain the search name. To clear the search, delete the text in the Code Group Name entry box or click the **Clear** button.

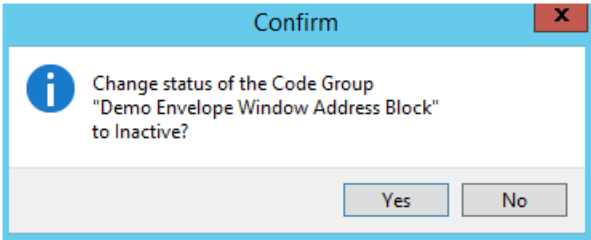
The Default display is for Active Code Groups only. To see Active and Inactive Code Groups uncheck the **Active Only** checkbox.

To change the status of a code group to Active/Inactive, select a code group then click the **Change Status** button.

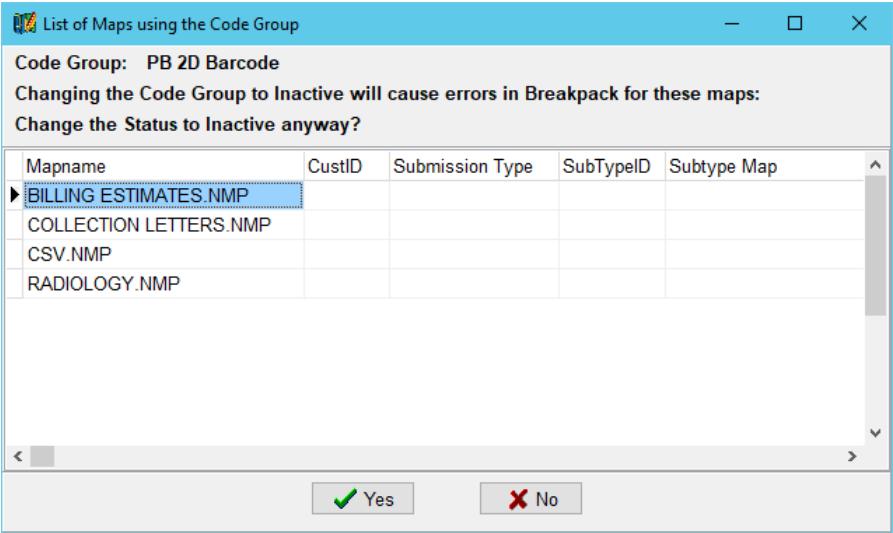
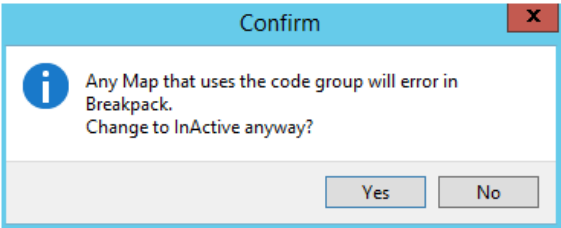
Change status can also be accessed by right-clicking on a code group to change its status.



If changing from Active to Inactive, this can cause Breakpack to fail if the map uses the Inactive Code Group. The user will be asked to confirm the change to inactive Status. Click Yes to Confirm and No to cancel.



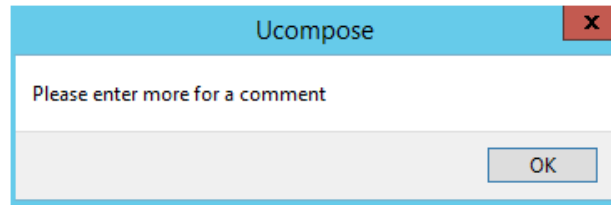
Then the List of Maps using the Code group will be displayed.



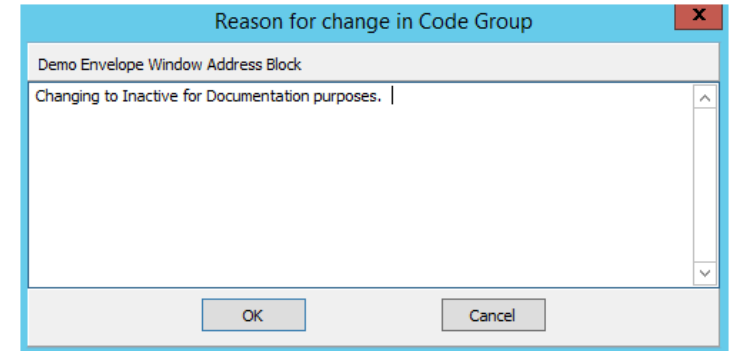
If the user selects Yes to continue, they will be asked again if they want to set the status to Inactive.

Selecting Yes will ask for a reason for the Change. Selecting No will cancel the status change.

The User must enter a comment into this window to continue or there will be an error message asking for more of a comment.



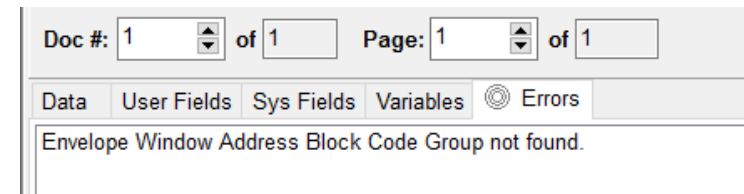
A dialog box titled "Ucompose" with a red close button. It contains a text area with the placeholder text "Please enter more for a comment" and an "OK" button at the bottom right.



A dialog box titled "Reason for change in Code Group" with a red close button. It contains a text area with the text "Changing to Inactive for Documentation purposes." and "OK" and "Cancel" buttons at the bottom.

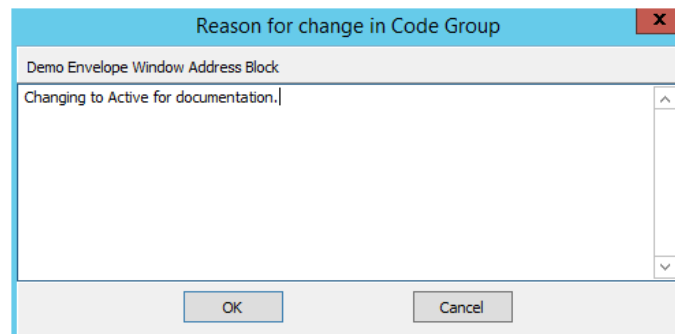
Any Map that contains the Inactive Code Group will now display an error when opened or processed through Breakpack. Code groups are embedded during Breakpack, along with all other map commands.

Transactions			Reports	Emails	Text Messages	HTML Emails	Voice Messages	uSecure	Pri
ID	Date	Transaction Description							
1421749	11/5/2016 10:11:20	Resubmit of 143626							
1421750	11/5/2016 10:11:20	BreakPack							
1421752	11/5/2016 10:11:58	Begin Breakpack							
1421753	11/5/2016 10:11:58	Breakpack Complete							
1421754	11/5/2016 10:11:58	Error: Envelope Window Address Block Code Group not found.							



A screenshot of a document viewer showing "Doc #: 1 of 1" and "Page: 1 of 1". Below the document content, there are tabs for "Data", "User Fields", "Sys Fields", "Variables", and "Errors". The "Errors" tab is selected, displaying the message "Envelope Window Address Block Code Group not found."

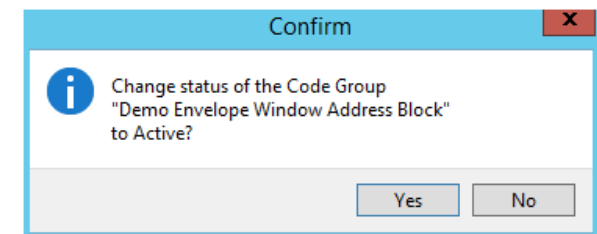
Inactive Code groups can be changed to Active by selecting the Code Group and clicking the Change Status button. If the code group is not listed in the Lookup Code Group form, be sure to uncheck Active status to see the Inactive Code Groups.



A dialog box titled "Reason for change in Code Group" with a red close button. It contains a text area with the text "Changing to Active for documentation." and "OK" and "Cancel" buttons at the bottom.

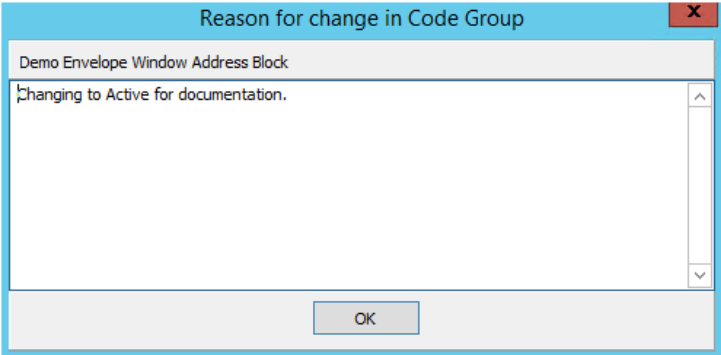
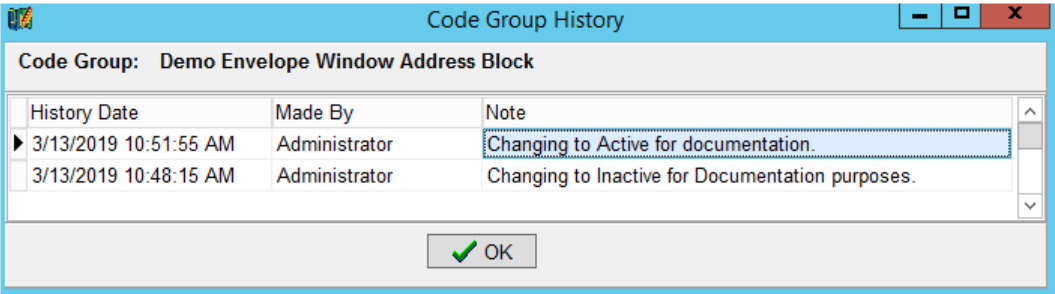
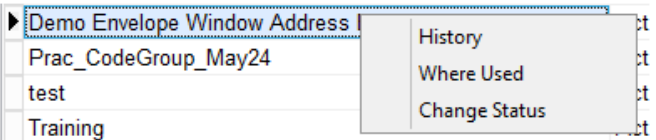
There will be a confirmation message to confirm the status change. Click Yes to confirm and No to cancel.

Then enter the reason.

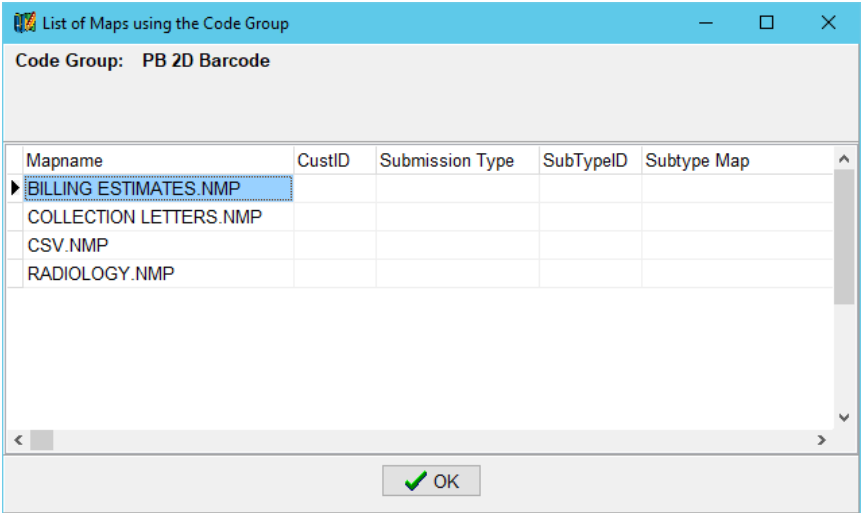
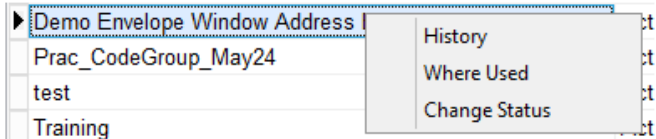


A dialog box titled "Confirm" with a red close button. It contains an information icon and the text "Change status of the Code Group 'Demo Envelope Window Address Block' to Active?". At the bottom are "Yes" and "No" buttons.

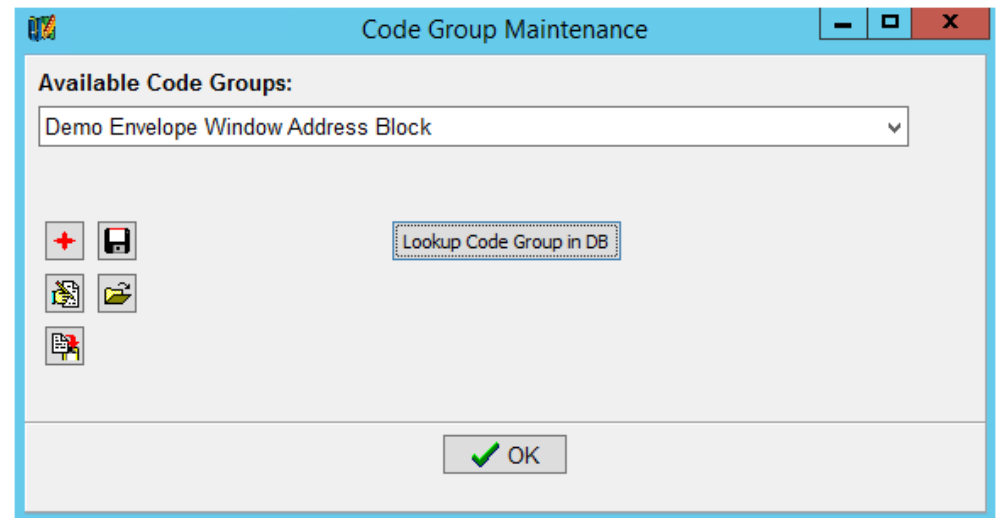
The History of a Code Group includes the reasons entered when changing the status of a code group. To access the History, right-clicking on a code group and select History. Double click on the not to see the reason window.



To see all the maps that are currently using the Code Group, right-click on a code group and select Where Used. This can also be accessed by clicking on the code group and clicking the **Where Used** button on the Lookup Code Group form.



To select a Code Group, double Click on the Code Group name or Click the **Select** button. This will return the user to the Code Group Maintenance form which the selected code group listed.



Edit Code Group

The Edit button allows editing a Code Group.

After clicking the Edit Code Group button, the Edit Code Group form will be displayed. The Code Group Name will be displayed and cannot be changed.

Editing a Code Group is easier if performed within an existing map. The Code Group maintenance will then have access to an output form and data from the map to use in the editing.

The Same Edit Code Group form is used to create a new code group.

Add Code Group

The Add Code Group button allows adding or simply creating a new Code Group.

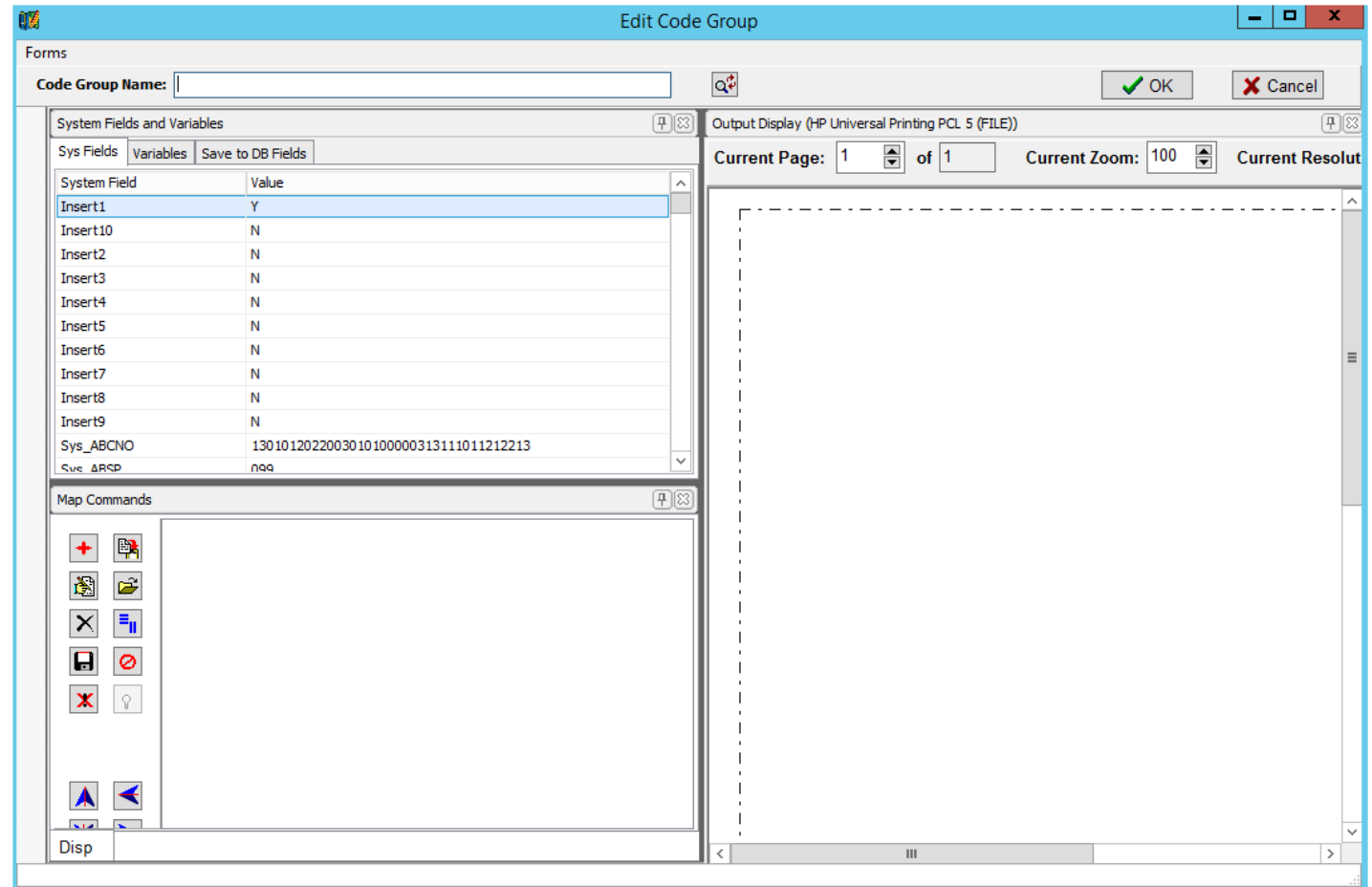
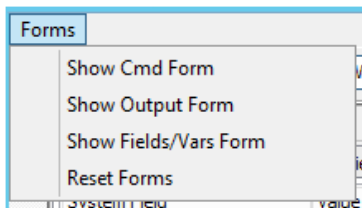
After clicking the Add Code Group button the Edit Code Group form will be displayed.

This form is like the main Relay Unify uCompose form but is displayed within the program to enforce that the Code Group is a map of commands within the map. It contains 3 windows.

If this is an edit, the **Code Group Name** will be populated and cannot be edited.

There is a refresh/reparse button next to the Code Group Name.

The Forms menu has four options. a Reset Forms option.



The 'Edit Code Group' form is a window with a title bar and standard window controls. It contains three main panes:

- System Fields and Variables:** A table with two columns: 'System Field' and 'Value'. The table lists various system fields and their values.
- Map Commands:** A pane with a list of commands and icons for adding, deleting, and editing commands.
- Output Display:** A large pane for displaying the output of the code group.

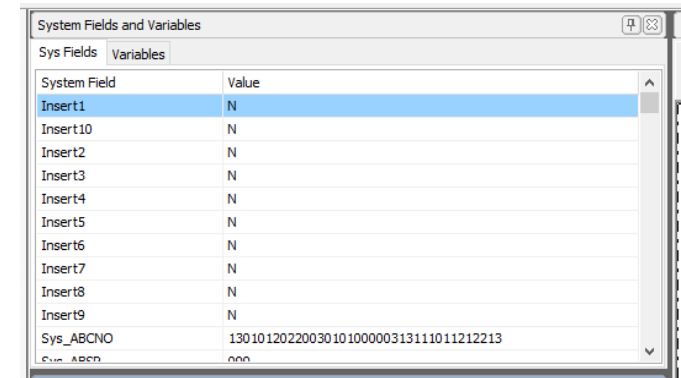
System Field	Value
Insert1	Y
Insert10	N
Insert2	N
Insert3	N
Insert4	N
Insert5	N
Insert6	N
Insert7	N
Insert8	N
Insert9	N
Sys_ABCNO	1301012022003010100000313111011212213
Sys_ARSP	ngq

The Show Cmd Form resets the Map Commands window if it has been closed. The Show Output Form rests the Output window if it has been closed. The Show Fields/Vars Form resets the System Fields and Variables window if it has been closed. The Reset Forms option will restore all three forms if they are disconnected from the main edit window.

System Fields and Variables Window

Displays the System Fields and Variables that can be used in the Code Group.

Only System Fields, System Variables, and Local Variables are available within the code group.

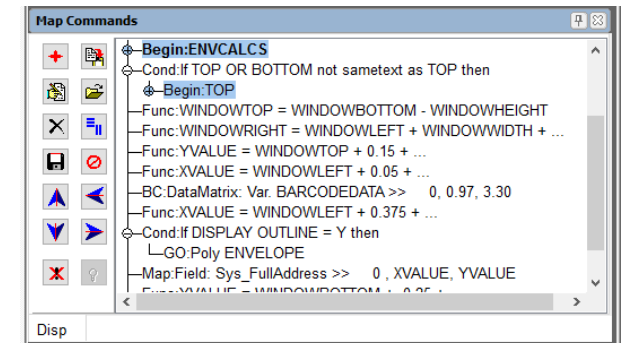


System Field	Value
Insert1	N
Insert10	N
Insert2	N
Insert3	N
Insert4	N
Insert5	N
Insert6	N
Insert7	N
Insert8	N
Insert9	N
Sys_ABCNO	1301012022003010100000313111011212213
Sys_ABCD	000

Map Commands Window

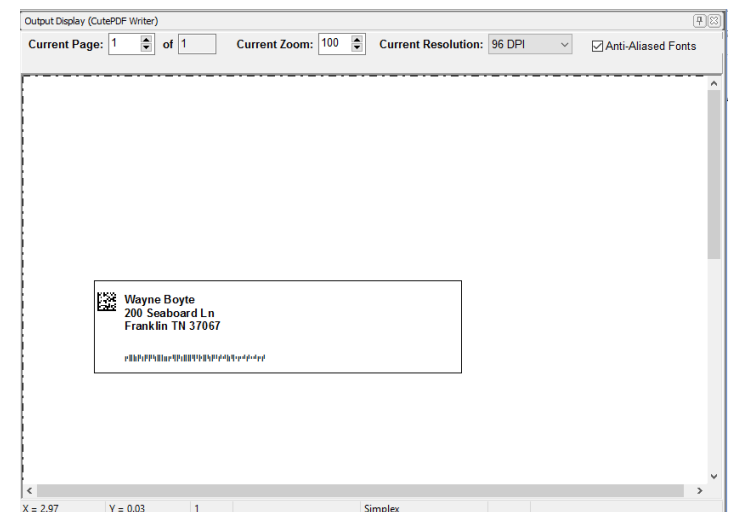
Shows the Commands that make up the Code Group.

There is only a Display tab within the Code Group Map Command window. Some of the commands available within the map are not available within the code group.



Output Display Window

Displays the output from the Code Group (using the Input parameters from the original Map.



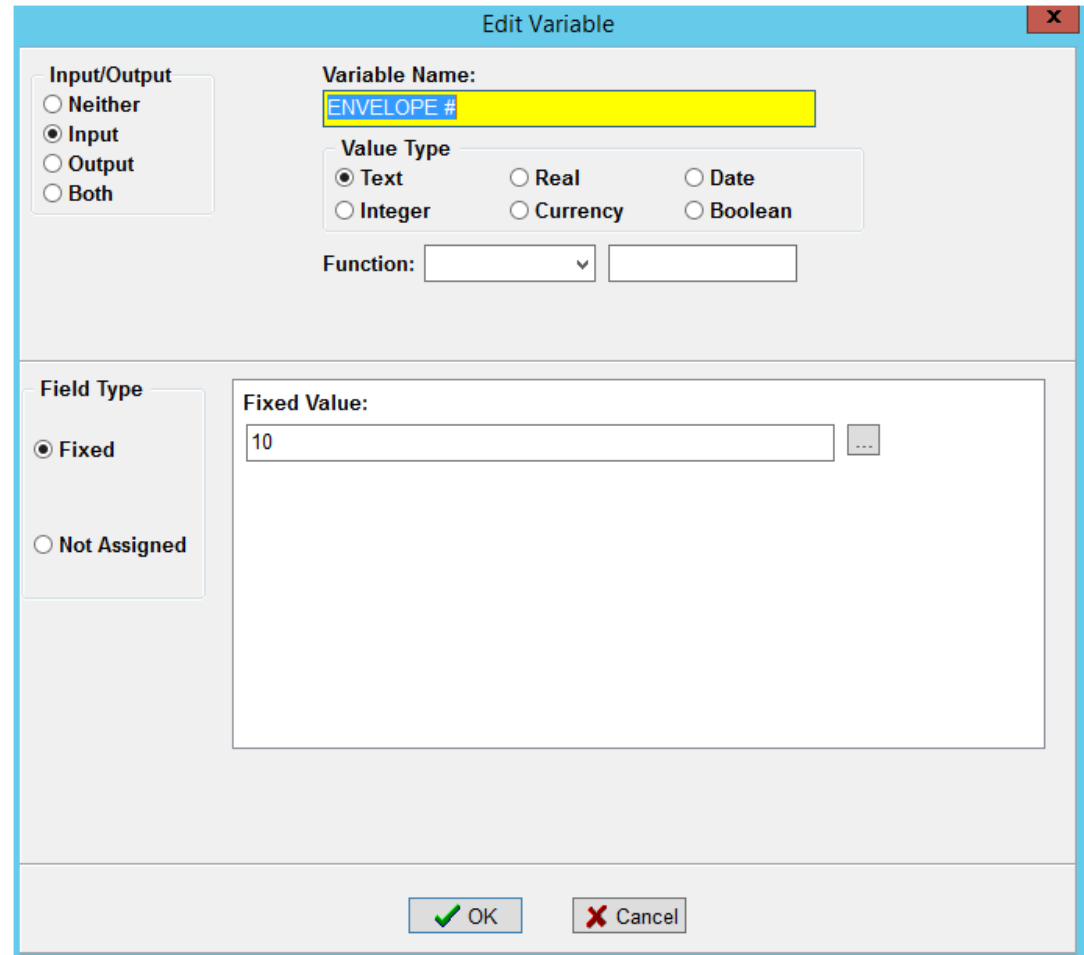
Defining a variable is different in the Code Group.

The Input data cannot be accessed. The only option for a Variable is Fixed or Not Assigned.

Variables can be set as Neither, Input, Output, or Both. Neither is not Input or Output. Input will make the variable an input parameter. Output will make the variable an output parameter. Both will make the variable an input and output parameter.

If a parameter is added to the code group at a later time such as during a future edit, there will be a warning in the maps that call the code group that a parameter is missing.

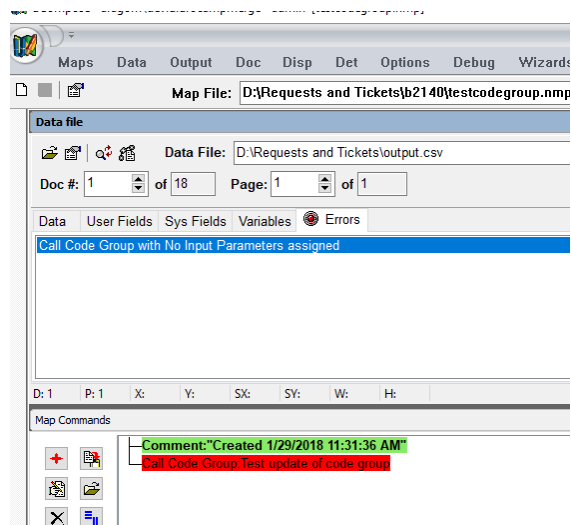
Go into the maps that use the code group and define the new parameter.



The 'Edit Variable' dialog box is shown with the following settings:

- Input/Output:** ☒ Input
- Variable Name:** ENVELOPE #
- Value Type:** ☒ Text, ☐ Real, ☐ Date, ☐ Integer, ☐ Currency, ☐ Boolean
- Function:** (empty dropdown)
- Field Type:** ☒ Fixed, ☐ Not Assigned
- Fixed Value:** 10

Buttons at the bottom: OK, Cancel



Copy Code Group

The Copy Code Group button allows copying a Code Group.

After clicking the Copy Code Group button, the Edit Code Group form will be displayed. The Default name will be “Copy of “ + original Code Group Name. This name can be changed.

System Field	Value
Insert1	Y

Copying a Code Group, like adding a new one, allows setting the Code Group Name. Clicking the OK button saves the changes. If the Code Group Name is the same as an existing Code Group, a message will be displayed that the Code Group Name must be changed.

Code Group
Copy of Demo Envelope Window Address Block
Already Exists.
Update Existing Code Group?

Yes No

Once a new name has been entered, click Ok. A reason for the change is required.

Enter a reason and click Ok.

Reason for change in Code Group

Copy of Demo Envelope Window Address Block 2

OK Cancel

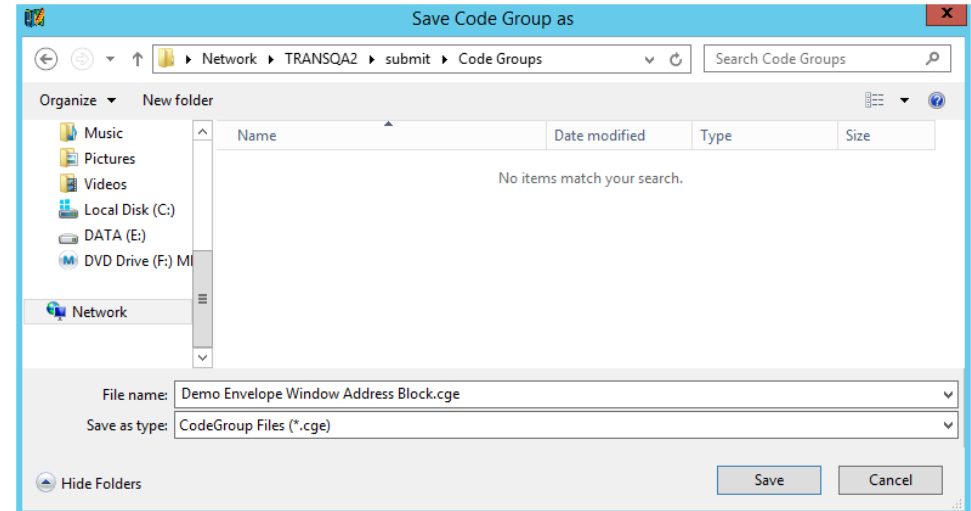
Export Code Group

The Export Code Group button allows exporting a Code Group.

After clicking the Export Code Group button, a Save Code Group As window will be displayed.

Exported Code Groups will have a .cge extension.

Select a location and name to save the code group and click Save.



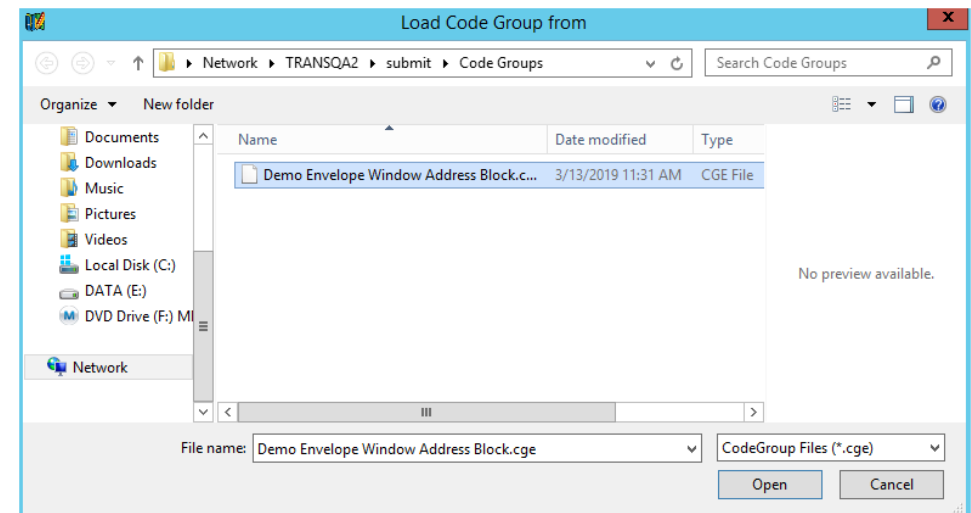
Import Code Group

The Import Code Group button allows importing of a Code Group.

After clicking the Import Code Group button, a Load Code Group from window will be displayed.

Select a Code Group Export (.cge) file and click open.

The Edit Code Group form will be displayed. The Default name will be the Code Group Name from the export file. This name can be changed.



If the Code Group already exists, a confirmation window is displayed to update the existing code group. Click Yes to Update the Existing Code Group or No to cancel.

Enter Reason for the change or update and click ok.

Reason for change in Code Group

Demo Envelope Window Address Block

OK

Cancel

The Code Group has been updated.

Confirm

i

Code Group

Demo Envelope Window Address Block

Already Exists.

Update Existing Code Group?

Yes

No

Detail Tab

The Detail tab displays commands that define the detail line output display of the document. The Detail Tab is the area the user will use to add and edit commands for the detail section.

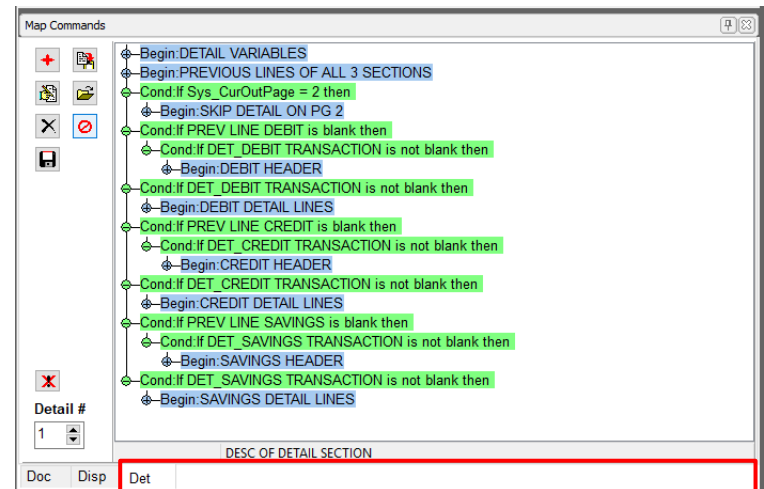
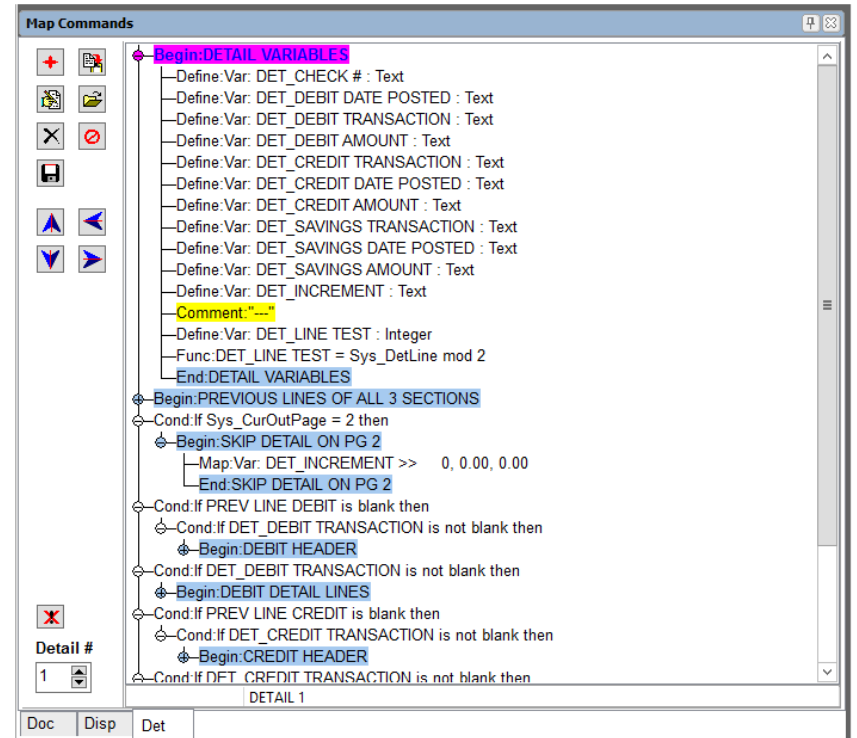
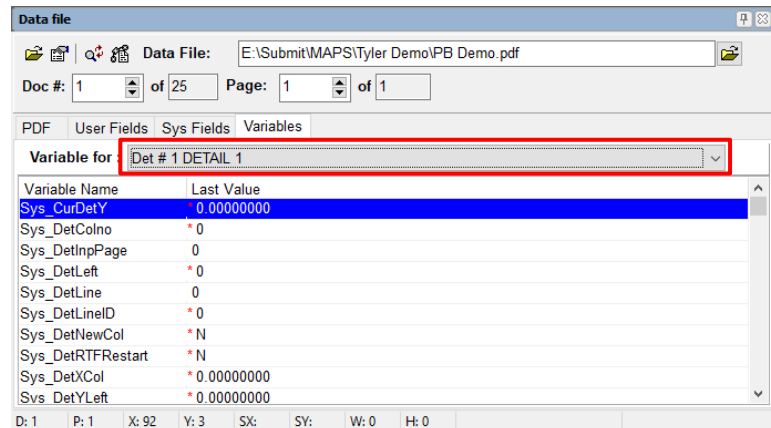
The order of these commands are important. The drawing occurs in the order that the commands are displayed from top to bottom. This results in layers. The affect is that the commands lower in the list are drawn on top of the command drawn earlier (above the current command). If a mapping is created and is not visible it may have another command drawn on top. Move the command down until it is displayed in the output.

Detail commands are drawn after all other commands on the Page unless the DoDetail comand is called.

When commands are added they will be added either before or after the currently selected command (depending on the Settings on the Options Ribbon bar group).

To edit a command, select the command and either double-click on the command or click the edit button.

The name of each detail section will be listed on the Variable tab dropdown in the Data window and in the status panel at the bottom of the detail commands tab.



Comment

The Comment command allows a comment to be added to the Command List for clarification and organization of the commands. This is helpful for when multiple users work on a map, or someone needs to make edits later.

The Comment command can be accessed in 2 ways. The 1st is to click Comment from the Ribbon bar Det. The 2nd is to Click the + on the Detail tab of the Map Commands window, then select Comment from the list.

Enter the Comment that will be displayed within the Map Commands list.

The value can be entered in the field or by clicking on the Ellipsis button to pull up the edit form.

In this form the user can enter data that can contain multiple lines. Check **Keep Line Breaks** to retain the Line Breaks. If Keep Line Breaks is not checked the multiple lines will be combined with a space.

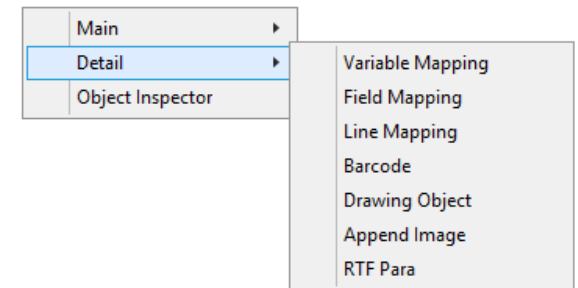
Enter the Comment and Click OK to Save. Click Cancel to cancel the changes to the comment. Comments are displayed by default in Yellow on the Map Commands List.

Comments do not display or print.

Field Mapping

This command is to output the value of a field. If it needs to be embedded in text, then the [RTF Paragraph](#) command will need to be used instead.

The Field mapping command can be accessed in 4 ways. The 1st is to click Field from the Ribbon bar Det. The 2nd is to Click the + on the Detail tab of the Map Commands window, then select Field Mapping from the list. The 3rd is to right-click on the Output Window and from the Pop-up menu select Detail then Field Mapping. The advantage of using this method is the Field Mapping will default to the selected location. The advantage of this is it is quick to select the variable and then position the variable. Once it is dropped the field mapping can be edited to change font, color, format etc.

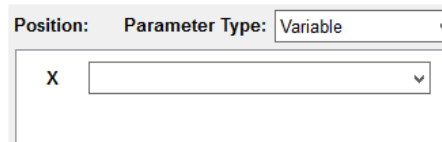


All of these options will bring up the Field Mapping command form.

The **Field** can be selected from the dropdown. Once selected the Field Type will be displayed directly to the right.

The **Position** is in inches and can be set using the **X** value. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window, the X value will be populated automatically with the value from where the cursor was located. The Y output position is based on the Current Detail Y position (available in the System Variable Sys_CurDetY).

The Position can be entered using a Fixed Value for X, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X value will become a dropdown to select the variable/field that contains the X value.



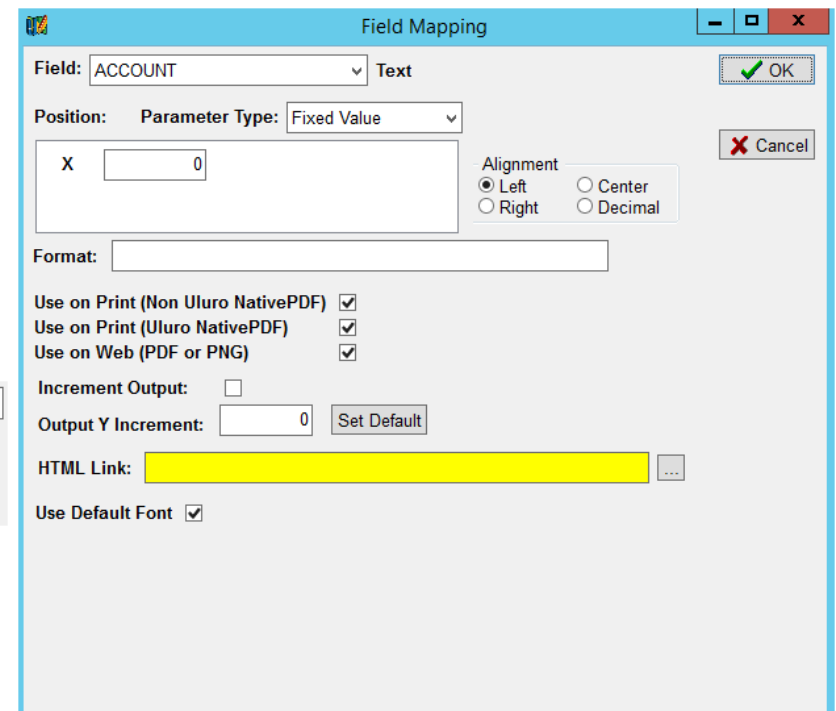
The **Alignment** of the output can be set using:

Left – This sets the output starting position on the Left side at the X position. This is normal Left to right drawing.

Right – This sets the output starting position on the right side at the X position. This starts on the Right and draws to the left.

Center – This sets the output starting position to the center of the text at the X position.

Decimal – This sets the output starting position to the first decimal point from the left at the X position.



Enter a formatting string in the **Format** field. This allows text to be added to the output or the data format to be changed. The field type is important when using the format options. If the Format is not valid for the Field Type, then the format will be ignored. If the format does not appear to be correct the confirmation window will be displayed.

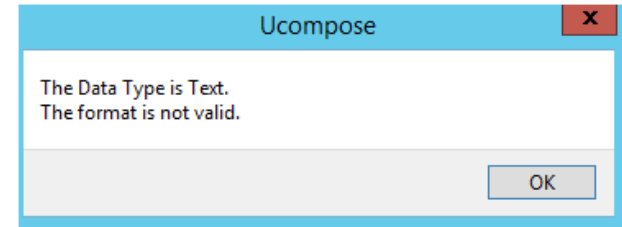
Please reference the [Formatting](#) section for how to format the different Field Types.

If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

The **Increment Output** checkbox will cause the system to increment by the amount entered in the **Output Y Increment Field**. The **Output Y Increment** is the amount (in Inches) to increment after the mapping is printed. This can be a Negative amount. The **Set Default** button will set the Output Y Increment based on the Current Font.





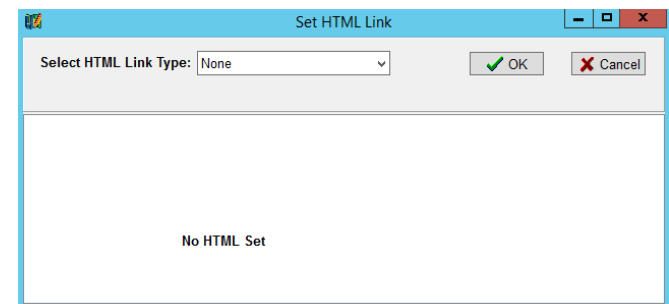
Tips:

Incrementing can be done using a variable. Create a variable definition for DET_Increment for example and leave it as Not Assigned. When mapping the variable use the Increment Output option to create different spacing multiple times throughout the detail section. This provides more versatility for incrementing the detail lines.

HTML Links will appear on the PNG created during web viewing. When the User cursor floats over the HTML Link command the cursor will change to a hand. The user may click on the link and the action will occur. To accomplish this, an image Map file is created along with the PNG file. The image map file defines the areas on the PNG image and the action to be performed.

The Ellipsis button can be used to set up the HTML link.

The default setting for HTML Link is None. This means no HTML link has been set up.



User Entered URL is for simple links. Select User Entered URL for the **Select HTML Link Type**. Select HTTP:// or HTTPS:// for the **URL Type**, then enter the URL. An example would be <https://www.pitneybowes.com/us>.

Use the **Test** button to see the result of clicking on the HTML link.

The screenshot shows the 'Set HTML Link' dialog box with 'Check Image' selected as the link type. It features a section for required variables (Transaction #, Check #, Posting Date, Account #, Amount) and an optional section (Sub Account, Application ID, Trans Type, Routing #). Each variable is represented by a dropdown menu with a default value like 'DET1 TRANSNO'.

Check Image are links that will call an external system to generate check images. These links require specific information in order to call the external system. The five pieces of information at the top specify the required data. The four pieces of information at the bottom are optional depending on the external system that will generate the check images. If unsure it is always best to provide the information if possible.

The required items must be linked to a variable specified and set before the mapping is called. The optional items may be linked to a variable.

Click Through are also simple links with the exception that Relay Unify will track who and when the web user clicks on the link. Select HTTP:// or HTTPS:// and enter the URL. An example would be <https://www.pitneybowes.com/us>

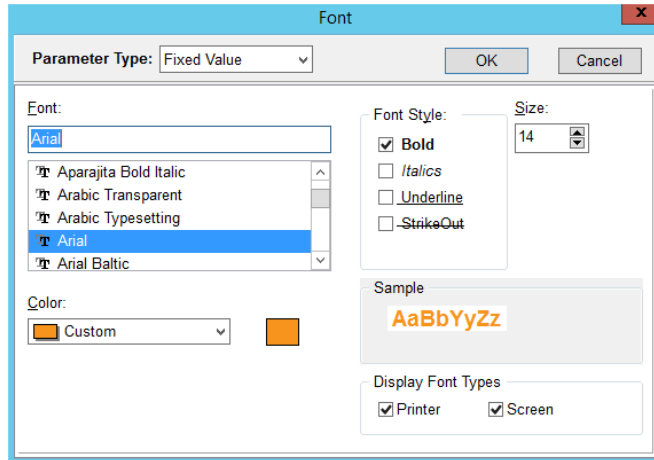
The test click through is not tracked.

This screenshot shows the 'Set HTML Link' dialog box with 'User Entered URL' selected. It has a 'URL Type' dropdown set to 'http://' and a large text area for 'Enter URL' containing 'www.pitneybowes.com/us'. There is a 'Test' button at the bottom.

This screenshot shows the 'Set HTML Link' dialog box with 'Click Through' selected. It has a 'URL Type' dropdown set to 'http://' and a large text area for 'Enter URL' containing 'www.pitneybowes.com/us'. There is a 'Test' button at the bottom.

The **Use Default Font** check box determines if the default font (from the Output Page Definition) is used or if a different font is used. When the Use Default Font checkbox is unchecked the Font parameters are displayed. Click the **Font** button to change the font.

This will display a standard Windows font selection dialog. Select the desired Font, Style, Size and Color.



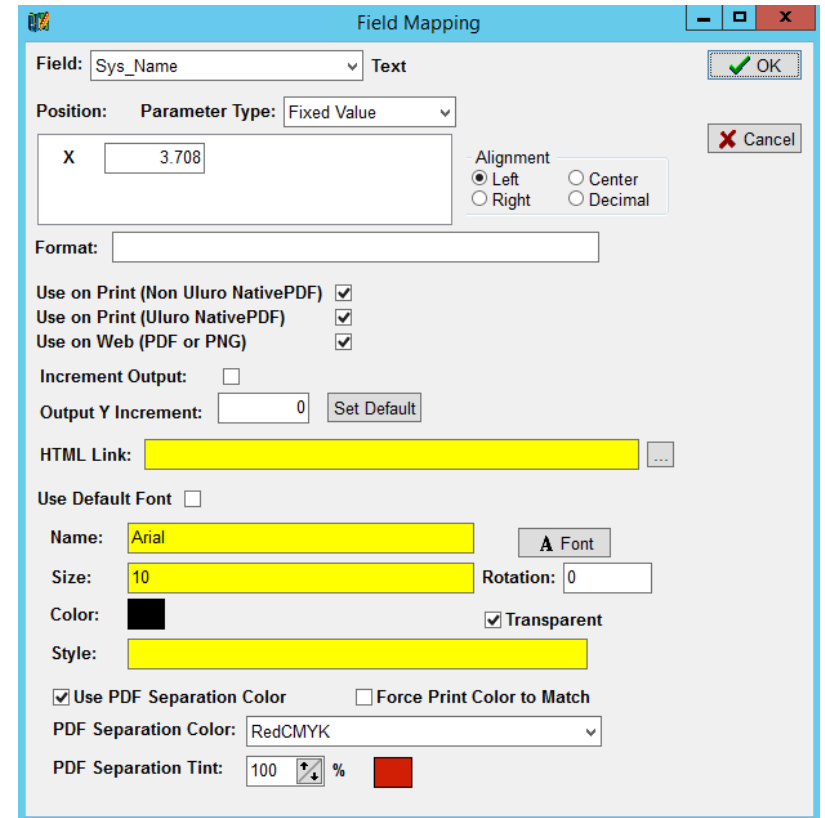
The fonts must still be installed on the server/machine running Relay Unify uCompose.

The Color can also be changed by clicking on the Color Square.

For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.

The **Rotation** is in Degrees (0 to 360). If a negative rotation is entered, it is converted to a positive by adding 360 degrees until it comes in the range of 0 to 360.

To have the font Transparent, check the **Transparent** checkbox. If unchecked the font will have a white background. If any other color background is desired, then create a drawing object of the desired color and make the font transparent.



If “Use on Print (Relay Unify NativePDF)” or “Use on Web (PDF or PNG)” or “Print on Campaign Onsert” is checked, and “Use Default font” is unchecked, the **Use PDF Separation Color** setting will be visible. If checked, the Separation Color List setup in the Doc tab of the mapping commands will be used.

Checking the **Use PDF Separation Color** will display the ability to Select a PDF Separation Color, set the PDF Separation Tint and force print color to match.

Select a color from the dropdown list for **PDF Separation Color** from the colors set up in the Separation Color List for the map.

Set the **PDF Separation Tint**. This is the % of the Separation color to use to determine how much ink is printed on the page. Enter a value from 0 to 100%.

Checking the **Force Print Color to Match** will cause the print (Non-PDF output) to occur in the selected separation color. Note that the Tint will not be used in Non-PDF Output.

Use Default Font ☐

Name:

Size: Rotation:

Color: ☒ Transparent

Style:

☒ Use PDF Separation Color ☐ Force Print Color to Match

PDF Separation Color:

PDF Separation Tint: %



Tips:

If the Font Color and Separation Color selected are different, the Separation Color will print on the PDF Output and the Font Color will print on all other types of output.

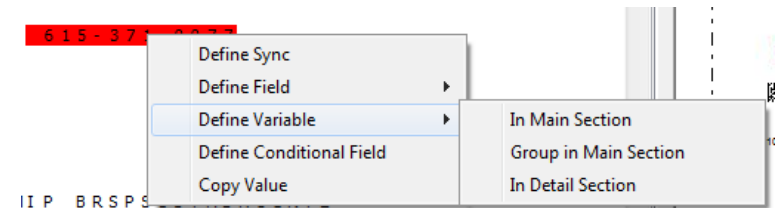
Variables

The Define Variable command allows a variable to be defined from the Detail data. This is like the Define Variable command in the Display section. The difference is that there is no Y Input position to set since there is only one line.

Variables are temporary storage for information. The options for defining a variable are like the options for a Field with a few differences. Variables will hold the final values of functions. Variables can change values within a document. Variables are not saved to the Database.

The command can be accessed in 3 ways. The 1st is to click on the Define Variable from the Ribbon bar Det. The 2nd is to Click on the + on the Det tab of the Map Commands window then select Variables. The 3rd way is to select an area on the Input data and right click to display the popup menu. Select Define Variable, then either In Detail Section.

For all the options, the Edit Variable form will then be displayed.



Occurrence

Occurrence defines which page to locate the variable.

First does not mean page 1. Selecting First will locate the variable in the First input page that results in a value field.

Last does not mean last page. Selecting Last will locate the last input page that results in a value for the variable.

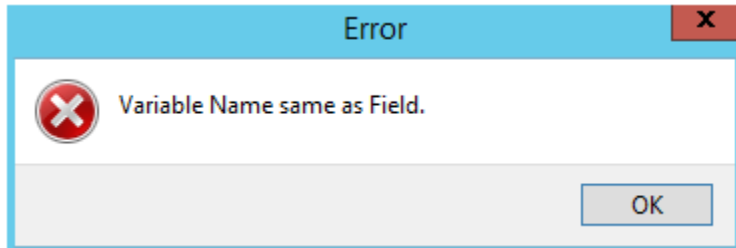
Page will display a spin edit that allows setting the Input Page number to use for the selection. The range is 0 to 9999. When set the value is selected only from the defined Input Page. The value of 0 means the current input page.

Var Page will display a dropdown of variables to select the variable determining when the definition should take place. This allows a variable to be defined on different pages.

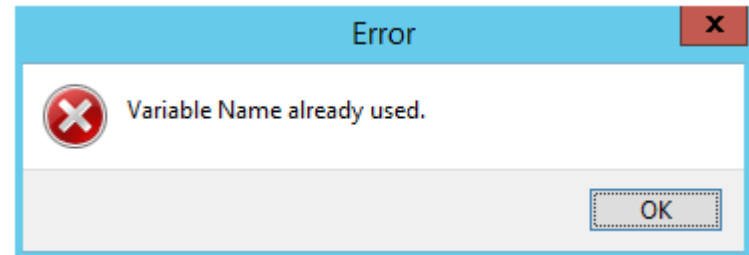
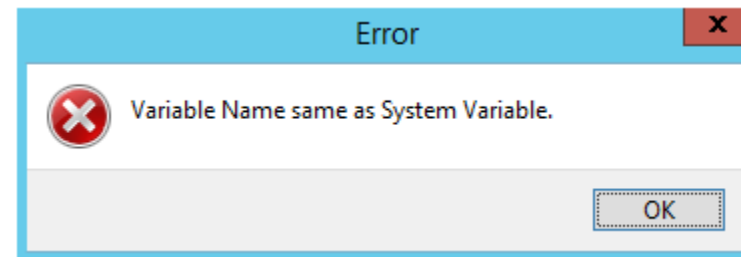
Variable Name

Variable Name is the Name the user selects for the variable. The Variable Name must be unique within the map and cannot be the same as any other Field of Variable used in the Map. If the name is used by a Variable an error will be displayed.

If the name is already used as a field an error will be displayed.



If the name is a System Variable, then an error will be displayed.



Value Type

Value Type specifies how to store the data for the variable.

Text – contains text data (i.e. "This is text")

Real – contains numbers that can be expressed with a decimal (i.e. 186.254)

Date – contains date and time information (i.e. "01/01/2009 12:24pm") When Date is selected an additional entry area for Input format will be display

The **Format** entry allows the definition of how the input date is represented.

'd' = displays the day number without a leading zero (1 - 31)

A dialog box titled "Edit Variable" with a blue header bar. It contains a "Variable Name:" label followed by a text input field. Below this is a "Value Type" section with six radio buttons: "Text", "Real", "Date" (which is selected), "Integer", "Currency", and "Boolean". At the bottom, there is a "Function:" label followed by a dropdown menu and a text input field, and a "Format:" label followed by a text input field.

'dd' = displays the day number with a leading zero (01 - 31)
'ddd' = displays the three-letter day abbreviation (Sun - Sat)
'dddd' = displays the full day name (Sunday - Saturday)
'dddddd' = displays the 'Short Date' (m/d/yyyy)
'ddddddd' = displays the 'Long Date' (dddd, mmmm dd, yyyy)
'm' = displays the month number without a leading zero (1 - 12)
'mm' = displays the month number with a leading zero (01 - 12)
'mmm' = displays the three-letter month abbreviation (Jan - Dec)
'mmmm' = displays the full month name (January - December)
'yy' = displays the 2-digit year
'yyyy' = displays the full, 4-digit year

Relay Unify will attempt to convert the dates using the format and slight variations. If the date cannot be converted, then the date will be blank.

Integer – contains number that can be expressed without a decimal (i.e. 186)

Currency – contains numbers that represent money (i.e. \$25.25)

Boolean – contains Y or N (true or false) (Yes or No).

Function

Function allows the data to be modified before being stored. The Functions available will depend on the Value Type. Some functions may require an extra parameter. The extra parameter is entered to the right of the Function.

Functions for Text are:

Trim – removes leading and trailing whitespace characters. This will include tabs, CR, control Characters, as well as space. For most Text fields it is desirable to trim the data before storage. No extra parameter is necessary.

Ltrim – removes leading whitespace characters. No extra parameter is necessary.

Rtrim – removes trailing whitespace characters. No extra parameter is necessary.

Remove Zeros – removes leading zeros from the data. As an example, if the data contains 00000123, **Remove Zeros** will cause the stored value to be 123. No extra parameter is necessary.

Reverse text – This will allow the first text block to be removed from the beginning and added to the end. The delimiter is contained in the extra parameter block. If no value is placed in the parameter block, then a space is assumed. As an example, if the Incoming text is “Smith, Robert M” then **Reverse Text** with a parameter of “,” will store the value “Robert M Smith”.

Functions for Real and Currency are:

X – This allows multiplication of the value by the extra parameter.

/ - This allows division of the value by the extra parameter.

+ - This allows addition of the value with the extra parameter.

Function for Date are:

+ - This allows adding days to the Value. The number of days are in the extra parameter.

Function for Integer are:

X – This allows multiplication of the value by the extra parameter.

/ - This allows division of the value by the extra parameter.

+ - This allows addition of the value with the extra parameter.

Mod – This allows determining the Modulo (remainder after integer division). The extra parameter is the Divisor. An example of this is 9 Mod 7. The result would be 2 (9 / 7 = 1 with remainder of 2).

There are no Functions for Boolean values.

Field Type

Position

Position defines a variable occurring at a set position defined as X position, Delimiter, and length. The system will look for the data at the **X position** defined. If **Delimiter** is included, it will stop when the delimiter is reached or the **Length** of characters (whichever is less).

If the data is selected in the Data window, click the **Retrieve** button to obtain the currently selected area. Clicking the **Highlight** button will select the area defined in the Variable on the data window. The user can then adjust the Position values for the desired area.

The screenshot shows a dialog box titled 'Field Type' with a sidebar on the left containing radio buttons for 'Position' (selected), 'Test', 'Delimited', 'Fixed', 'XML', and 'Not Assigned'. The main area contains the following fields: 'X Position' with a value of 1 and a spinner, 'Delimiter' with an empty text box, and 'Length' with a value of 0 and a spinner. To the right of the 'Length' field are two buttons: 'Retrieve' and 'Highlight'. At the bottom of the dialog, there is a note: 'For Case Insensitive, surround Regular Expression with /.../i'. At the very bottom are 'OK' and 'Cancel' buttons.

Test

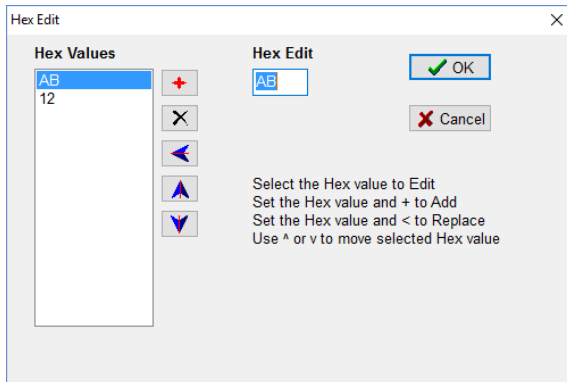
Test defines a variable using a test for a specific value using a Regular Expression defined as **Test Text**, X offset, Delimiter, and length. The system will look for the Test Text. If found, the data will be retrieved **X (X offset) characters** from the start of the Test Text. If **Delimiter** is included, it will stop when the delimiter is reached or the **Length** of characters (whichever is less).

The screenshot shows a dialog box titled 'Field Type' with a sidebar on the left containing radio buttons for 'Position', 'Test' (selected), 'Delimited', 'Fixed', 'XML', and 'Not Assigned'. The main area contains the following fields: 'Test Text' with the value '^Date' and a button to open a file, 'X offset' with a value of 0 and a spinner, 'Delimiter' with an empty text box, and 'Length' with a value of 10 and a spinner. At the bottom of the dialog, there is a note: 'For Case Insensitive, surround Regular Expression with /.../i'. At the very bottom are 'OK' and 'Cancel' buttons.

Delimited

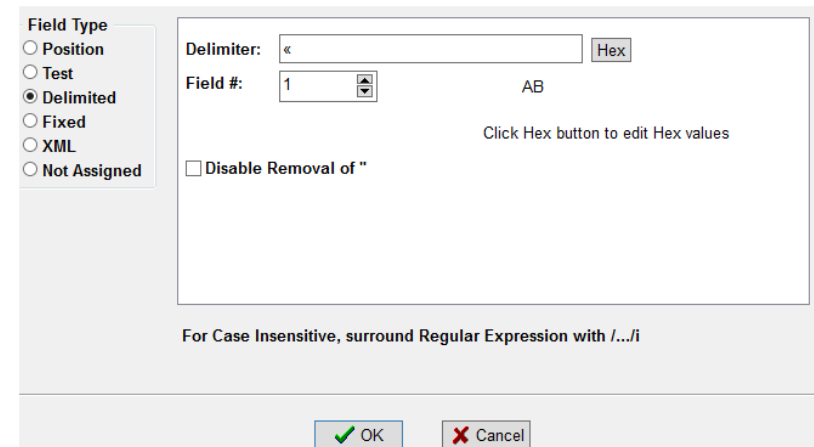
Delimited defines a variable by selecting the information from a delimited set of data (comma, tab, etc) by Row and Field #.

Enter the **Delimiter** for the data. For tab use \t. Then enter the **Field #** (column number) from the data. The first field is field # 1.



Hex Values can be entered by clicking on the **Hex** button. This will display the Hex editor form. The Hex Values list will contain the Hex values that make up the delimiter. When the Hex Value is selected in the Hex Values list, it will be transferred to the Hex Edit entry field. Change the Value in the Hex Edit entry field.

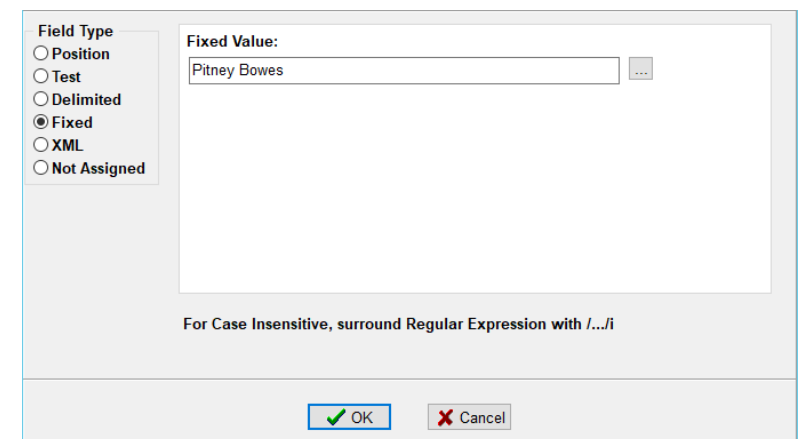
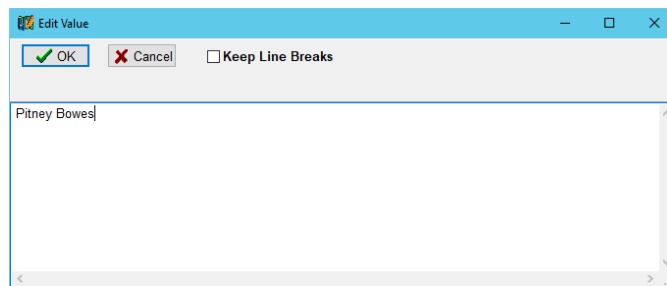
Once added, the Hex Value will be displayed in the command below the Hex button.



Fixed

Fixed defines a field as a Fixed value entered in Relay Unify uCompose. Use the Ellipsis button to bring up an editor.

In this form the user can enter data that can contain multiple lines. Check **Keep Line Breaks** to retain the Line Breaks. If Keep Line Breaks is not checked the multiple lines will be combined with a space.



XML

XML defines a variable from XML data to be accessed. XML data can be entered either by specifying the Pos, Node and Attribute or by entering the XPath Query. XPath Queries are methods of extracting data from XML data. XPath Query will not be explained in this document. A search of the Internet will provide documentation and examples of XPath Queries.

The **Node** contains the node path. The node path tells the system how to find the desired node. Each tag is separated from its parent with >>. The **Attribute** is the selected attribute of the selected node.

Clicking on the **Retrieve XML** button will pull in the Node for the XML node that is selected in the Data Window.

Once the node and attribute are found, all the data is returned by the system unless the delimiter and/or the length is provided. A length of 0 and delimiter of blank will return all the data. If a **length** is provided, then the returned data contains at most the specified number of characters. If a **delimiter** is specified, then the data is returned up to the specified delimiter. If both delimiter and length are specified, then the data is returned to the delimiter and then the maximum specified characters are returned.

The screenshot shows a dialog box for configuring an XML field. On the left, under 'Field Type', the 'XML' radio button is selected. The main area contains fields for 'Node' (with the value 'xml>>row>>METER_NUMBER'), 'Attribute' (empty), 'Delimiter' (empty), and 'Length' (set to 0). A 'Retrieve XML' button is next to the Length field. At the bottom, there is a note: 'For Case Insensitive, surround Regular Expression with /.../i' and 'OK'/'Cancel' buttons.

Not Assigned

Not Assigned defines a variable that has a value of blank.

This allows the variable to be defined at a later time, possibly after a calculation or formatting change.

The screenshot shows a dialog box for configuring a 'Not Assigned' field. On the left, under 'Field Type', the 'Not Assigned' radio button is selected. The main area contains the text 'This variable is not assigned'. At the bottom, there is a note: 'For Case Insensitive, surround Regular Expression with /.../i' and 'OK'/'Cancel' buttons.

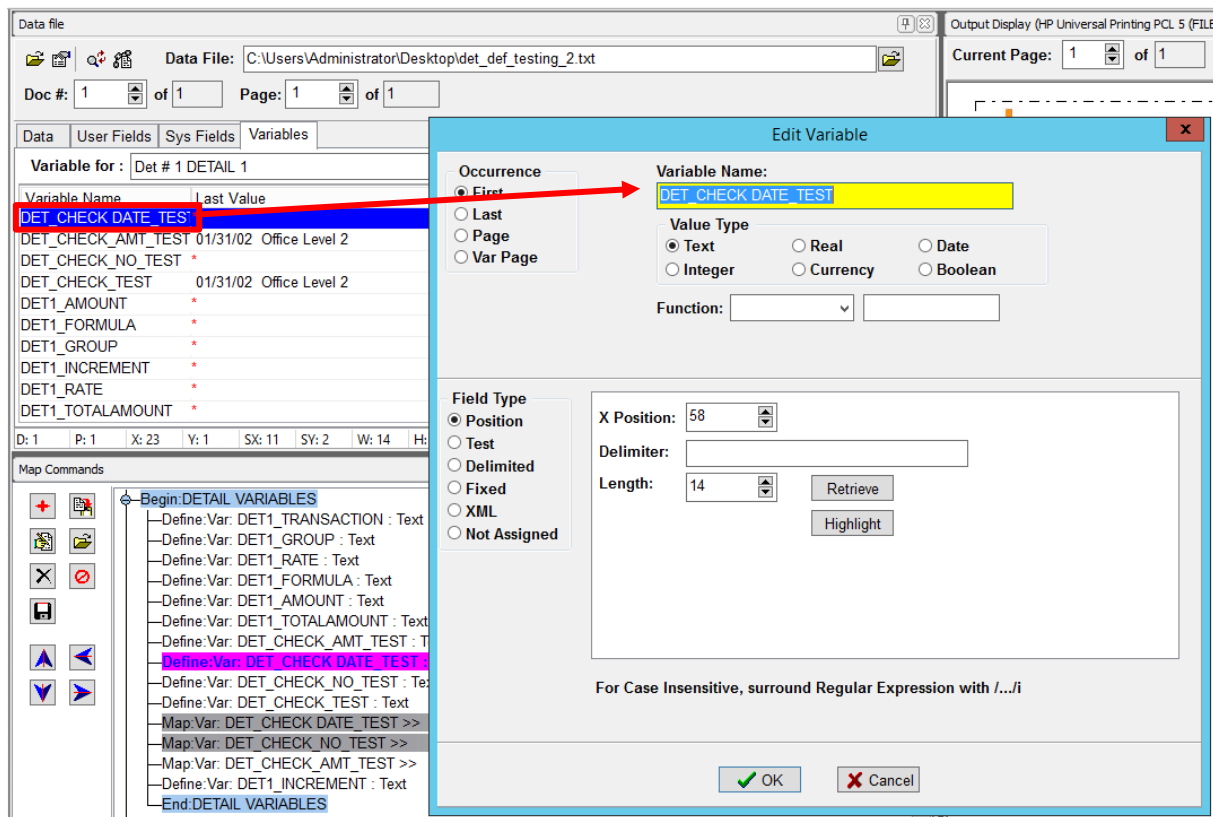
Editing a Variable Definition

Once the Variables are saved the system will reparse the data and the value of the Variables will be displayed on the Variables tab in the Data Window.

Variables can be edited from the Data Window. Select the variable to edit and double click the variable name. This will pull up the edit variable window so that the properties of the variable definition can be edited.

The name cannot be edited.

This only applies to User Variables.

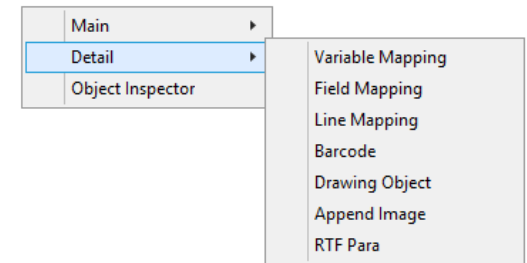


Variable Mapping

This command is to output the value of a variable.

The Variable mapping command can also be accessed in 4 ways. The 1st is to click on Variable from the Ribbon bar Det. The 2nd is to Click the + on the Detail tab of the Map Commands window, then select Variable Mapping from the list.

The 3rd is to right –click on the Output Window and from the Pop-up menu select Detail then Variable Mapping. The advantage of using this method is the Variable Mapping will default to the selected location.



Data	User Fields	Sys Fields	Variables
Variable for : Det # 1 DETAIL 1			
Variable Name		Last Value	
DET_CHECK_DATE_TEST*			
DET_CHECK_AMT_TEST 01/31/02 Office Level 2			
DET_CHECK_NO_TEST *			

The 4th is to select a field from the Variables tab in the Data Window. Once a variable is selected, it can be dragged onto the Output form and dropped.

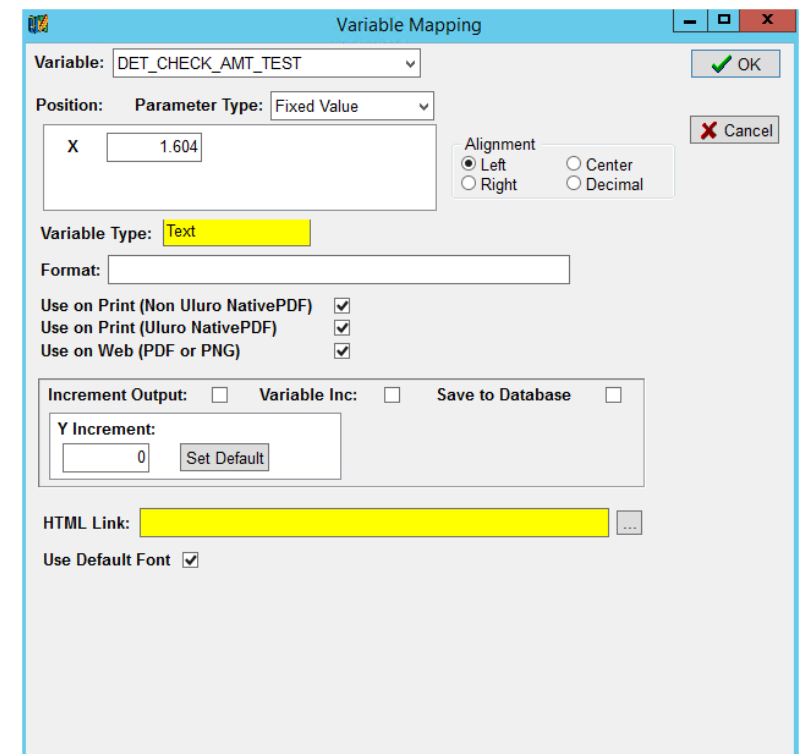
The advantage of this is it is quick to select the variable and then position the variable. Once it is dropped the variable mapping can be edited to change font, color, format etc.

Options 1 – 3 will bring up the Variable Mapping command form.

The **Variable** can be selected from the dropdown. Once selected the **Variable Type** will be displayed below the Position. The **Position** is in inches and can be set using the **X** value. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window, the X value will be populated automatically with the value from where the cursor was located. The Y output position is based on the Current Detail Y position (available in the System Variable Sys_CurDetY).

The Position can be entered using a Fixed Value for X, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X value will become a dropdown to select the variable/field that contains the X value.

Position:	Parameter Type:	Variable
X		



The **Alignment** of the output can be set using:

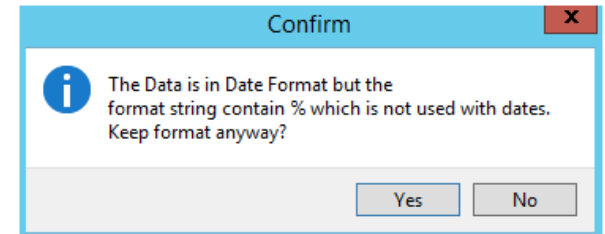
Left – This sets the output starting position on the Left side. This is normal Left to right drawing.

Right – This sets the output starting position on the right side. This starts on the Right and draws to the left.

Center – This sets the output starting position to the center of the text.

Decimal – This sets the output starting position to the first decimal point from the left.

Enter a formatting string in the **Format** field. This allows text to be added to the output or the data format to be changed. The field type is important when using the format options. If the Format is not valid for the Field Type, then the format will be ignored. If the format does not appear to be correct the confirmation window will be displayed.



Please reference the [Formatting](#) section for how to format the different Field Types.

If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

The Increment section allows setting an Increment to move the Y position for the Next Detail command. Check **Increment Output** to cause an increment after the command. Enter the inches to increment in the **Y Increment** field. This can be a Negative amount. Click the **Set Default** button to set the Output Y increment based on the current Font. If **Variable Inc** is checked, then a Variable can be selected using the dropdown for **Variable Increment**. The list will be all global, system, and user variables. The Variable must contain the Increment amount.

A form section with three checkboxes at the top: "Increment Output:" (unchecked), "Variable Inc:" (unchecked), and "Save to Database" (unchecked). Below these is a "Y Increment:" label followed by a text input field containing the number "0" and a "Set Default" button.

The **Save to Database** checkbox allows the value of the selected Variable to be saved to the database for later use.

A form section similar to the one above, but with "Variable Inc:" checked. The "Y Increment:" label is replaced by "Variable Increment:" followed by a dropdown menu showing a downward arrow.



Tips:

Incrementing can be done using a variable. Create a variable definition for DET_Increment for example and leave it as Not Assigned. When mapping the variable use the Increment Output option to create different spacing multiple times throughout the detail section. This provides more versatility for incrementing the detail lines.

HTML Links will appear on the PNG created during web viewing. When the User cursor floats over the HTML Link command the cursor will change to a hand. The user may click on the link and the action will occur. To accomplish this, an image Map file is created along with the PNG file. The image map file defines the areas on the PNG image and the action to be performed.

The Ellipsis button can be used to set up the HTML link.

User Entered URL is for simple links. Select User Entered URL for the **Select HTML Link Type**. Select HTTP:// or HTTPS:// for the **URL Type**, then enter the URL. An example would be <https://www.pitneybowes.com/us>.

Use the **Test** button to see the result of clicking on the HTML link.

The screenshot shows the 'Set HTML Link' dialog box. At the top, there's a title bar with a minus, maximize, and close button. Below it, the 'Select HTML Link Type' dropdown is set to 'User Entered URL'. To the right of this are 'OK' and 'Cancel' buttons. Below that, the 'URL Type' dropdown is set to 'http://', and there's an 'Insert Var or Field' button to its right. The 'Enter URL' section has a large text area containing 'www.pitneybowes.com/us'. At the bottom of the dialog is a 'Test' button.

Set HTML Link

Select HTML Link Type: Check Image OK Cancel

Enter the Variable for the Check Image

Transaction #: DET1 TRANSNO May be the same as Transaction #

Check #: DET1 CHECK NUMBER

Posting Date: DET1 CHECK DATE

Account #: ACCOUNT NUMBER

Amount: DET1 CHECK AMOUNT

Optional

Sub Account: DET1 SUBACCTNO

Application ID: DET1 APPID

Trans Type: DET1 TRANSTYPE

Routing #:

Check Image are links that will call an external system to generate check images. These links require specific information in order to call the external system. The five pieces of information at the top specify the required data. The four pieces of information at the bottom are optional depending on the external system that will generate the check images. If unsure it is always best to provide the information if possible.

The required items must be linked to a variable specified and set before the mapping is called. The optional items may be linked to a variable.

Click Through are also simple links with the exception that Relay Unify will track who and when the web user clicks on the link. Select HTTP:// or HTTPS:// and enter the URL. An example would be <https://www.pitneybowes.com/us>

The test click through is not tracked.

Set HTML Link

Select HTML Link Type: Click Through OK Cancel

URL Type: http:// Insert Var or Field

Enter URL:

www.pitneybowes.com/us

Test

The default setting for HTML Link is None. This means no HTML link has been set up.

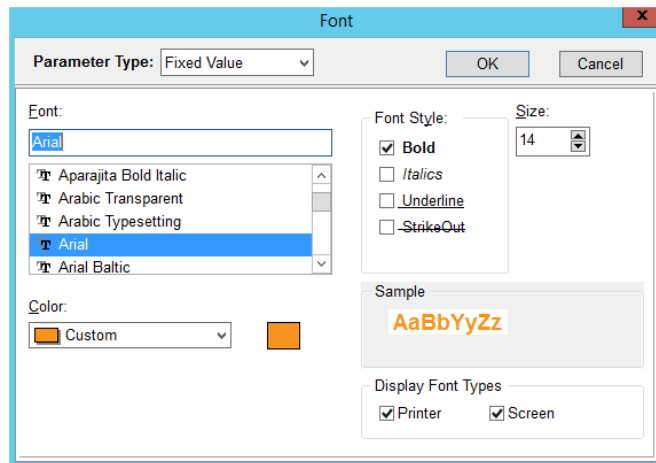
Set HTML Link

Select HTML Link Type: None OK Cancel

No HTML Set

The **Use Default Font** check box determines if the default font (from the Output Page Definition) is used or if a different font is used. When the Use Default Font checkbox is unchecked the Font parameters are displayed. Click the **Font** button to change the font.

This will display a standard Windows font selection dialog. Select the desired Font, Style, Size and Color.



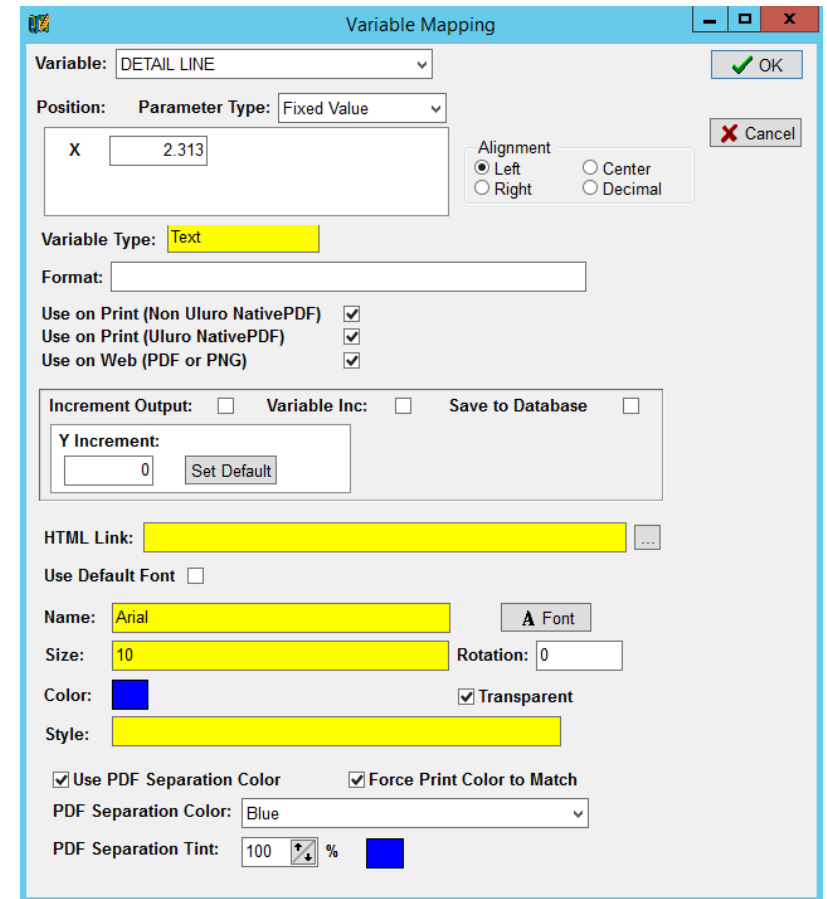
The fonts must still be installed on the server/machine running Relay Unify uCompose.

The Color can also be changed by clicking on the Color Square.

For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.

The **Rotation** is in Degrees (0 to 360). If a negative rotation is entered, it is converted to a positive by adding 360 degrees until it comes in the range of 0 to 360.

To have the font Transparent, check the **Transparent** checkbox. If unchecked the font will have a white background. If any other color background is desired, then create a drawing object of the desired color and make the font transparent.



If “Use on Print (Relay Unify NativePDF)” or “Use on Web (PDF or PNG)” or “Print on Campaign Onsert” is checked, and “Use Default font” is unchecked, the **Use PDF Separation Color** setting will be visible. If checked, the Separation Color List setup in the Doc tab of the mapping commands will be used.

Checking the **Use PDF Separation Color** will display the ability to Select a PDF Separation Color, set the PDF Separation Tint and force print color to match.

Select a color from the dropdown list for **PDF Separation Color** from the colors set up in the Separation Color List for the map.

Set the **PDF Separation Tint**. This is the % of the Separation color to use to determine how much ink is printed on the page. Enter a value from 0 to 100%.

Checking the **Force Print Color to Match** will cause the print (Non-PDF output) to occur in the selected separation color. Note that the Tint will not be used in Non-PDF Output.

Use Default Font ☐

Name:

Size: Rotation:

Color: ☒ Transparent

Style:

☒ Use PDF Separation Color ☐ Force Print Color to Match

PDF Separation Color:

PDF Separation Tint: %



Tips:

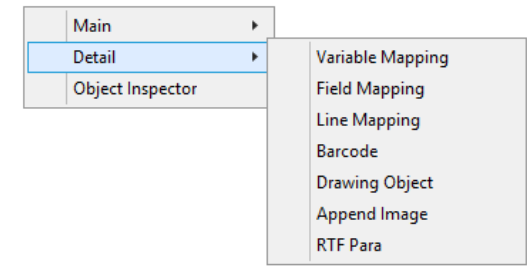
If the Font Color and Separation Color selected are different, the Separation Color will print on the PDF Output and the Font Color will print on all other types of output.

Line Mapping

Line mapping allows input data to be directly mapped to the output.

The Line mapping command can be accessed in 3 ways. The 1st is to click the Line from the Ribbon bar Det. The 2nd is to Click the + on the Display tab of the Map Commands window, then select Line Mapping from the list.

The 3rd is to right –click on the Output Window and from the Pop-up menu select Detail then Line Mapping. The advantage of using this method is the Line Mapping will default to the selected location.



This is only available for text and delimited data.

Once the Line Mapping Command is created it can be edited. The first three options will open a blank edit form.

The **Position** values represent the data.

The **X position** is the starting character position in the data.

The **Length** is the Character length selected from the data.

If the Data Window has a line selected, then clicking the **Retrieve** button will obtain the values for X and Length from the selected input.

The **Output Position X** value specifies the starting location in inches. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window, the X value will be populated automatically with the value from where the cursor was located. The Y output position is based on the Current Detail Y position (available in the System Variable Sys_CurDetY).

The Output Position can be entered using a Fixed Value for X, or as a

Parameter Type of Variable or Field. If Variable or field are selected, the X value will become a dropdown to select the variable/field that contains the X value.

The **Alignment** of the output can be set using:

Left – sets the output starting position on the Left side. This is normal Left to right drawing.

Right – sets the output starting position on the right side. This starts on the Right and draws to the left.

Center – sets the output starting position to the center of the text.

Enter a formatting string in the **Format** field. This allows text to be added to the output or the data format to be changed. The field type is important when using the format options. If the Format is not valid for the Field Type, then the format will be ignored. Only %s can be used since the lines are always text. XML data cannot map lines. The Formatting Prefixes #U, #L, and #M can also be used.

If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

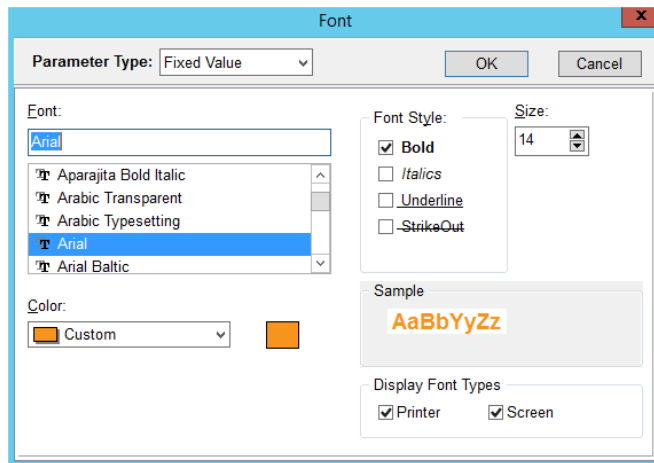
If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

The Increment section allows setting an Increment to move the Y position for the Next Detail command. Check **Increment Output** to cause an increment after the command. Enter the inches to increment in the **Output Y Increment** field. This can be a Negative amount. Click the **Set Default** button to set the Output Y increment based on the current Font.

The **Save to Database** checkbox allows the value of the selected Variable to be saved to the database for later use.

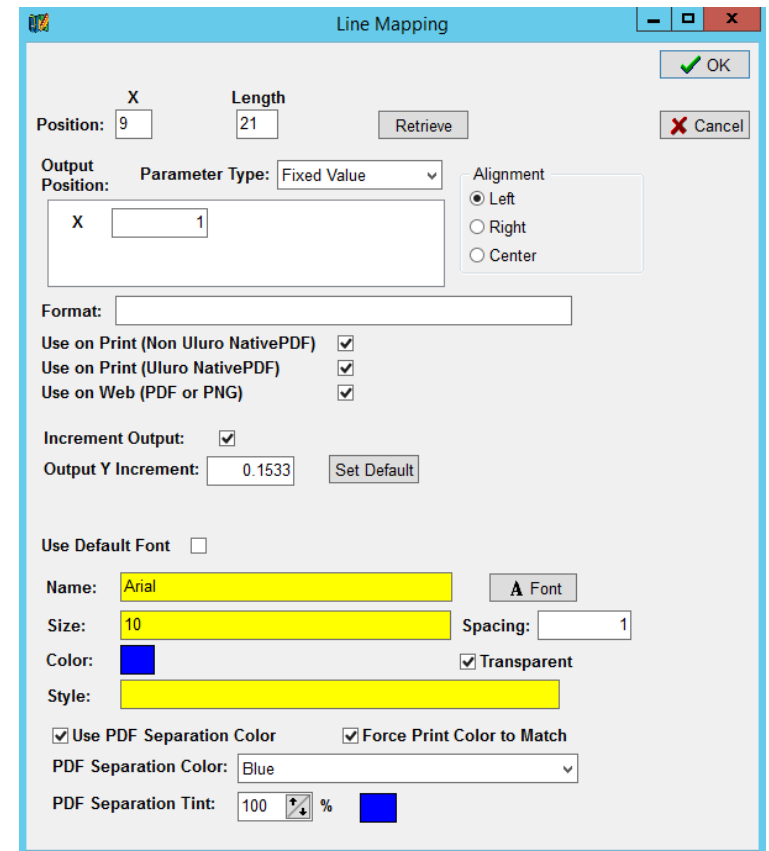
The **Use Default Font** check box determines if the default font (from the Output Page Definition) is used or if a different font is used. When the Use Default Font checkbox is unchecked the Font parameters are displayed. Click the **Font** button to change the font.

This will display a standard Windows font selection dialog. Select the desired Font, Style, Size and Color.



The fonts must still be installed on the server/machine running Relay Unify uCompose.

The Color can also be changed by clicking on the Color Square.



For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.

The line spacing can be changed by the **Spacing** parameter. A Value of 1 is normal single space. The spacing can be reduced by changing to a decimal value between 0 and 1. The line spacing can be increased by changing to a decimal value greater than 1.

To have the font Transparent, check the **Transparent** checkbox. If unchecked the font will have a white background. If any other color background is desired, then create a drawing object of the desired color and make the font transparent.

If “Use on Print (Relay Unify NativePDF)” or “Use on Web (PDF or PNG)” or “Print on Campaign Onsert” is checked, and “Use Default font” is unchecked, the **Use PDF Separation Color** setting will be visible. If checked, the Separation Color List setup in the Doc tab of the mapping commands will be used.

Checking the **Use PDF Separation Color** will display the ability to Select a PDF Separation Color, set the PDF Separation Tint and force print color to match.

Select a color from the dropdown list for **PDF Separation Color** from the colors set up in the Separation Color List for the map.

Set the **PDF Separation Tint**. This is the % of the Separation color to use to determine how much ink is printed on the page. Enter a value from 0 to 100%.

Checking the **Force Print Color to Match** will cause the print (Non-PDF output) to occur in the selected separation color. Note that the Tint will not be used in Non-PDF Output.

Use Default Font ☐

Name:

Size: Rotation:

Color: ☒ Transparent

Style:

☒ Use PDF Separation Color ☐ Force Print Color to Match

PDF Separation Color:

PDF Separation Tint: %



Tips:

If the Font Color and Separation Color selected are different, the Separation Color will print on the PDF Output and the Font Color will print on all other types of output.

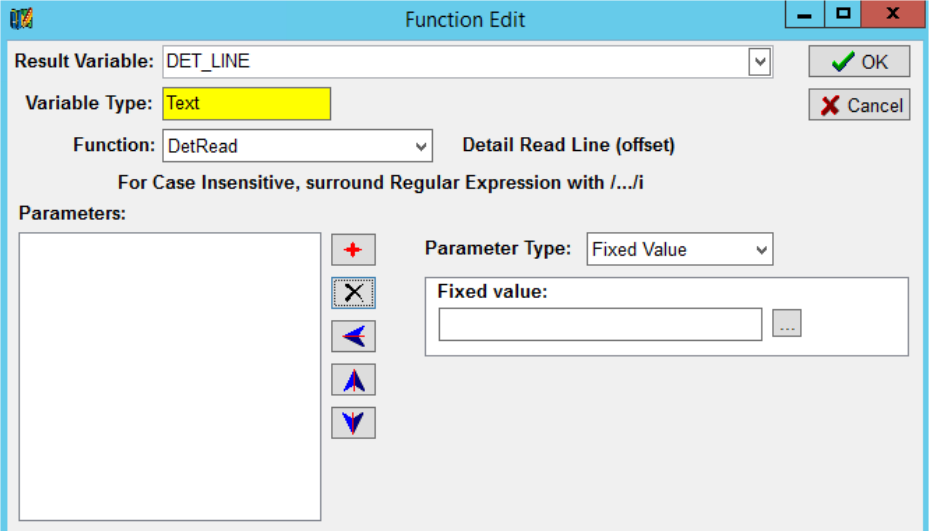
Functions

The Function command allows the result of a function to be assigned to a variable. This is commonly used to format dates, money, perform calculations such as adding a late fee, among many other applications.

This command can be accessed in 2 ways. The 1st is to click Function from the Ribbon bar Det. The 2nd is to Click on the + on the Det tab of the Map Commands window then select Functions.

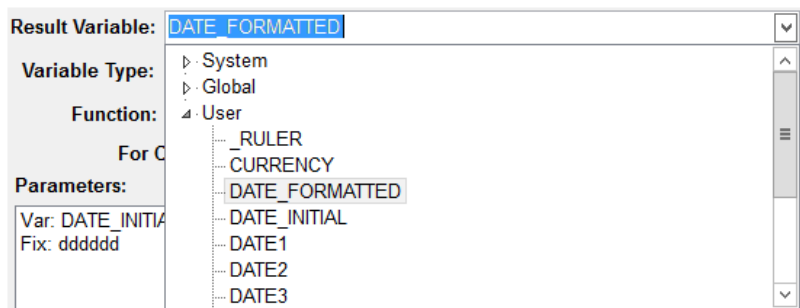
Both options will display the Function Edit form.

The **Result Variable** can be a System, Global, or User Variable. This can be a display or detail variable. Select the variable from the dropdown that will contain the resulting value after the function is performed. This is typically a variable that has been created and has a Field Type of Not Assigned. Best practice is to let the function assign the value to a variable that is not assigned; avoid changing the value of a variable multiple times throughout a document. A date for example may be in the format of mm/dd/yyyy in the data. The date coming from the data may be a variable named Date_Initial. The resulting variable once formatted correctly would be named Date_Formatted. Date_Formatted can then undergo another function (using a new resulting variable to describe the function) or be assigned to a field. This allows the user to diagnose issues within the map easier and keeps each step/variable value separate.



The Function Edit dialog box is shown with the following fields and options:

- Result Variable:** DET_LINE
- Variable Type:** Text
- Function:** DetRead
- Detail Read Line (offset):** For Case Insensitive, surround Regular Expression with /.../i
- Parameters:** (Empty list)
- Parameter Type:** Fixed Value
- Fixed value:** (Empty text box)
- Buttons:** OK, Cancel



The Function Edit dialog box is shown with the following fields and options:

- Result Variable:** DATE_FORMATTED
- Variable Type:** System, Global, User
- Function:** For C
- Parameters:** Var: DATE_INITIAL, Fix: dddddd
- Dropdown Menu:** _RULER, CURRENCY, DATE_FORMATTED, DATE_INITIAL, DATE1, DATE2, DATE3

The **Variable Type** will be filled in based on the Value Type of the Result Variable selected. This cannot be edited. This will change as the result variable changes.

The **Function** dropdown will contain the available functions based on the Result Variable Type. The table below describes the Function Availability by Result Variable type.

	Result Variable Type						Parameters	
Function	Text	Real	Integer	Currency	Date	Boolean	Min	Max
Abs		Y	Y	Y			1	1
Assign	Y	Y	Y	Y	Y	Y	1	1
Blank						Y	1	1
CustomCheckDigit	Y						2	2
DateDiff		Y	Y				2	2
Delimited Data	Y						3	3
DetRead	Y							
Evaluate	Y	Y	Y	Y	Y	Y	1	1
Exp		Y					1	1
File Exists	Y					Y	1	1
Format	Y						2	2
In						Y	2	2
Int		Y					1	1
Julian	Y	Y	Y				1	1
Length		Y	Y				1	1
Ln		Y					1	1
Log		Y	Y				1	1
Ltrim	Y						1	1
Max		Y	Y	Y			1	99
Min		Y	Y	Y			1	99
Mod			Y				1	2
Mod10	Y						3	3
NotAssign						Y	1	1

Not Blank						Y	1	1
Not SameText						Y	2	2
Power		Y					2	2
Random		Y	Y	Y			1	1
Regexp	Y					Y	2	2
Remove Zeros	Y						1	1
Reverse Text	Y						1	2
Round		Y		Y			2	2
Rtrim	Y						1	1
SameText						Y	2	2
Sqr		Y					1	1
Sqrt		Y					1	1
Substring	Y						3	3
To_Currency				Y			1	1
To_Date					Y		1	1
To_Int			Y				1	1
To_Real		Y					1	1
To_Str	Y						1	1
Trim	Y						1	1
Trunc			Y				1	1
ULREncode	Y						1	1
+	Y	Y	Y	Y			1	99
/		Y	Y	Y			2	2
*		Y	Y	Y			2	2
-		Y	Y	Y			2	2
=						Y	2	2
<						Y	2	2
>						Y	2	2
<=						Y	2	2
>=						Y	2	2

<>						Y	2	2
+Days					Y		2	2
+Months					Y		2	2
+Time					Y		2	2

The available functions are:

Abs

Absolute value of the parameter.

Result = Abs(param_1)

Assign

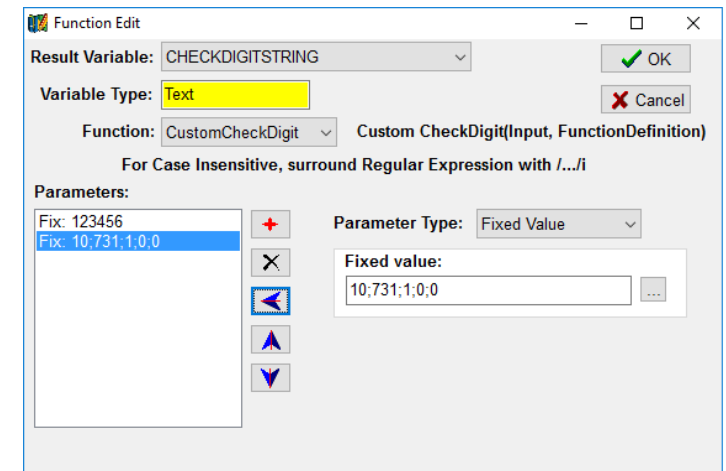
Assign will assign the parameter to the Result variable.

Result = param_1

Blank

Is the parameter blank.

Result = (param_1 = blank)

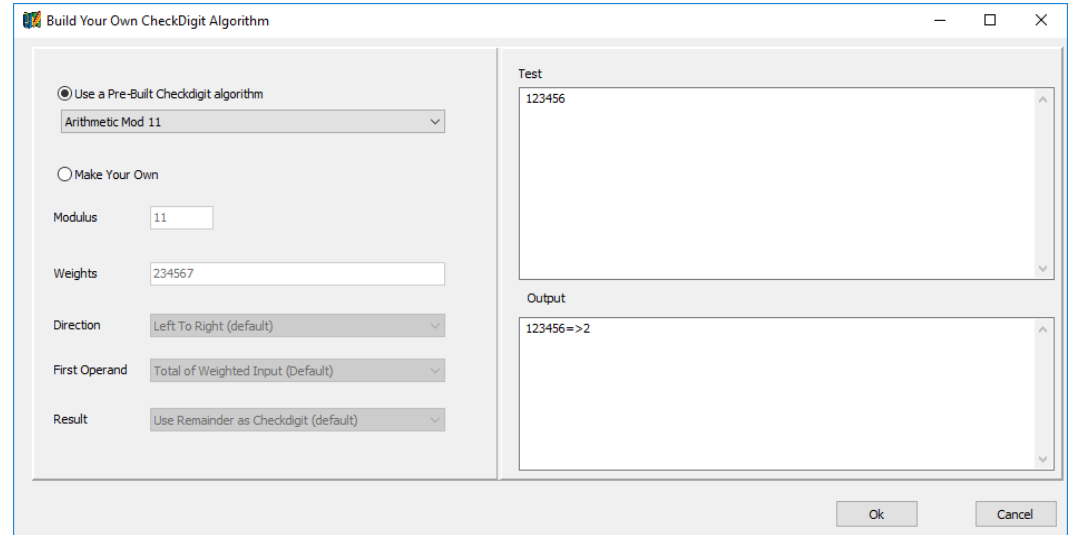


CustomCheckDigit

Customize the checksum algorithm for creating checkdigits.

This function requires two parameters, the first being the input text (which can be a field, variable, or even a fixed value) and the second being a string that specifies which algorithm to use to calculate checkdigits. The second string can either be the name of the algorithm or a semicolon-delimited set of values specifying the parameters of the algorithm. Editing either will launch the Build Your Own Checkdigit Algorithm form.

If the name of the algorithm is known and it is supported, select it from the dropdown list in the upper left-hand corner. On the right side, the user can test as many different number combinations as needed to make sure it is the correct checksum algorithm.



Build Your Own CheckDigit Algorithm

☒ Use a Pre-Built Checkdigit algorithm
Arithmetic Mod 11

☐ Make Your Own

Modulus: 11

Weights: 234567

Direction: Left To Right (default)

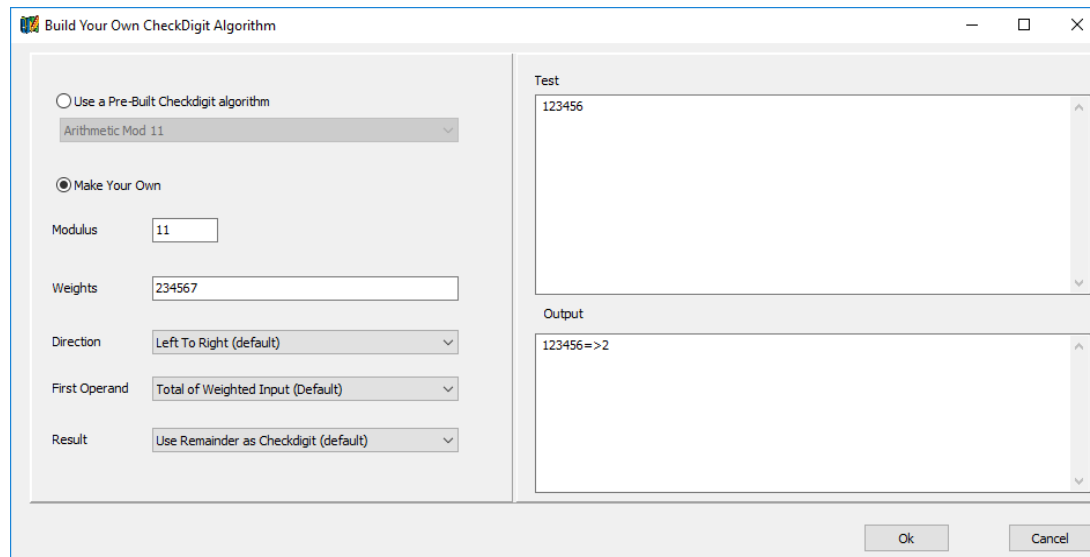
First Operand: Total of Weighted Input (Default)

Result: Use Remainder as Checkdigit (default)

Test: 123456

Output: 123456=>2

Ok Cancel



Build Your Own CheckDigit Algorithm

☐ Use a Pre-Built Checkdigit algorithm
Arithmetic Mod 11

☒ Make Your Own

Modulus: 11

Weights: 234567

Direction: Left To Right (default)

First Operand: Total of Weighted Input (Default)

Result: Use Remainder as Checkdigit (default)

Test: 123456

Output: 123456=>2

Ok Cancel

If a custom algorithm is needed, select Make Your Own. It's best to do this after selecting one of the prebuilt algorithms that is like what is intended.

Specify the modulus (the number by which the division is being done to get the remainder once the digits are weighted), the weights (used in the second step of the calculation), the direction of evaluation (doesn't matter when there are no weights, but matters a lot when there are), the way the weighted digits are added up to get the number that will be divided by the modulus, and the way the final checkdigit is generated.

Best practice would be to test custom algorithms with a large enough test dataset to make certain the algorithm is correct.

DateDiff

The numeric difference between 2 date parameters in days.

Result = DateDiff(Param_2 – Param_1)

Delimited Data

Extract the data from a delimited text. Parameter 1 is the delimited text data. Parameter 2 is the Delimiter. For tab use \t. Parameter 3 is the field number.

Result = Delim(param_1, param_2, param_3)

DetRead

This is the only additional function available in the Detail section and not in the Display section. This function allows the user to obtain a detail line that is different from the current line. If the next detail line is needed, it can be obtained by calling DetRead with Offset of 1. The Detail offset can be any value from -10 to +10.

Result = Detail line +/- (above/after) the current detail line

Evaluate

Evaluates a text expression. This allows freeform entry of Equations. Variables can be used in the Equation in the Form <#VarName>. An example of a valid equation would be 15 + 25. The result would be 40.

Result = Evaluate(param_1)

Exp

Exponent of the Parameter base e.

Result = e^param_1

File Exists

Does the file specified in Parameter exist?

Result = fileexists(param_1)

Format

Format Parameter 1 using the value in Parameter 2.

Result = format(param_1,param_2)

In

Is Parameter 1 in the ; separated list in Parameter 2

Result = Param_1 in Param_2

Int

Return the Integer value of Parameter.

Result = Int(Param_1)

Julian

Return the Number of Days since the start of the year for Date Parameter.

Result = Julian(Param_1)

Length

Number of characters in parameter.

Result = length(Param_1)

Ln

Base e Log of Parameter.

Result = ln(Param_1)

Log

Base 10 Log of Parameter.

Result = log(Param_1)

Ltrim

Remove leading spaces and control characters from Parameter. This will include tabs, CR, control Characters, as well as space. For most Text fields it is desirable to trim the data before storage.

Result = ltrim(Param_1)

Max

Max value in parameter lists.

Result = Max(Param_1, Param_2, .. Param_x)

Min

Min value in parameter lists.

Result = Min(Param_1, Param_2, .. Param_x)

Mod

Remainder after division of Parameter 1 by Parameter 2.

Result = Param_1 mod Param_2

Mod10

Mod 10 Checksum. Parameter 1 is number, parameter 2 is direction, and parameter 3 is weight. Direction is 0 (start from right) or 1 (start from left). Weight is 0 (start with 1 for weight) or 1 (start with 2 for weight) or 3-9 (start with indicated value and alternate with 1). Only the Check digit is created.

Result = Mod10(Param_1, Param_2, Param_3)

NotAssign

Assign will not assign the parameter to the Result variable.

Result = param_1

Not Blank

Is parameter 1 not blank.

Result = (Param_1 <> blank)

Not SameText

Is parameter 1 not the same as parameter 2 (not case sensitive).

Result = Not sametext(Param_1, Param_2)

Power

Parameter 1 raised to the power of Parameter 2.

Result = Param_1 ^ Param_2.

Random

Randomly generate a number greater than or equal to 0 and less than the number for parameter 1. If parameter 1 is 3 the number will be either 0, 1, or 2.

Result = Random(Param_1)

Regexp

Regular expression in parameter 2 applied to parameter 1.

Result = Param_1 regexp Param_2.

Remove Zeros

Remove leading 0's from parameter.

Result = RemZeros(Param_1).

Reverse Text

Reverse text in parameter 1 by delimiter in parameter 2. If parameter 2 is blank, then Space is used as delimiter. Only the 1st delimiter is used.

Result = RevText(Param_1, Param_2)

Round

Round parameter 1 to Parameter 2 decimals

Rounding uses "Banker's Rounding". This means that values exactly halfway between 2 values rounds to even number. Negative values for Param_2 rounds to right of Decimal. Positive values for Param_2 rounds to left of Decimal.

Result = param_1 round param_2

Rtrim

Remove trailing spaces and control characters from the parameter. This will include tabs, CR, control Characters, as well as space. For most Text fields it is desirable to trim the data before storage.

Result = rtrim(param_1)

SameText

Is parameter 1 the same as parameter 2 (not case sensitive).

Result = sametext(Param_1, Param_2)

Sqr

Square of Parameter

Result = Param_1 ^ 2

Sqrt

Square Root of Parameter

Result = $\sqrt{Param\_1}$

Substring

Substring of Parameter 1 starting at Parameter 2 for length of Parameter 3

Result = Substring(Param_1, Param_2, Param_3)

To_Currency

Convert Parameter 1 to Currency.

Result = To_Cur(Param_1)

To_Date

Convert Parameter 1 to Date

Result = To_Date(Param_1)

To_Int

Convert Parameter 1 to integer

Result = To_Int(Param_1)

To_Real

Convert Parameter 1 to Real

Result = To_Real(Param_1)

To_Str

Convert Parameter 1 to String

Result = To_Str(Param_1)

Trim

Remove Leading and Trailing spaces and control characters. This will include tabs, CR, control Characters, as well as space. For most Text fields it is desirable to trim the data before storage.

Result = Trim(Param_1)

Trunc

Truncate Parameter 1 to an integer by dropping everything to the right of the decimal.

Result = Trunc(Param_1)

ULREncode

Convert the Parameter to a URLEncoded String for use in web URL.

Result = URLEncode(Param_1)

+

Add parameter list. For text this will concatenate the values; For integer, real, and currency it will add the values.

Result = Param_1 + Param_2+...Param_x

/

Divide Parameter 1 by Parameter 2

Result = Param_1 / Param_2

*

Multiply Parameter 1 with Parameter 2

Result = Param_1 * Param_2

–

Subtract Parameter 2 from Parameter 1

Result = Param_1 – Param_2

=

Is Parameter 1 equal to Parameter 2

Result = (Param_1 eq Param_2)

<

Is Parameter 1 less than Parameter 2

Result = (Param_1 < Param_2)

>

Is Parameter 1 greater than Parameter 2

Result = (Param_1 > Param_2)

<=

Is Parameter 1 less than or equal to Parameter 2

Result = (Param_1 <= Param_2)

>=

Is Parameter 1 greater than or equal to Parameter 2

Result = (Param_1 >= Param_2)

<>

Is Parameter 1 not equal to Parameter 2

Result = (Param_1 Not Eq Param_2)

+Days

Add Parameter 2 days to Parameter 1 date. To subtract days, use a negative value for Parameter 2.

Result = Param_1 +days Param_2

+Months

Add Parameter 2 months to Parameter 1 date. To subtract months, use a negative value for Parameter 2.

Result = Param_1 +Months Param_2

+Time

Add Parameter 2 time (in hours) to Parameter 1 date. To subtract time (in hours), use a negative value for Parameter 2.

Result = Param_1 +Time Param_2

Format with #B

There is the ability to format numeric/currency values without coercing blank to "0". There was a change to allow the use of #B before % in Mapping Format String to indicate to output blank if 0. This is available for:

%d Integer

%f Fixed Float

%g General floating point

%n Number floating point

%u Unsigned integer

%x Hexadecimal

%m Money

It allows Labels before and after. For example, Total #B%d gallons will result in "Total 100 gallons" if 100 is the value. If the Value is 0 the output will be "Total gallons" (one space instead of a number).

Formatting Strings

Additional Format Strings are available for Changing the Case of a string.

There is the ability to use "[LMU]" format strings with labels like the "#B%m" format string.

Text variables can be made lower/mixed/upper case with one of the following format strings:

#L%s #M%s #U%s

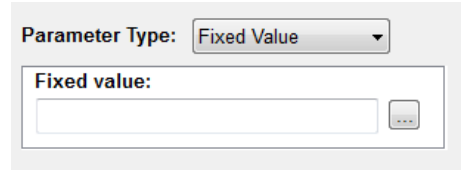
Text variables can also be formatted to have labels with the following format string:

This is a label: [%s]

The two formats can be combined.

Based on the function selected, the **Parameters** required will be displayed to the right of the function dropdown. The order of the Parameters is important for most functions. The parameters will need to be listed in the Parameter Display in the order designated. Parameters can be Fixed Value, Variable (Main or Detail), or Field. When the Parameter type is changed the available selection changes.

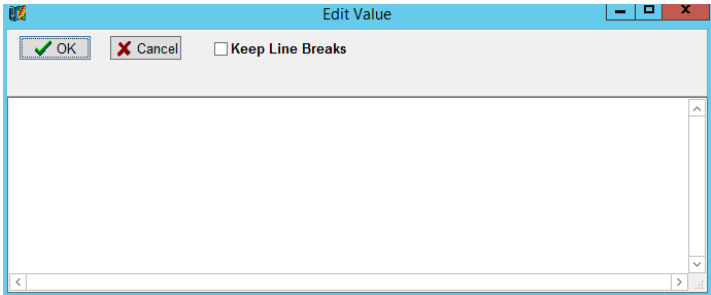
Fixed Value allows the user to enter the parameter value or use the ellipsis button to use the edit form. In this form the user can enter data that can contain multiple lines. Check **Keep Line Breaks** to retain the Line Breaks. If Keep Line Breaks is not checked the multiple lines will be combined with a space.



Parameter Type: Fixed Value

Fixed value:

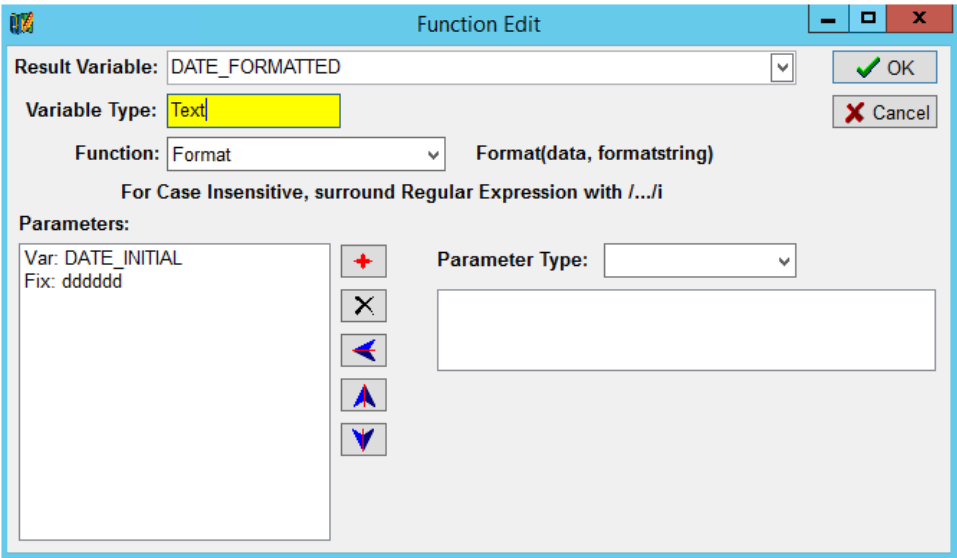
[Text input field with ellipsis button]



Edit Value

OK Cancel Keep Line Breaks

[Large text area for editing value]



Function Edit

Result Variable: DATE_FORMATTED

Variable Type: Text

Function: Format Format(data, formatstring)

For Case Insensitive, surround Regular Expression with /.../i

Parameters:

Var: DATE_INITIAL
Fix: dddddd

Parameter Type: [Dropdown]

[Buttons: +, X, Left Arrow, Up Arrow, Down Arrow]

[Large text area for parameters]

OK Cancel

The Variable and field options will display a dropdown of all variables/fields that have been defined in the map. This allows a variable/field to be assigned a new value depending on the results of a function.

Parameter Type: Variable

Variable:

- 30+MES
- 60+ MESS
- 90 DAYS
- ACCOUNT BALANCE
- ACCOUNT NUMBER
- APPT NUMBER
- BILLING NUMBER
- BILLING PHONE SUB

Parameter Type: Field

Field:

- 121+
- 1-30
- 31-60
- 61-90
- 91-120
- ACCOUNT #
- ADDR LINE 1
- ADDR LINE 2

Conditional

The Conditional command allows for Comparisons and branching based on the results of the test. This functions like an If statement in a programming language.

This command can be accessed in 2 ways. The 1st is to click Conditional from the Ribbon bar Det. The 2nd is to Click on the + on the Det tab of the Map Commands window then select Conditional.

Parameter types may be Fixed, Variable, or Field.

Fixed allows the user to enter a fixed value. If field or variable are selected, select the field/variable from the dropdown to be used in the comparison test of this conditional. The Variables available can be from the Main or Detail sections.

Only the command immediately following the Conditional will be executed if the statement is true. If the Statement is false, it will not be executed (unless the Not checkbox is checked). For a group of commands executed, use a group after the Conditional. The conditional will then be applied to the entire group of commands being executed or not.

Select the **1st Parameter Type** and enter the value or select the variable/field. Select a **Condition** for the compare. Select the **2nd Parameter Type** and enter the value or select the variable/field.

Condition Edit

Not ☐

1st Parameter Type: Variable

Variable: Sys_CurOutPage

Condition: =

2nd Parameter Type: Fixed Value

Fixed value: 1

For Case Insensitive, surround Regular Expression with /.../i

OK Cancel

If the **Not** Checkbox is selected, the results are converted to the negated value. If the result is true it is converted to false. If the result is false it is converted to true. This is useful for creating an If else capability. For this create the condition you want for true. The command after the Conditional will be executed if the statement is true. Duplicate the Condition command and select the Not checkbox. The command after the conditional will be executed if the statement is false.

Available conditions are:

Assign

The first parameter is assigned a value

NotAssign

The first parameter is not assigned a value

=

The 2 parameters must be equal (for Text they must be identical)

>

The first parameter to be greater than the 2nd

<

The first parameter is less than the 2nd

<>

The 2 parameters are not equal

<=

The first parameter is less than or equal to the 2nd

>=

The first parameter is greater than or equal to the 2nd

SameText

The 2 parameters are the same ignoring case

Blank

The first parameter is blank

Not Blank

The first parameter is not blank

Not SameText

The 2 parameters are not the same ignoring case

RegExp

Is the regular expression in Parameter 2 found in Parameter 1

In

Is Parameter 1 in the ; separated list in Parameter 2

File Exists

Does the file specified in Parameter 1 exist? Parameter 1 should contain the full path to the file.

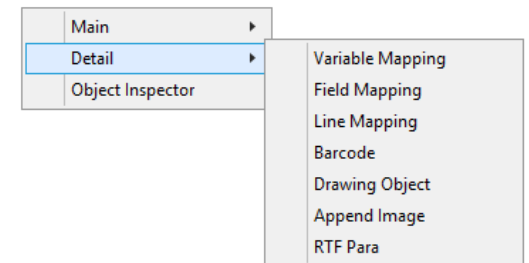
Barcode

This command allows the user to output a barcode based on a fixed value, Variable, or Field.

This command can be accessed in 3 ways. The 1st is to click Barcode from the Ribbon bar Det. The 2nd is to Click on the + on the Det tab of the Map Commands window then select Barcode. The 3rd is to right-click on the Output and select Barcode under the Detail options from the Pop-up menu. The advantage of using the last method is the Barcode will default to the selected location.

Once the command is created it can be edited to change the parameters.

The **Parameter Type** is where the data in the barcode is coming from and can be a Fixed Value, Variable, or Field. Select the appropriate type and enter the value or select the variable/field from the dropdown.



The **Output Position X** value specifies the starting location in inches. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window, the X value will be populated automatically with the value from where the cursor was located. The Y output position is based on the Current Detail Y position (available in the System Variable Sys_CurDetY).

The Output Position can be entered using a Fixed Value for X, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X value will become a dropdown to select the variable/field that contains the X value.

Select the **Barcode Type**. This will determine the type of barcode displayed on the output. The barcodes available are:

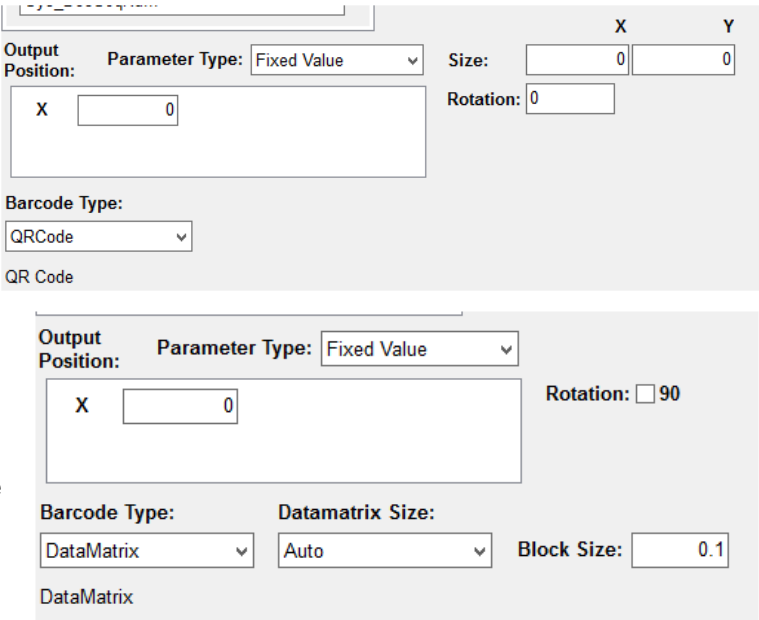
Ean 8	2/5 IATA
Ean 13	2/5 Invert
Codabar	ITF
Code 39S	ISBN
Code 39E	ISSN
Code 93	ISMN
Code 128	UPC-A
ABC Codabar	UPC-E0
2/5 Datalogic	UPC-E1
2/5 Interleaved	UPC Shipping
2/5 Matrix	JAN8
2/5 Industrial	JAN13

MSI Plessey	PZN
PostNet	PDF 417
OPC	DataMatrix
Ean 128	QRCode
GS1-128	
25 Coop	
Code 11	

Some Barcode Types have the size determined by the Datamatrix Size and Block Size while others have an X and Y value for Size. The **Datamatrix Size** determines how many blocks are within the barcode. Select the desired values or Auto for the system to select the best for the other settings. The **Block Size** is for the entire barcode size in inches; this is not the size of each block within the barcode. The **X** and **Y** values for **Size** are also in inches and represent the width (X) and Height (Y) for the barcode. If the PostNet barcode is selected, the X and Y values are not visible because they are automatically set to the USPS requirements.

If the sizes entered are not large enough the barcode will not display correctly and may not be readable when printed. Best practice would be to test print to verify that the barcode is readable by the Barcode Reader.

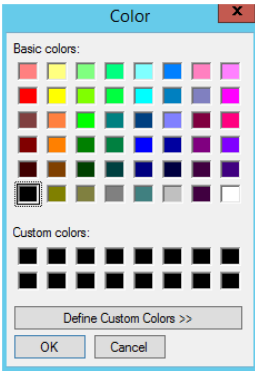
Enter the **Rotation** in Degrees (Counterclockwise) or check the Rotation box to rotate the barcode 90 degrees. These two options will depend on the Barcode Type that has been selected.



The image shows two panels of a barcode configuration interface. The top panel is for a QR Code, with fields for Output Position, Parameter Type (Fixed Value), Size (X: 0, Y: 0), and Rotation (0). The bottom panel is for a DataMatrix, with fields for Output Position, Parameter Type (Fixed Value), Rotation (90), Barcode Type (DataMatrix), Datamatrix Size (Auto), and Block Size (0.1).

The **Background Color** and **Barcode Color** can be entered using a **Parameter Type** of Fixed Value, Variable or Field. If Variable or field are selected, the color value will become a dropdown to select the variable/field that contains the color value. If Fixed Value is selected, change the Color for the background by clicking on the Color Rectangle. This will display a color selection window. Select the color and click OK. This will change the Color Rectangle to the color selected.

Check the **Transparent** checkbox to make the Background Color transparent.



The image shows a color selection window titled 'Color'. It contains a grid of 'Basic colors' and a section for 'Custom colors'. There are 'OK' and 'Cancel' buttons at the bottom.

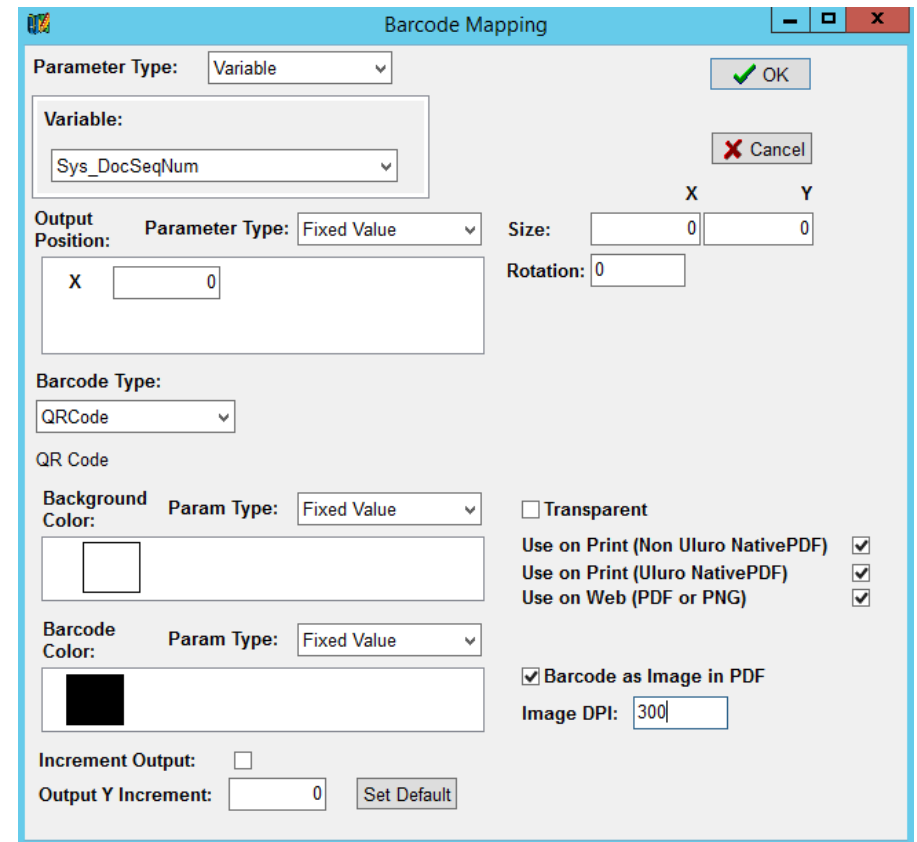
If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

The Increment section allows setting an Increment to move the Y position for the Next Detail command. Check **Increment Output** to cause an increment after the command. Enter the inches to increment in the **Output Y Increment** field. This can be a Negative amount. Click the **Set Default** button to set the Output Y increment based on the current Font.

Small images, especially Black and White images, can be highly compressed in the output PDF. By using images, the size can be reduced. This is especially true if there are many barcodes and if barcode values are the same. Check the **Barcode as Image in PDF** to output the barcodes as images in the output PDF to reduce the size of the output PDF file. Once the setting is checked, select the desired DPI for the image. If the barcode is Black and White, then a 1-bit image will be used.



The image shows a 'Barcode Mapping' dialog box with the following fields and options:

- Parameter Type:** Variable (dropdown)
- Variable:** Sys_DocSeqNum (dropdown)
- Output Position:** X: 0 (text box)
- Parameter Type:** Fixed Value (dropdown)
- Size:** X: 0, Y: 0 (text boxes)
- Rotation:** 0 (text box)
- Barcode Type:** QRCode (dropdown)
- QR Code**
 - Background Color:** Param Type: Fixed Value (dropdown)
 - Barcode Color:** Param Type: Fixed Value (dropdown)
 - ☐ Transparent
 - ☒ Use on Print (Non Uluro NativePDF)
 - ☒ Use on Print (Uluro NativePDF)
 - ☒ Use on Web (PDF or PNG)
 - ☒ Barcode as Image in PDF
 - Image DPI:** 300 (text box)
- Increment Output:** ☐
- Output Y Increment:** 0 (text box) with a **Set Default** button
- Buttons:** OK (green checkmark), Cancel (red X)

Append Image

The Append Image Command allows defining of an image to output.

This command can be accessed in 3 ways. The 1st is to click Append Image from the Ribbon bar Det. The 2nd is to Click on the + on the Det tab of the Map Commands window then select Append Image. The 3rd is to right-click on the Output and select Append Image under the Detail options from the Pop-up menu. The advantage of using the last method is the image will default to the selected location.

Once the command is created it can be edited to change the parameters.

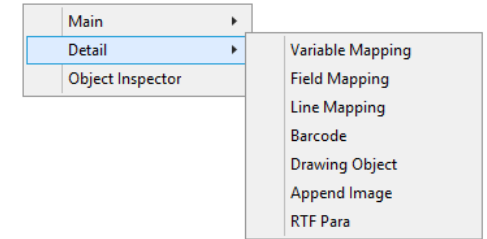
The **Parameter Type** is where the image is coming from and can be a Fixed Value, Variable, or Field. Select the appropriate type and enter the value or select the variable/field from the dropdown.

The Fixed Value is for the full UNC path to the image on the server that will be processing the map. If the **Relative To** checkbox is checked, this will be a relative path to the directory listed. The Ellipsis can be used to browse for the file.

When the image is selected the **Image Type** will be determined based on the File Extension and a preview of the image will be displayed.

Relay Unify can accept images in the following formats:

- BMP – Bitmap image.
- JPG – Jpeg image compressed image
- WMF – Windows Meta File Image
- PNG – PNG image
- TIF – Tagged Image Format (single Page only)
- PDF – PDF Image from a page in the pdf
- Auto is for allowing the image type to be determined from the file extension.



Parameter Type: ☒ Relative to \\TRANSQA2\SUBMIT\IMAGES\

Variable:

Add Image to Page

Parameter Type: ☒ Relative to \\TRANS-QA3\SUBMIT\IMAGES\

Fixed value: ...

Image Type
☐ BMP ☒ PNG ☐ Auto
☐ JPG ☐ TIF
☐ WMF ☐ PDF

☒ Scale ☐ Size ☐ Max Size

Output Position:

Scale:
Res:

Use on Print (Non Uluro NativePDF) ☒
Use on Print (Uluro NativePDF) ☒
Use on Web (PDF or PNG) ☒

Send as PCL Macro ☐

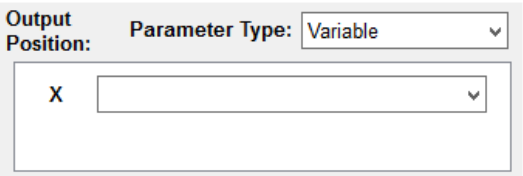
8 Bit Color ☐
GrayScale ☐
1 Bit ☐

Additional PDF
JPG Compression:

Increment Output: ☐
Output Y Increment:

HTML Link:

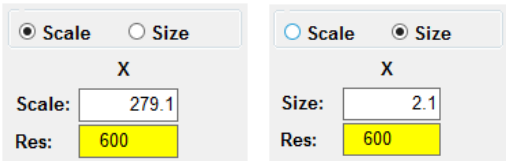
The **Output Position X** value specifies the starting location in inches. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window, the X value will be populated automatically with the value from where the cursor was located. The Y output position is based on the Current Detail Y position (available in the System Variable Sys_CurDetY).



Output Position: Parameter Type: Variable
X

The Output Position can be entered using a Fixed Value for X, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X value will become a dropdown to select the variable/field that contains the X value.

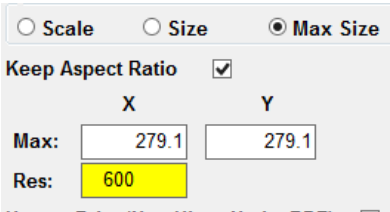
The image can be sized using the **Scale**, **Size**, or **Max Size** options. For Scale, the X entered for Scale will be the percent to size the image. For Size, the X entered for Size (width) will be the inches to size the image.



Scale Size
X
Scale: 279.1
Res: 600
Scale Size
X
Size: 2.1
Res: 600

The **Res** or Resolution values are based on the currently selected printer resolution in DPI. If they are RED, then the Current printer Resolution does not match the resolution the Command was last saved at. On the Creation of the command, they will always be Red. Once the Command is saved, they will be Yellow. They cannot be adjusted. This setting allows the System to compensate for a printer with a different resolution than the one it was created with. If the Resolution is saved, the scaling factor can be recalculated to keep the images the same.

The ability to resize images by width and height independent of the original ratios is done through Max Size. The **Max Size** setting is for Image Types other than PDF and Auto. This allows setting the Max X and Y size of an image. **Keep Aspect Ratio** will maintain the aspect ratio of the image when resizing. If unchecked, the image will be sized to the X and Y sizes defined (except for PDF and Auto images).



Scale Size Max Size
Keep Aspect Ratio
X Y
Max: 279.1 279.1
Res: 600

If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

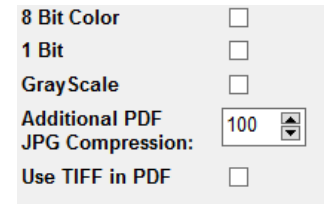
If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

Check the **8 Bit Color** if the image should be converted to 8 Bit color from the default of 24-bit color. This will make the image smaller when being sent to the printer and increase printing speed but may distort the colors.

Check the **1 Bit** box if the image should be converted to 1 Bit. This is the same as black and white.

Check the **GrayScale** box if the image should be converted to GrayScale.

A screenshot of a settings panel for image conversion. It contains five options, each with a checkbox: '8 Bit Color' (unchecked), '1 Bit' (unchecked), 'GrayScale' (unchecked), 'Additional PDF JPG Compression:' (set to 100 in a spinner box), and 'Use TIFF in PDF' (unchecked).

Normally Relay Unify will not recompress a JPG image. There have been instances where the uncompressed JPG image is very large. With a small amount of Compression, the image may be acceptable and will result in a much smaller PDF. The **Additional PDF JPG compression** can be set from 1 to 100. Value of 100 means No additional compression (highest quality). Value of 1 means maximum compression (lowest quality). The correct setting will require testing and adjustment to obtain acceptable results (compression vs quality). If the JPG is not compressed, then using 80 for additional compression may be a good starting point.

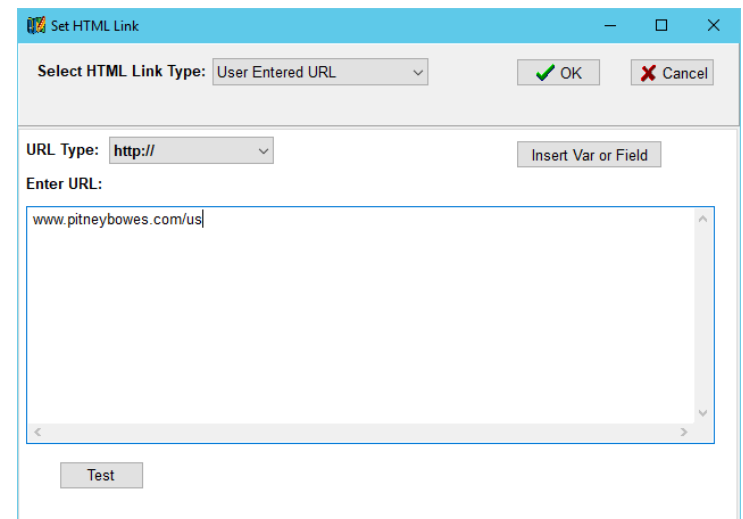
If the Image Type is TIFF, there will be an additional setting that appears, Use TIFF in PDF. When **Use TIFF in PDF** is checked, the TIFF image will be placed directly in the PDF Output. If this is unchecked the 1 Bit color will be ignored when putting the Image in the PDF and no modifications will be made to the TIFF image. Using this setting will increase processing and printing speeds.

HTML Links will appear on the PNG created during web viewing. When the User cursor floats over the HTML Link command the cursor will change to a hand. The user may click on the link and the action will occur. To accomplish this, an image Map file is created along with the PNG file. The image map file defines the areas on the PNG image and the action to be performed.

The Ellipsis button can be used to set up the HTML link.

User Entered URL is for simple links. Select User Entered URL for the **Select HTML Link Type**. Select HTTP:// or HTTPS:// for the **URL Type**, then enter the URL. An example would be <https://www.pitneybowes.com/us>.

Use the **Test** button to see the result of clicking on the HTML link.

A screenshot of a 'Set HTML Link' dialog box. It has a title bar with standard window controls. Inside, there's a 'Select HTML Link Type:' dropdown menu currently set to 'User Entered URL', with 'OK' and 'Cancel' buttons to its right. Below this is a 'URL Type:' dropdown menu set to 'http://', with an 'Insert Var or Field' button to its right. Underneath is a text area labeled 'Enter URL:' containing the text 'www.pitneybowes.com/us'. At the bottom of the dialog is a 'Test' button.

Check Image are links that will call an external system to generate check images. These links require specific information in order to call the external system. The five pieces of information at the top specify the required data. The four pieces of information at the bottom are optional depending on the external system that will generate the check images. If unsure it is always best to provide the information if possible.

The required items must be linked to a variable specified and set before the mapping is called. The optional items may be linked to a variable.

The 'Set HTML Link' dialog box is shown with the 'Click Through' option selected in the 'Select HTML Link Type' dropdown. It features an 'OK' button with a green checkmark and a 'Cancel' button with a red X. Below the dropdown, there is a 'URL Type' dropdown set to 'http://' and an 'Insert Var or Field' button. A text area labeled 'Enter URL:' contains the text 'www.pitneybowes.com/us'. At the bottom left, there is a 'Test' button.

The default setting for HTML Link is None. This means no HTML link has been set up.

The 'Set HTML Link' dialog box is shown with the 'Check Image' option selected in the 'Select HTML Link Type' dropdown. It features an 'OK' button with a green checkmark and a 'Cancel' button with a red X. Below the dropdown, there is a section titled 'Enter the Variable for the Check Image' with five dropdown menus: 'Transaction #' (DET1 TRANSNO), 'Check #' (DET1 CHECK NUMBER), 'Posting Date:' (DET1 CHECK DATE), 'Account #' (ACCOUNT NUMBER), and 'Amount:' (DET1 CHECK AMOUNT). A note 'May be the same as Transaction #' is next to the 'Check #' dropdown. Below this is an 'Optional' section with three more dropdown menus: 'Sub Account:' (DET1 SUBACCTNO), 'Application ID:' (DET1 APPID), and 'Trans Type:' (DET1 TRANSTYPE). A 'Routing #' dropdown is also present but empty.

Click Through are also simple links with the exception that Relay Unify will track who and when the web user clicks on the link. Select HTTP:// or HTTPS:// and enters the URL. An example would be <https://www.pitneybowes.com/us>

The test click through is not tracked.

The 'Set HTML Link' dialog box is shown with the 'None' option selected in the 'Select HTML Link Type' dropdown. It features an 'OK' button with a green checkmark and a 'Cancel' button with a red X. The main area of the dialog is empty, with the text 'No HTML Set' centered at the bottom.

The Increment section allows setting an Increment to move the Y position for the Next Detail command. Check **Increment Output** to cause an increment after the command. Enter the inches to increment in the **Output Y Increment** field. This can be a Negative amount. Click the **Set Default** button to set the Output Y increment based on the current Font.

If the Use PS command has been enabled, then there will also be an option to **Send as Reusable PS**. This will cache the image once in the Print stream and send the image as a reference when needed. This will speed up the Print and reduce the Print Stream size.

Use on Print (Non Uluro NativePDF)

☐

Use on Print (Uluro NativePDF)

☒

Use on Web (PDF or PNG)

☒

Send as PCL Macro

☐

8 Bit Color

☐

If the Use PCL command has been enabled, then there will also be an option to **Send as PCL Macro**. This will cache the image once in the Print Stream and send the image as a PCL Macro call when needed.

When using the Send as Reusable PS or Send as PCL Macro only one can be set. For Send as Reusable PS the printer must be a Post Script printer and the Print Driver must be set to Post Script Level 3. For Send as PCL Macro the print driver must be HP LaserJet 5 only.

Use on Print (Non Uluro NativePDF)

☐

Use on Print (Uluro NativePDF)

☒

Use on Web (PDF or PNG)

☒

Send as Reusable PS

☐

8 Bit Color

☐

The **PDF Page** determines which page of the PDF will be output. This can be a Fixed Value, Variable, or Field. If Variable or field are selected, the value will become a dropdown to select the variable/field that contains the page number.

PDF Page:

Add Image to Page

Parameter Type: Fixed Value ☒ Relative to \\TRANS-QA3\SUBMIT\IMAGES\

Fixed value:
Tyler\Backer Pg1.PDF

Image Type
☐ BMP ☐ PNG ☐ Auto
☐ JPG ☐ TIF
☐ WMF ☒ PDF

☒ Scale ☐ Size

X
Scale: 100
Res: 600

Use on Print (Non Uluro NativePDF) ☒
 Use on Print (Uluro NativePDF) ☒
 Use on Web (PDF or PNG) ☒

Send as PCL Macro ☐
Disable White Background ☒

8 Bit Color ☐
 GrayScale ☐
 1 Bit ☐

Additional PDF
 JPG Compression: 100

Increment Output: ☐
 Output Y Increment: 0.0000

HTML Link:

Output Position: X 0 Parameter Type: Fixed Value

PDF Page: Fixed Value
1

Copy Page to New PDF ☒
 Check objects for Reuse ☒

Default PDF Rendering ☐

White Drawings Transparent ☐

Print as Image ☐ If at Least Images on page 0

Replace Fonts
☒ No Replacements ☐ With Same Font
☐ Using Font Map

Font Map

If **Copy Page to New PDF** is checked, Relay Unify will copy the original PDF page to the output PDF page. The PDF's are copied into the new output PDF and objects are duplicated unless the **Check objects for Reuse** is checked. When checked it will compare the Fonts, Forms, and Images and if they are *identical*, it will add only once per PDF. *Identical* requires that the names and all sub-objects be identical. This would only normally happen if a large PDF is split into multiple smaller PDFs.

The rendering of the PDF as an image can be turned off by unchecking **Default PDF Rendering**. If this is unchecked, several other options will be available. When the output is not going to Relay Unify Native PDF either the Default PDF Rendering will occur or the settings available with the Default PDF Rendering unchecked will occur.

The **White Drawings Transparent** setting can be used but will have no effect if Relay Unify Native Output is the output or Copy Page to New PDF is checked.

If **Print as Image** is checked, the PDF will be processed as an image if the image count parameter is met. **If at Least Images on Page** value is what determines which pages will process as images. Use the arrows to adjust the value. This can be useful if 1) An image exists on the PDF that may not process correctly when printed, or 2) The PDF contains check images. In some cases, these check images can take a long time to process when printing. By utilizing this setting, pages that fit these criteria will process at a faster speed.

Replace Fonts can be set to three different settings. **No Replacements** outputs the pdf using the original Embedded fonts. If the embedded fonts are bitmap, then the Output file size can be larger than when Rendered as an Image. **With Same Font** will output the PDF using Fonts on the Local computer instead of the original Embedded fonts. This will reduce the output file size, but the fonts may not exactly match the original embedded fonts. **Using Font Map** allows manual selection of the Replacement Fonts. This will reduce the output file size, but the fonts may not exactly match the original embedded fonts.

When substituting fonts each character is positioned incrementally in the output. Unchecking the **Incremental Char Position** will position only the line in the Output file. This can reduce the file size, but on long lines the text may no longer match the original Input PDF.

When Using Font Map is selected, click on the Font Map edit box (...) to display the Font Mappings\Font Substitution form.

The screenshot shows the 'PDF Page' settings dialog box. It includes a 'PDF Page' dropdown set to 'Fixed Value', a page number input set to '1', and several checkboxes: 'Copy Page to New PDF' (checked), 'Check objects for Reuse' (checked), 'Default PDF Rendering' (unchecked), and 'White Drawings Transparent' (unchecked). There is also a 'Print as Image' checkbox (unchecked) and an 'If at Least Images on page' spinner set to '0'. Under the 'Replace Fonts' section, 'No Replacements' is selected with a radio button, while 'With Same Font' and 'Using Font Map' are unselected. A 'Font Map' button with an ellipsis is at the bottom.

The screenshot shows the 'Font Mappings\Font Substitution' dialog box. It has a 'PDF Font' section with a 'Replacement Font' dropdown set to 'Arial'. Below it, 'Replacement Font Style' has checkboxes for 'Match' (checked), 'Bold' (unchecked), 'Italics' (unchecked), 'Underline' (unchecked), and 'StrikeOut' (unchecked). A 'Select PDF' section contains a text box with the path '\\Trans-qa3\submit\IMAGES\Tyler\'. On the right side, there are 'OK' and 'Cancel' buttons. At the bottom right, there are 'Clear List' and 'Build List' buttons. The main area of the dialog is a table with two columns: 'PDF Font' and 'Replacement Font'.

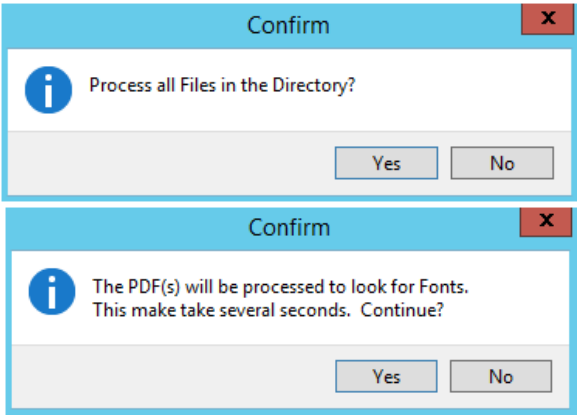
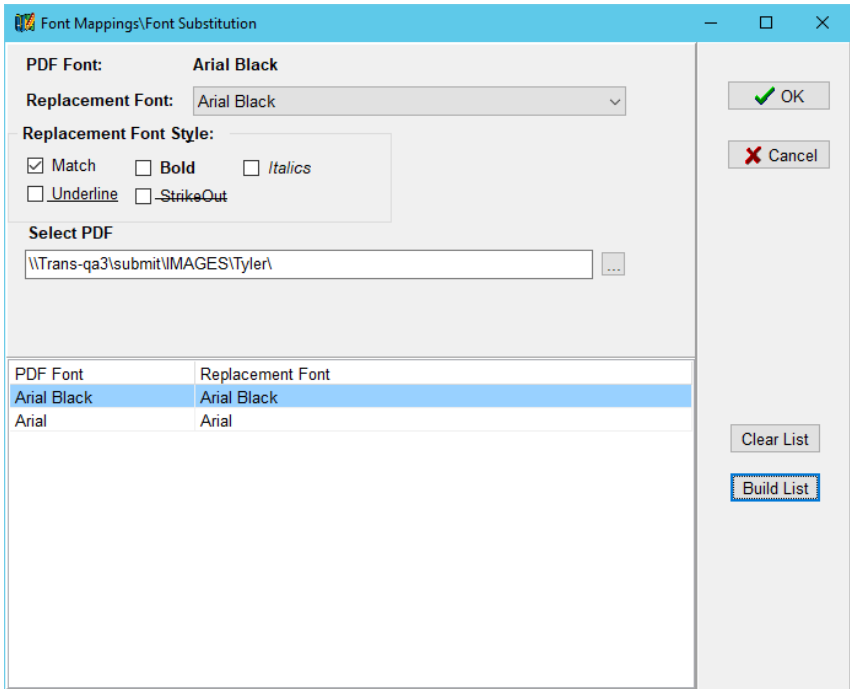
PDF Font	Replacement Font

Click the ellipsis button to select the PDF file in **Select PDF**. Select the path and a PDF.

The user will be asked if all PDF's should be processed. Select Yes to process all PDF's and No to process only the one PDF.

Clicking the **Clear List** button will clear the already entered data.

Click the **Build List** button to process. There will be a confirmation message. Click Yes to Continue and No to cancel.



A List of the Fonts and suggested Substitutions will be displayed.

Select each font and change the **Replacement Font** if desired.

Change the **Replacement Font Style** if desired.

When finished Click OK.

When the PDF output is created the Fonts will be substituted.

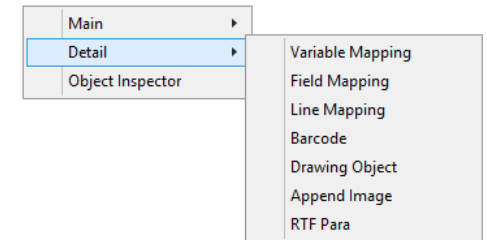
It is possible to copy the command and use one method for printing and another method for Web Presentment.

Enter the Y Scale in % to Size the image.

Drawing Object

This command allows simple drawing or various polygons and lines.

The command can be accessed in 3 ways. The 1st is to click the Drawing Object from the Ribbon bar Det. The 2nd is to Click on the + on the Det tab of the Map Commands window then select Drawing Object. The 3rd is to right-click on the Output and select Drawing Object under the Detail options from the Pop-up menu. The advantage of using the last method is the Drawing Object will default to the selected location.



Once the command is created it can be edited to change the parameters.

The **Drawing Object** can be an Arc, Polygon, or Rectangle. Arc is a circle or part of a circle. Polygon is a drawing from point to point ending at the starting point. Rectangle is a rectangle with a set size and height.

Select the desired shape. Based on the selection, the Parameter Type section will change to include the necessary parameters for that object.

The **Name** is Drawing Object by default but can be edited to a more descriptive name. This name will be part of the name for the command in the Map Commands window.

The **Output Position X** value specifies the starting location in inches. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window, the X value will be populated automatically with the value from where the cursor was located. The Y output position is based on the Current Detail Y position (available in the System Variable Sys_CurDetY).

The Output Position can be entered using a Fixed Value for X, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X value will become a dropdown to select the variable/field that contains the X value.

Arc

Arc is a circle or part of a circle.

The arc can be created using a **Parameter Type** of Fixed Value, Variable, or Field. If Variable or field are selected, the values to create the arc will become dropdowns to select the variable/field that contains each value.

Parameter Type: Variable

Center X:

Center Y:

Size X:

Size Y:

Start Deg:

End Deg:

Drawing Object: Arc

Name: Drawing Object

Parameter Type: Fixed Value

X: 1.073

Parameter Type: Fixed Value

Center X: 0

Center Y: 0

Size X: 0.5

Size Y: 0.5

Start Deg: 0

End Deg: 270

All parameter values must be in inches except Start Deg and End Deg.

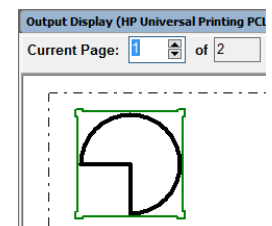
Select or enter the center point by providing values for **Center X** and **Center Y**.

The Size of the Arc is determined using the Size X and Size Y values. The **Size X** value is the horizontal radius. The **Size Y** value is the vertical radius.

The **Starting Degree** and **Ending Degree** values are in degrees. Use the arrows to adjust the value or enter a value.

The 0 degree starts on the left and is clockwise (0 is 9:00, 90 is 12:00 etc.)

The drawing object will be output for each detail line. To avoid this, place a condition on the command if this is not the desired output.



Polygon

Polygon is a drawing from point to point ending at the starting point.

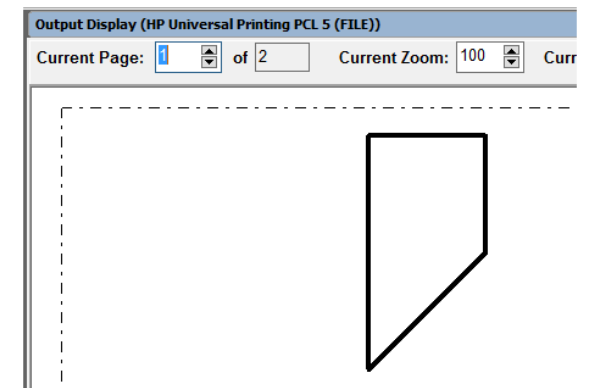
The polygon can be created using a **Parameter Type** of Fixed Value, Variable, Field, or Variable List. If Variable, Field, or Variable List are selected, the values to create the polygon will become dropdowns to select the variable/field/list that contains each value. For Variable List, the values come from variables that begin with the same text and end with numbers. Examples would be XPoint001, XPoint002, ... XPoint010. This would show in the Variable List as XPoint. The Points will be applied to the Polygon in Numeric order from low to high.

This screenshot shows the Polygon configuration dialog with the **Parameter Type** set to **Variable**. On the left, a list of points is shown: Fixed:0.0000;0.0000, Fixed:0.0000;2.0000, Fixed:1.0000;1.0000, Fixed:1.0000;0.0000, and Fixed:0.0000;0.0000. The first point is selected. To the right of the list are five buttons: a red plus button, a black X button, a blue left arrow button, a blue up arrow button, and a blue down arrow button. Further right, the **Parameter Type** is set to **Variable**, and there are two dropdown menus for X and Y, both currently showing no selection.

This screenshot shows the Polygon configuration dialog with the **Parameter Type** set to **Fixed Value**. The **Drawing Object** is set to **Polygon** and the **Name** is **DRAWING OBJECT**. The **Points** list on the left contains the same five fixed coordinate pairs as the previous screenshot. The **Parameter Type** is set to **Fixed Value**. To the right of the list are five buttons: a red plus button, a black X button, a blue left arrow button, a blue up arrow button, and a blue down arrow button. Further right, there are two input fields for X and Y, both containing the value 0.

For the **Points** of the polygon, enter the **X** and **Y** offset values. Enter the values and click the Add or Update (left facing arrow) button until all points are listed.

In this example, the first point is (0, 0). From there, the polygon goes to (0, 2) and so on until back at (0,0) the last point to close the polygon.



Rectangle

Rectangle is a rectangle with a set size and height.

The rectangle can be created using a **Parameter Type** of Fixed Value, Variable, or Field. If Variable or field are selected, the values to create the rectangle will become dropdowns to select the variable/field that contains each value.

Parameter Type: Variable

Width:

Height

☒ Rounded Corners

% Rounded:

10

Drawing Object: Rect

Parameter Type: Fixed Value

Name: DRAWING OBJECT

X0.7709

Parameter Type: Fixed Value

Width:2

Height:1

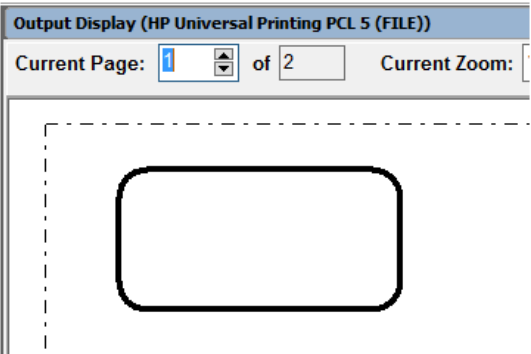
☒ Rounded Corners

% Rounded:

40

Enter the **Width** and **Height** of the Rectangle in inches.

For rounded corners on the rectangle check the **Rounded Corners** box. If Rounded Corners is checked, the percent for **% Rounded** will determine how rounded the corners will be on the output of the rectangle.



Special Drawings

The Ellipsis button next to the Drawing Object dropdown in the Drawing Object command allows the user to easily access some additional Special Drawing objects.

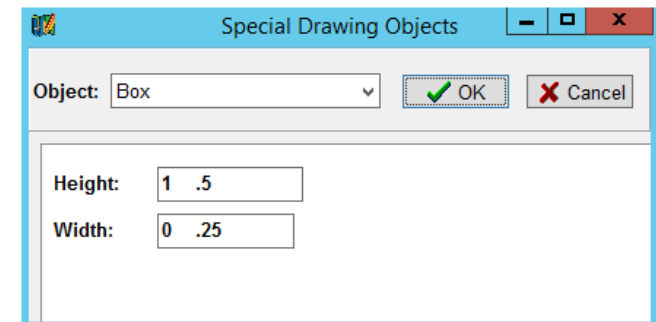
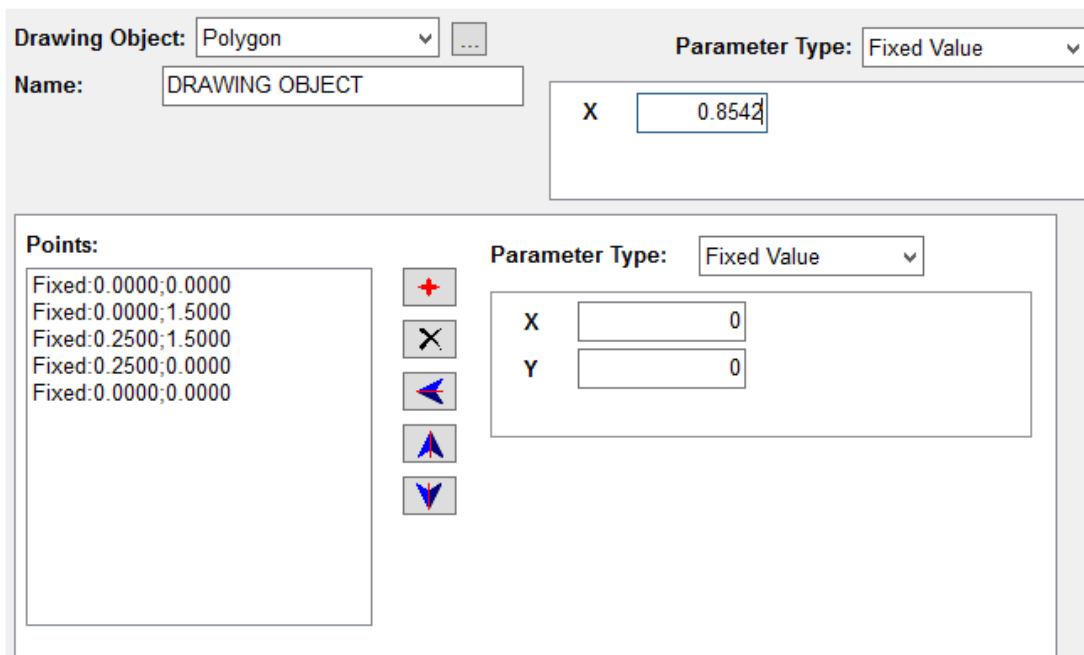
The Special Drawing Objects available are Box, Circle, Vertical Line, Horizontal Line, and Diagonal Line.

Box

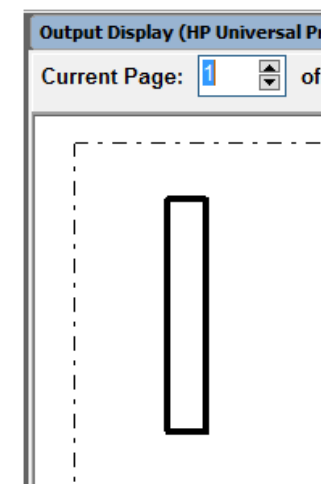
The Box is a Polygon defined with Height and Width. This is a simple way of creating a rectangle.

Enter the Height and Width of the box and click Ok.

This will then fill in the polygon points automatically.



Make any other edits to the command for color, position, etc. and click Ok. The box will then be displayed on the output.



Circle

The Circle has a defined radius. This is a simplified version of creating a circle using the arc drawing.

Enter the radius for the circle.

This will then fill in the arc parameter values automatically.

Drawing Object: Arc ... Parameter Type: Fixed Value

Name: DRAWING OBJECT

X 2.49

Parameter Type: Fixed Value

Center X: 0

Center Y: 0

Size X: 2

Size Y: 2

Start Deg: 0

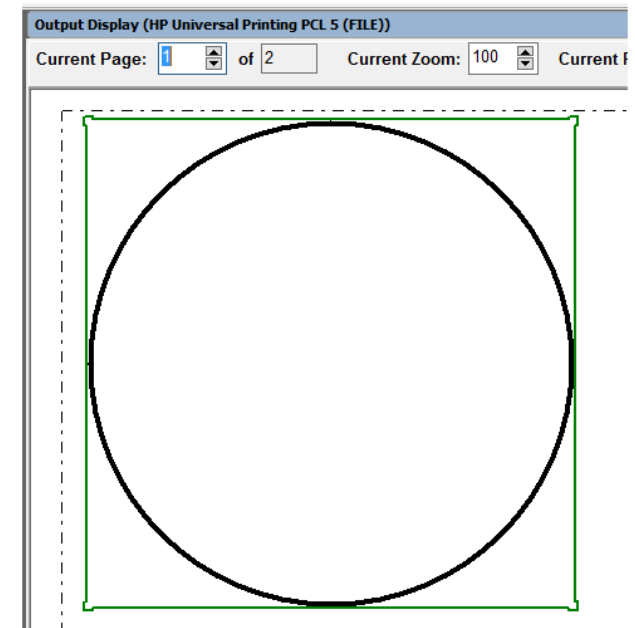
End Deg: 360

Special Drawing Objects

Object: Circle OK Cancel

Radius: 2.0

Make any other edits to the command for color, position, etc. and click Ok. The circle will then be displayed on the output.



Vertical Line

Vertical Line is a line with only a defined height.

Enter the Height (length) for the line.

This will then fill in the polygon values automatically with one of the points being (0, 0).

Drawing Object: Polygon

Parameter Type: Fixed Value

Name: DRAWING OBJECT

X2.49

Points:

Fixed:0.0000;0.0000
Fixed:0.0000;1.0000

Parameter Type: Fixed Value

X0

Y0

Special Drawing Objects

Object: Vertical Line

OKCancel

Height: 1.0

Make any other edits to the command for color, position, etc. and click Ok. The line will then be displayed on the output.

Output Display (HP Universal Printing PCL 5 (FILE))

Current Page: 1 of 2

Current Zoom:

Pitney Bowes

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Horizontal Line

Horizontal Line is a line with only a defined width.

Enter the Width (length) for the line.

This will then fill in the polygon values automatically with one of the points being (0, 0).

Drawing Object: Polygon

Parameter Type: Fixed Value

Name: DRAWING OBJECT

X2.49

Points:

Fixed:0.0000;0.0000
Fixed:1.0000;0.0000

Parameter Type: Fixed Value

X0

Y0

Special Drawing Objects

Object: Horizontal Line

Width: 1.0

OKCancel

Make any other edits to the command for color, position, etc. and click Ok. The line will then be displayed on the output.

Output Display (HP Universal Printing PCL 5 (FILE))

Current Page: 1 of 2

Current Zoo

Pitney Bowes

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Diagonal Line

Diagonal Line is a line with a defined height, width, and direction.

Enter the Height and Width of the line.

The Direction can be from Top left to Bottom Right or Bottom Left to Top Right.

This will then fill in the polygon values automatically with one of the points being (0, 0).

Drawing Object: Polygon

Parameter Type: Fixed Value

Name: DRAWING OBJECT

X1.355

Points:
Fixed:0.0000;0.0000
Fixed:0.5000;1.5000

Parameter Type: Fixed Value

X0

Y0

Special Drawing Objects

Object: Diagonal Line

OK

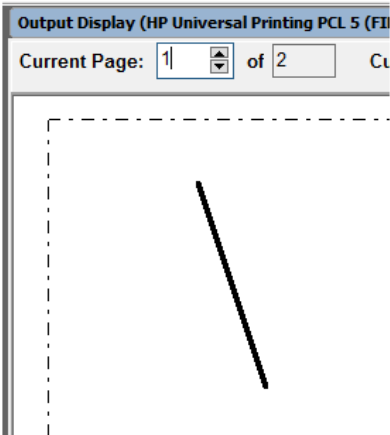
Cancel

Height: 1.5

Width: 0.5

Direction: Top Left to Bottom Right

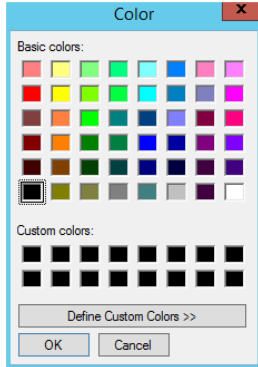
Make any other edits to the command for color, position, etc. and click Ok. The line will then be displayed on the output.



Once the shape dimensions have been created, the color can be customized.

The **Fill** refers to the color inside the boundaries of the drawing object. The **Line** refers to the border or outline of the drawing object.

Both the Fill and Line color can be changed and are done so in the same manner. The **Fill Color** and **Line Color** can be a Fixed Value, Variable, or



Field. If using a Fixed Value, click on the Color Rectangle to select the color. This will display a color selection window. Select the color and click OK. This will change the Color Rectangle to the color selected.

If Variable or field are selected as the **Param Type**, the color value will become a dropdown to select the variable/field that contains the color value.

A screenshot of the 'Fill' and 'Line' settings panel. The 'Fill' dropdown is set to 'Solid' and the 'Line' dropdown is set to 'Solid'. The 'Size in 1/100th' is set to 5. The 'Fill Color' and 'Line Color' are both set to 'Fixed Value'. Below these, there are two color selection rectangles: a white one for Fill and a black one for Line. Further down, there are checkboxes for 'Use on Print (Non Uluro NativePDF)', 'Use on Print (Uluro NativePDF)', and 'Use on Web', all of which are checked. An 'HTML Link' field is present with a yellow bar and a dropdown arrow. At the bottom, there are checkboxes for 'Increment Output' and 'Output Y Increment' (set to 0.0000), and a 'Set Default' button.A screenshot of the 'Fill' and 'Line' settings panel. The 'Fill' dropdown is set to 'Solid' and the 'Line' dropdown is set to 'Solid'. The 'Size in 1/100th' is set to 5. The 'Fill Color' and 'Line Color' are both set to 'Variable' and 'Field' respectively. Below these, there are two dropdown menus for selecting the variable or field for the Fill and Line colors.

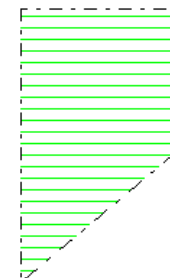
The **Fill** dropdown options list the way the color will fill the drawing object. The **Line** dropdown options are ways the line creating the drawing object can look.

In the example below, the Fill is Horizontal, and the Line is Dash-Dot.

Settings:

A screenshot of the 'Fill' and 'Line' settings panel. The 'Fill' dropdown is set to 'Horizontal' and the 'Line' dropdown is set to 'Dash-Dot'. The 'Size in 1/100th' is set to 1. The 'Fill Color' and 'Line Color' are both set to 'Fixed Value'. Below these, there are two color selection rectangles: a green one for Fill and a black one for Line.

Result:



The **Size in 1/100th** determines the thickness of the line creating the drawing object. This value is in 1/100th of an inch. If the Line Style selected contains a Dot or Dash the size must be 1 to see the dots and dashes.

If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

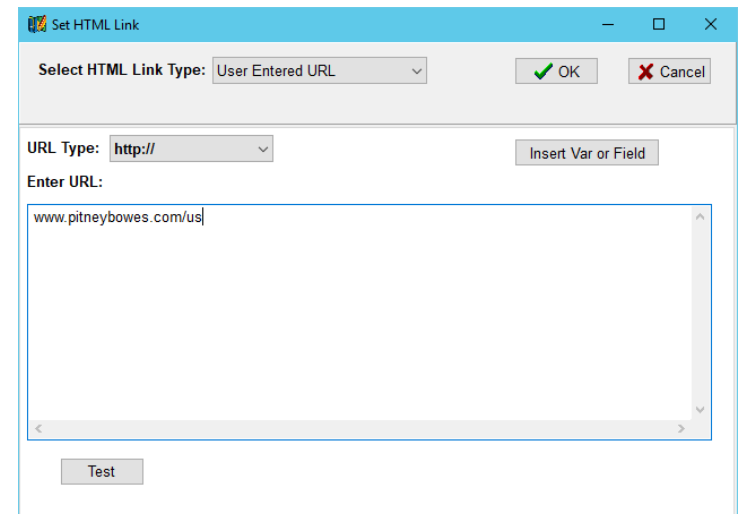
If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

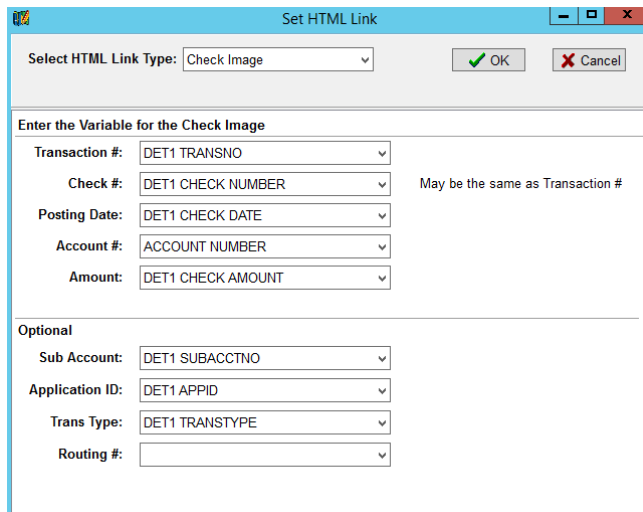
HTML Links will appear on the PNG created during web viewing. When the User cursor floats over the HTML Link command the cursor will change to a hand. The user may click on the link and the action will occur. To accomplish this, an image Map file is created along with the PNG file. The image map file defines the areas on the PNG image and the action to be performed.

The Ellipsis button can be used to set up the HTML link.

User Entered URL is for simple links. Select User Entered URL for the **Select HTML Link Type**. Select HTTP:// or HTTPS:// for the **URL Type**, then enter the URL. An example would be <https://www.pitneybowes.com/us>.

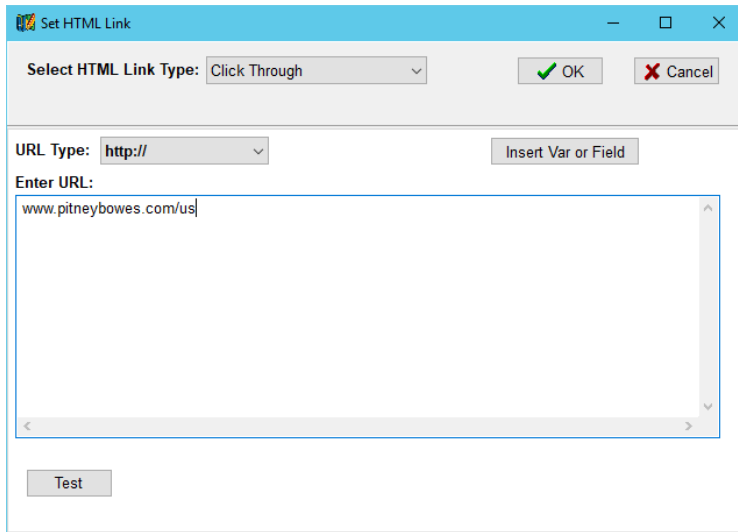


Use the **Test** button to see the result of clicking on the HTML link.



Check Image are links that will call an external system to generate check images. These links require specific information in order to call the external system. The five pieces of information at the top specify the required data. The four pieces of information at the bottom are optional depending on the external system that will generate the check images. If unsure it is always best to provide the information if possible.

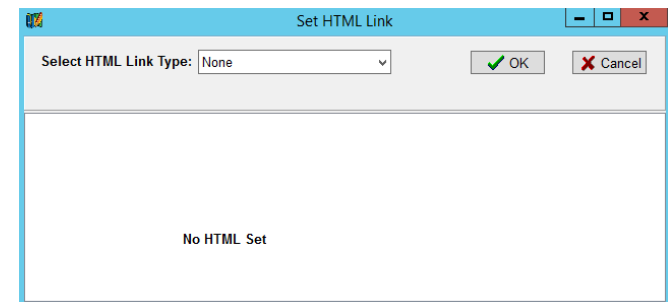
The required items must be linked to a variable specified and set before the mapping is called. The optional items may be linked to a variable.



Click Through are also simple links with the exception that Relay Unify will track who and when the web user clicks on the link. Select HTTP:// or HTTPS:// and enters the URL. An example would be <https://www.pitneybowes.com/us>

The test click through is not tracked.

The default setting for HTML Link is None. This means no HTML link has been set up.



The Increment section allows setting an Increment to move the Y position for the Next Detail command. Check **Increment Output** to cause an increment after the command. Enter the inches to increment in the **Output Y Increment** field. This can be a Negative amount. Click the **Set Default** button to set the Output Y increment based on the current Font.

Once any of the drawing objects have been created and are on the output, they can easily be moved to change the position by using the cursor. The dimensions can be adjusted by drawing on the green outline or corner to adjust all dimensions at once.

Graph Object

The Graph Object command allows the user to create a graph(s) to represent data.

The command can be accessed in 2 ways. The 1st is to click Graph Object from the Ribbon bar Det. The 2nd is to Click on the + on the Det tab of the Map Commands window then select Graph Object.

Once the command is created it can be edited to change the parameters.

The **Name** can be edited to provide a more descriptive name for the command. This name will be part of the name for the command in the Map Commands window.

The width and height define the command's overall width and height in inches. The **Width** and **Height** values specify the dimensions of the graph on the output. These can be edited here or using the cursor once the command is on the output. To use the cursor, select one of the dimensions or the corner to change both simultaneously.

Width Height

Param Type: Fixed Value

3.2708

Width Height

Param Type: Fixed Value

1.4792

Graph Object Maintenance

Name:

Output Position: Parameter Type: Fixed Value

X 0

HTML Link:

Use on Print (Non Uluro NativePDF) ☒

Use on Print (Uluro NativePDF) ☒

Use on Web (PDF or PNG) ☒

Increment Output: ☐

Output Y Increment: 0.0000 Set Default

Graphs:

General Effects Legend Walls Axis

Chart Title:

Font ☒ Transparent

Shadow ☐

Border ☐

Line Style ☒ ☐ ☐ ☐ ☐

Size 1 Round 0

The Width and Height can be entered using a Fixed value or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the values will become dropdowns to select the variable/field that contains the width/height value.

The **Output Position X** value specifies the starting location in inches. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window, the X value will be populated automatically with the value from where the cursor was located. The Y output position is based on the Current Detail Y position (available in the System Variable Sys_CurDetY).

The Output Position can be entered using a Fixed Value for X, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X value will become a dropdown to select the variable/field that contains the X value.

If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

HTML Links will appear on the PNG created during web viewing. When the User cursor floats over the HTML Link command the cursor will change to a hand. The user may click on the link and the action will occur. To accomplish this, an image Map file is created along with the PNG file. The image map file defines the areas on the PNG image and the action to be performed.

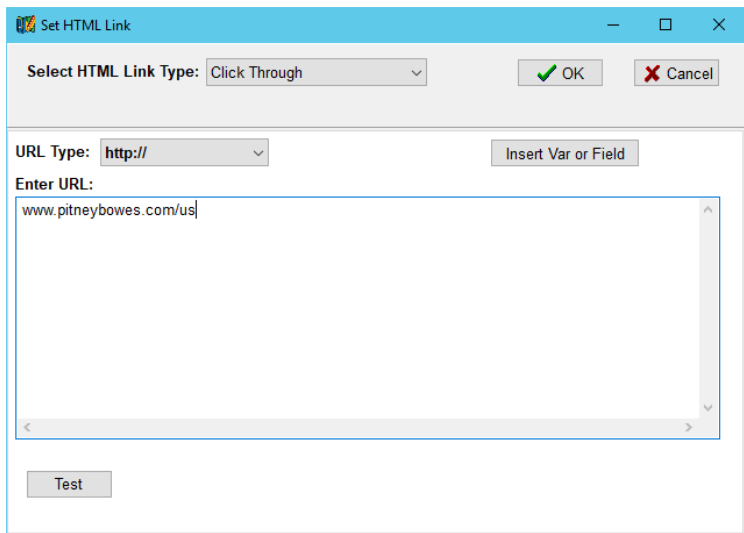
The Ellipsis button can be used to set up the HTML link.

User Entered URL is for simple links. Select User Entered URL for the **Select HTML Link Type**. Select HTTP:// or HTTPS:// for the **URL Type**, then enter the URL. An example would be <https://www.pitneybowes.com/us>.

Use the **Test** button to see the result of clicking on the HTML link.

Check Image are links that will call an external system to generate check images. These links require specific information in order to call the external system. The five pieces of information at the top specify the required data. The four pieces of information at the bottom are optional depending on the external system that will generate the check images. If unsure it is always best to provide the information if possible.

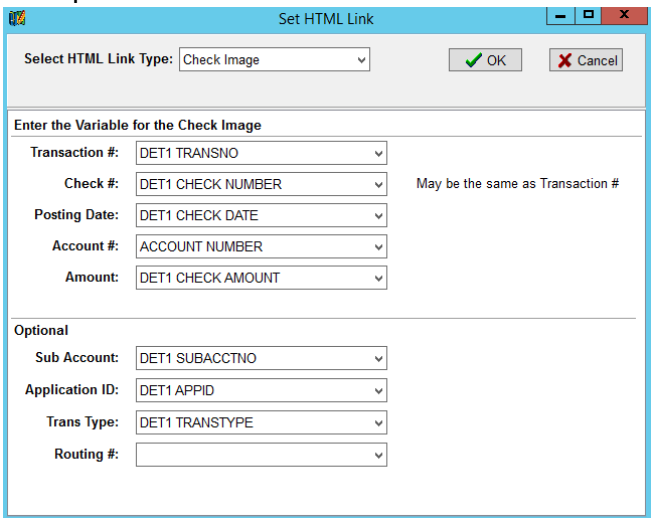
The required items must be linked to a variable specified and set before the mapping is called. The optional items may be linked to a variable.



The screenshot shows the 'Set HTML Link' dialog box. The 'Select HTML Link Type' dropdown is set to 'Click Through'. The 'URL Type' dropdown is set to 'http://'. The 'Enter URL:' text area contains 'www.pitneybowes.com/us'. There is an 'Insert Var or Field' button and a 'Test' button at the bottom.

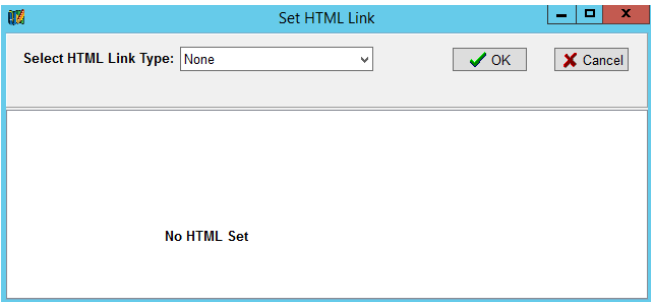
Click Through are also simple links with the exception that Relay Unify will track who and when the web user clicks on the link. Select HTTP:// or HTTPS:// and enter the URL. An example would be <https://www.pitneybowes.com/us>

The test click through is not tracked.



The screenshot shows the 'Set HTML Link' dialog box with 'Check Image' selected. It has fields for 'Transaction #', 'Check #', 'Posting Date', 'Account #', and 'Amount', each with a dropdown menu. There is also an 'Optional' section with fields for 'Sub Account', 'Application ID', 'Trans Type', and 'Routing #', each with a dropdown menu. A note next to the 'Check #' field says 'May be the same as Transaction #'. There are 'OK' and 'Cancel' buttons.

The default setting for HTML Link is None. This means no HTML link has been set up.



The screenshot shows the 'Set HTML Link' dialog box with 'None' selected in the 'Select HTML Link Type' dropdown. The main area of the dialog is empty, and the text 'No HTML Set' is displayed at the bottom. There are 'OK' and 'Cancel' buttons.

The Increment section allows setting an Increment to move the Y position for the Next Detail command. Check **Increment Output** to cause an increment after the command. Enter the inches to increment in the **Output Y Increment** field. This can be a Negative amount. Click the **Set Default** button to set the Output Y increment based on the current Font.

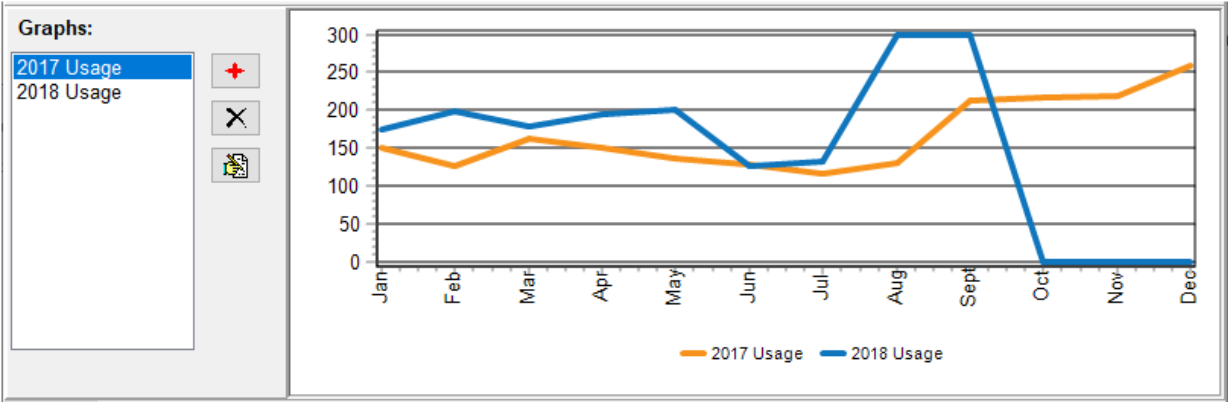
The Graphs section on the command is for defining the graphs. Each Graph Object can contain one or more individual graphs. This can allow a history graph and current graph to be displayed on top of each other.

The Graphs in the Graph Object will be listed on the left and previewed on the right. Click on a graph in the list then the Edit or Delete button to edit or delete the graph. Additional graphs can be added by clicking the Add button.

To begin, click the Add button. This will display the Graph Edit form to define or edit the graph. Clicking the edit button from the Graph Object command will also bring up the Graph Edit form.

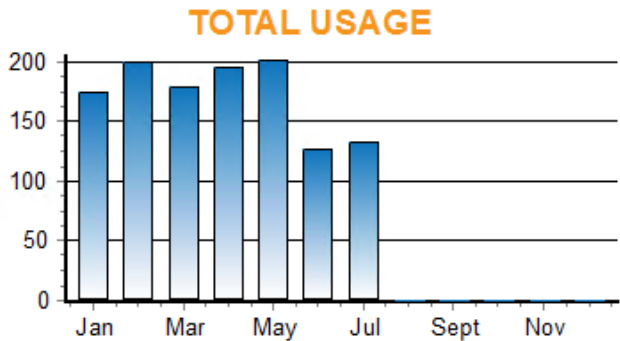
If it is a new graph that is being created, the Select Graph type form will be displayed first.

Select the desired graph type to represent the data.

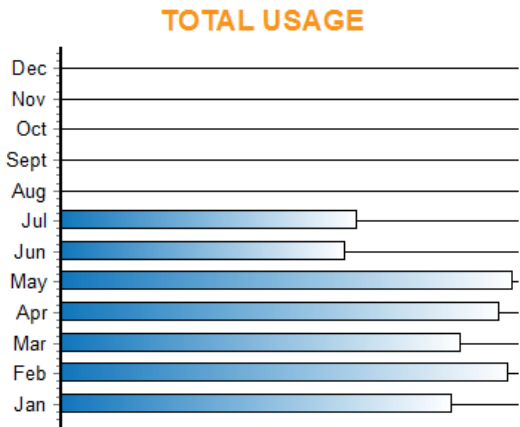


The "Select Graph Type" dialog box is shown. It has a title bar with a close button (X). Inside, under "Graph Type", there are six radio button options: "Vertical Bar" (which is selected), "Horizontal Bar", "Line", "Point", "Pie", and "Area". To the right of these options are two buttons: "OK" with a green checkmark icon and "Cancel" with a red X icon.

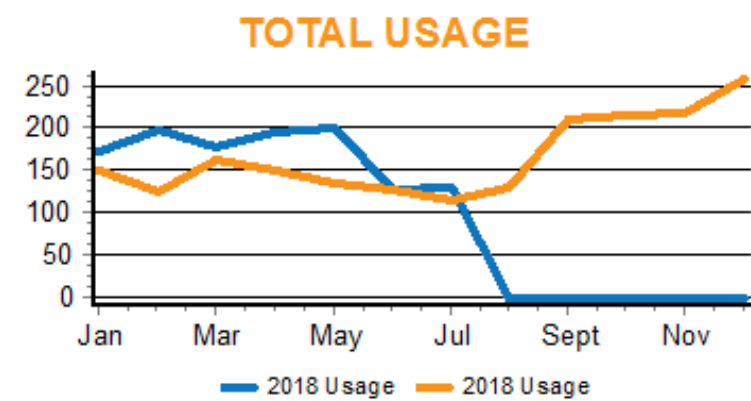
The Vertical bar graph displays data as vertical bars.



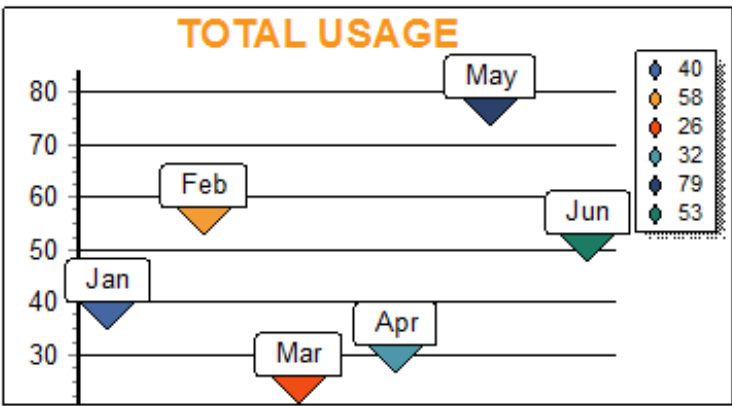
The Horizontal bar graph displays data as horizontal bars.



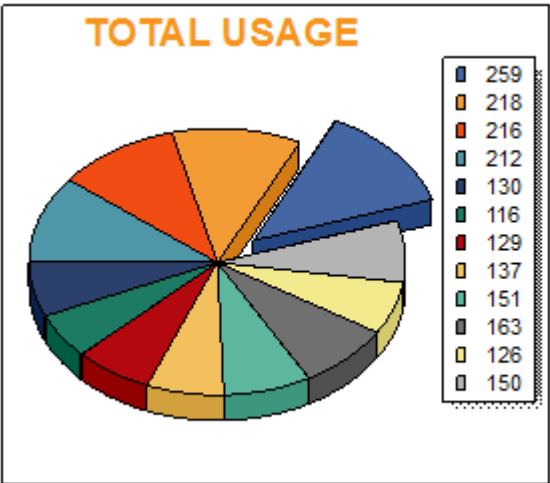
The Line graph displays data as lines.



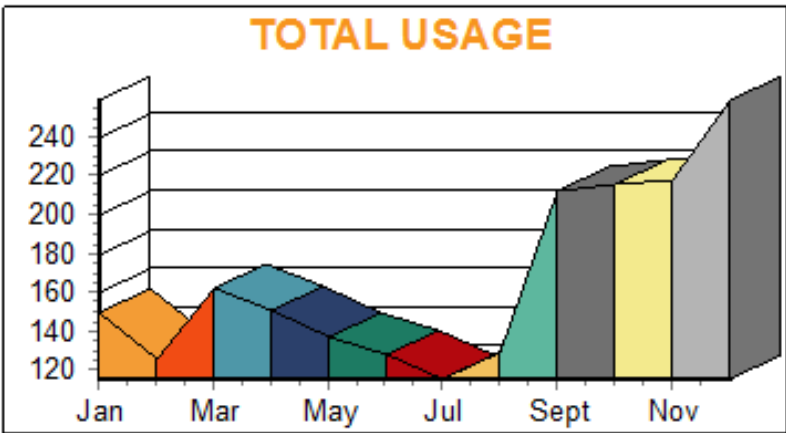
The Point graph displays data as non-connected points.



The Pie graph displays data as a pie where each slice represents the percentage of the overall amount.



The Area graph displays data as areas under a line.



All six of the Graph types will display the Graph Edit form. Initially this will be blank. The settings on each of the tabs will depend on the Graph Type previously selected.

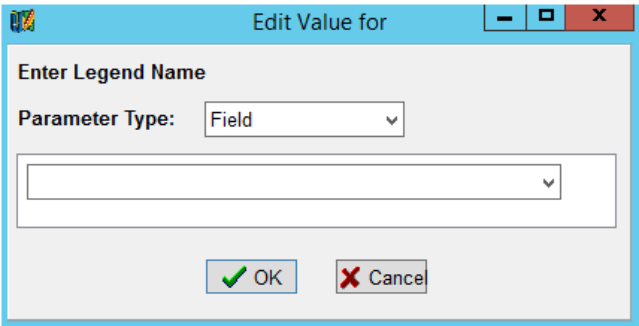
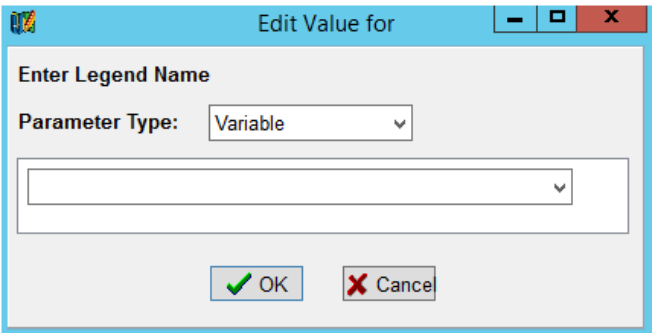
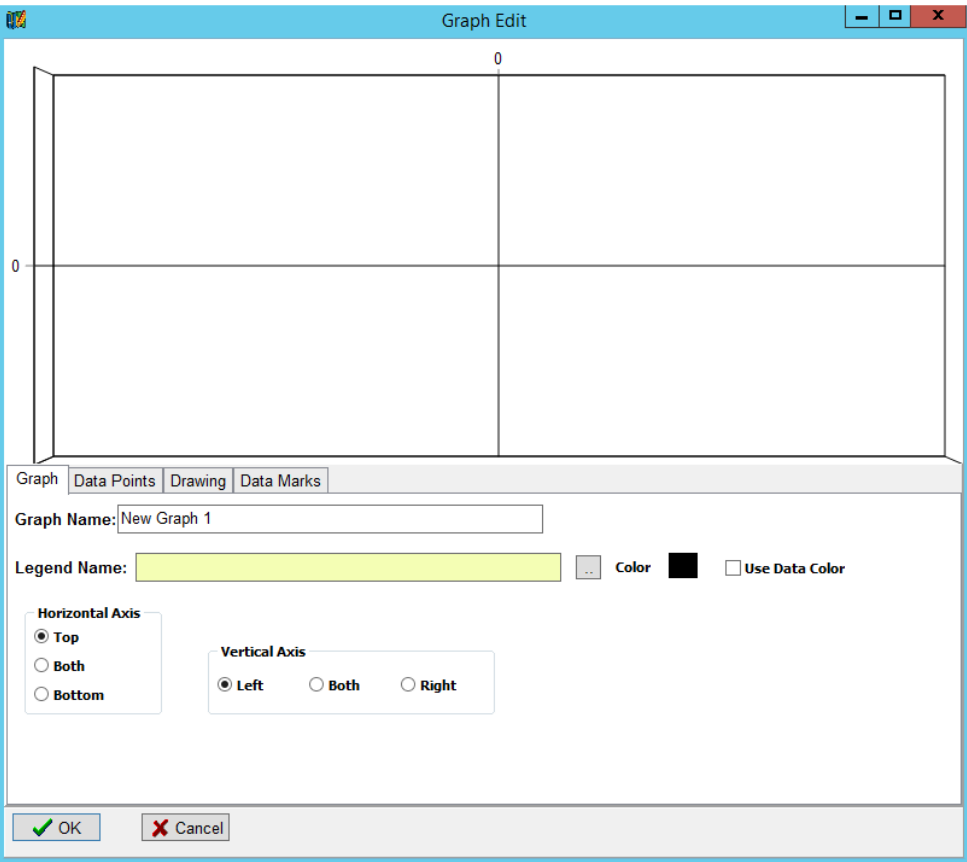
The Graph Type cannot be edited. A new graph will need to be added, and the old graph deleted.

Graph

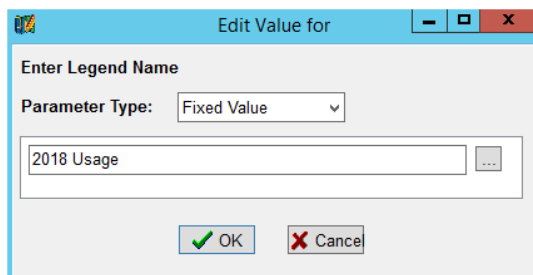
This tab allows setting general parameters for the graph.

The **Graph Name** is to differentiate each graph within the command. This name is for Display only in the List of graphs on the Graph Object Maintenance Form.

The **Legend Name** can be used to identify multiple graphs within the object, such as on a line graph. It can also be used to title the graph such as Total Usage in the example images. To edit, click the Ellipsis button to the right of the Legend Name field. This will display the Edit Value form. This allows the Value for the selected graph field to be set to either a Fixed Value, Variable, or Field. If Variable or Field are selected, a dropdown to select the variable/field will be displayed. Select the variable of field that contains the Legend Name.

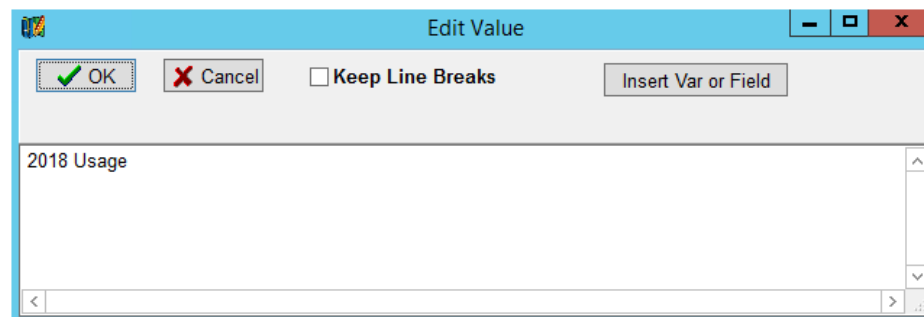


If entering a Fixed Value, type in the value or click on the ellipsis button for the Edit Form.

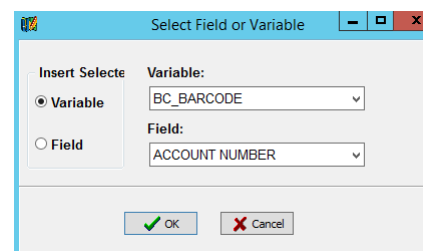


The 'Edit Value for' dialog box has a title bar with a standard window icon and controls. Inside, there's a section 'Enter Legend Name' with a 'Parameter Type' dropdown set to 'Fixed Value'. Below this is a text input field containing '2018 Usage' and an ellipsis button. At the bottom are 'OK' and 'Cancel' buttons.

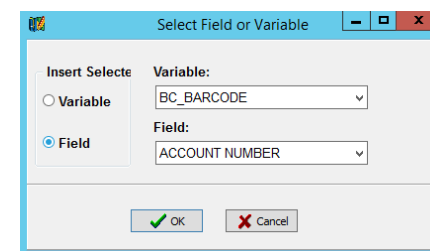
This allows text to be entered. Check the **Keep Line Breaks** check box to retain line breaks entered on this page. Leaving the box unchecked will remove any line breaks. Variable or fields can be inserted by clicking the **Insert Var or Field** button. This will display the Select Field or Variable form. Choose Variable or Field and select the desired Variable or Field using the dropdown. Then click the OK button to insert the Variable or field. Fields or Variables may be manually entered as well. They should be surrounded by `<# >`. At the Time of print the actual values will be substituted.



The 'Edit Value' dialog box has a title bar with a standard window icon and controls. It features 'OK', 'Cancel', and 'Keep Line Breaks' (unchecked) buttons. An 'Insert Var or Field' button is on the right. The main area is a large text field containing '2018 Usage'.



The 'Select Field or Variable' dialog box has a title bar with a standard window icon and controls. It has an 'Insert Selects' section with 'Variable' selected. The 'Variable' dropdown is set to 'BC_BARCODE' and the 'Field' dropdown is set to 'ACCOUNT NUMBER'. 'OK' and 'Cancel' buttons are at the bottom.

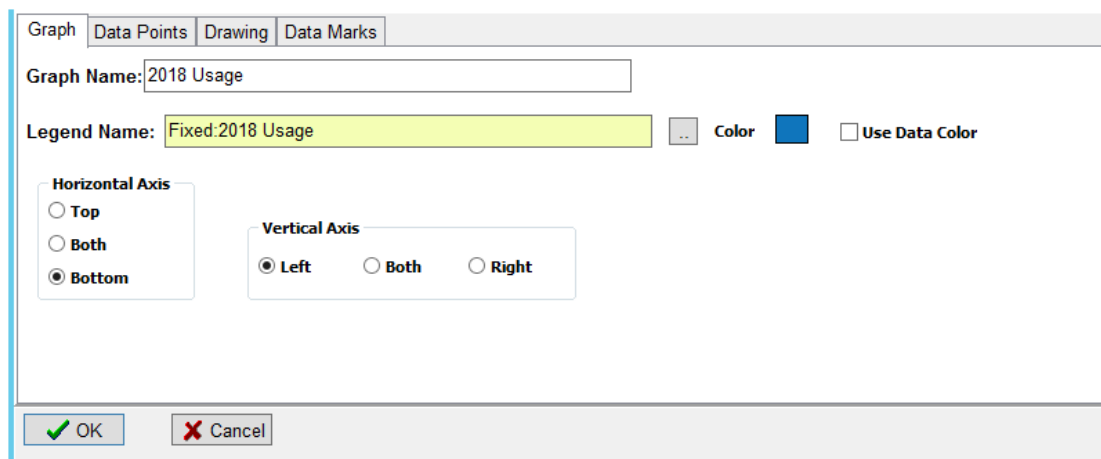


The 'Select Field or Variable' dialog box has a title bar with a standard window icon and controls. It has an 'Insert Selects' section with 'Field' selected. The 'Variable' dropdown is set to 'BC_BARCODE' and the 'Field' dropdown is set to 'ACCOUNT NUMBER'. 'OK' and 'Cancel' buttons are at the bottom.

Once the Legend Name has been filled in, it will be a Read only field highlighted in Yellow. To edit, click on the ellipsis button.

The **Color** square displays the color of the Legend Name. To change, click on the Color square. This will display the standard color selection window. Select the desired color and click ok to change. Check the **Use Data Color** checkbox to use the Color assigned to the Data (if all data points are the same color). This allows the Legend Name to be colored the same as the data.

Horizontal Axis determines where the Horizontal axis will be displayed. The Horizontal Axis will display the Values for the data. The horizontal can be displayed at the Top, Bottom or Both top and Bottom. This setting will not affect a Pie graph.



The 'Graph' configuration dialog box has tabs for 'Graph', 'Data Points', 'Drawing', and 'Data Marks'. The 'Graph' tab is active. It has a 'Graph Name' field with '2018 Usage'. The 'Legend Name' field is highlighted in yellow and contains 'Fixed:2018 Usage', with an ellipsis button to its right. A 'Color' square is blue, and there is an unchecked 'Use Data Color' checkbox. Below are 'Horizontal Axis' (Top, Both, Bottom) and 'Vertical Axis' (Left, Both, Right) sections. 'OK' and 'Cancel' buttons are at the bottom.

Vertical Axis determines where the Vertical Axis will be displayed. The Vertical Axis displays the Height Values for the data. The Vertical axis can be displayed on the Left, Right or Both Left and Right sides. This setting will not affect a Pie graph.

Data Points

The Data Points tab allows entering the Data Points for the Graph.

The **Data Type** is where the values to create the graph will be coming from and can be a Fixed Value, Variable, Field, Variable List, or Field List.

The Variable List are values contained in a List of Variables. Each variable will begin with the same text and end with a number. The list is sorted by the value of the Number when creating the Graph.

The Field List are values contained in a List of Fields. Each field will begin with the same text and end with a number. The list is sorted by the value of the Number when creating the Graph.

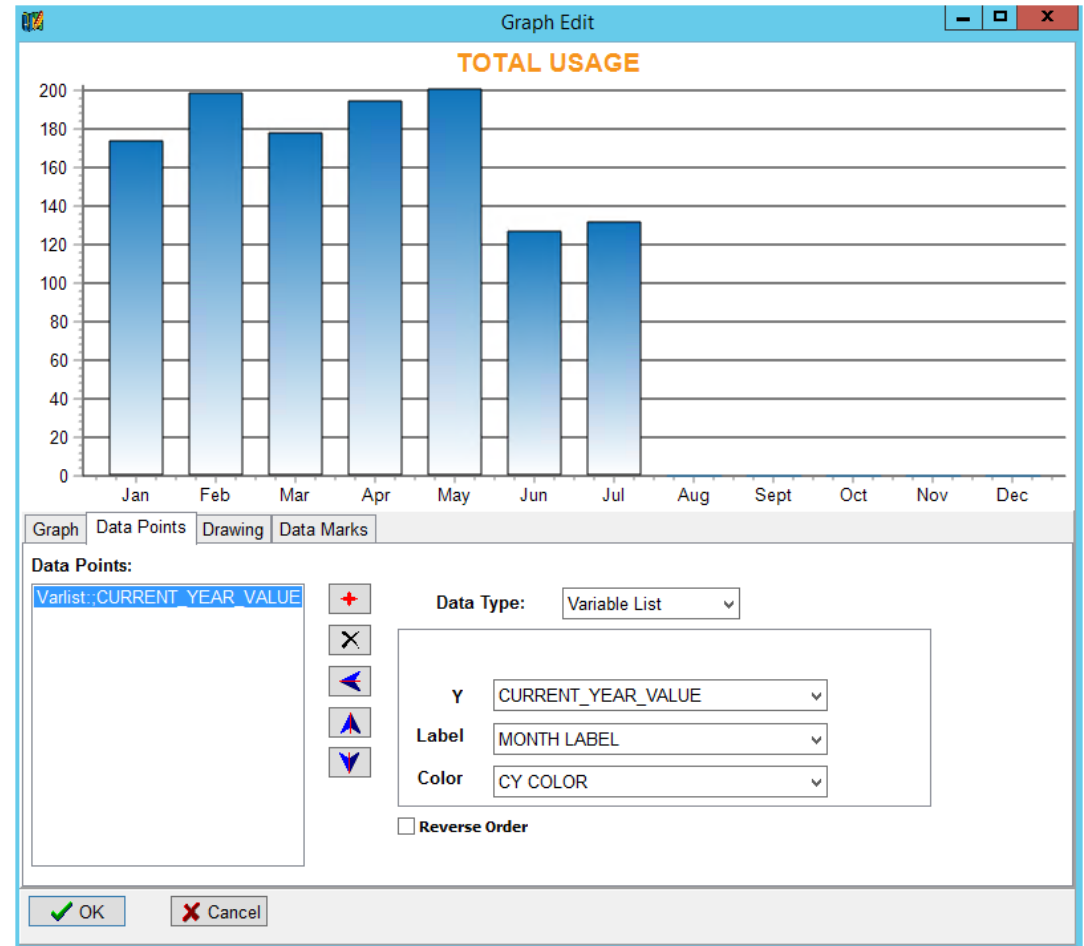
The easiest way to enter the data is to use either the Variable list or Field list. First, define the Variable or Field for each value in the Map. Make sure the name is the same with only the numeric portion different. Then select Variable List or Field list and select the List variable for each parameter.

Depending on the graph type, the parameters will vary.

The **Y** Value is the Vertical Axis value for the bar height in a Vertical Bar Graph. The Y Value is also used as the line height in a Line Graph and an Area Graph. The Y value is also used to represent the Y coordinate of a Point Graph point (X, Y).

The **X** Value is the Horizontal Axis value for the bar length in a Horizontal Line Graph. The X value is also used to represent the X coordinate of a Point Graph point (X, Y).

The **P** Value is the Pie value that will be used to calculate a percentage of the pie for that data point.



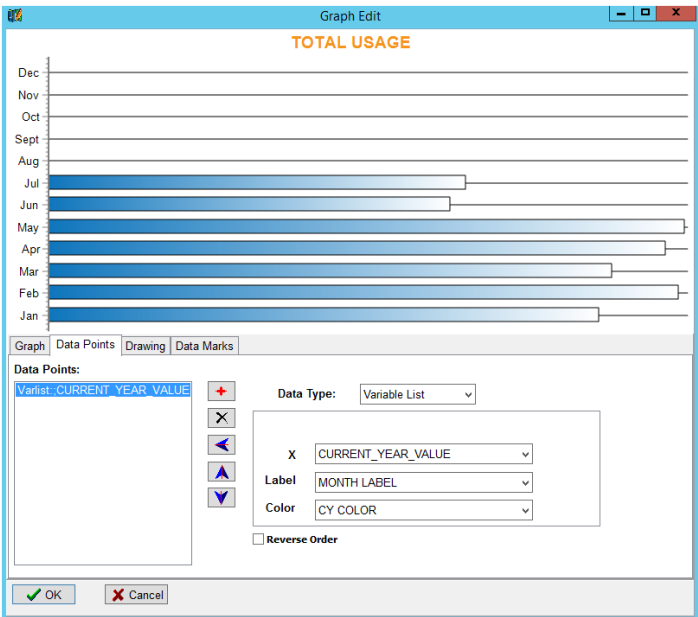
The **Label** Value is used to label the points, bars, lines, and pieces of the pie. This can be used to help label the graph in the Data Marks tab.

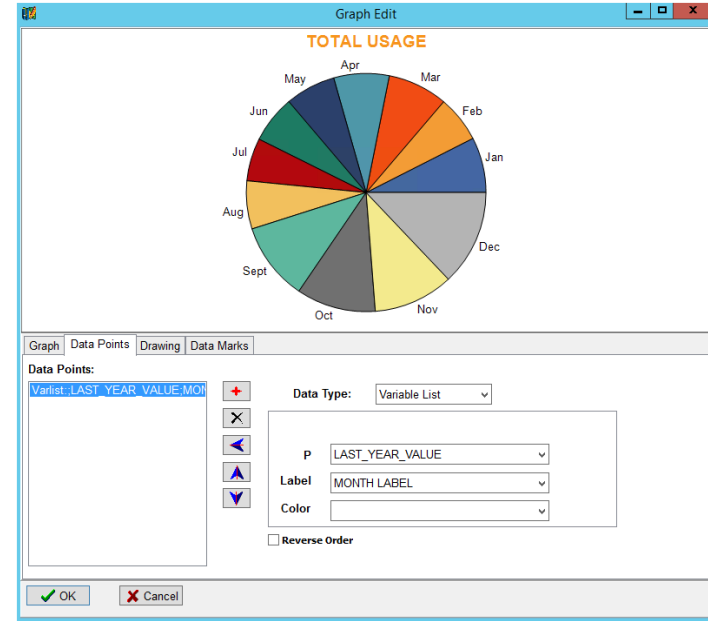
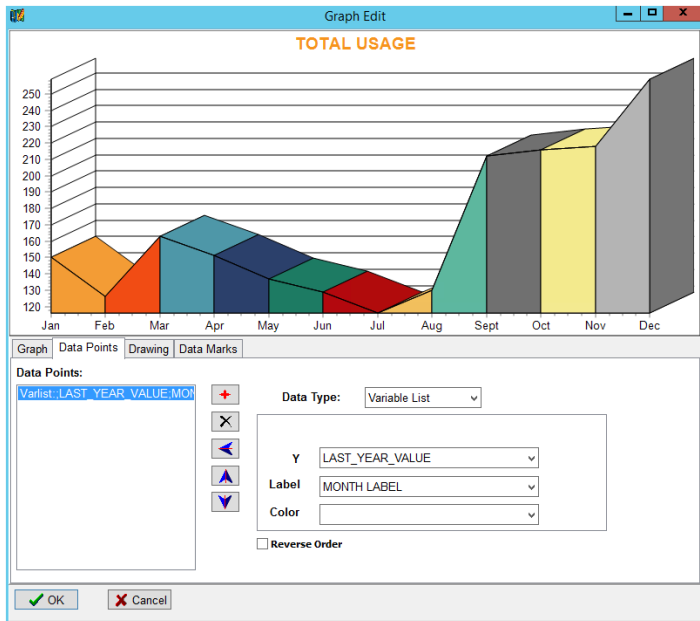
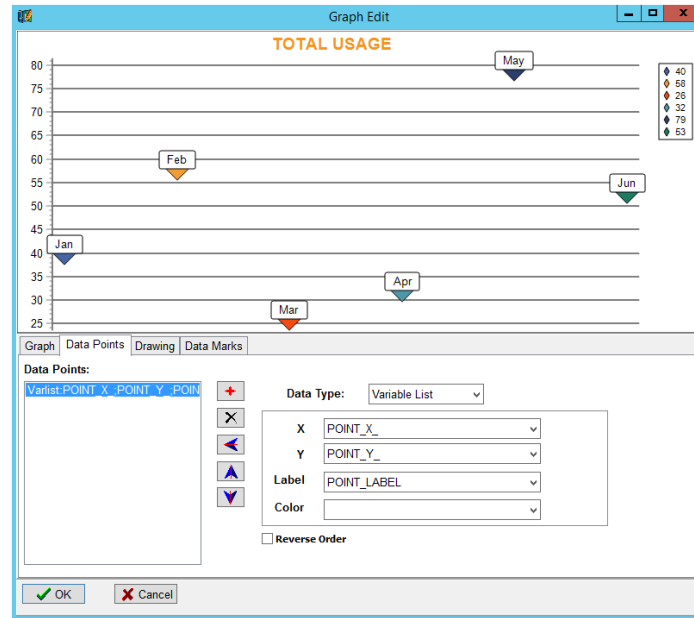
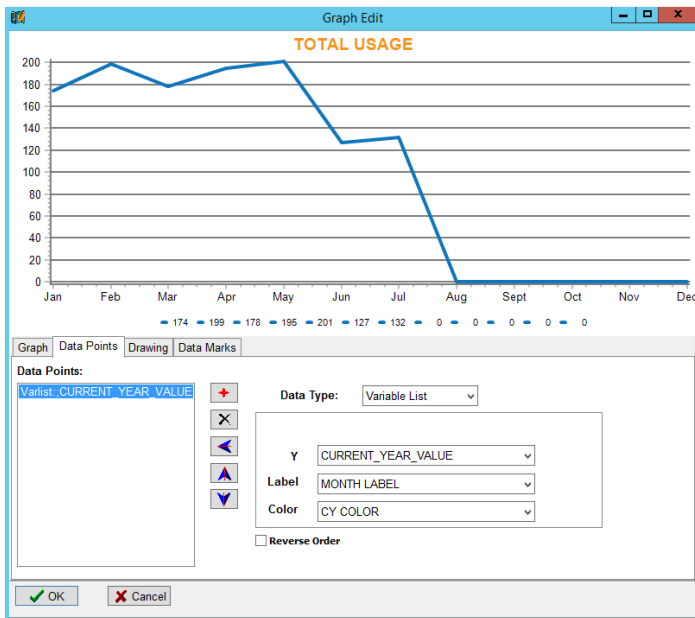
The **Color** Value is the color of the point, bar, line, or piece of the pie. If a color is not selected, then a random color will be used for the data point.

Once the data point information is entered either as a list or as an individual point, click the Add button to add it to the list of **Data Points**. If a list is used only one data point is necessary using the lists for each parameter. If the data was entered using a Fixed Value, Variable, or Field, each Data Point will need to be added individually. If Data Points are entered as individual values, the position can be modified by selecting and changing the position of the Data Point using the Move Data Point Up or Down buttons. To edit a Data Point, select it from the list, make the changes, then click on the left facing arrow to update the Data Point.

Once the data is added a preview of the Graph will be displayed.

For Variable List and Field List, the **Reverse Order** Checkbox will reverse the order of display of the Data Points. The Normal order is from lowest Numeric data point to highest data point (i.e. Current_Year_Value01, Current_Year_Value02, Current_Year_Value03, ... Current_Year_Value12). Checking Reverse Order and updating the Datapoint (click the Update button) will output using data points from highest to lowest (i.e. Current_Year_Value12, Current_Year_Value11, Current_Year_Value10, ... Current_Year_Value01).





Drawing

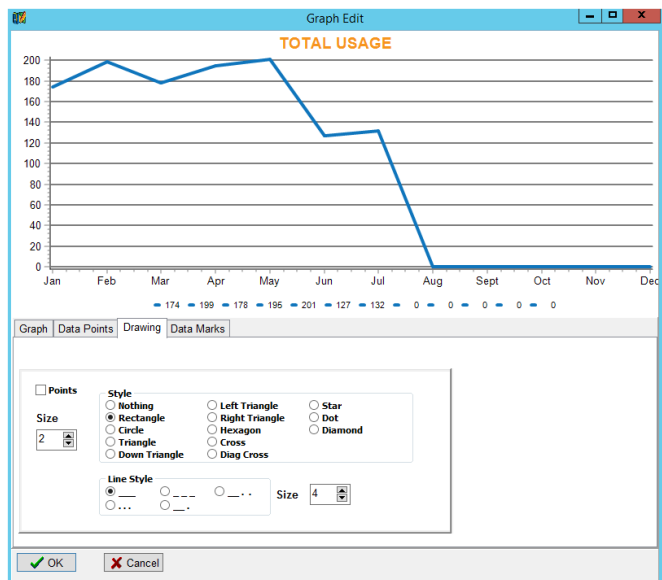
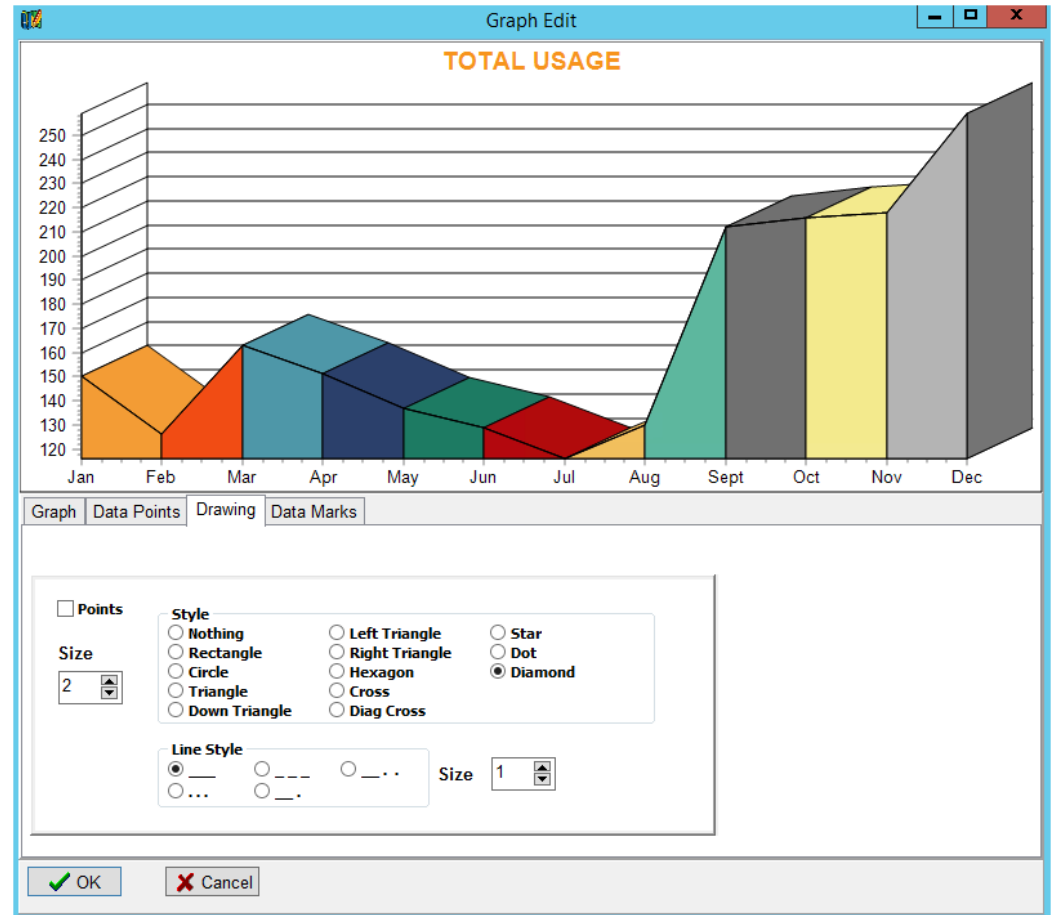
The Drawing tab allows setting the Style of the Graph. The settings on this tab will depend on the Graph Type.

As changes are made, the effects will be seen in the Graph Preview at the top of the form.

Check the **Points** checkbox to enable the Display of Data Points. The **Size** value below the Point checkbox allows the user to change the Size of the Points. Use the arrows or enter a value to adjust the size. These are available for Point, Line, and Area graphs.

The **Style** is the way the Point is displayed. Select the shape or style to be the bars or points on the graph. These settings take effect on Bar and Point graphs.

The **Line Style** changes the way the lines are drawn between the points. The **Line Size** changes the thickness of the Line. These settings are available for Line and Area graphs.

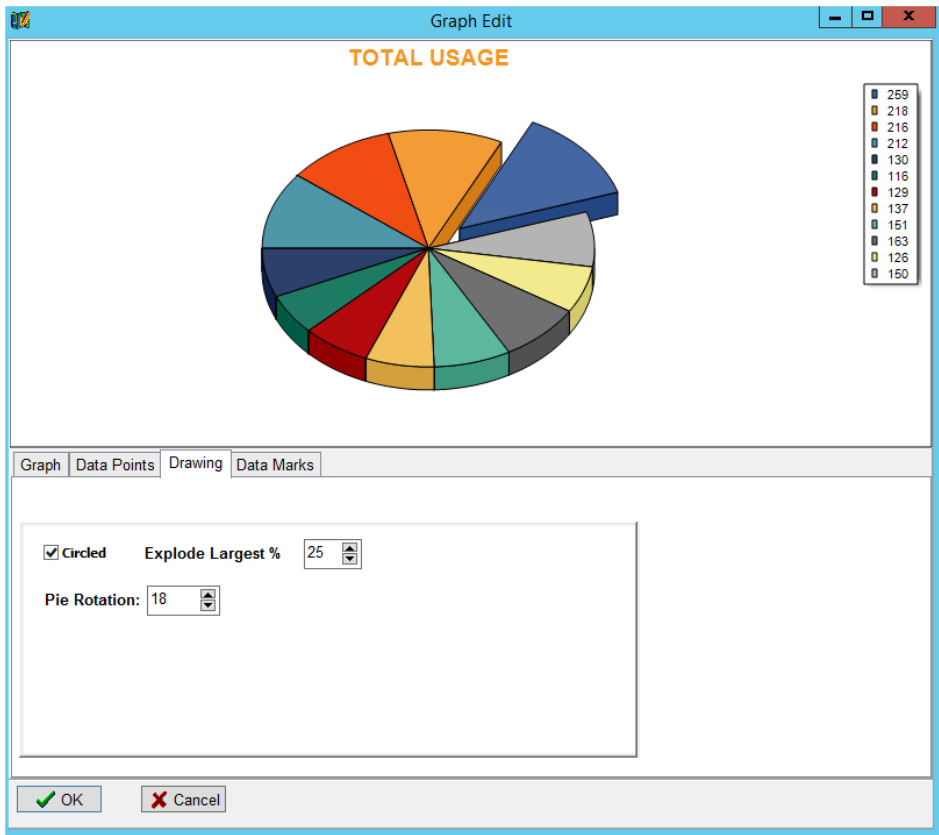
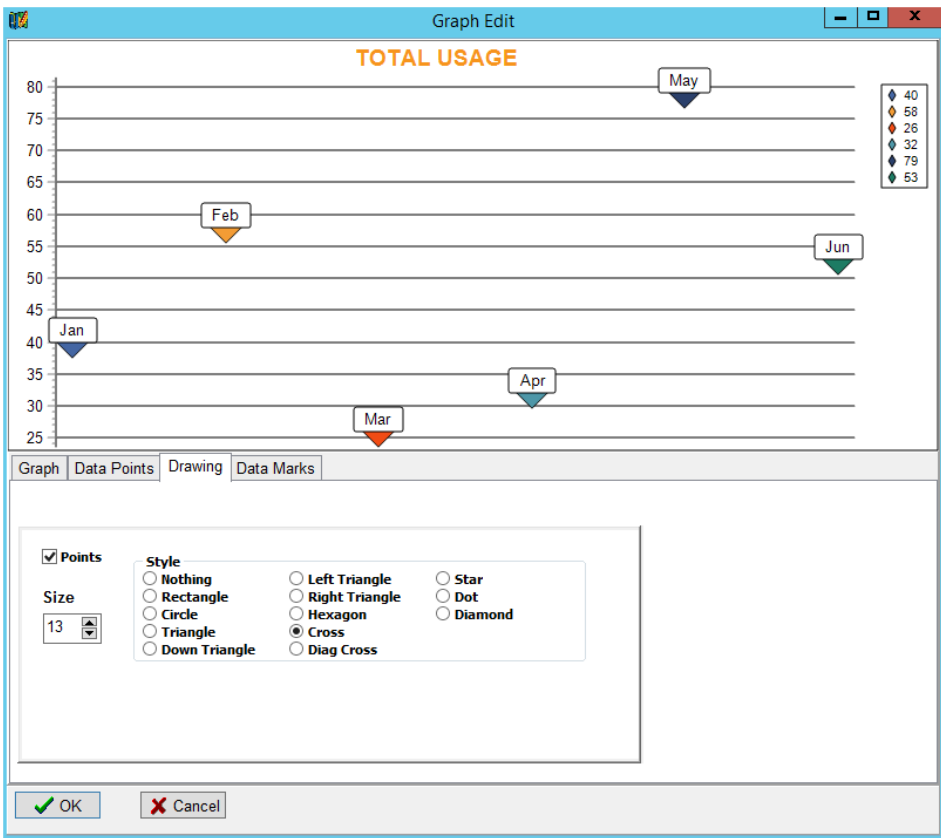


The Pie Graph has different settings on the Drawing tab.

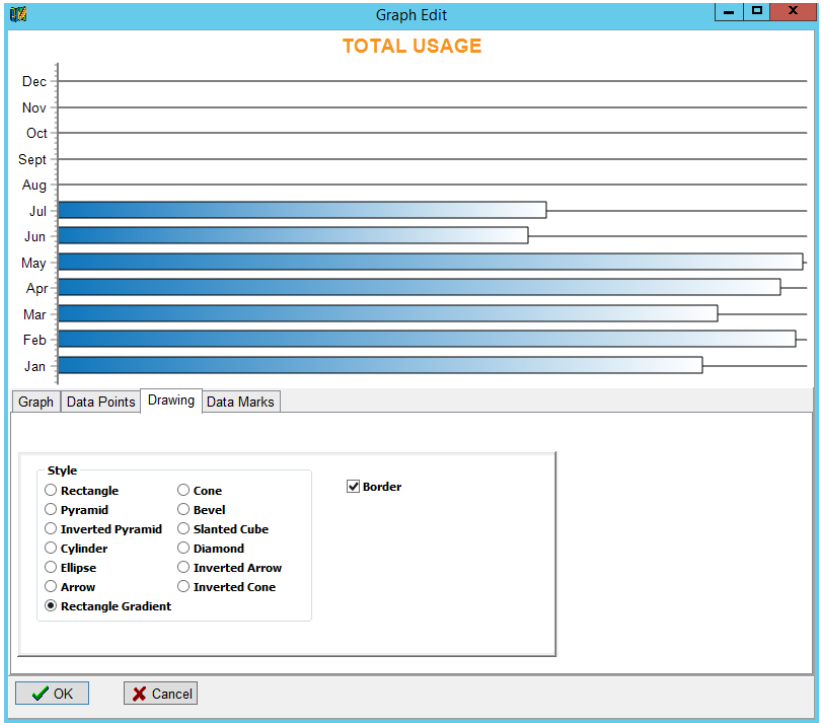
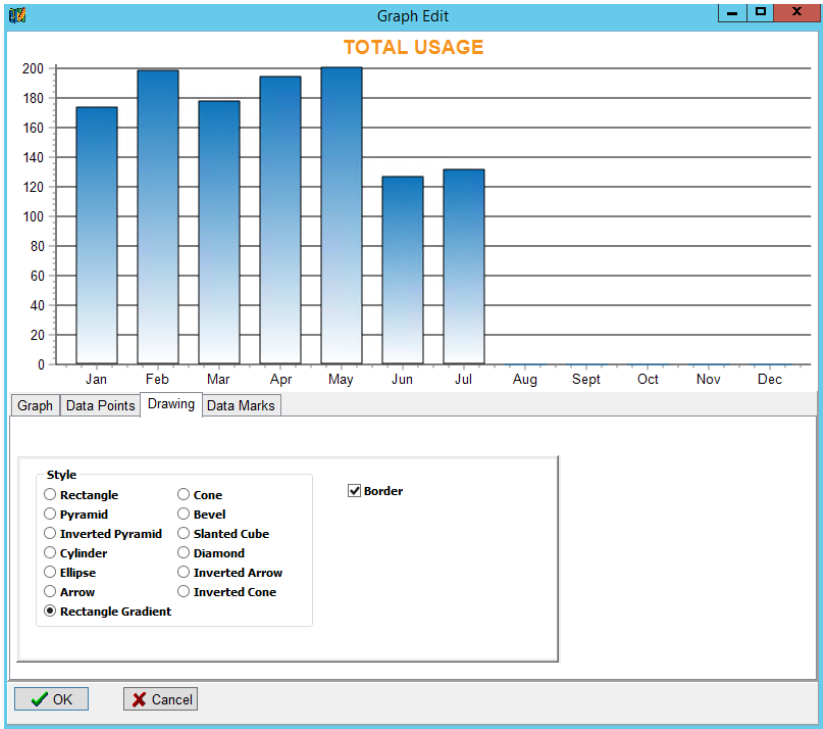
Check the **Circled** checkbox to enable the display of the Pie as a Circle. If this is unchecked, the Pie will be more oval shaped.

The **Explode Largest %** value will cause the largest pie piece to be separated from the rest of the pie. As this value gets larger, the piece will be farther from the center of the pie.

The **Pie Rotation** value will rotate the pie. The rotation is in a counterclockwise direction.



If the **Border** box is checked, there will be a border around the bars on the graph. This is available on Vertical and Horizontal Bar graphs.



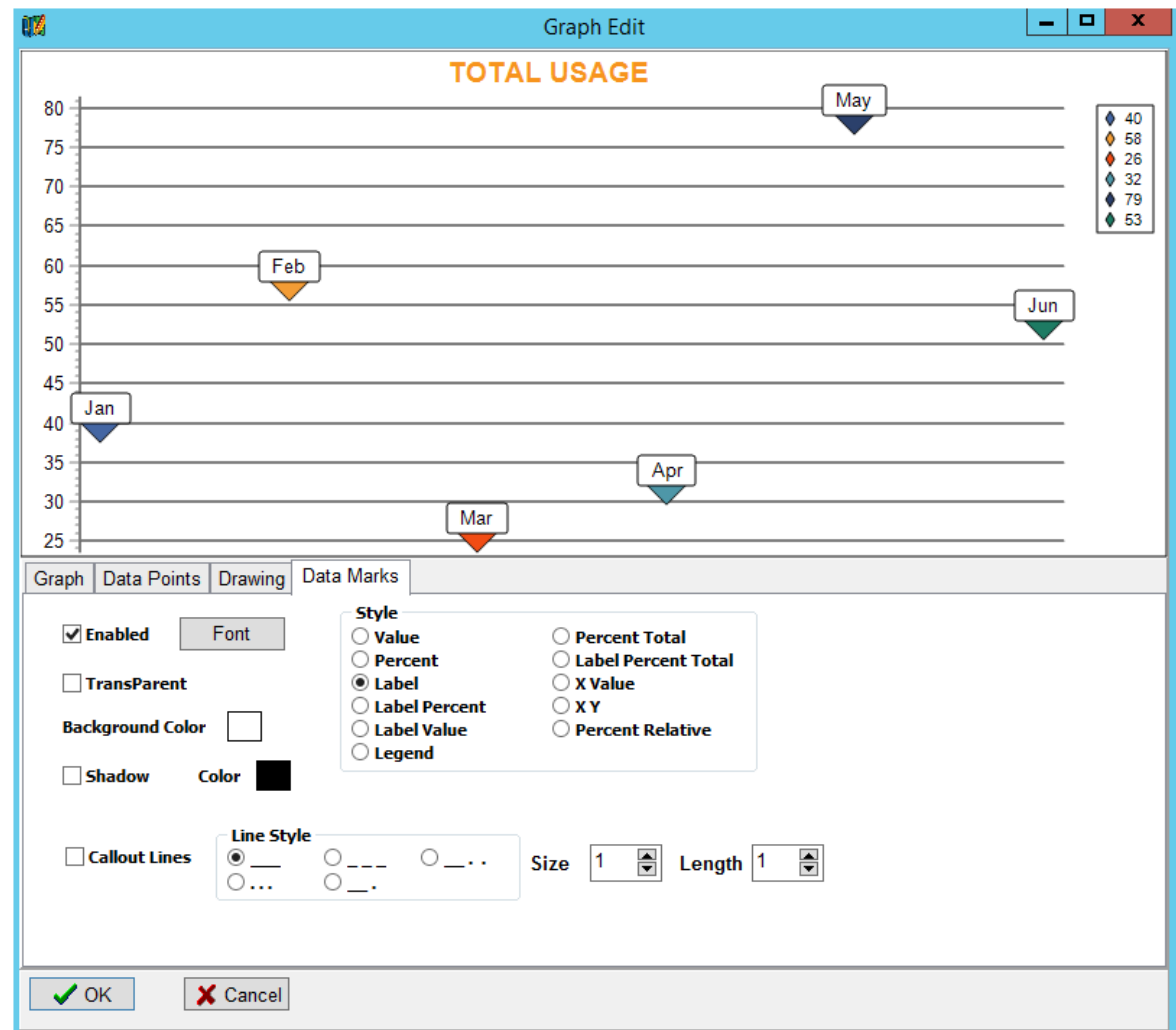
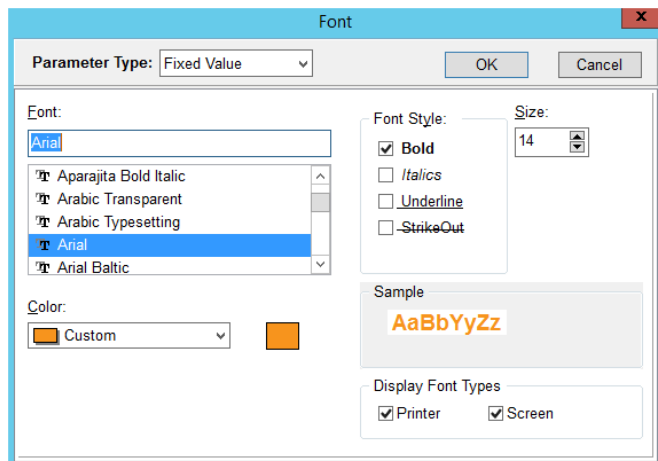
Data Marks

The Data Marks tab allows setting the Data Marks for the Graph. The settings on this tab are the same regardless of the graph type.

If **Enabled** is checked, the Data Marks will be displayed on each data point, bar, or pie. Data Marks are text labels that appear above the Bar or Point, and outside the Pie.

Click the **Font** button to set the font of the Data Marks. This will display a standard Windows font selection dialog. Select the desired Font, Style, Size and Color. The fonts must still be installed on the server/machine running Relay Unify uCompose.

For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.



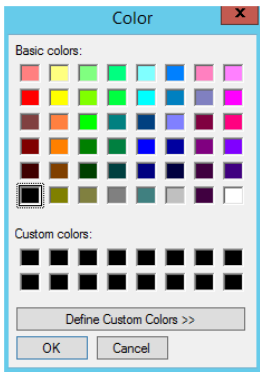
The Data Mark **Style** is the information that will be displayed on the Data Mark.

Checking the **Transparent** box will make the rectangle that contains the Data Marks transparent. Unchecked the Data Marks will be in a Rectangle.

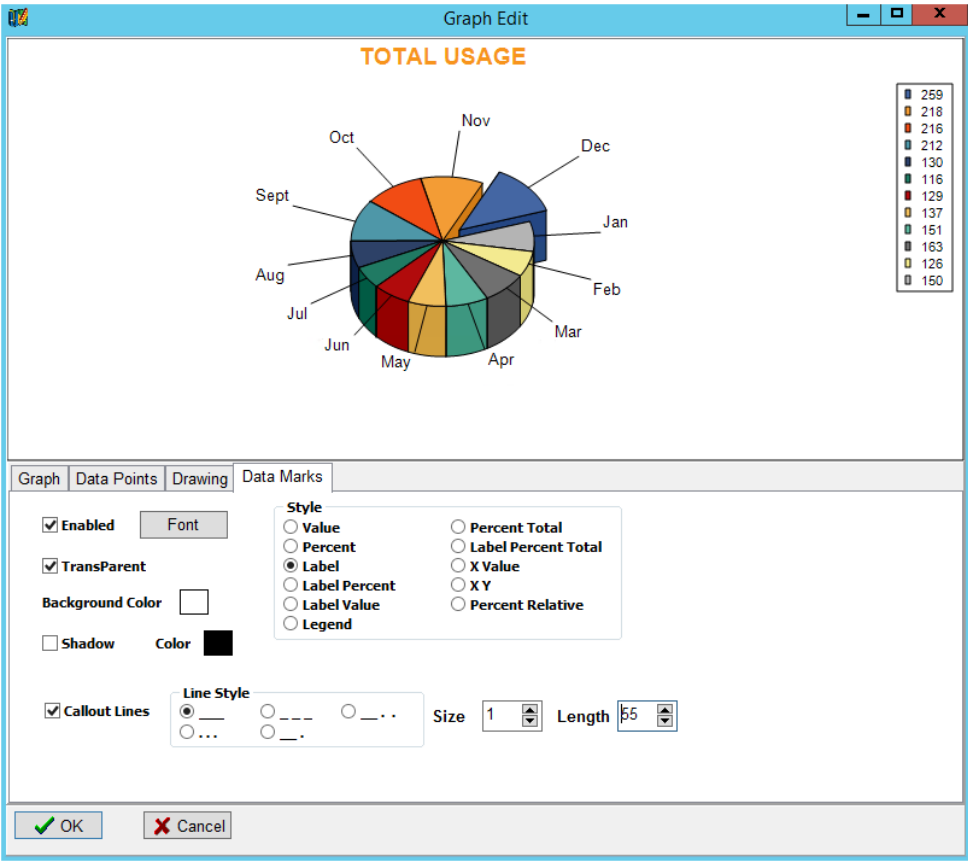
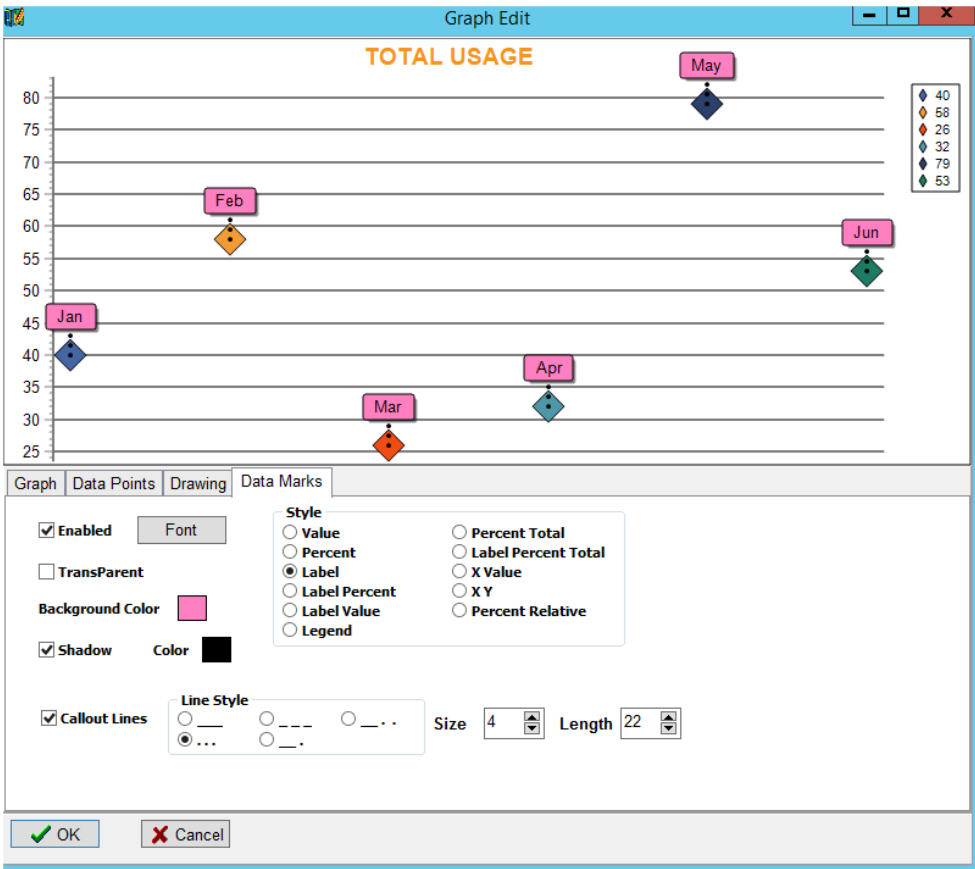
The Background Color setting only takes effect if the data marks are enabled, and the transparent box is unchecked. The **Background Color** square displays the color of the rectangle fill for the data mark. Click on the color square to display the standard color selection window to edit the color selected.

If the Data Marks are enabled and Not Transparent then a **Shadow** can be enabled around the Data Marks Rectangle by checking the Shadow checkbox. The color of the Shadow can be set by clicking on the **Color** Square.

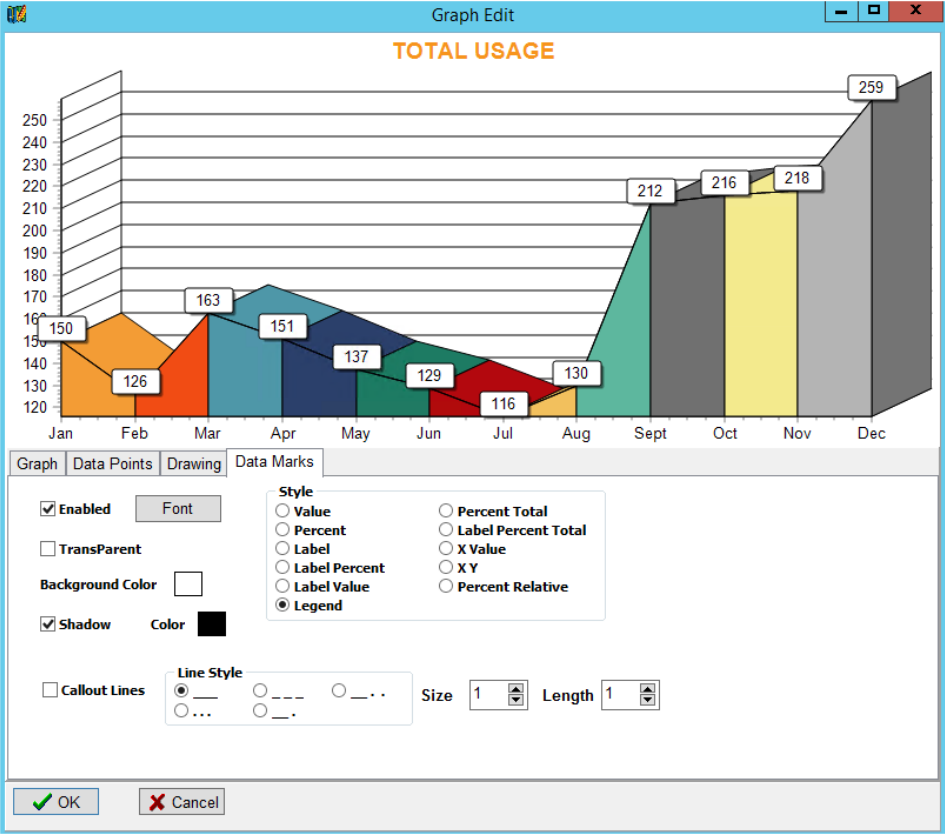
Callout Lines are lines connecting the bar, point, or pie with the Data Marks. The Callout Lines are enabled by checking the Callout Lines Checkbox. The Callout **Line Style**, Line **Size** (thickness), and Line **Length** (from the Data Point) can be set once the Callout Lines are Enabled.



Here are some examples:



When Finished with the Editing click the OK button to return to the Graph Object Maintenance Screen.

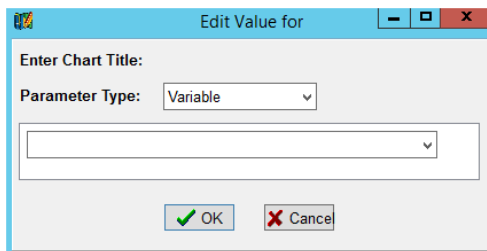


The bottom section of the command applies to all the graph types created in the command.

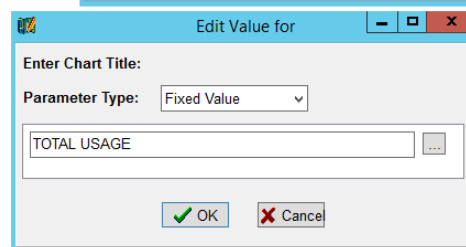
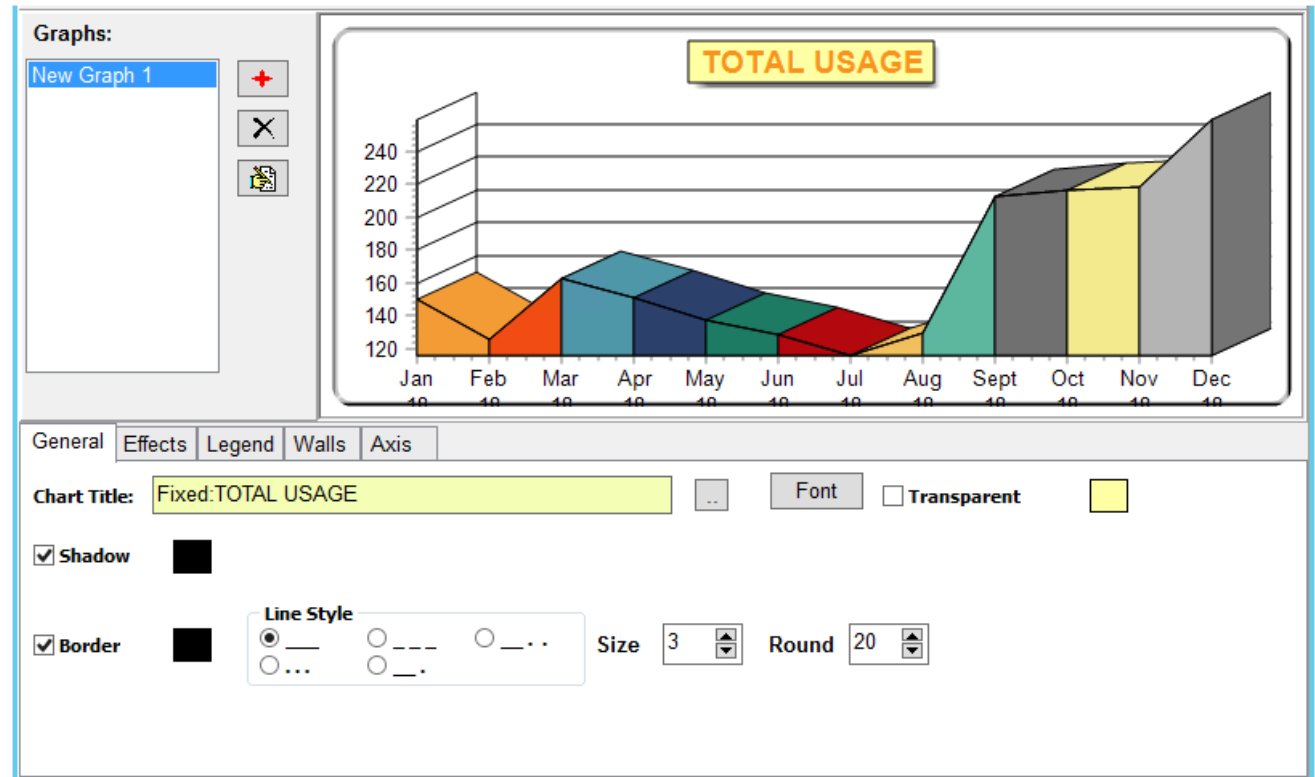
General

The General tab allows setting of General Graph Settings.

The **Chart Title** is the title for the graph(s) and can be set by clicking the Ellipsis next to the Chart Title field. This displays the Edit Value form. The Chart Title can be a Fixed value, Variable, or Field value. If Variable or Field are selected, a dropdown to select the variable/field will be displayed. Select the variable or field that contains the Chart Title.

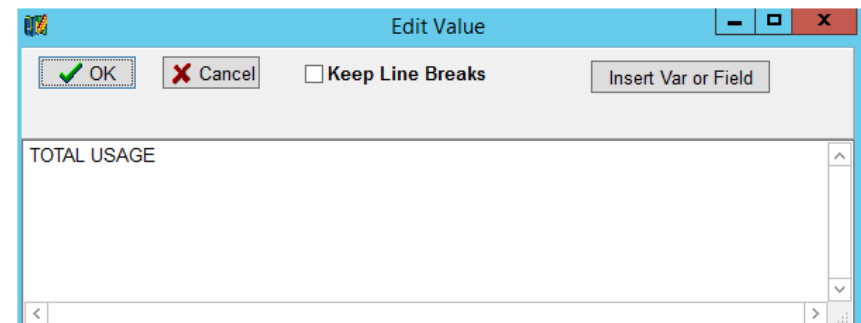


Dialog box titled "Edit Value for". It contains a label "Enter Chart Title:" and a "Parameter Type:" dropdown menu set to "Variable". Below the dropdown is a text input field. At the bottom are "OK" and "Cancel" buttons.



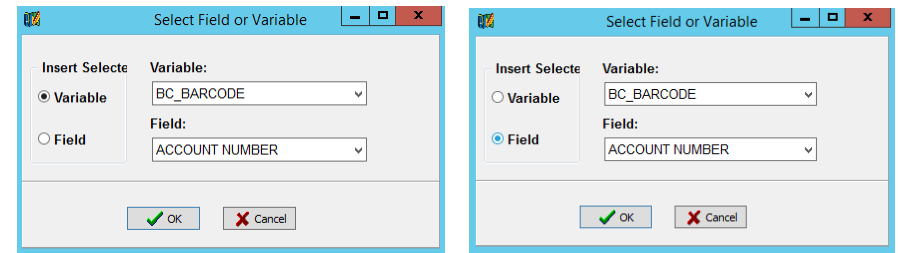
Dialog box titled "Edit Value for". It contains a label "Enter Chart Title:" and a "Parameter Type:" dropdown menu set to "Fixed Value". Below the dropdown is a text input field containing "TOTAL USAGE". At the bottom are "OK" and "Cancel" buttons.

If entering a Fixed Value, type in the value or click on the ellipsis button for the Edit Form. This allows text to be entered. Check the **Keep Line Breaks** check box to retain line breaks entered on this page. Leaving the box unchecked will remove any line breaks. Variable or fields can be inserted by clicking the **Insert Var or Field** button. This will display the Select Field or Variable form. Choose Variable or Field and select the desired Variable or Field using the dropdown.



Dialog box titled "Edit Value". It contains "OK", "Cancel", and "Keep Line Breaks" checkboxes. There is an "Insert Var or Field" button. Below these is a large text input field containing "TOTAL USAGE". At the bottom are navigation arrows.

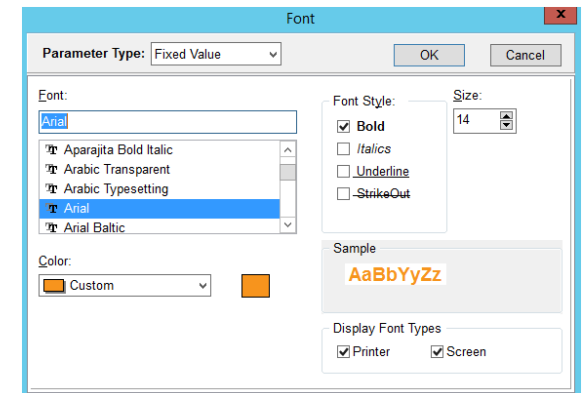
Then click the OK button to insert the Variable or field. Fields or Variables may be manually entered as well. They should be surrounded by <# >. At the Time of print the actual values will be substituted.



Once the Chart Title has been filled in, it will be a Read only field highlighted in Yellow. To edit, click on the ellipsis button.

Once the Chart Title is set, the Font of the Title can be set by clicking on the **Font** button. This displays the standard Font selection window. Select the desired Font, Style, Size and Color. The fonts must still be installed on the server/machine running Relay Unify uCompose.

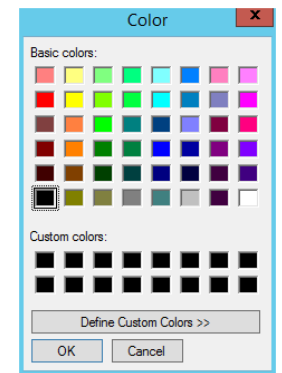
For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.



The Chart Title will be contained in a rectangle when the **Transparent** Checkbox is unchecked. If checked, the Chart Title will not be within a rectangle. With the Title set to Not Transparent, the Background color of the Chart Title Rectangle can be set by clicking on the **Color** Square to the right of the Transparent box. This will display the standard color selection window to edit the color selected.

If the Chart Title is not Transparent then the Chart Title Rectangle can have a Shadow. The **Shadow** is enabled by checking the Shadow checkbox. The **Color** of the Shadow is set by clicking on the color square next to the Shadow Checkbox. This will display the standard color selection window to edit the color selected.

A border around the Graph can be enabled by checking the **Border** Checkbox. Once enabled, the Color of the Border is set by clicking the **Color** square next to the Border checkbox. The Line **Style** for the Border can be set. The Border Line Size can be set and the Rounding of the Border. A Larger Round value will result in a more pronounced rounding.



The Border **Line Style**, Line **Size** (thickness), and Rounding can be set once the Border is enabled. The **Round** value determines how much the corners of the border are rounded. A Larger Round value will result in a more pronounced rounding.

Effects

The Effects tab allows setting special effects on the Graph, the majority of which are 3D.

If **3D** is checked the graph will appear as a 3D graphical representation. The **3d %** value sets the amount of the 3D effect.

Checking the **Orthogonal** setting will display the graph in an Orthogonal 3D mode. This presents the X axis horizontal and the Y axis vertical. The Orthogonal Angle can be adjusted using the **Ortho Angle**. This can be 0 to 180. The default is 45.

If Orthogonal is not checked, the Tilt, Rot, Elev, and Pers settings become available.

Changing **Tilt** allows the graph to be tilted clockwise around the Z- Axis (coming out of the page).

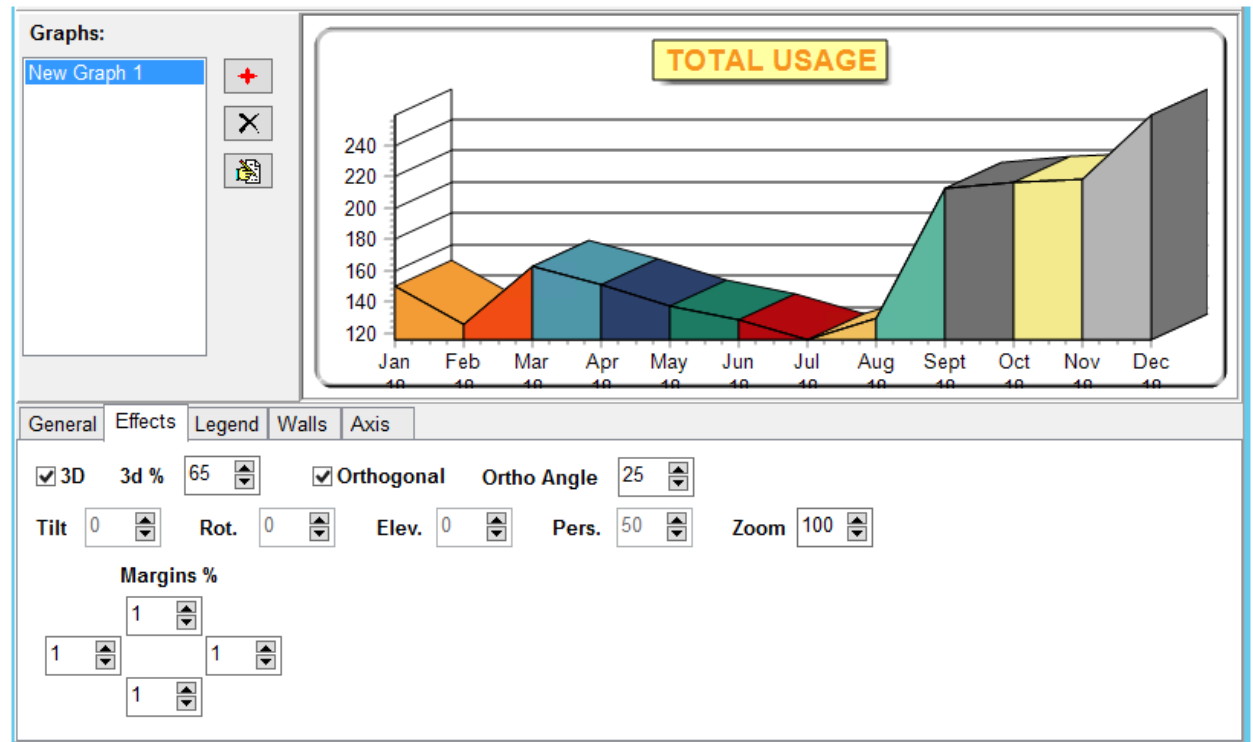
Changing **Rot** allows the graph to be rotated counterclockwise around the Y axis (from the Bottom of the page to the Top).

Changing **Elev** allows the graph to be elevated counterclockwise around the X axis (from the right side of the page to the left).

Changing **Pers** allows the graph perspective to be changed.

Changing **Zoom** allows the graph drawing point to be moved closer or further from the viewer.

The **Margins** settings change the Margin values for Top, Left, Right, and Bottom. The settings are applied within the border of the graph.

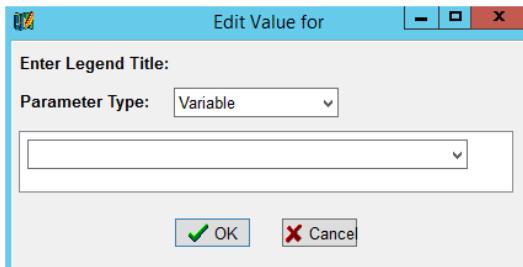


Legend

The Legend tab allows options for the Legend of the graph to be set.

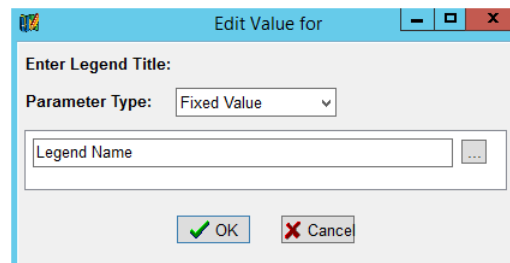
Checking the **Enabled** box will display the Legend. To hide the legend on the graph, uncheck the Enabled setting.

The Legend **Title** can be used to Name the Legend and its values. To edit, click the Ellipsis button to the right of the Legend Title field. This will display the Edit Value form. This allows the Value for the selected graph field to be set to either a Fixed Value, Variable, or Field. If Variable or Field are selected, a dropdown to select the variable/field will be displayed. Select the variable or field that contains the Legend Title.



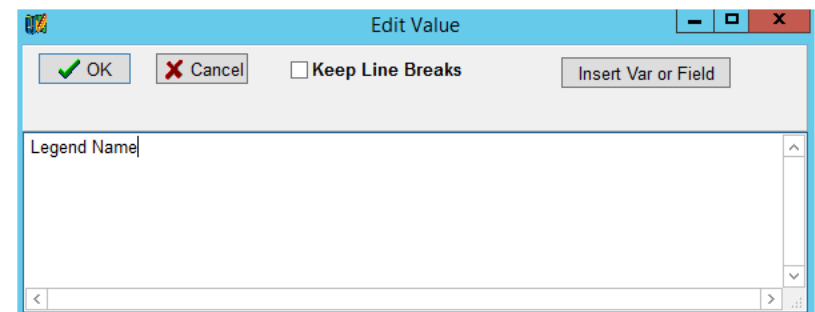
Dialog box titled "Edit Value for". It contains a label "Enter Legend Title:", a "Parameter Type" dropdown menu set to "Variable", and a text input field. At the bottom are "OK" and "Cancel" buttons.

If entering a Fixed Value, type in the value or click on the ellipsis button for the Edit Form.

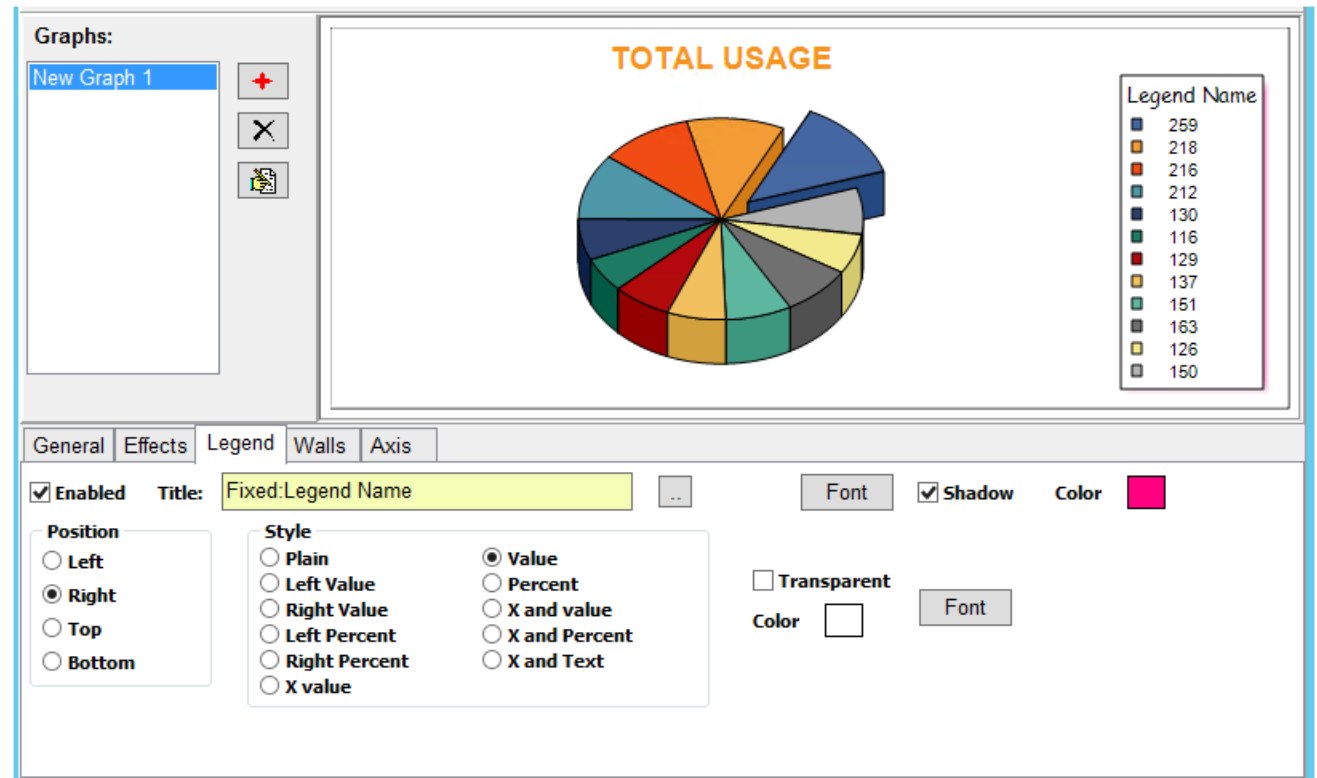


Dialog box titled "Edit Value for". It contains a label "Enter Legend Title:", a "Parameter Type" dropdown menu set to "Fixed Value", a text input field containing "Legend Name", and an ellipsis button. At the bottom are "OK" and "Cancel" buttons.

This allows text to be entered. Check the **Keep Line Breaks** check box to retain line breaks entered on this page. Leaving the box unchecked will remove any line breaks. Variable or fields can be inserted by clicking the **Insert Var or Field** button.



Dialog box titled "Edit Value". It contains "OK" and "Cancel" buttons, a "Keep Line Breaks" checkbox, and an "Insert Var or Field" button. Below is a large text area containing the text "Legend Name".



The main interface shows a pie chart titled "TOTAL USAGE" with 12 segments. To the right is a legend titled "Legend Name" with 12 entries, each with a colored square and a number. Below the chart are tabs for "General", "Effects", "Legend", "Walls", and "Axis". The "Legend" tab is active, showing options for "Enabled" (checked), "Title" (Fixed: Legend Name), "Position" (Right selected), "Style" (Value selected), "Font", "Shadow" (checked), "Color" (pink), "Transparent" (unchecked), and another "Font" button.

Legend Name
259
218
216
212
130
116
129
137
151
163
126
150

This will display the Select Field or Variable form. Choose Variable or Field and select the desired Variable or Field using the dropdown. Then click the OK button to insert the Variable or field. Fields or Variables may be manually entered as well. They should be surrounded by <# >. At the Time of print the actual values will be substituted.

Once the Legend Title has been filled in, it will be a Read only field highlighted in Yellow. To edit, click on the ellipsis button.

Once the Legend Title is set, the Font of the Title can be set by clicking on the **Font** button directly to the right of the Legend Title field. This displays the standard Font selection window. Select the desired Font, Style, Size and Color. The fonts must still be installed on the server/machine running Relay Unify uCompose.

For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.

The Legend will be contained in a rectangle when the **Transparent** Checkbox is unchecked. If checked, the Chart Title will not be within a rectangle. With the Legend set to Not Transparent, the Background color of the Legend Rectangle can be set by clicking on the **Color** Square below the Transparent box. This will display the standard color selection window to edit the color selected.

If the Legend is not Transparent then the Legend Rectangle can have a Shadow. The **Shadow** is enabled by checking the Shadow checkbox. The **Color** of the Shadow is set by clicking on the color square next to the Shadow Checkbox. This will display the standard color selection window to edit the color selected.

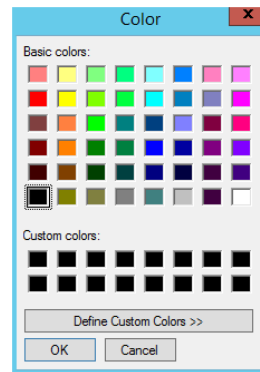
The **Position** of the Legend can be on the left, right, top or bottom or the graph. Select the desired position of the legend.

The Legend **Style** determines how the values are listed in the legend. The **Font** button by Transparent controls the Font settings for the values within the Legend.

Walls

The Walls tab allows options for the walls of the graph to be set.

On the Background tab, the **Background Color** of the graph can be changed. Click the color square to edit the color. This will display the standard color selection window to edit the color selected.



The Left, Bottom, Right, and Back Wall tabs have the same settings. They effect the Left, Bottom Right and Back walls respectively.

Checking **Visible** makes the wall visible and must be checked for the other settings to apply.

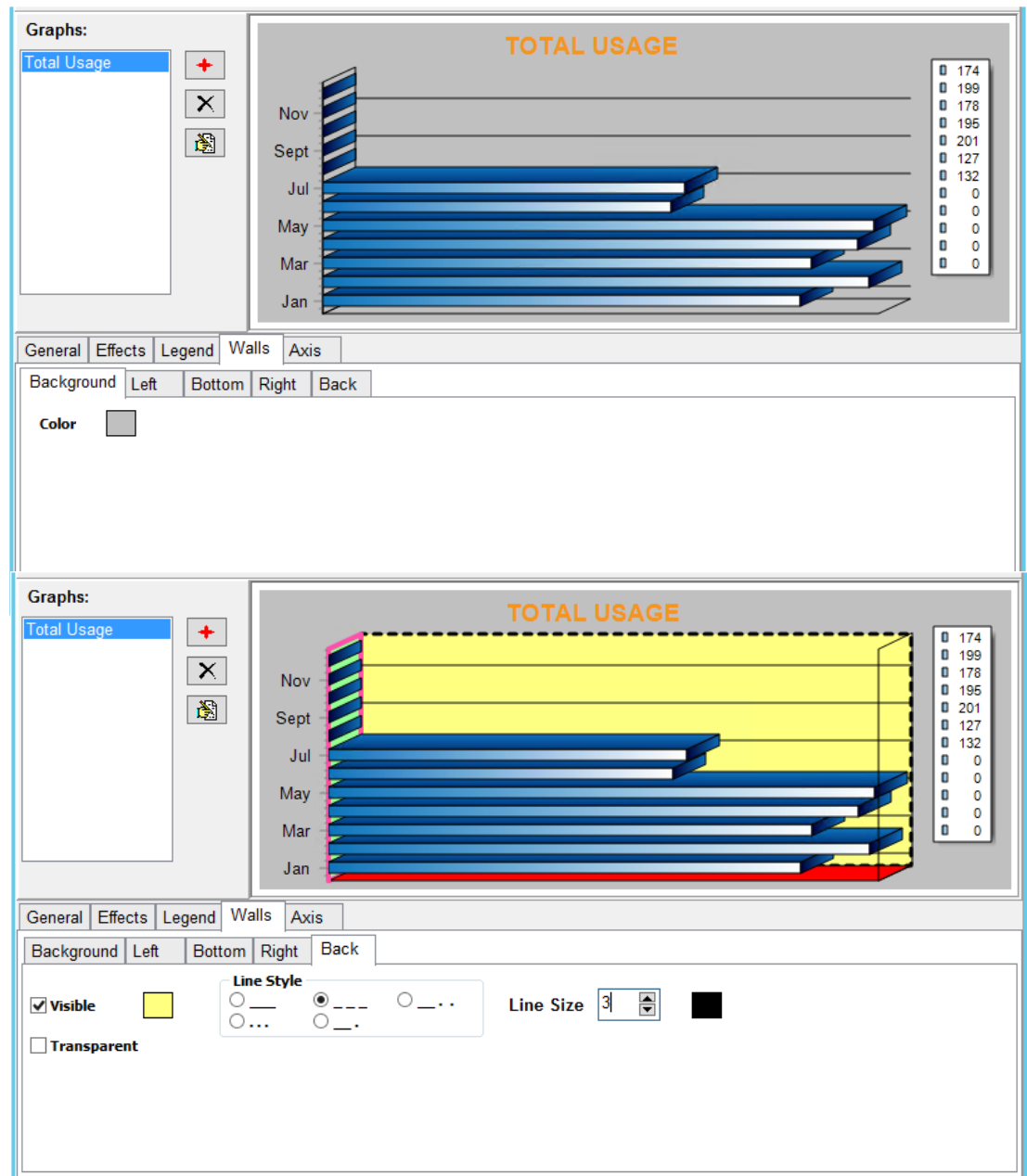
The Color of the Wall can be changed by clicking on the **Color** square. Only visible walls can have a color.

The **Transparent** checkbox makes the wall transparent (no color).

The **Line Style** changes the style of the lines that are used to draw the wall.

The **Line Size** changes the size or thickness of the lines used to draw the wall.

The **Line Color** can be changed by clicking on the Color square next to line size.



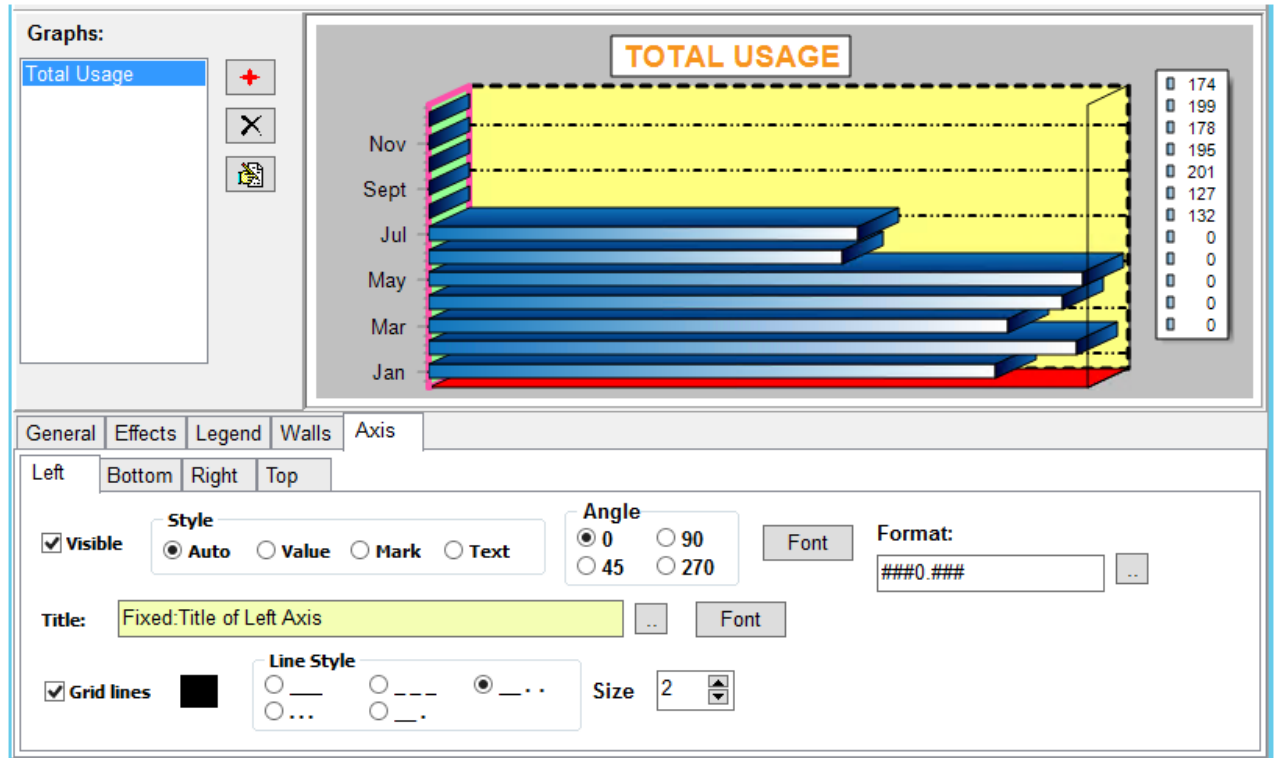
Axis

The Axis tab allows options for the Axis to be set. There are four tabs, Left, Bottom, Right, and Top. The settings on each of these four tabs are identical. They apply to the Left, Bottom, Right, and Top Axis respectively.

The **Visible** checkbox makes the axis visible.

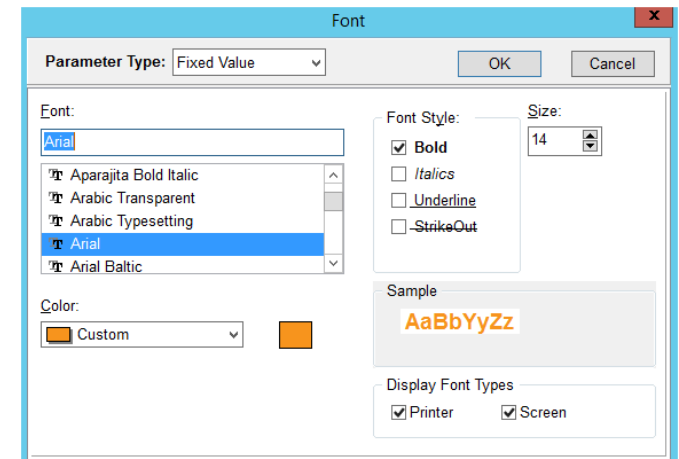
The **Style** sets the style of the data on the Axis. Auto will use the normally used settings for the graph type. Value uses the Value set in the Data Points. Mark uses the Mark value set in the Data Points. Text uses the Label set in the Data Points.

Angle sets the angle at which the Axis text is drawn.



Clicking on the directly to the right of the Angle options allows setting the font for the Axis Labels. This displays the standard Font selection window. Select the desired Font, Style, Size and Color. The fonts must still be installed on the server/machine running Relay Unify uCompose.

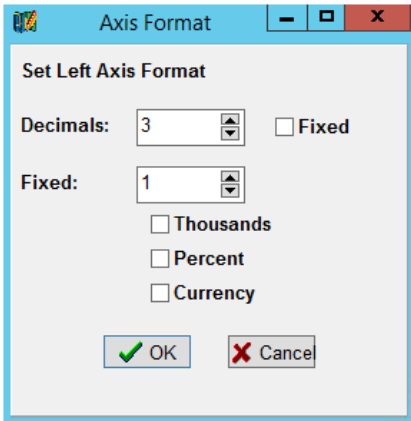
For the Display Font Types, if **Printer** is checked, the list of fonts will be those used for the printer. This is the default setting. If **Screen** is checked, the list of fonts will be those used for the screen view.



The **Format** Field allows setting the format of the Axis. Click the Ellipsis to see the Axis Format window. The **Decimals** value sets the maximum decimals used. Checking the **Fixed** box sets the minimum decimals. The **Fixed** value sets the minimum number of characters to the left of the decimal. This will Zero pad on the left if necessary.

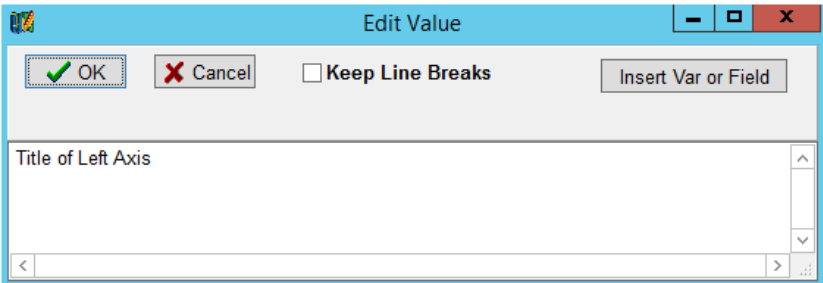
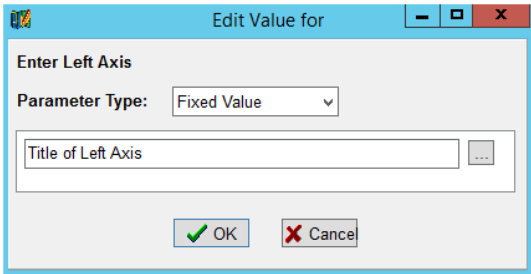
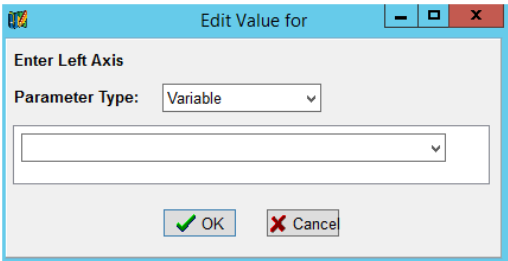
Checking **Thousands** enables the Thousands comma. Checking **Percent** enables the Percent sign. Percent cannot be used with Thousands or Currency. Checking **Currency** enables the Currency sign.

Click OK and the format reflecting the settings entered will be displayed in the Format field.



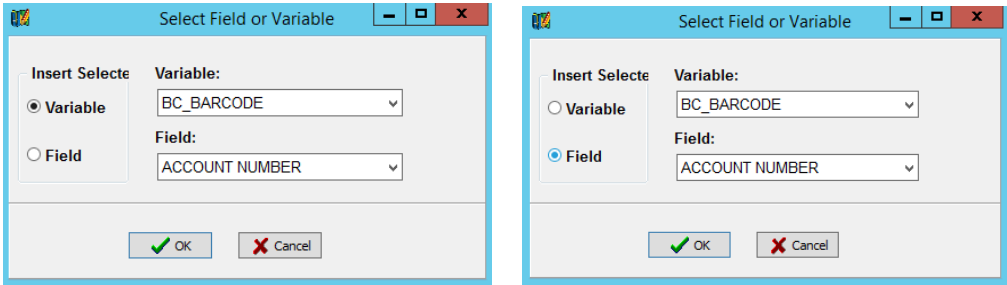
The Axis **Title** can be used to Name the Axis. To edit, click the Ellipsis button to the right of the Axis Title field. This will display the Edit Value form. This allows the Value for the selected graph field to be set to either a Fixed Value, Variable, or Field. If Variable or Field are selected, a dropdown to select the variable/field will be displayed. Select the variable or field that contains the Axis Title.

If entering a Fixed Value, type in the value or click on the ellipsis button for the Edit Form.



This allows text to be entered. Check the **Keep Line Breaks** check box to retain line breaks entered on this page. Leaving the box unchecked will remove any line breaks. Variable or fields can be inserted by clicking the **Insert Var or Field** button. This will display the Select Field or Variable

form. Choose Variable or Field and select the desired Variable or Field using the dropdown. Then click the OK button to insert the Variable or field. Fields or Variables may be manually entered as well. They should be surrounded by <# >. At the Time of print the actual values will be substituted.

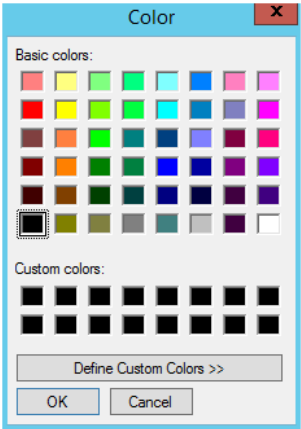


Once the Axis Title has been filled in, it will be a Read only field highlighted in Yellow. To edit, click on the ellipsis button.

The Axis Title Font can be set by clicking on the Font button next to Title. This displays the standard Font selection window.

The **Grid Lines** checkbox enables the drawing of grid lines from the Axis. The **Color** of the Grid lines is set by clicking the Color square. This will display the standard color selection window to edit the color selected.

The **Style** of the grid lines is set by the Line Style selection. The **Line Size** sets the grid line size or thickness.



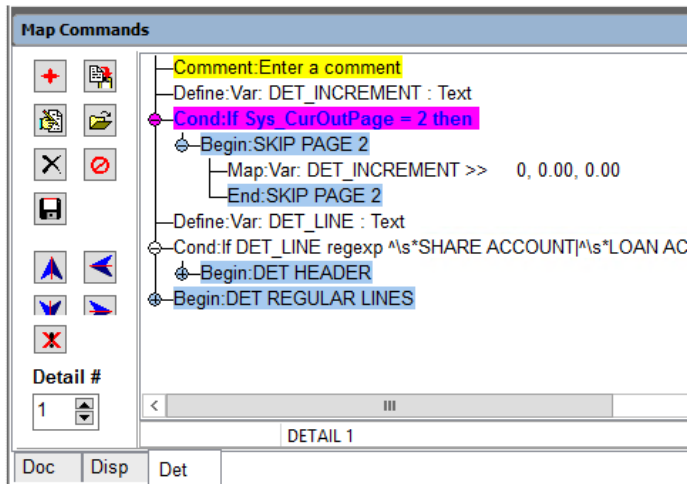
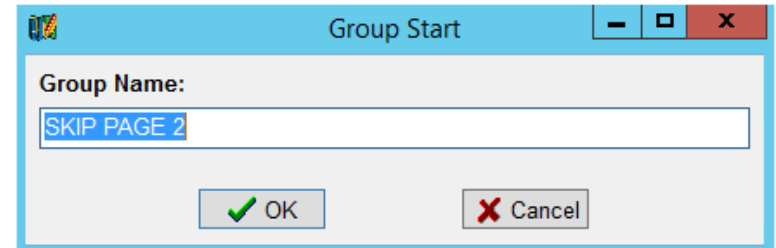
Start Group

The Group command allows grouping commands together. This is useful for groups of commands that are executed based on a condition or for creating a group of commands that may need to be moved or saved for use later.

The Start Group command can be accessed in 2 ways. The 1st is to click on Group from the Ribbon bar Det. The 2nd is to Click the + on the Detail tab of the Map Commands window, then select Start Group from the list.

Enter the Group name.

Groups are displayed by default with a Blue background in the Command Window. Both the Start and End Commands are created.



A group defines a group of commands. If the Start Group command is the first command after a Conditional, then the commands in the Group will be processed if the conditional is true.

Groups can be added within groups as well.

Skip Detail

The Skip detail lines command allows the user to skip a detail line (by not processing or Printing). Details are normally processed 1 detail at a time. This command allows the user to change the processing.

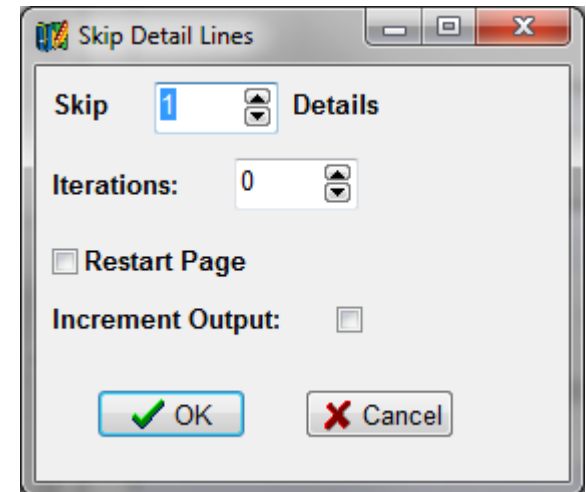
The Start Group command can be accessed in 2 ways. The 1st is to click on Skip Det from the Ribbon bar Det. The 2nd is to Click the + on the Detail tab of the Map Commands window, then select Skip Detail from the list.

The **Skip** value is the number of detail lines to skip. Use the arrows to select a value. This must be a value greater than zero.

The **Iterations** value is the number of times to perform the skip. This must be a value greater than zero.

If **Restart Page** is checked, this will cause the command processing to restart from the beginning of the detail commands. Leaving this unchecked will cause the next command to be executed. If this is checked and the skip value is zero, the processing will restart without moving to the next detail line.

If **Increment Output** is checked, the default increment will occur even if a line is being skipped.



Save CSV Data

This command allows the user to save CSV data for a document that can be exported.

This command can be accessed by clicking on the + on the Det tab of the Map Commands window then selecting Save CSV Data.

Only one Save CSV command can be used to define the CSV. Check the **Define the CSV** checkbox to enable the Definition. Select any System Field, User Field, System Variable, or User Variable to add to the CSV output. From the List box select the Item to be moved to the Save list and click the Right Arrow. This moves the Item to the Save list. To remove it from the save list select the item and click the left arrow. The item will be returned to the appropriate list box. To change the order of the output, select the item and use the up or down arrow to change the output order for the CSV file.

Check the **Save CSV to DB** checkbox to save the current values of the Save List items to the database.

At any location in the map the Save CSV command may be entered. The current values of the Save list items will be saved to the database during Breakpack.

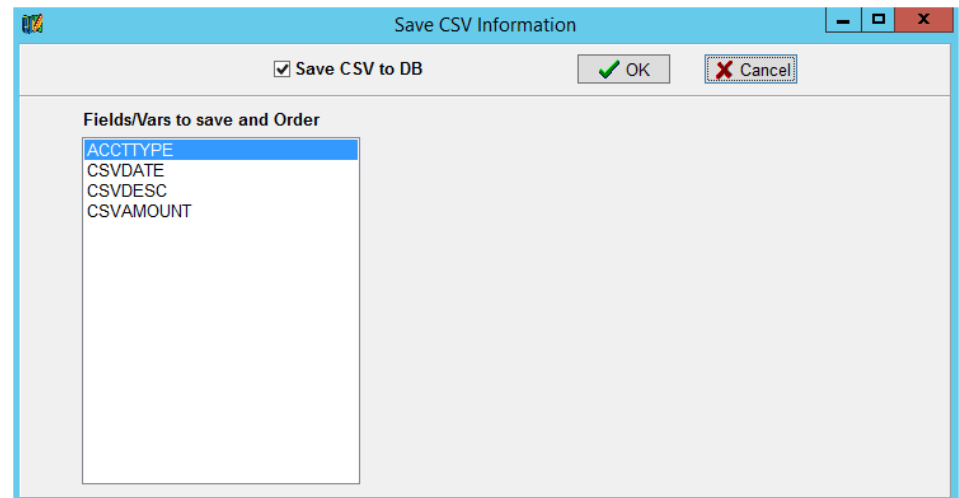
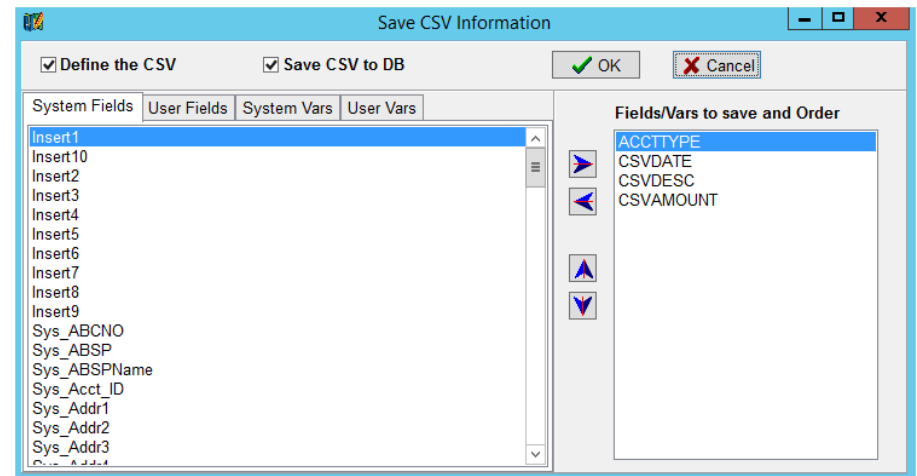
If the CSV save list has been defined, then adding a new Save CSV command will display only the List.

To save the values stored in those fields/variables later in the map, add the same command again. This time it will let you save those previously selected variables and fields. The first command Defines the CSV and the second Saves the CSV.

Sample

CSV file:

1				
2	ACCTTYPE	CSVDATE	CSVDESC	CSVAMOUNT
3	Checking	8/19/2017	Beginning Balance	726.7
4	Checking	8/22/2017	Check 3409	-47.34
5	Checking	8/22/2017	Check 3411	-115.02
6	Checking	8/24/2017	Check 3405	-49.95
7	Checking	8/25/2017	Check 3410	53.70



Save Reconcile Data

This command allows the user to save Reconcile data for a document. This allows saving specific types of data.

This command can be accessed by clicking on the + on the Det tab of the Map Commands window then selecting Save Reconcile Data.

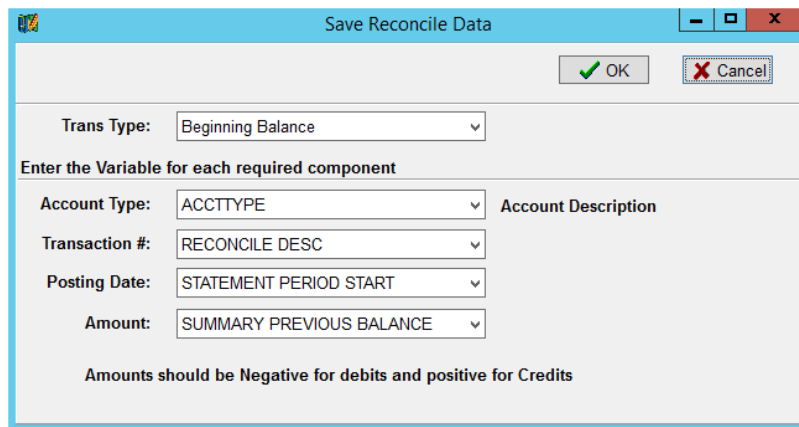
For Reconciliation there are 6 **Transaction Types**: Beginning Balance, Ending Balance, Check, Withdraw, Interest, and Adjustment. Select the Transaction type and then select the Variable that will define each entry.

Account Type should define the description of the Account. An example would be Checking, Saving, Money Market, etc.

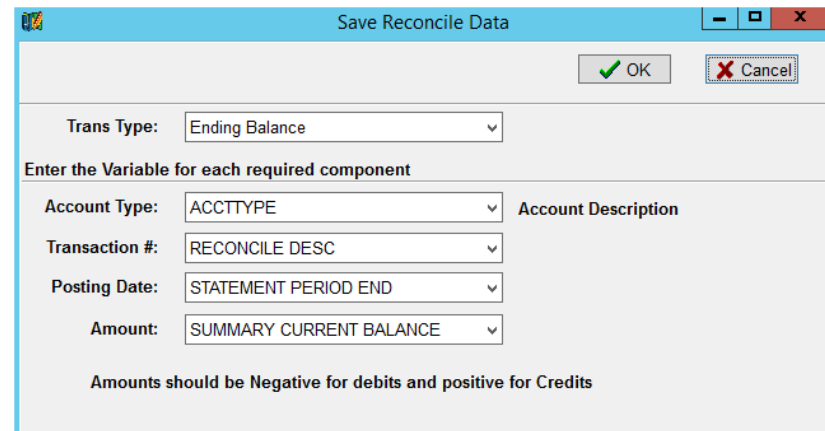
Transaction # should be some identifying information for the Transaction. This could be check number or description of the Transaction, or in Beginning Balance Trans Type this could be the text "Beginning Balance".

Posting Date should be the date of the Transaction was posted. For Beginning Balance this could be the date of the last statement.

Amount should be the amount of the Transaction. For Debits this should be negative. For Credits this should be positive.



The screenshot shows the 'Save Reconcile Data' dialog box. At the top, there are 'OK' and 'Cancel' buttons. Below them, the 'Trans Type:' dropdown menu is set to 'Beginning Balance'. A section titled 'Enter the Variable for each required component' contains four rows: 'Account Type:' with 'ACCTTYPE', 'Transaction #:' with 'RECONCILE DESC', 'Posting Date:' with 'STATEMENT PERIOD START', and 'Amount:' with 'SUMMARY PREVIOUS BALANCE'. At the bottom, a note states 'Amounts should be Negative for debits and positive for Credits'.



The screenshot shows the 'Save Reconcile Data' dialog box. At the top, there are 'OK' and 'Cancel' buttons. Below them, the 'Trans Type:' dropdown menu is set to 'Ending Balance'. A section titled 'Enter the Variable for each required component' contains four rows: 'Account Type:' with 'ACCTTYPE', 'Transaction #:' with 'RECONCILE DESC', 'Posting Date:' with 'STATEMENT PERIOD END', and 'Amount:' with 'SUMMARY CURRENT BALANCE'. At the bottom, a note states 'Amounts should be Negative for debits and positive for Credits'.

The Save Reconcile Data command can occur at any location within the Map Commands. The Reconcile data will be saved during Breakpack with the values of the variables at the time the command is executed.

Save Vars to DB

This command can be used for check images or variable values that need to be saved to the database. These will then be searchable on the web, or can be updated using a uBridge job.

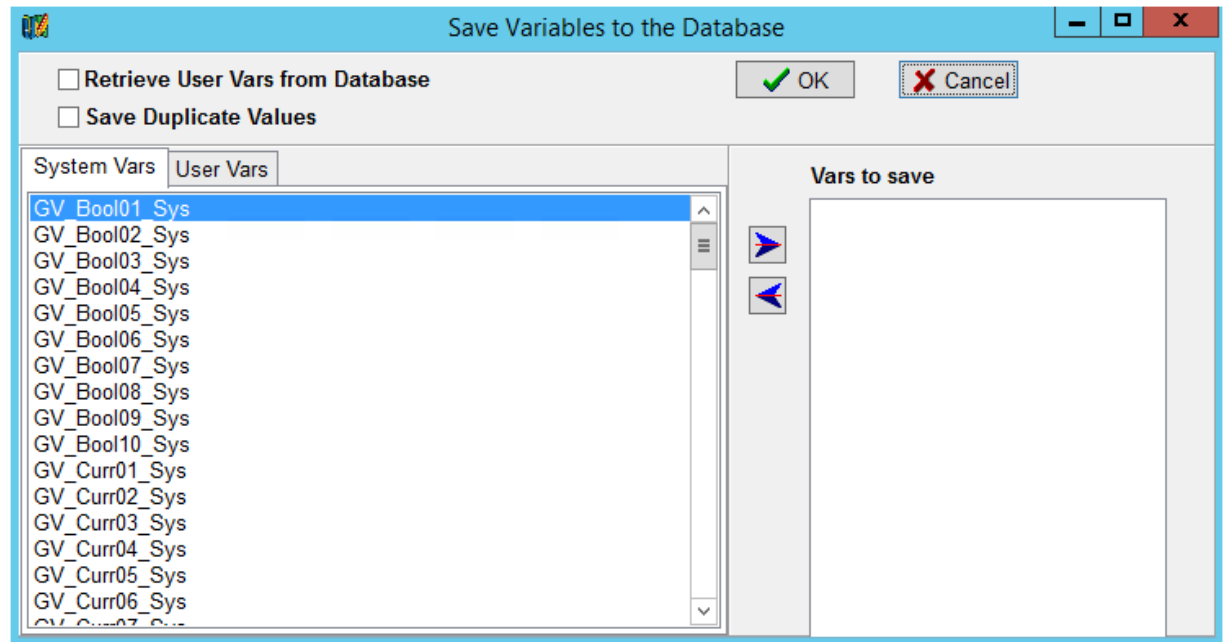
This command can be accessed by clicking on the + on the Det tab of the Map Commands window then selecting Save Vars to DB.

Once the command is created it can be edited to change the parameters.

Select the variables to save to the database.

If **Retrieve User Vars from Database** is checked, the value will be pulled and can then be updated using a uBridge job.

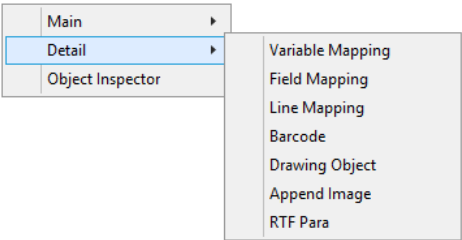
If **Save Duplicate Values** is checked, all duplicate values for a variable will be saved. If this is unchecked, the value will only be saved once.



RTF Paragraph

The Rich Text Paragraph or RTF command allows the user to create text or charts on the output. This command is more versatile than the Word Wrap Paragraph.

The command can be accessed in 2 ways. The 1st is to click on the + on the Det tab of the Map Commands window then select RichText Para. The 2nd is to right-click on the Output and select RTF Para under the Detail options from the Pop-up menu. The advantage of using the second method is the RTF will default to the selected location.

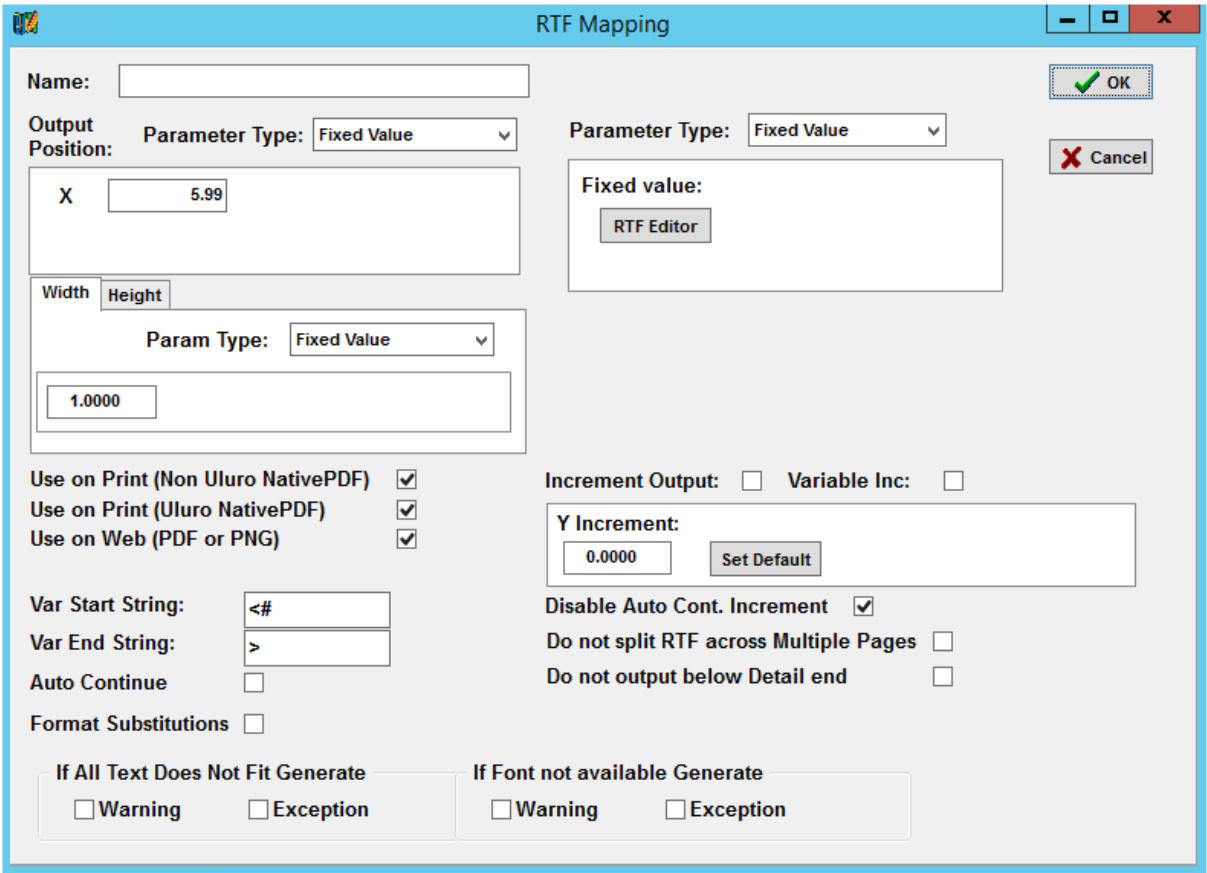
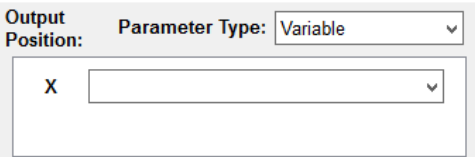


Once the command is created it can be edited to change the parameters.

The **Name** can be edited to provide a more descriptive name for the command. This name will be part of the name for the command in the Map Commands window.

The **Output Position X** value specifies the starting location in inches. This will correspond to the placement in the Output window. If the command was accessed by right clicking on the Output Window, the X value will be populated automatically with the value from where the cursor was located. The Y output position is based on the Current Detail Y position (available in the System Variable Sys_CurDetY).

The Output Position can be entered using a Fixed Value for X, or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the X value will become a dropdown to select the variable/field that contains the X value.



The width and height define the command’s overall width and height in inches. The **Width** and **Height** values specify the dimensions of the graph on the output. These can be edited here or using the cursor once the command is on the output. To use the cursor, select one of the dimensions or the corner to change both simultaneously.

The Width and Height can be entered using a Fixed value or as a **Parameter Type** of Variable or Field. If Variable or field are selected, the values will become dropdowns to select the variable/field that contains the width/height value.

The figure consists of four screenshots arranged in a 2x2 grid, each showing a configuration panel for 'Width' and 'Height'. Each panel has tabs for 'Width' and 'Height'. The top-left panel shows 'Param Type' set to 'Fixed Value' with a text input field containing '3.2708'. The top-right panel shows 'Param Type' set to 'Fixed Value' with a text input field containing '1.4792'. The bottom-left panel shows 'Param Type' set to 'Field' with a dropdown menu. The bottom-right panel shows 'Param Type' set to 'Variable' with a dropdown menu.

The RTF contents can be fixed and stored in the map or come from a Variable or Field. The **Parameter Type** will determine what contains the RTF contents.

If Fixed Value is the Parameter Type click the **RTF Editor** button to edit the RTF Paragraph.

If Variable is the Parameter Type, the variable can contain the RTF or the RTF Filename.

For the first scenario, select the Variable that contains the RTF. Then check the **Variable Contains RTF** box to indicate the RTF is within the variable.

This screenshot shows a configuration panel for a 'Variable' parameter type. It includes two checkboxes: 'Variable Contains Filename' (unchecked) and 'Variable Contains RTF' (checked). Below these is a dropdown menu currently showing 'USAGE'.

This screenshot shows a configuration panel for a 'Fixed Value' parameter type. It features a 'Fixed value:' label and an 'RTF Editor' button.

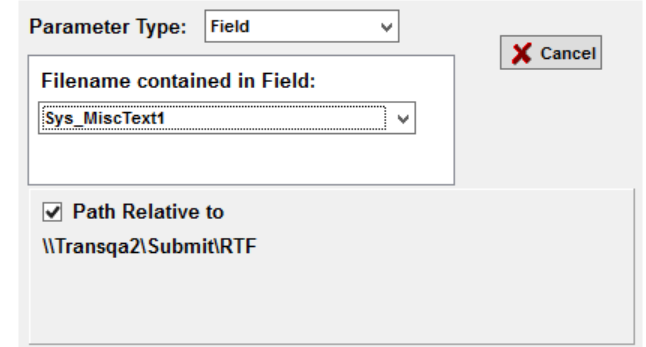
For the second scenarios, select the Variable that contains the Fielname of the RTF. Then check the **Variable Contains Filename** box to indicate the Filename is what is stored in the Variable selected. For this, there is an additional setting that will appear.

This screenshot shows a configuration panel for a 'Variable' parameter type. It includes checkboxes for 'Variable Contains Filename' (checked) and 'Variable Contains RTF' (unchecked). Below is a dropdown menu showing 'URL'. At the bottom, there is a checked checkbox for 'Path Relative to' followed by the text '\\Transqa2\\Submit\\RTF'. A 'Cancel' button is visible in the top right corner.

If Field is the Parameter Type, then the field selected in the dropdown will need to contain the RTF Filename.

The **Path Relative To** option should be checked if the Variable or Field contains the relative path to the RTF. If not this should be unchecked and the Variable will contain the full path to the RTF. The RTF path listed is the current Base Path which is pulled from DefRTFDir in the uSetup Processes list. If that setting is blank, then it will use the DefImgDir. If that setting is also blank, it will use the images directory under the Submit Folder.

The Path Relative To setting will only be visible if Variable Contains Filename is checked or if the Parameter Type is field. The variable or field selected in the dropdown menu should have the name of the RTF (name.rtf) in the directory setup.



If the command will be printed using something other than Relay Unify Native PDF, check the **Use on Print (Non-Relay Unify NativePDF)** box.

If the command will be printed using Relay Unify Native PDF, check the **Use on Print (Relay Unify NativePDF)** box.

If the command will be displayed on the web, but not necessarily printed, check the **Use on Web (PDF or PNG)** box.

RTF Paragraphs can contain embedded Variables or Fields. The **Var Start String** defines the starting string that defines an Embedded Variable or Field. The **Var End String** defines the ending string that defines an Embedded Variable or Field.

If an RTF Paragraph requires more room than is available for one page checking the **Auto Continue** box will force additional pages until the entire RTF paragraph is output. With Auto Continue unchecked the RTF Paragraph will stop at one page.



Tips:

If an RTF is coming from a variable or field that contains the filename, the existence of the RTF is not checked during Breakpack by default.

There is a setting in the uSetup.exe Process list, CheckRTF, that will enable the checking of RTF files during Breakpack. Set this to Y to enable. This will cause an error during Breakpack if the file does not exist. If this is set to N (blank by default) then there will be no error during Breakpack. The file will only error during print.

If Auto Continue is checked, this will check the existence of the RTFs during Breakpack since the number of pages in the document will may on the RTF.

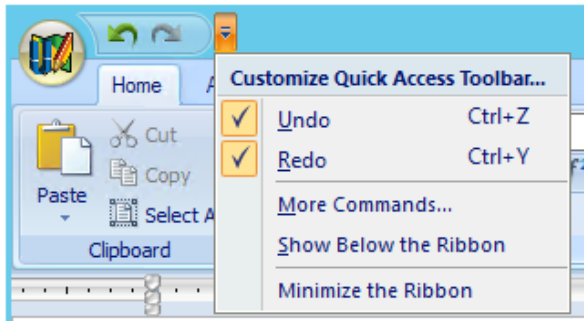
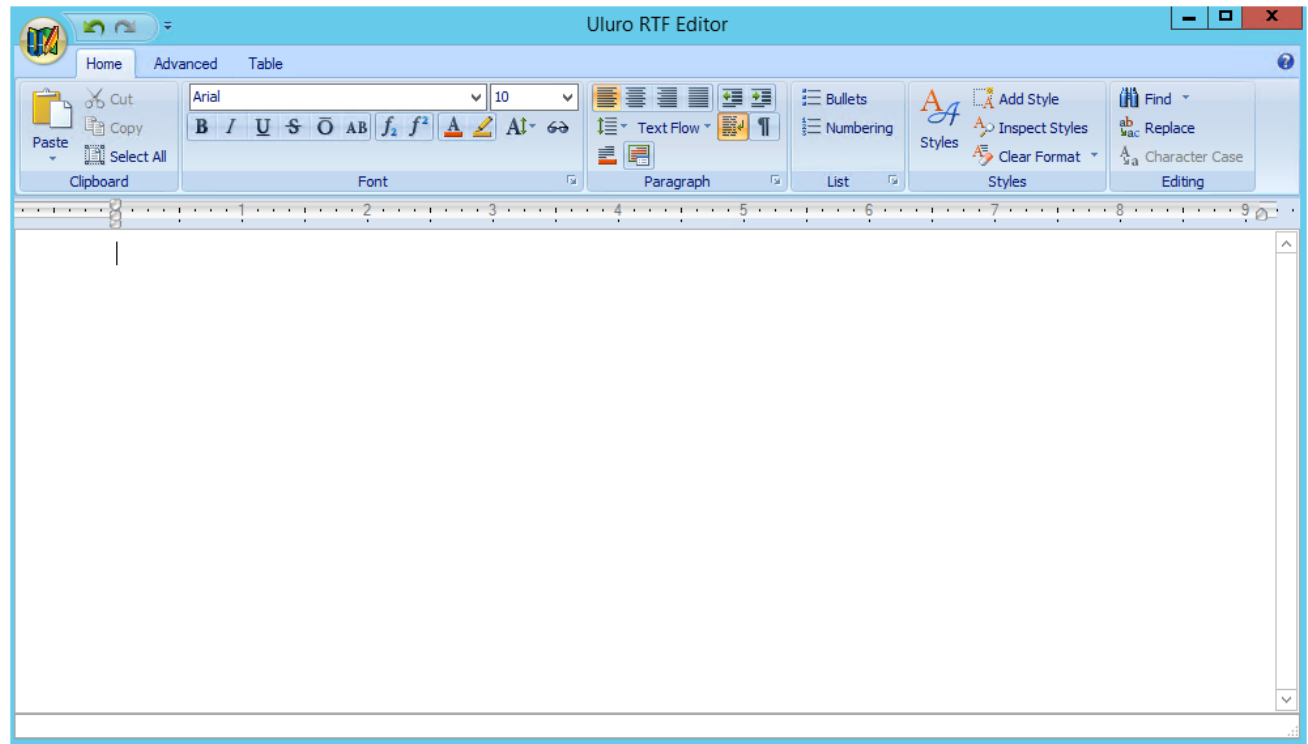
RTF Editor

The RTF Editor allows the contents of the RTF to be entered and customized.

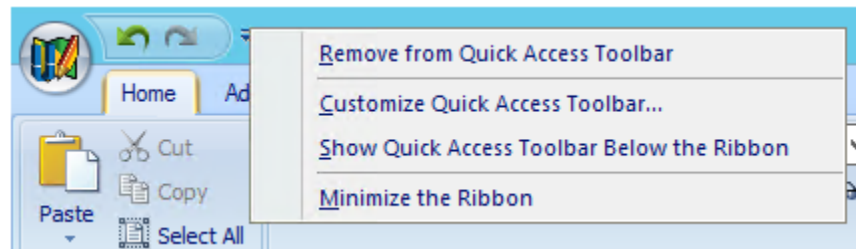
The RTF editor uses Microsoft's Word Pad Library. No CMYK color options are available within the editor, even if the Preferences in Relay Unify uCompose are setup for CMYK.

The Ribbon Bar can be moved below the Ribbon and customized.

The Undo, Redo, and Minimize options will be checked if enabled. Select again to uncheck. The Undo and Redo options hide the green arrows.



Right-clicking in the Editor will yield some additional options.



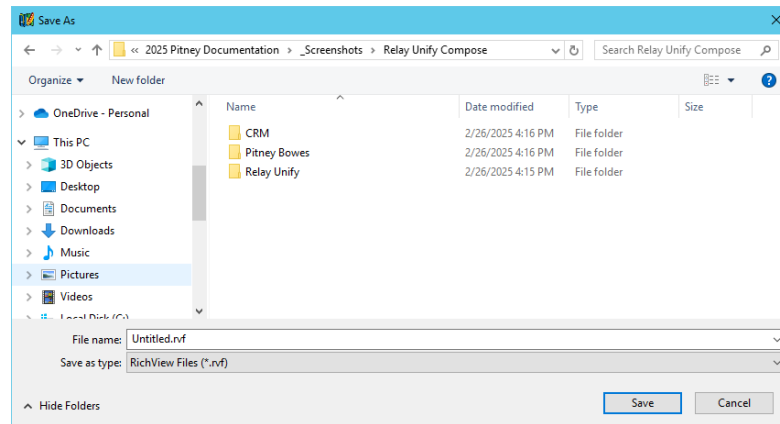
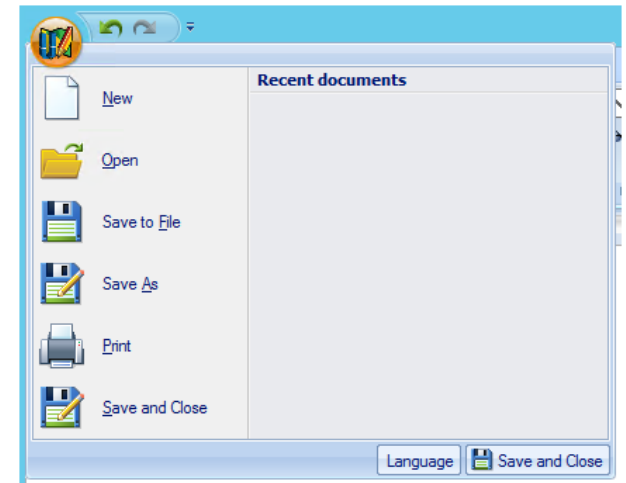
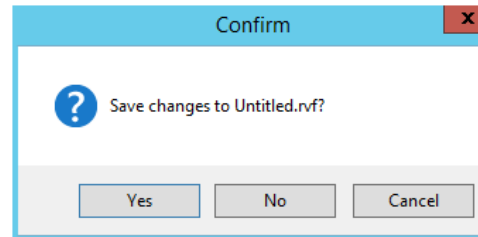
The Ribbon Bar Options are the Quick Access Menu, the Home Tab, Advanced Tab, and Table Tab.

Quick Access Menu

This menu, accessible by clicking the Relay Unify uCompose circular icon in the upper-left corner, is like a File type menu in many other programs.

New will start a new RTF. A confirmation to save the existing RTF will be displayed.

Selecting Yes will result in a Save As dialog box to save the file prior to a new blank RTF being opened.



Selecting No will result in a New RTF and all previous edits that were not saved to the previous will be lost.

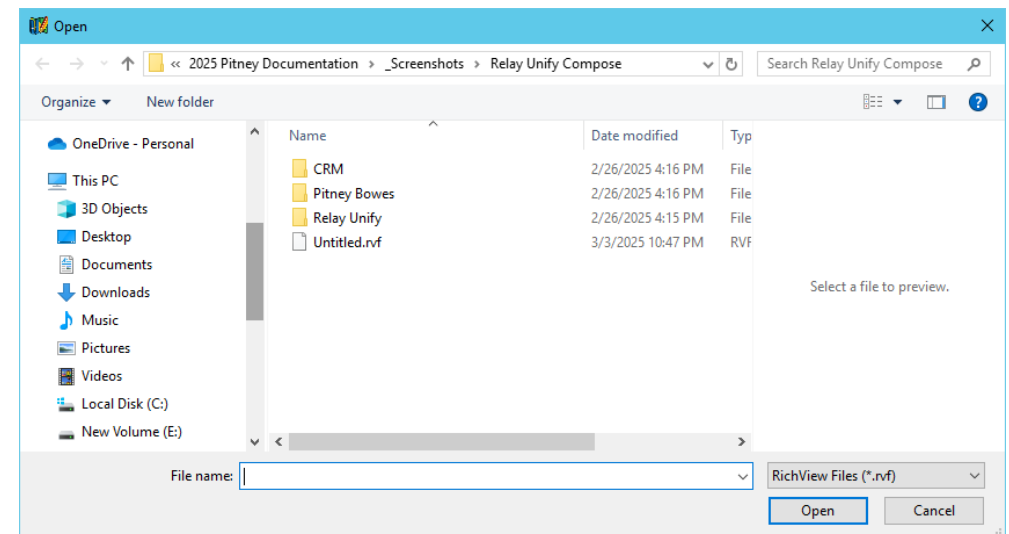
Select Cancel to return to the current RTF and not create a new RTF.

Open will allow the user to open a saved RTF. An Open dialog will be displayed to select the RTF file.

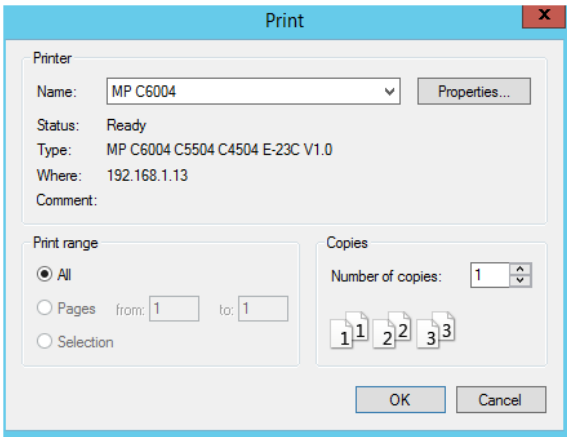
Locate the file, select the file and click the open button.

The default extension is .rvf. This is an enhanced RTF format file. The file type can be changed to .rtf or .txt.

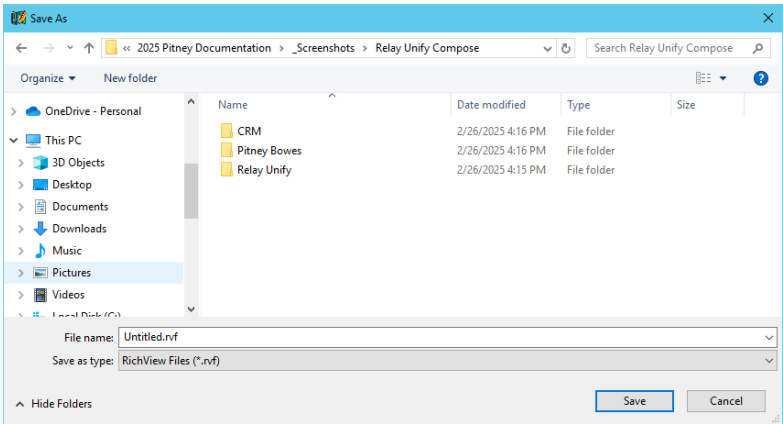
Save to File will save the RTF to a desired location. The Save As dialog box will pop up to select the filename and location. The default extension is .rvf. This is an enhanced RTF format file. The file type can be changed to .rtf or .txt.



Save As will allow the RTF to be saved or exported. A Save As dialog box will be displayed. Navigate to the location where the RTF file is to be saved and enter the new RTF name. Click the Save button.



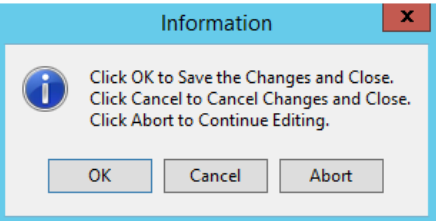
Print allows the RTF to be printed. This will display a Print dialog box to select a printer and the desired print settings. Once the print settings are entered click Ok to print.



Save and Close allows the RTF to be saved and automatically closes the editor, returning to the RTF command form. Selecting Save and Close from the menu or the Save and Close button in the Quick Access Toolbar have the same effect.

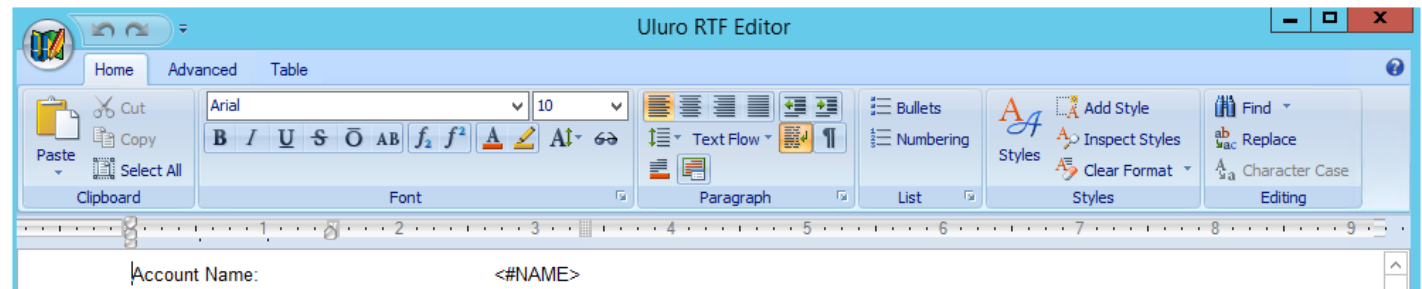
Clicking on the 'X' in the top right corner will yield a message to save the changes prior to closing if edits were made or the new RTF was never saved. Click OK to Save the RTF to the command and close the editor. Click Cancel to have any edits made not be saved. Click Abort to return to the editor.

Language allows some of the options to be converted to other Languages.



Home

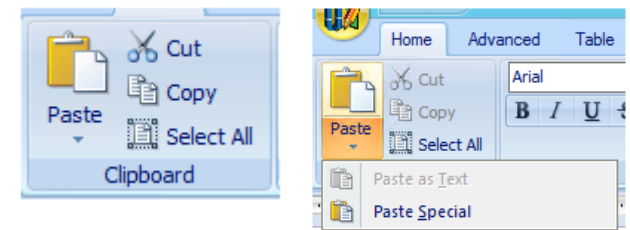
The Home group contains 5 subgroups: Clipboard, Font, Paragraph, List, Styles, and Editing.



Clipboard

This Subgroup contains Clipboard functions of Paste, Cut, Copy, and Select All.

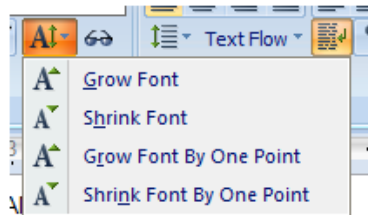
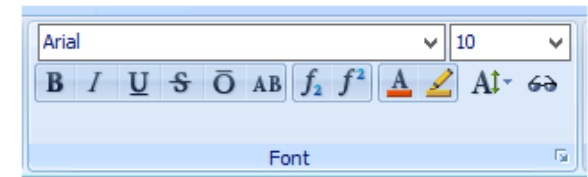
Paste has options of Paste as Text and Paste Special. Paste Special will display the available paste special options.



Font

The Font Subgroup contains options for setting the Font. These and some additional settings can also be accessed by clicking the arrow in the bottom left corner of the subgroup.

These options are Font name, Font size, Font Style, Superscript and Subscript, Font Color, Background Color, Font Size Change, and Hide text.



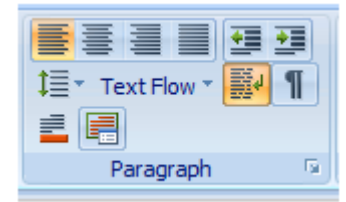
The Font Size Change button shows options for Grow Font, Shrink Font, Grow Font by One Point and Shrink Font by One Point.

Text can be hidden. Select the text then click on  the Hide button. Hidden Text can only be displayed by clicking the Nonprint Character button in the Paragraph subgroup. The hidden text will be underlined with a dotted line.

Account-Name:¶
Account-Number:¶
Service-Address:¶
Statement-Date:¶

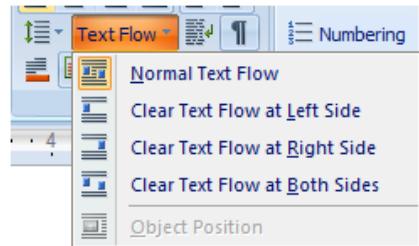
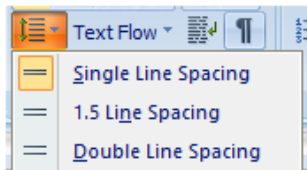
Paragraph

The Paragraph subgroup contains options for the current paragraph. These and some additional settings can also be accessed by clicking the arrow in the bottom left corner of the subgroup.

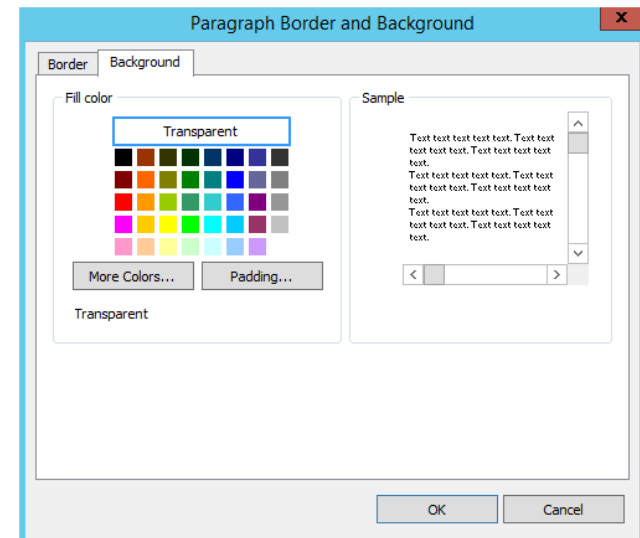
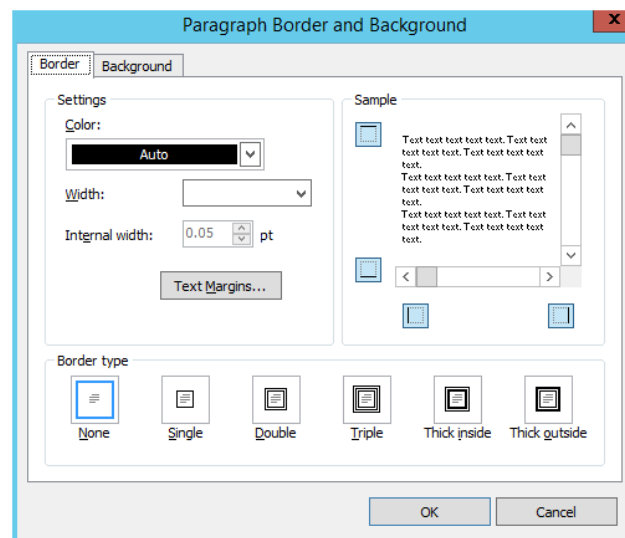
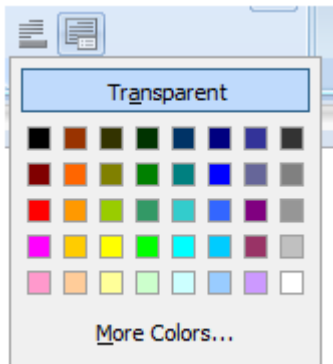


The top row of options are Alignment (Left, Center, Right, Justified), Decrease Indent, and Increase Indent.

The second row contains Line Spacing (Single, 1.5, Double), Text Flow for defining how text flows around pictures, Word Wrap, and Nonprinting Characters. Word Wrap can be enabled and disabled by clicking the button. When Non-Print is enabled, all characters are shown including hidden text.



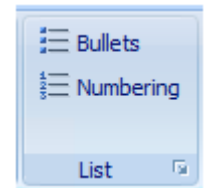
The third row contains Paragraph Background Color and Paragraph Border and Background.



List

The List subgroup contains options for Lists of data. These and some additional settings can also be accessed by clicking the arrow in the bottom left corner of the subgroup.

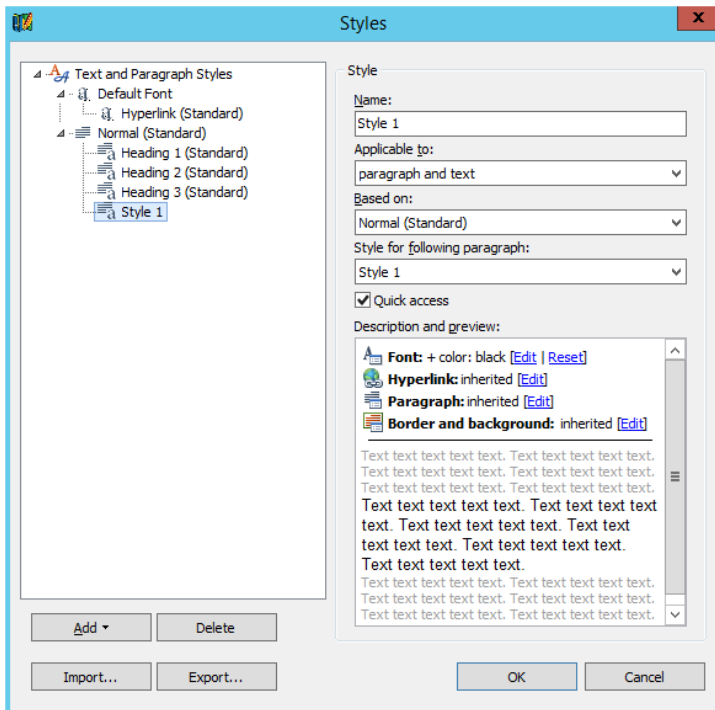
These options are Bullets and Numbering.



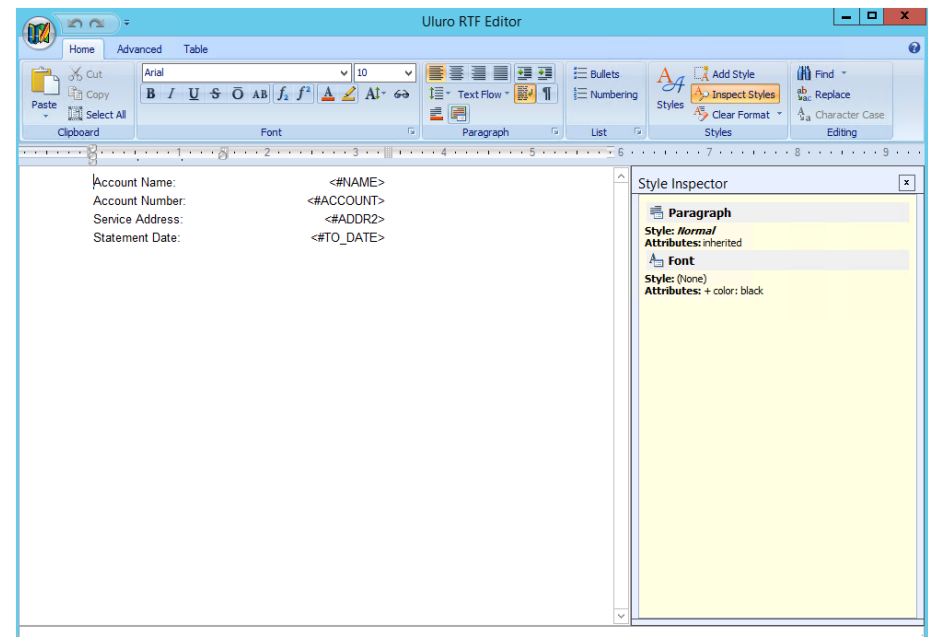
Styles

The Styles subgroup contains options for the style of the RTF.

The Styles button allows a style to be selected. The Add button pulls up the same form to add or select a style.



Inspect Styles will display a Style Inspector to the right of the RTF area. Click the button again to hide the Style Inspector.



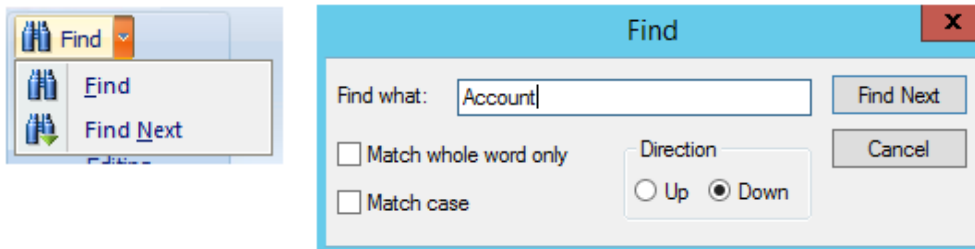
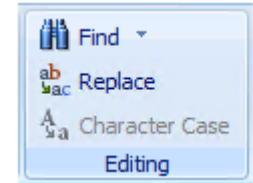
Select the text to return to its default formatting then click Clear Format.

Editing

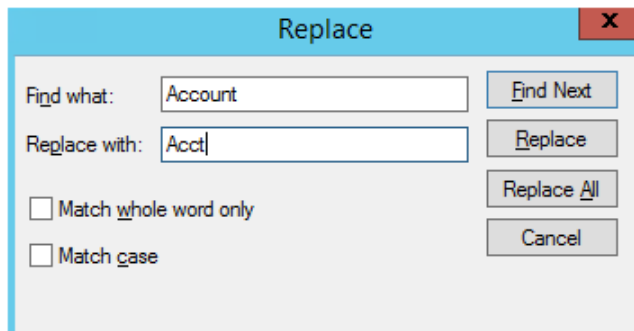
The Editing subgroup contains options for editing.

These options are Find, Replace and Character Case.

Find has the option for Find and Find Next. Find displays the Find dialog. Once text has been highlighted (or entered in the Find dialog), click Find Next to have the editor highlight the next time that text occurs.



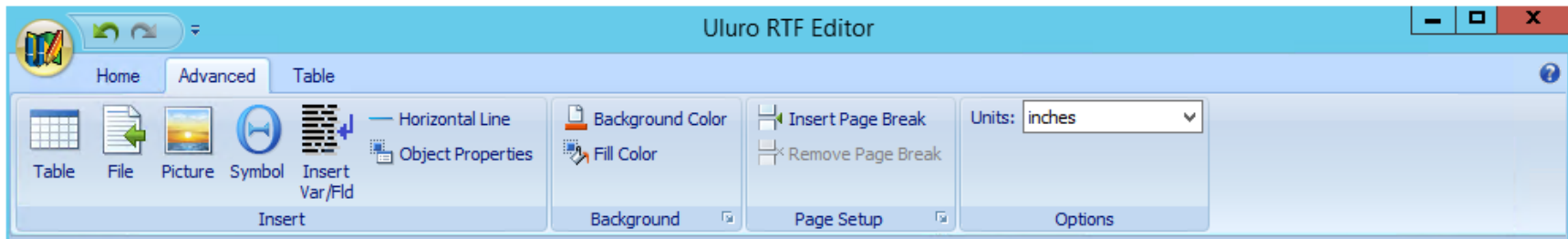
Replace displays the Replace Dialog to replace a specified text with different text.



Character Case will cycle the Character Case of the selected text. It will cycle through Upper Case, Lower Case, and Camel Case.

Advanced

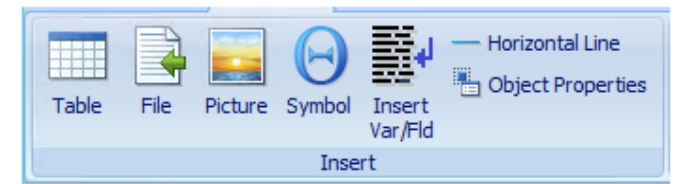
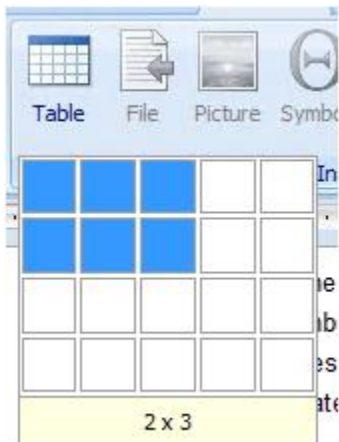
The Advanced group contains 4 subgroups: Insert, Background, Page Setup, and Options.



Insert

The Insert subgroup contains 7 options for inserting.

Table allows inserting a Table into the RTF. Selecting Table displays the Quick Table insert.

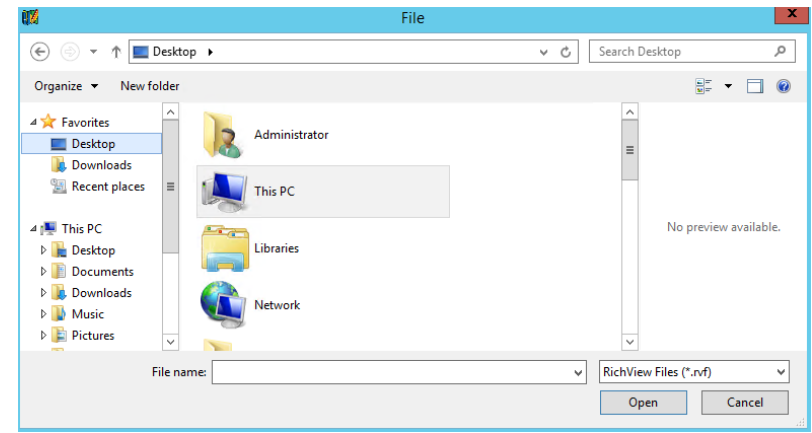


Once inserted the Table will be displayed with Borders. Use the Table Group or Table Properties menu to change the settings.

The screenshot shows a document with a table at the top. The table has four columns and two rows. The first column contains the following text: 'Account Name:', 'Account Number:', 'Service Address:', and 'Statement Date:'. The other three columns contain placeholder text: '<#NAME>', '<#ACCOUNT>', '<#ADDR2>', and '<#TO_DATE>'. Below the table, there is a 2x3 grid of empty cells with borders.

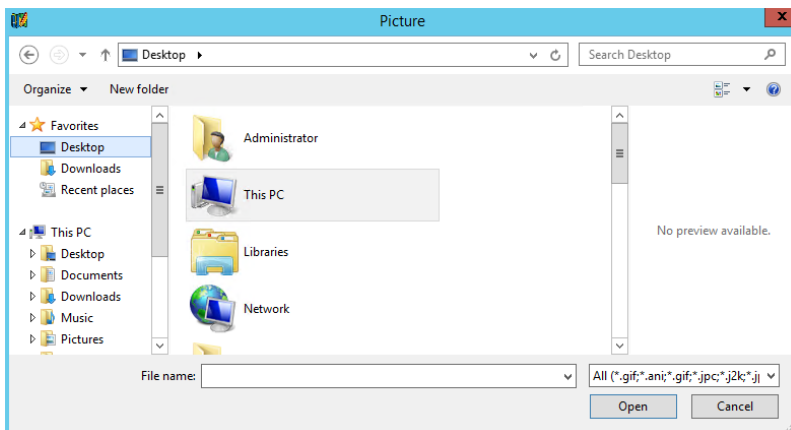
File allows inserting RTF from a file. This will display a File dialog to select the file to insert.

Once the File is selected it will be inserted into the RTF.

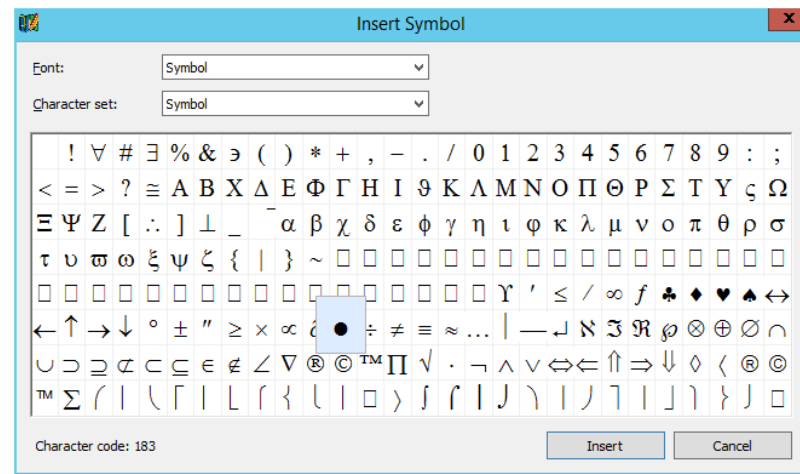


Picture allows inserting a Picture into the RTF. This will display a Picture dialog to select the picture to insert.

Once the Picture file is selected it will be inserted into the RTF.



Symbol allows inserting a symbol character.



Insert Var/Fld displays the RTF Insert Variable/Field/Detail window

The available types are:

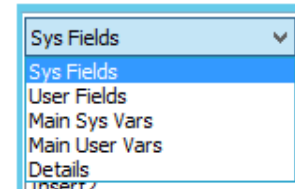
Sys Fields – The System generated Fields.

User Fields – The Fields created by the User.

Main Sys Vars – The System generated Variables in the Disp Section.

Main User Vars – The Variables created by the User in the Disp Section.

Details – Embedded Details. This will be a blank list unless a Detail Definition has been marked for Allow Detail RTF Embedding.

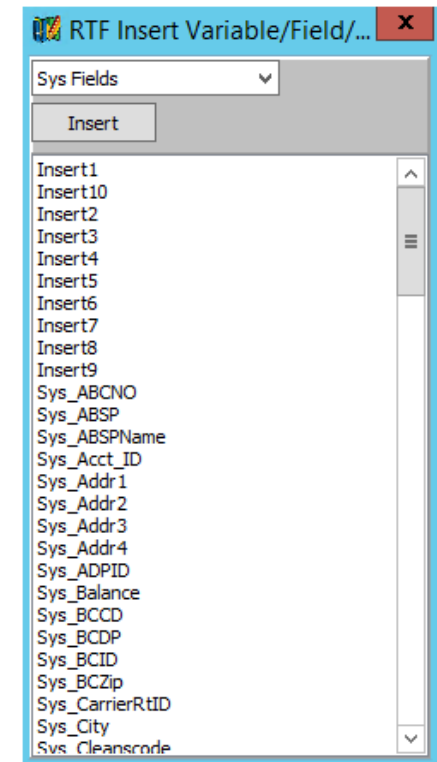


Once the type is selected the form will list the available fields or variables.

Select the variable or field and click the Insert button or double-click on the field or variable.

The variable or field will be inserted at the current cursor position.

ack. <#Sys_Acct_ID> To exp
transaction. You will not recei
on of the transaction will app

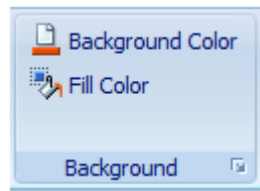


Horizontal Line will insert a Horizontal Line at the current cursor position.

Object Properties will display a form with properties of the object if an object (table or image) is selected. This form will allow some of the Object properties to be edited.

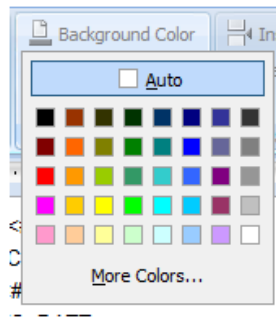
Background

The Background Subgroup contains 2 options.

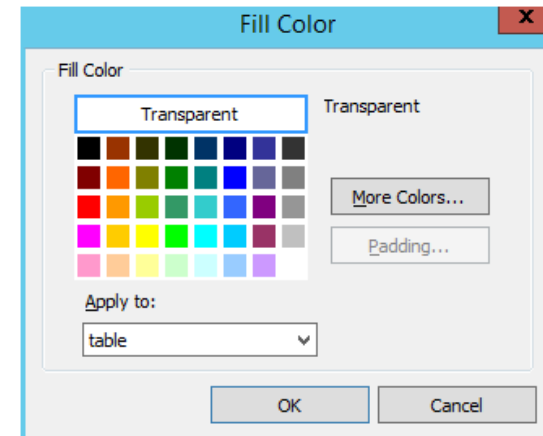


Background Color allows the color of the background to be selected.

Selecting a color will set the background color for the entire RTF.

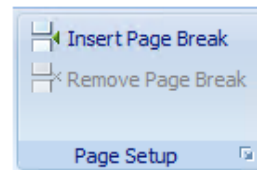


Fill Color allows selecting the background color for a



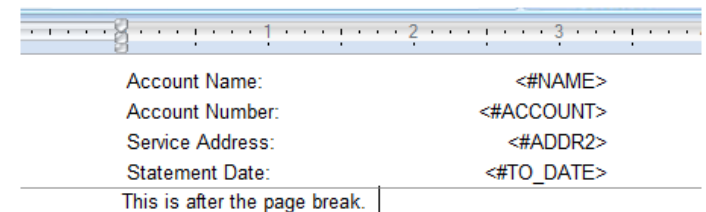
Page Setup

The Page Setup subgroup contains 2 options.



Insert Page Break will insert a page break at the current cursor position. On the output this will force a new page (if Auto Continue is checked). The Page Break will be displayed as a line in the RTF.

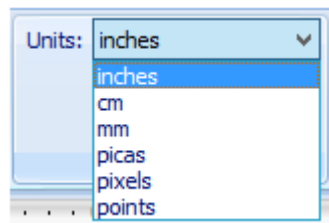
With the cursor on the line below the Page Break the Remove Page Break option is available. Selecting the Remove Page Break will remove the Page Break.



Options

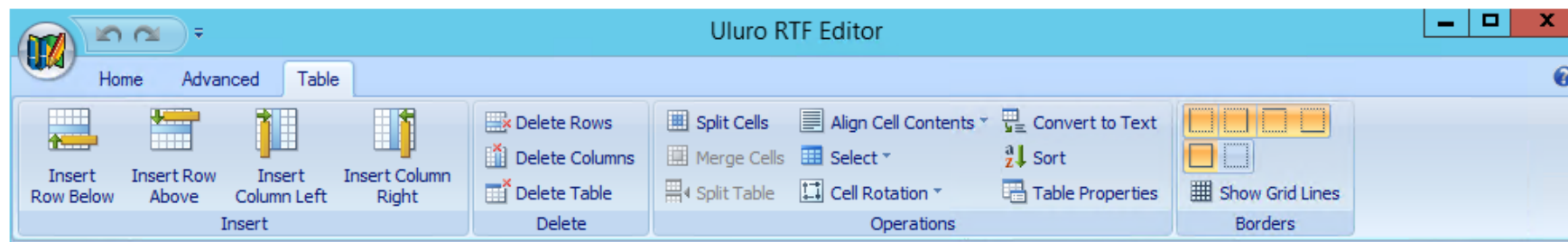
The Options subgroup contains only 1 option, Units.

Changing the Units changes the Ruler units.



Table

The Table group contains 4 subgroups: Insert, Delete, Operations, and Borders. The options in each subgroup become available once the cursor is within a cell of a table.



Insert

The Insert subgroup contains 4 options.

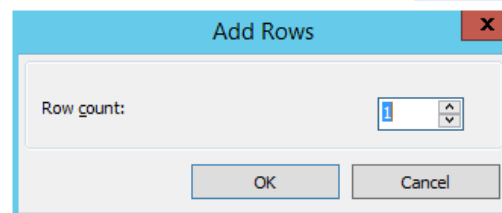
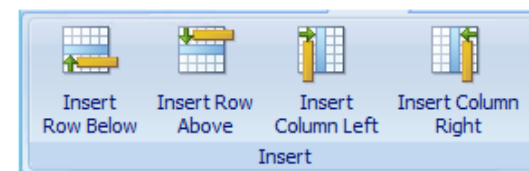
Insert Row Below will insert a row in the table below the current row. If the last row of the table is selected the Add Rows dialog will be displayed.

Insert Row Above will insert a row in the table above the current row.

Insert Column Left will insert a column in the table to the left of the current column.

Insert Column Right will insert a column in the table to the right of the current column.

For all four of the options to add a row or column, the inserted row or column will be selected once it has been added.



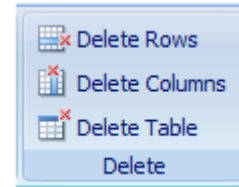
Delete

The Delete subgroup contains 3 options.

Delete Rows will delete the current row or selected rows.

Delete Columns will delete the current column or selected columns.

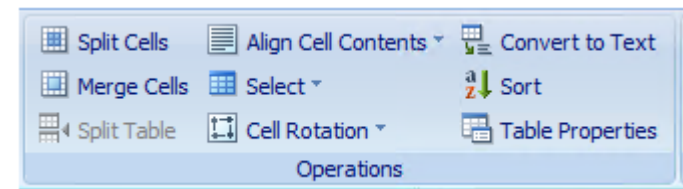
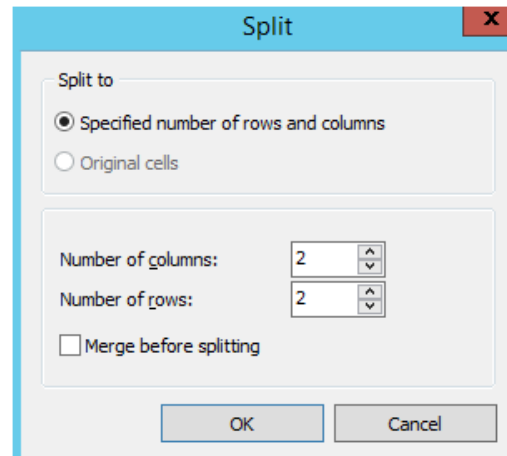
Delete Table will delete the current table.



Operations

The Operations subgroup contains 9 options.

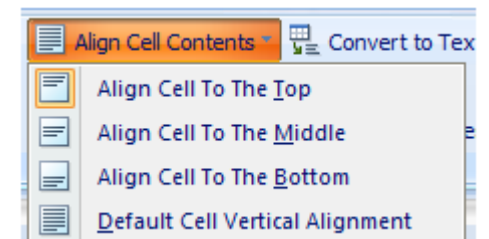
Split Cells will display the Split dialog to allow the current cell(s) to be split.



Merge Cells will merge the selected cells into one cell.

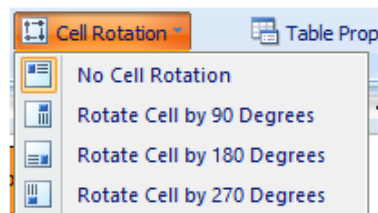
Split Table will allow the table to be split at the current row. This will create two tables from the original table.

Align Cell Contents allows the contents of the selected cells to be vertically aligned. Horizontal alignment is set in the Home Group, Paragraph subgroup.

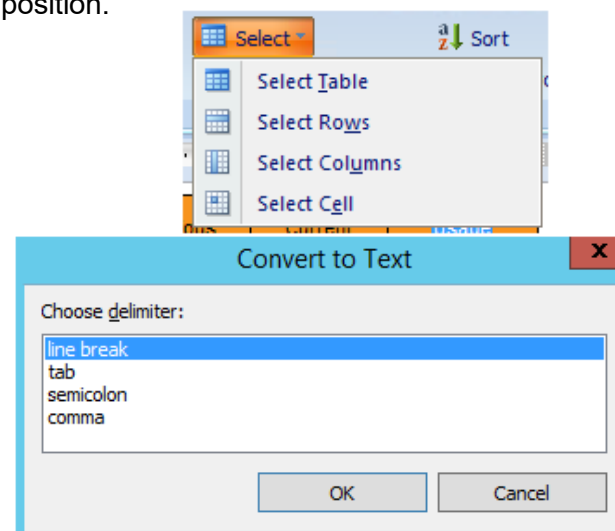


Select allows the entire Table, Rows, Columns or cell to be selected from the current cursor position.

Cell Rotation allows the contents of the cell to be rotated.



Convert to Text will convert the current table to text. This will display the Convert to Text Dialog.



Sort will display the Table Sort dialog and allows the table to be sorted.

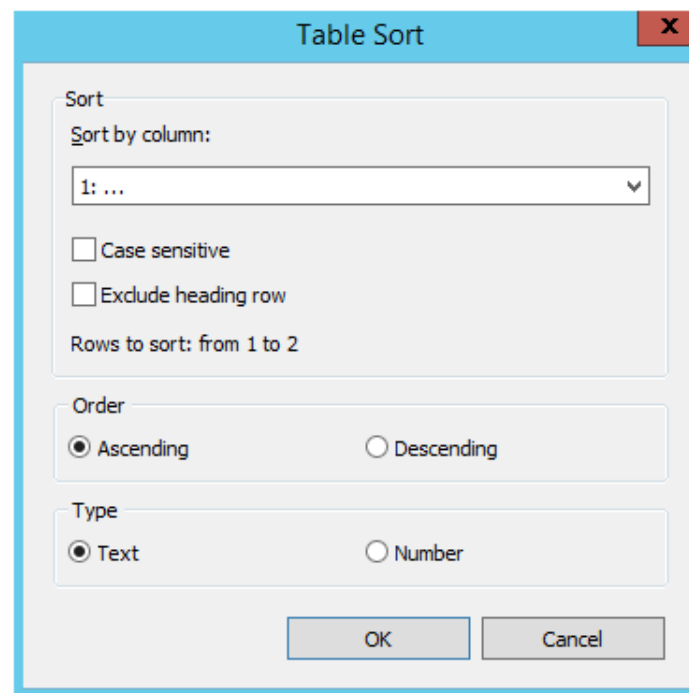
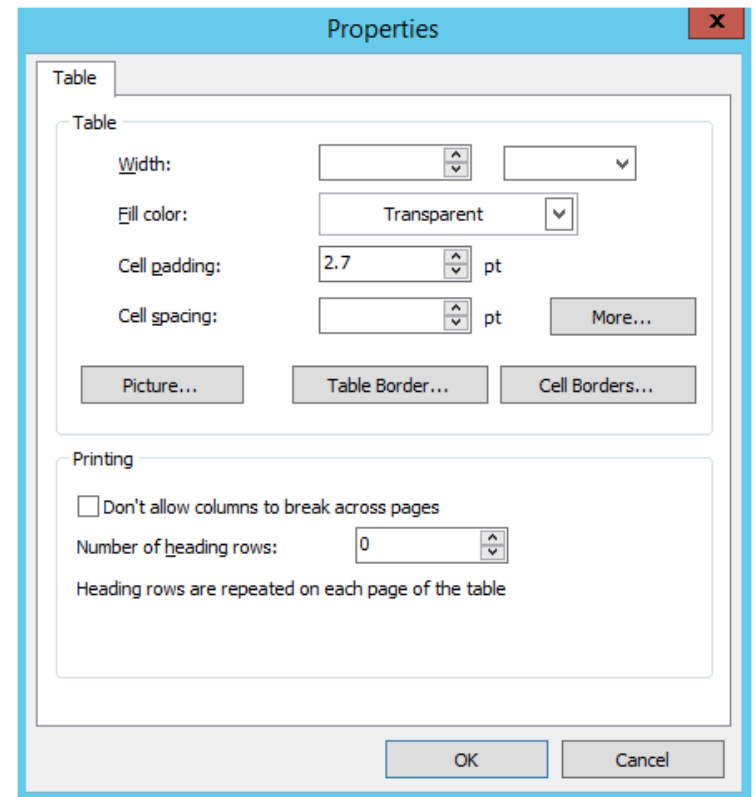


Table Properties will display the Table Properties dialog, allowing the settings for the table to be changed.



Borders

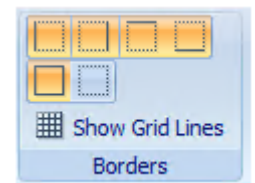
The Borders subgroup contains 7 options.

When a cell(s) is selected or the cursor is within a cell, the buttons will be highlighted to show which borders of the cell are currently being displayed. Click to show and click again to hide the borders of each cell.

The first row has options for the Left, Right, Top, and Bottom border.

The second row will add all borders or remove all borders.

Show All Grid Lines will show the hidden borders of the table in a dotted white outline. The selected cell will also be outlined in a white dotted line.



Popup Menus

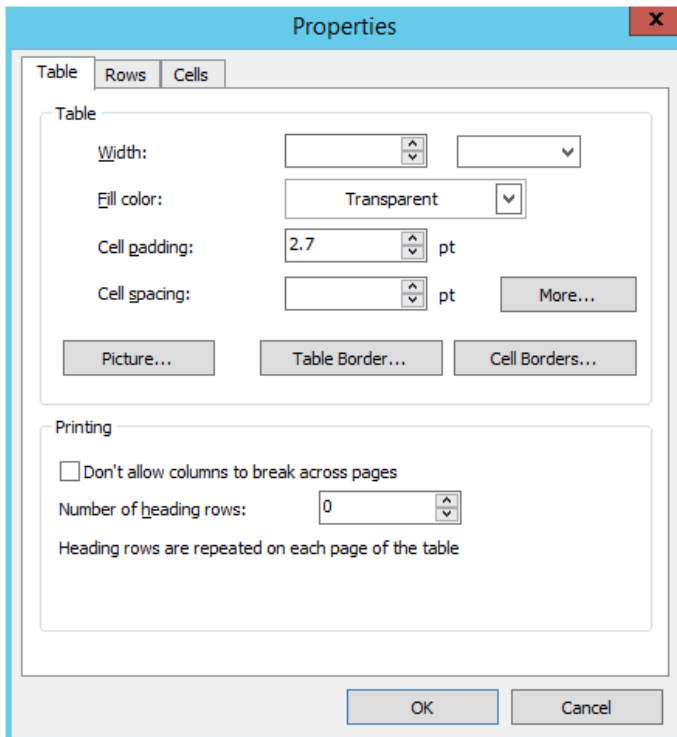
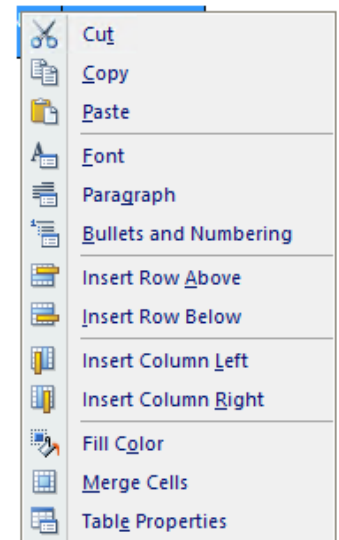
Depending on if text is selected, the cursor is within the table, or the cursor is next to the table, the popup menu will have some or all these options.

The Cut, Copy, and Paste functions are also accessible using keyboard shortcuts or from the Home tab Clipboard subgroup.

The Font, Paragraph, and Bullets and Numbering options display the dialog box that is also accessible by clicking the arrow in the bottom right corner of the Font, Paragraph, and List subgroups on the Home tab.

The four Insert row and column options can also be accessed in the Insert subgroup of the Table tab.

The Fill Color option can also be accessed from the Background subgroup on the Advanced tab.



Merge Cells and Table Properties can be accessed from the Operations subgroup on the Table tab. The Table Properties from the popup will contain tabs for the Table, Rows, and Cells. The Table tab allows changing properties of the table. The Rows tab allows changing the Vertical Alignment of the Row. The Cells tab allows changing the properties of the selected cells. Many of the options on those tabs can be accessed from the Table tab directly.

Once the RTF is complete, Save and close the RTF Editor to return to RTF Mapping Form.

RTF Mapping

Name:

Output Position: Parameter Type:

X	Y
5.99	1.0000

Width Height

Param Type:

Fixed value:

Use on Print (Non Uluro NativePDF) ☒

Use on Print (Uluro NativePDF) ☒

Use on Web (PDF or PNG) ☒

Var Start String:

Var End String:

Auto Continue ☐

Format Substitutions ☐

Increment Output: ☐ Variable Inc: ☐

Y Increment:

Disable Auto Cont. Increment ☒

Do not split RTF across Multiple Pages ☐

Do not output below Detail end ☐

If All Text Does Not Fit Generate ☐ Warning ☐ Exception

If Font not available Generate ☐ Warning ☐ Exception

Var Start String: <#

Var End String: >

Auto Continue ☐

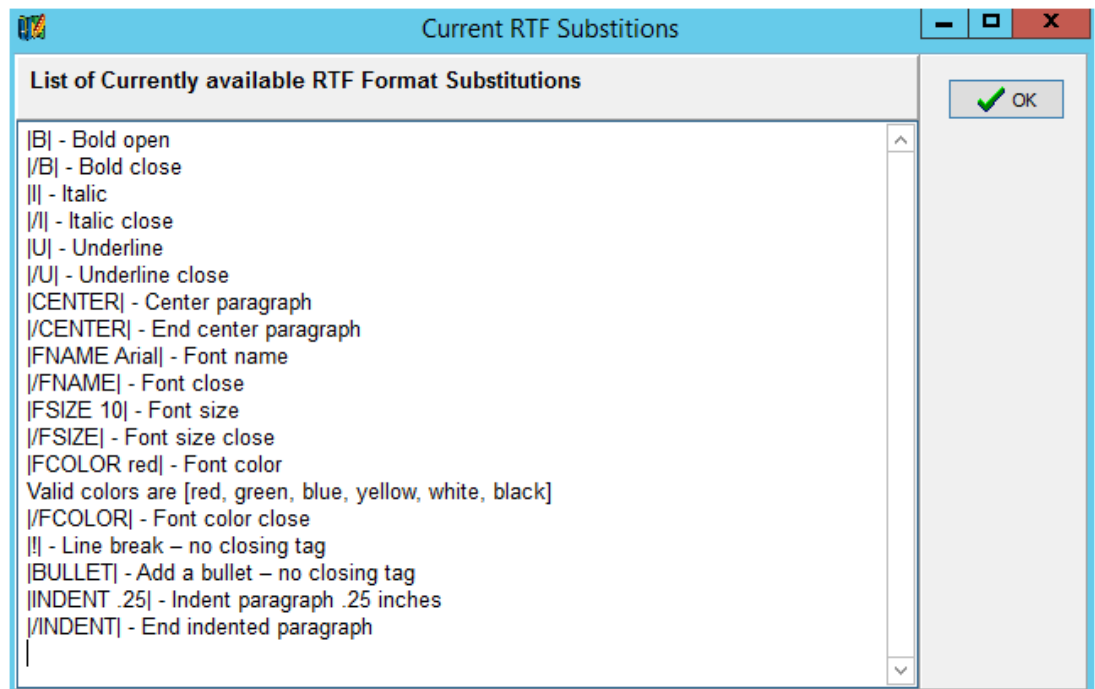
Format Substitutions ☒ **Current Substitutions**

If **Format Substitutions** is checked it enables the substitutions options to be used to format the RTF. If this is checked there will be a Current Substitutions button that is displayed. Click on **Current Substitutions** to see the list of current RTF substitutions that can be used to format the text in the RTF.

If Format Substitutions is not checked, but the substitution is in the data or RTF text, then it will be output as text and not used to format.

RTF - Marketing Message Variable

[B]Joe Auto Repair[/B] is having a [I][F]COLOR RED[Buy 3 Get 1 Free [/I][F]COLOR[tyre sale until the end of July. Visit Joe Auto Repair today on 21st Street for sizes and prices.



When format substitutions is checked, the formatting can be embedded in the data or formatted in the RTF editor. This example shows both.

Editor:

Output:

RTF - Marketing Message Variable (with Format Substitutions)

Joe Auto Repair is having a *Buy 3 Get 1 Free* tyre sale until the end of July. Visit Joe Auto Repair today on 21st Street for sizes and prices.

If the data contains the formatting and is being output using a variable or field mapping command, the format substitutions will not be respected and will be output as text.

[B]Joe Auto Repair[/B] is having a [I][F]COLOR RED[Buy 3 Get 1 Free [/I][F]COLOR[tyre sale until the end of July.

Warnings and Exceptions can be generated for the text and/or font in the RTF.

The Text and Font options function the same.

If the **Warning** setting is checked, it will write a record into the submission transaction table stating that the text did not fit in the area. The submission will continue to process.

If **Exception** is checked, the record will still be written in the table but the submission will error during Breakpack and not continue to process. The records can be accessed in uSetup and uControl within the submission transaction details.

RTF Mapping

Name:

Output Position: Parameter Type:

X

Width Height

Param Type:

Use on Print (Non Uluro NativePDF) ☒

Use on Print (Uluro NativePDF) ☒

Use on Web (PDF or PNG) ☒

Var Start String:

Var End String:

Auto Continue ☐

Format Substitutions ☐

Increment Output: ☐ Variable Inc: ☐

Y Increment:

Disable Auto Cont. Increment ☒

Do not split RTF across Multiple Pages ☐

Do not output below Detail end ☐

If All Text Does Not Fit Generate ☐ Warning ☐ Exception

If Font not available Generate ☐ Warning ☐ Exception

With Auto Continue enabled and Increment Output disabled the output will appear as it does in the image on the right.

Increment Output: ☐ Variable Inc: ☒

Variable Increment:

Disable Auto Cont. Increment ☒

Do not split RTF across Multiple Pages ☐

Do not output below Detail end ☐

1	1	[1-1]	Should be: [1]
2	2	[2-1]	Should be: [2]
4	3	[3-1]	Should be: [4]
7	4	[4-1]	Should be: [7]

Page 474 of 514

Increment Output enabled and Y Increment set to 0 would result in:

1 1 [1-1] Should be: [1]
2 2
4 3
7 4

[2-1] Should be: [2]

The Output will change **based** on the Viewer (program or Browser).
The output will not be scaled to fit in the available window,
It will be designed in Ucompose to fit within the window.
This may require different fields being displayed (fewer fields on the smaller display) and a different layout (multiple lines, Different Font, etc).
1-11-21-3

The Output will change **based** on the Viewer (program or Browser).
The output will not be scaled to fit in the available window,
It will be designed in Ucompose to fit within the window.
This may require different fields being displayed (fewer fields on the smaller display) and a different layout (multiple lines, Different Font, etc).

Notice the 2nd RTF paragraph ends before it is complete. It is continued on Page 2.

[2-1]
[3-1] Should be: [4]

[4-1] Should be: [7]

2-12-22-3

The Output will change **based** on the Viewer (program or Browser).
The output will not be scaled to fit in the available window,
It will be designed in Ucompose to fit within the window.
This may require different fields being displayed (fewer fields on the smaller display) and a different layout (multiple lines, Different Font, etc).
3-13-22-3

The Output will change **based** on the Viewer (program or Browser).
The output will not be scaled to fit in the available window,
It will be designed in Ucompose to fit within the window.
This may require different fields being displayed

The Detail System Variable Sys_DetRTFRestart will be True on the first detail line after an RTF Paragraph and force a New Page. It can be used with a Conditional to enable or disable the display of other mappings in a Detail section.

The example above shows the use of Sys_DetRTFRestart to enable the display of the Red line that reads “Should be: [x]”.

Without the Conditional the Line2 mapping would be displayed on page 1 and page 2.

```
map.var. MEMO1 >> 2, 1.40, 0.97
Cond:If Sys_DetRTFRestart = F then
  Map:Var: LINE2 >> 2, 2.10, 0.99
  Map:Var: Sys_DetLineID >> 0, 2.13, 0.00
```

Page 1 would be

1 1	[1-1]	Should be: [1]	The Output will change based on the Viewer (program or Browser). The output will not be scaled to fit in the available window. It will be designed in Ucompose to fit within the window. This may require different fields being displayed (fewer fields on the smaller display) and a different layout (multiple lines, Different Font, etc). 1-11-21-3
2 2			
4 3			
7 4			
	[2-1]	Should be: [2]	The Output will change based on the Viewer (program or Browser). The output will not be scaled to fit in the available window. It will be designed in Ucompose to fit within the window. This may require different fields being displayed (fewer fields on the smaller display) and a different layout (multiple lines, Different Font, etc).

Page 2 would be:

[2-1]	Should be: [2]	2-12-22-3	The Output will change based on the Viewer (program or Browser). The output will not be scaled to fit in the available window. It will be designed in Ucompose to fit within the window. This may require different fields being displayed (fewer fields on the smaller display) and a different layout (multiple lines, Different Font, etc). 3-13-22-3
[3-1]	Should be: [4]		
[4-1]	Should be: [7]		The Output will change based on the Viewer (program or Browser). The output will not be scaled to fit in the available window. It will be designed in Ucompose to fit within the window. This may require different fields being displayed

If the repeat of all the Mappings on additional pages is desired, then do not use Sys_DetRTFRestart. If suppression of the Mappings on additional pages is desired, then use Sys_DetRTFRestart and place all non-repeating mappings in a group beneath the conditional.

The Detail System Variable Sys_DetLineID is a Unique Identifier for each Detail Line output. This includes the new Detail created on Additional Pages generated by the Auto Continue setting in the RTF Paragraph command.

RTF Details that are split will create duplicates. The problem occurs when the RTF contains a table and one of the columns is too large to fit.

Use on Print (Non Uluro NativePDF) ☒

Use on Print (Uluro NativePDF) ☒

Use on Web (PDF or PNG) ☒

Var Start String: <#

Var End String: >

Auto Continue ☐

Format Substitutions ☐

Increment Output: ☐ Variable Inc: ☐

Y Increment: 0.0000

Set Default

Disable Auto Cont. Increment ☒

Do not split RTF across Multiple Pages ☐

Do not output below Detail end ☐

On page 1 the detail transactions show Debit \$73,421.86 and \$21,293.14

Transactions				
Date	Description	Check #	Debit	Cr
02/01	Wire Transfer Debit Uluro Company, LLC 102000021 103690296415 5680 NEW Uluro Plaza Boulevard Uluro Village, CO 37067 US BANK CO Uluro uluro, CO proceeds from sale Service reference 16080 2212 Uluro Avenue 01-16-3930 20170201FED ADV 000001		\$73,421.86	
02/01	Wire Transfer Debit Maurice T. Uluro 262183749 0000006838494 14402 Lusby Uluro MD 37067 ARMY AVIATION Uluro, TN Sale Proceeds 14402 Lusby Ridge Uluro TN		\$21,293.14	

Page 3 shows the continuation of the 2nd detail and then part of the 2nd detail.

Transactions (Continued)				Statement Date Page
Date	Description	Check #	Debit	Credit
02/01	Wire Transfer Debit Maurice T. Uluro 262183749 0000006838494 14402 Lusby Uluro MD 37067 ARMY AVIATION Uluro, TN Sale Proceeds 14402 Lusby Ridge Uluro TN 37067 20170201FED ADV 000004 37067 20170201FED ADV 000004		\$21,293.14	
02/01	CASHED CHECK	0507	\$0,350.00	

This occurs because the detail RTF contains a table with all 4 columns. The RTF will Restart the Detail and then adds the section that was not originally printed.

Var Start String:

<#

Var End String:

>

Auto Continue☒

Disable Auto Cont. Increment☒

Do not split RTF across Multiple Pages☒

Do not output below Detail end☐

When **Do not split RTF across Multiple Pages** is checked, it will start a new page if necessary instead of splitting the Detail. Note that Auto Continue should also be checked. This allows the RTF to Grow as necessary.

Now the 1st page will contain only the 1st Detail

Transactions			
Date	Description	Check #	Debit
02/01	Wire Transfer Debit Uluro Company, LLC 102000021 103690296415 5680 NEW Uluro Plaza Boulevard Uluro Village, CO 37067 US BANK CO Uluro uluro, CO proceeds from sale Service reference 16080 2212 Uluro Avenue 01-16-3930 20170201FED ADV 000001		\$73,421.86

Page 3 will contain the detail line that was being duplicated

Transactions (Continued)				Statement Date Page
Date	Description	Check #	Debit	Credit
02/01	Wire Transfer Debit Maurice T. Uluro 262183749 0000006838494 14402 Lusby Uluro MD 37067 ARMY AVIATION Uluro, TN Sale Proceeds 14402 Lusby Ridge Uluro TN 37067 20170201FED ADV 000004		\$21,293.14	
02/01	Wire Transfer Debit Uluro.com 121000248 4125536268 1 Uluro Uluro, CA 37067 37067 NA SAN 37067, TN Auction Item #AP50642E 2212 Uluro Avenue PTE File 01-16-3930 20170201FED ADV 000001		\$1,762.50	

When **Do not output below Detail end** is not checked a Detail RTF may start before the bottom of the Detail section and continue below the RTF Detail. This can cause an RTF detail that would start before the Detail end and end after the detail end.

The bottom of Page 8 will show this issue.

033003258 10004370 ROCKVILLE TN EAGLEBANK Brentwood, TN 8921 Town Center Circle Unit 1 Upper Marlboro TN 37067 Atty Fee and Title Exam 20170210FED ADV 000010			
02/10	TNSHED CHECK	9649	\$7,895.00
02/10	TNSHED CHECK	9679	\$6,380.00

Checking Do not output below Detail end will cause these to move to the next page.

02/10	Wire Transfer Debit Old Title and Escrow 055003298 10004570 Rockville TN EAGLEBANK Brentwood, TN 8921 Town Center Circle Unit 1 Upper Marlboro TN 37067 Atty Fee and Title Exam 20170210FED ADV 000010		\$700.00
02/10	TNSHED CHECK	9649	\$7,895.00

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XXXXXX

Stateme
Page

Transactions (Continued)

Date	Description	Check #	Debit
02/10	TNSHED CHECK	9679	\$6,380.00
02/10	TNSHED CHECK	9641	\$5,526.50
02/10	TNSHED CHECK	9628	\$4,052.52

For the Best Results Both Do not Split RTF across Multiple Pages and Do not output below Detail end should be checked.

Click the OK button to save the RTF Command. Click the Cancel button to cancel all changes to the RTF Command.

Output Display Window

The Output Display is the area that contains the output of the Mapping of the Input Data using the Map commands.

In a New Map the Output Display will be blank and remain blank until the output page command is defined.

The Output Display contains three areas: 1) Top Status Area, 2) Central Area, and 3) Bottom Status Area.

The Top Status area contains the Name of the currently selected print driver. The **Current Page** displays the page visible in the Output Display of the total number of pages in that document. The **Current Zoom** (value in percent) and **Current Resolution** can be adjusted to view the document as desired.

Checking the **Anti-Aliased Fonts** box will turn on font aliasing. This is checked by default.

Output Display (CutePDF Writer)

☒ Anti-Aliased Fonts

Current Page: 1 of 3
Current Zoom: 100
Current Resolution: 96 DPI

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16 CLAREMONT RD
SCARSDALE, NY 10583

Page 1 of 1

Service Period Date: 01/07/2014 - 02/06/2014

Account Number 1175250-488100

Billing Date 02/14/2014

Last Bill Amount 91.39

Payments Received -91.39

Adjustments 0.00

Current Due 03/07/2014 109.38

Total Amount Due \$ 109.38

SAVE A TREE
SAVE A FOREST

Sign Up For Electronic Billing
 Contact Customer Service
 or visit www.pitneybowes.com

Account Detail	Usage	Charge
EL BASE CHG, RESIDENTIAL		4.50
EL \$.07657 / KWH	856.00	65.54
EL \$.04284 POWER COST	856.00	36.67
TOTAL ELECTRIC		106.71
GR FL GROSS RECEIPTS TX		2.67
TOTAL TAX		2.67

Account Detail	Usage	Charge

Service Address: 16 Claremont Rd

Account Number	Cycle	Bill Date	Total Amount Due
1175250-488100	10-01	02/14/2014	
Current Charges	Code	Due Date	\$ 109.38
	BL	03/07/2014	

Remittance

IF PAYING BY VISA, MASTERCARD, OR DISCOVER, FILL OUT BELOW

CHECK CARD USING FOR PAYMENT

☒ VISA
 ☐ MASTERCARD
 ☐ DISCOVER

CARD NUMBER _____ CARD SECURITY CODE _____

SIGNATURE _____ EXP. DATE _____

AMOUNT PAID _____

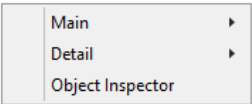
X = 6.76
Y = 6.70
1
Automatically Select
Duplex Long Front

This document was printed on an environmentally friendly printer

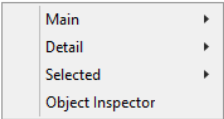
The Central Area contains the output display. The output display will contain a dotted line that represents the printer specific printable area. All commands that generate printable objects will be displayed including barcodes and images. Areas can be selected, indicated by a green outline, in the output display and moved. When an area is selected the corresponding command is also selected in the Map Commands list.

If the “Edit on Dbl-Click” or “Edit Map Command on Dbl-Click” setting has been enabled, then double-clicking on the Current Output command will display the edit for the command.

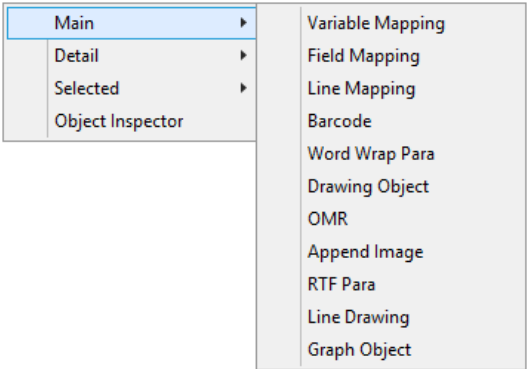
While in the Central Area, right-clicking will result in a pop-up menu. By default, the menu is:



If an object had been selected prior to right-clicking, the menu includes a selected option:

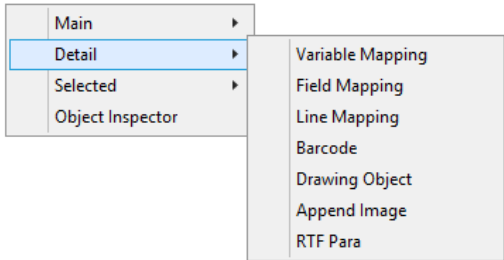


The Main option will allow adding new commands to the Map Commands Display tab. The command will be added after (or before depending on the “Add Command After Selected” setting) the currently selected command in the Map Commands Display tab. The command will occur at the (X,Y) position of the Cursor on the screen.



The Detail option will allow adding commands to the currently selected Detail section.

The command will be added after (or before depending on the “Add Det Command After Selected” setting) the currently selected command in the Map Commands Detail tab. The command will occur at the X position of the Cursor on the screen.

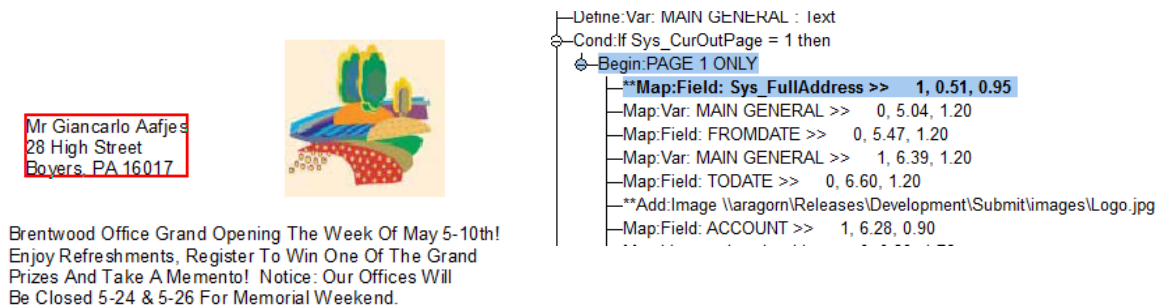
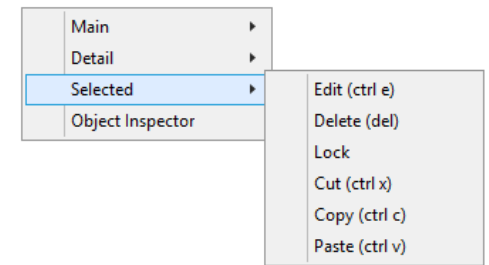


The Selected option is visible if a command was previously selected. This allows the user to adjust the selected command.

Edit will allow editing the command.

Delete will delete the command.

Lock will lock the command, indicated by a red outline when selected. Locked commands cannot be moved by mouse drag. Locked commands also appear with ** at the beginning of the Command in the Map Commands Window. The lock status is not saved.



Cut will cut the command.

Copy will copy it and allow the user to Paste it, using Paste, within the Map Commands where desired.

The [Object Inspector](#) option will make the Object Inspector window appear. This can be useful in adjusting positions of the output.

The bottom status area will display information about the Cursor Position values, Current output page number, the Tray being used, and the duplex information. The Cursor positions are in inches for the location of the mouse in the Central Output area. As the mouse moves, these values will update. The current page number is listed in the Bottom Status area in addition to the Top Status area. The Tray being used for that sheet/page and the Duplexing information will depend on the printer as well as the setup of the Output definition.

Additional Resources

Template Maps

uSetup

In uSetup select a customer and select the Template Fields Tab.

This contains a list of the available fields and the fields in use.

There are 4 types of fields.

Font – Fields used for Font Names.

Font Styles – Styles of fonts.

Font Sizes :

Color – Fields used for Colors.

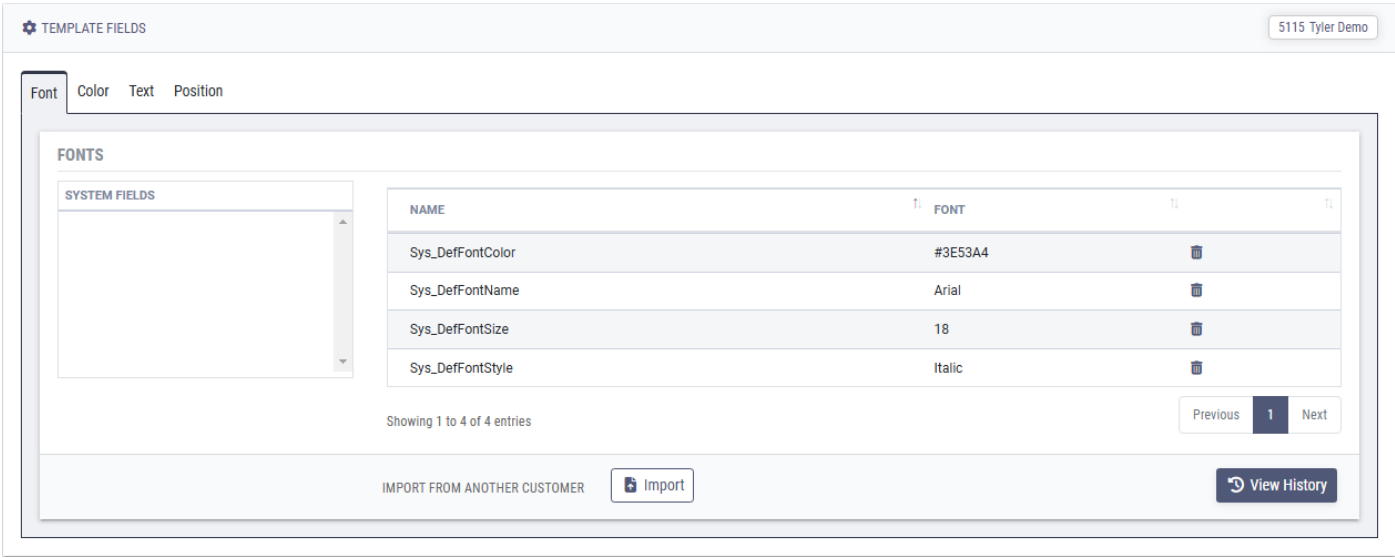
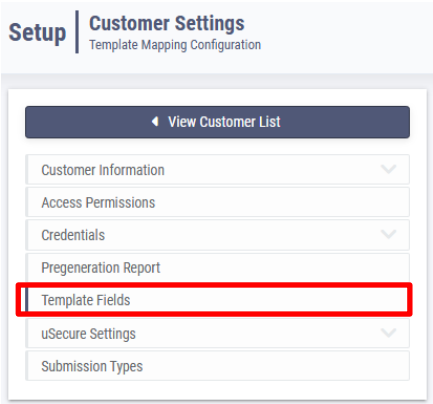
Text – Fields used for Text. This can be used for Fonts, Images, or any text.

Position – Fields used for position information.

Click on a Field on the Left side to enter a value and move to the right side.

Click on the assigned fields to edit the field value.

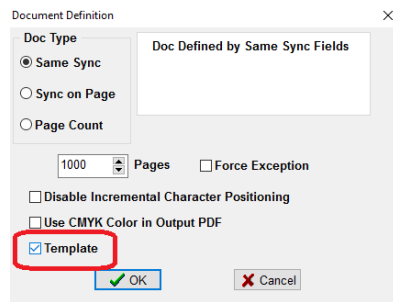
Press the Trash Can to Delete the field.



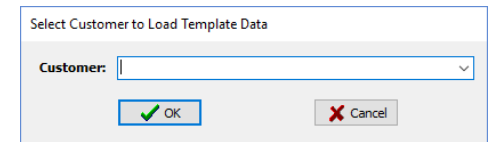
Relay Unify uCompose

In Relay Unify uCompose enable the Templates on a Map by selecting the Define Document command from the Doc tab.

Check the Template tab and click ok.

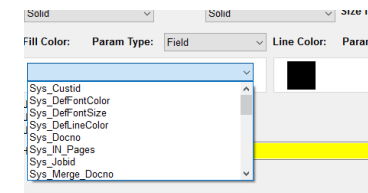


A customer will need to be selected to load the template data. Select a customer and click OK.

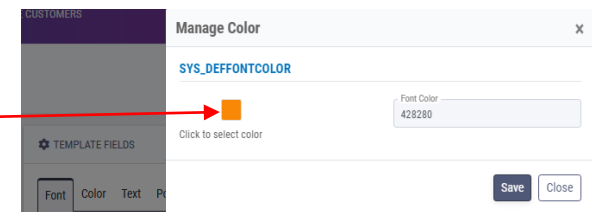
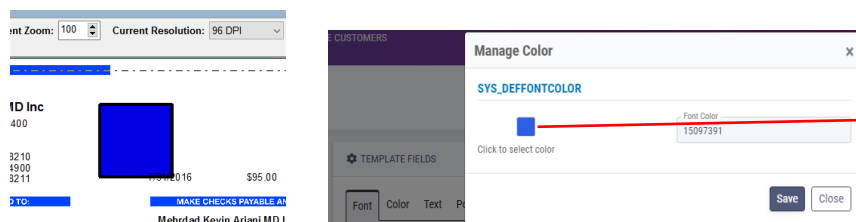


When editing a command, a new set of Fields will be available. The new fields are the Template Fields.

If a Template field is used, then the field can be changed by editing the value in uSetup.

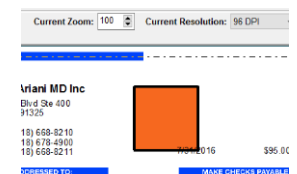
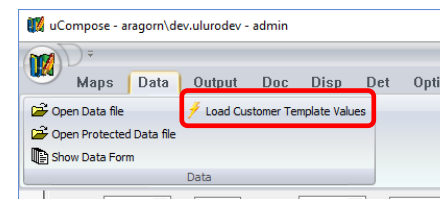


The square is set to the Sys_DefFontColor selection. If this is changed in uSetup to a different color and the map is reloaded or the Load Customer Template Values is selected from the Menu, the color will reflect the new value.



The Fields are copied during Breakpack to the Map. This locks the field values at the time of Breakpack.

After Breakpack changes to the Template values will not be updated. If an Update is desired, then use the uRemap program. The uRemap program will copy the new values to the Map during the update.



Template Field Display tab

In Relay Unify uCompose when a template map is opened and the customer is selected, the template fields are displayed with the current values of the fields.

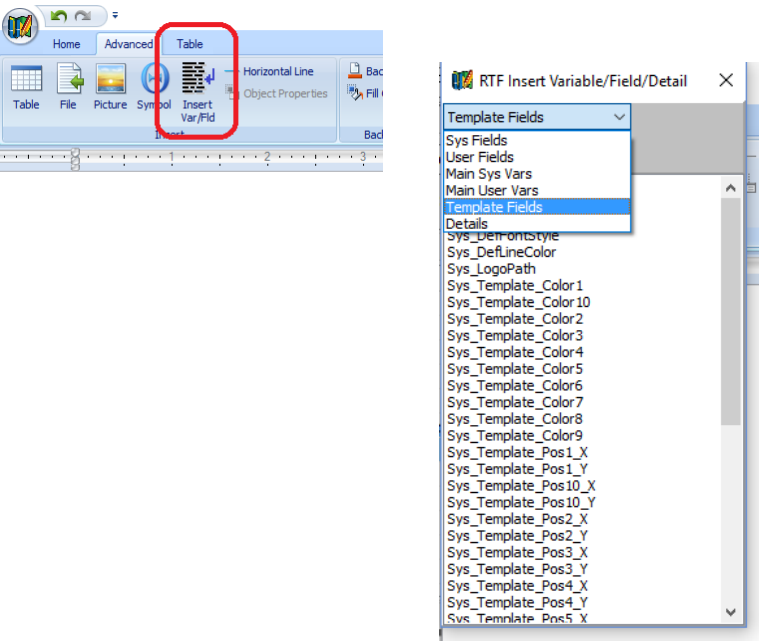
Colors are currently represented as integer values.

Doc #: 1 of 1 Page: 1 of 1

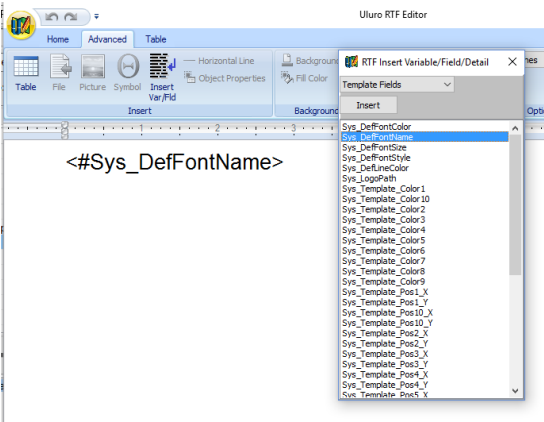
Data	Fields	Temp Fields	System	Variables
Tempmlate Field		Value		
Sys_DefFontColor		231926		
Sys_DefFontName		Arial		
Sys_DefFontSize		12		
Sys_DefFontStyle		Bold-Italic		
Sys_DefLineColor		16740394		
Sys_LogoPath		uwater/logo.png		
Sys_Template_Color1		55358		
Sys_Template_Color10		0		
Sys_Template_Color2		0		
Sys_Template_Color3		0		
Sys_Template_Color4		0		

Template Field list in RTF Editor

In Relay Unify uCompose in the RTF Editor, when inserting variables or Fields the Template fields are now listed.



The field can be inserted like any other field or variable in the RTF paragraph.



Using Global Variables

Global Variables can be used to pass information from one document to another instead of using a prep to duplicate data.

Caution

Global Variables can be used at print time. Once a value is set on the Global Variable the value can be used and changed on following documents.

This means that at Print Time a global variable can be set on the first document of the print. The documents following can use this data. The data will not necessarily be the same data presented in Relay Unify uCompose since the Data in Relay Unify uCompose is presented in document Number order. Print Jobs can present the data in a different order depending on sort. Print Jobs may also not contain all the data in a submission or may contain data from multiple submissions.

Best Practice

If consistent data is desired, use “If Sys_InBreakpack = Y” before a group that assigns data to save to DB fields. The Conditional will cause the assignments to be made only during Breakpack and the Save To DB fields will be stored. The Save to DB fields will be retrieved from the database during printing and will be the same regardless of the print order or multiple submissions.

Variables

Each data type has 10 Global Variables.

Text Variables

GV_Text01_Sys
GV_Text02_Sys
GV_Text03_Sys
GV_Text04_Sys
GV_Text05_Sys
GV_Text06_Sys
GV_Text07_Sys
GV_Text08_Sys
GV_Text09_Sys
GV_Text10_Sys

Date Variables

GV_Date01_Sys
GV_Date02_Sys
GV_Date03_Sys
GV_Date04_Sys
GV_Date05_Sys
GV_Date06_Sys
GV_Date07_Sys
GV_Date08_Sys
GV_Date09_Sys
GV_Date10_Sys

Integer Variables

GV_Int01_Sys
GV_Int02_Sys
GV_Int03_Sys
GV_Int04_Sys
GV_Int05_Sys
GV_Int06_Sys
GV_Int07_Sys
GV_Int08_Sys
GV_Int09_Sys
GV_Int10_Sys

Real Variables

GV_Real01_Sys
GV_Real02_Sys
GV_Real03_Sys
GV_Real04_Sys
GV_Real05_Sys
GV_Real06_Sys
GV_Real07_Sys
GV_Real08_Sys
GV_Real09_Sys
GV_Real10_Sys

Currency Variables

GV_Curr01_Sys
GV_Curr02_Sys
GV_Curr03_Sys
GV_Curr04_Sys
GV_Curr05_Sys
GV_Curr06_Sys
GV_Curr07_Sys
GV_Curr08_Sys
GV_Curr09_Sys
GV_Curr10_Sys

Boolean Variables

GV_Bool01_Sys
GV_Bool02_Sys
GV_Bool03_Sys
GV_Bool04_Sys
GV_Bool05_Sys
GV_Bool06_Sys
GV_Bool07_Sys
GV_Bool08_Sys
GV_Bool09_Sys
GV_Bool10_Sys

Use Cases

The following are common reasons for using Global Variables.

Information in Document 1 only

Sometimes the first document contains information needed by other documents. An example would be where the 1st document contains the Company Name, Address, Phone # etc.

This can be placed in a Text Variable and passed between documents.

This can be seen in the Map Doc1DataMap.nmp using data documentdata.txt

Verification of Data

Sometimes the last document contains information about how many documents or balance total.

This can be done by keeping a running count and looking for the document with the Totals. Then compare the totals and generate an error if the count or balance is not correct.

This VerificationMap.nmp using data CheckBalances.txt

Page Count for Merged Jobs with Coversheet

To enable this ability, create a record in the RPMisc table for the Relay Unify database instance with RPMiscKey = 'MergeDocReductions' and RPMISCValue = 'Y'.

In Relay Unify uCompose, manually create two Save to DB fields: sys_Merge_Page_Reduction and sys_Merge_Sheet_Reduction. Both fields need to be assigned a value.

The value of these fields will be the number of pages and sheets that will not print if the document is not the address document in a merge. The total number of pages, sheets, and weight will be adjusted accordingly during the merge.

The screenshot shows the 'Edit Fields' dialog box for the field 'SYS_MERGE_PAGE_REDUCTION'. The 'Occurrence' section has 'First' selected. The 'Value Type' section has 'Text' selected. The 'Function' section has a dropdown menu and a text input field. The 'System Field Link' section has a dropdown menu. The 'Define' tab is active, showing the 'Field Type' section with 'Fixed' selected. The 'Fixed Value' section has a text input field containing '1'. The 'Save to DB' checkbox is checked. The dialog box has 'OK' and 'Cancel' buttons at the bottom.

The screenshot shows the 'Edit Fields' dialog box for the field 'SYS_MERGE_SHEET_REDUCTION'. The 'Occurrence' section has 'First' selected. The 'Value Type' section has 'Text' selected. The 'Function' section has a dropdown menu and a text input field. The 'System Field Link' section has a dropdown menu. The 'Define' tab is active, showing the 'Field Type' section with 'Fixed' selected. The 'Fixed Value' section has a text input field containing '1'. The 'Save to DB' checkbox is checked. The dialog box has 'OK' and 'Cancel' buttons at the bottom.

Fonts

Relay Unify supports and can use all fonts that can be installed in Windows.

When Printing Windows will create a representation of a Bold font even if the Font does not contain Bold characters. PDF's require the Bold version of the Font. Relay Unify will not generate a Bold Version of the Font by Moving a slight distance and redrawing the character. This will be a Type 3 font.

Only one instance of a font will be used in the PDF. Fonts from copied PDF's are not combined currently.

Embedded Fonts

Fonts that are not embedded may not appear correctly if the system viewing the PDF does not have the font.

To turn off the Embedding of a Font create a file named PDF.ini in the directory with the Program that will be creating the PDF. These programs are PNGDLL.dll, Relay Unify uCompose or RPPrintapp.exe.

Within the PDF.ini create a section named NOEMBEDFONTS.

Under the section add the Fonts that will not be embedded.

An example is:

[NOEMBEDFONTS]

1=ARIAL

2=Calibri

3=Calibri,Bold

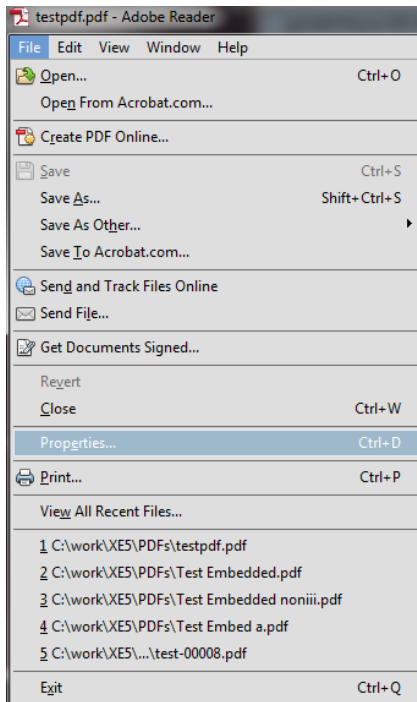
4=Courier

5=Tahoma

6=Times-Roman

With PDF's each style of the Font must be listed separately. The above indicates Calibri and Calibri,Bold will not be embedded.

To determine which fonts need to be removed, create the PDF from Relay Unify uCompose without the PDF.ini file. Open the newly created PDF and select File/properties from the menu.



Select the Fonts tab.

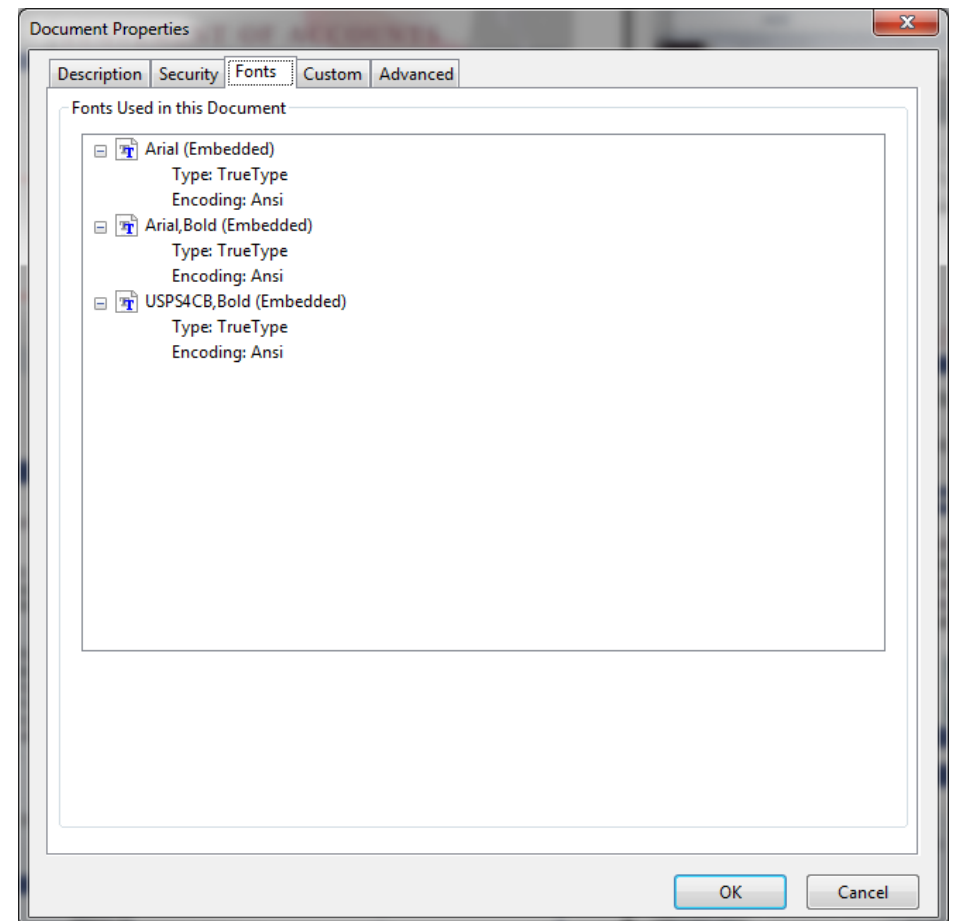
This will show the Fonts that are embedded.

Enter the name of the Fonts to be removed from embedding into the PDF.ini file.

[NOEMBEDFONTS]

1=Arial

2=Arial,Bold



Save the PDF.ini file in the Directory where Relay Unify uCompose is running.

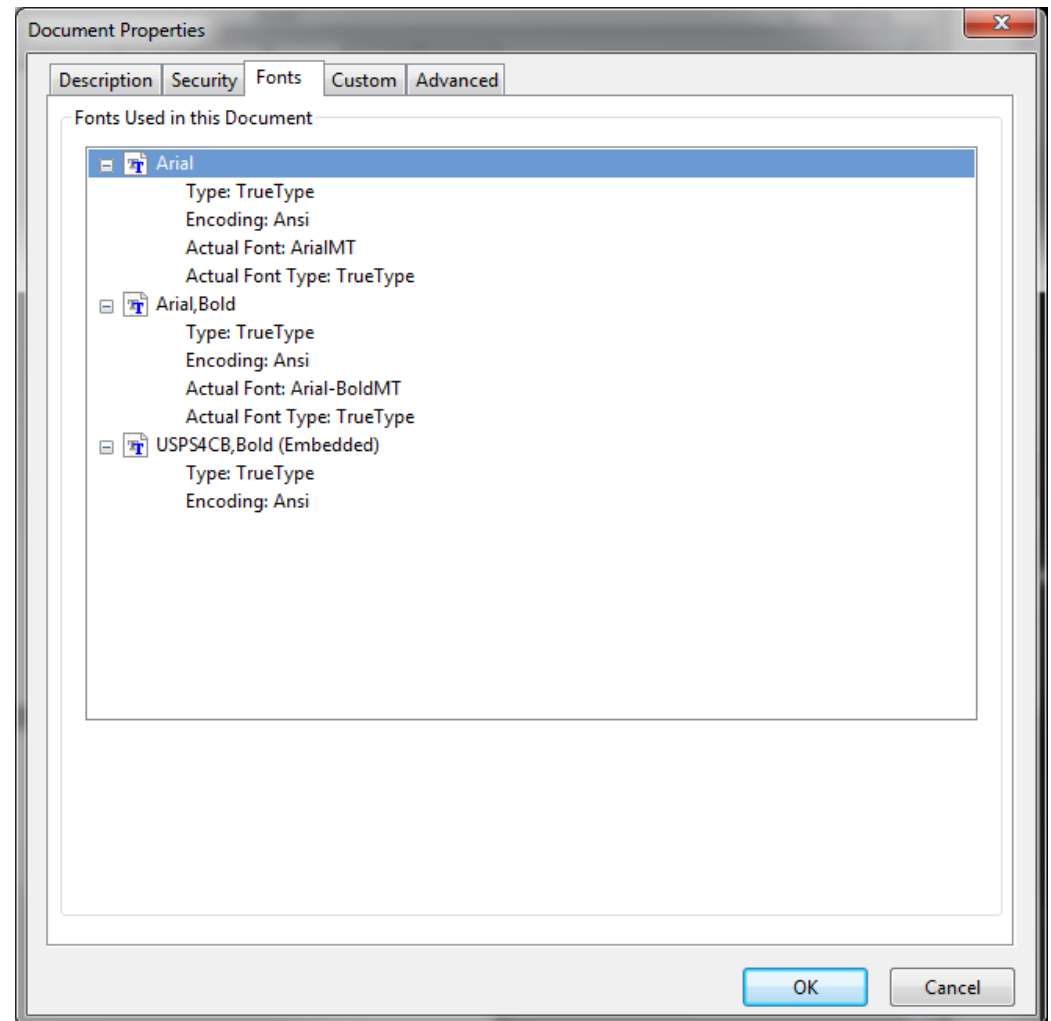
Create the PDF again with Relay Unify uCompose.

Open the New PDF and go to the File/Properties menu.

The Arial and Arial,Bold fonts are no longer embedded.

The file size has also been reduced since the font is not embedded.

Place this PDF.ini file in the Directory with the PNGDLL.dll and the RPPrintapp.exe.



Formatting

String

[CASE MODIFIER]%[JUSTIFICATION][PADDING][.MAXIMUM WIDTH][s,w,W]

'%%' = literal '%'

[CASE MODIFIER]

'#M' = mixed case

'#U' = upper case

'#L' = lower case

(NOTE: mappings with a case modifier must not have a label)

[JUSTIFICATION]

' ' (blank) = right-justify

'-' = left-justify

[PADDING]

The maximum number of spaces to pad the variable with.

[MAXIMUM WIDTH]

The maximum width of a variable. Variables longer than the maximum width will be truncated.

[s,w,W]

's' = regular string

'w' = spelled out numeric value

'W' = spelled out currency value

(NOTE: 'W' and 'w' formats are only available in the **Format** and **Assign Field** commands)

Examples:

```
%s, foo      = "foo"
%6s, foo      = "   foo"
%-6s, foo     = "foo   "
%2s, foo      = "foo"
%.2s, foo     = "fo"
%6.2s, foo    = "   fo"
%-6.2s, foo   = "fo   "
%w, 12.44     = twelve decimal forty four
%w, -12.44    = negative twelve decimal forty four
%W, 12.44     = twelve dollars and forty four cents
%W, -12.44    = minus twelve dollars and forty four cents
#L%s, fOO bAr = "foo bar"
#M%s, fOO bAr = "Foo Bar"
#U%s, fOO bAr = "FOO BAR"
```

Integer

%[JUSTIFICATION][PADDING][.ZERO PADDING][d,u,x]

'%%' = literal '%'

[JUSTIFICATION]

' ' (blank) = right-justify

'-' = left-justify

[PADDING]

The maximum number of spaces to pad the variable with.

[ZERO PADDING]

The maximum number of zeros to pad the left side of the variable with.

[d,u,x]

'd' = regular signed integer

'u' = unsigned integer (32-bit 2's complement)

'x' = hexadecimal

Examples:

```
%d, 1234    = 1234
%6d, 123    = "   123"
%-6d, 123   = "123   "
%2d, 123    = 123
%.6d, 123   = 000123
%6.4d, 123  = "  0123"
%-6.4d, 123 = "0123  "
%x, 123     = 7F
%d, -123    = -123
%x, -123    = FFFFFFF85
%u, -123    = 4294967173
```

Floating Point / Real / Currency

%[JUSTIFICATION][PADDING].[PRECISION][e,f,g,m,n]

'%%' = literal '%'

[JUSTIFICATION]

' ' (blank) = right-justify

'-' = left-justify

[PADDING]

The maximum number of spaces to pad the variable with.

[PRECISION]

The maximum number of decimal places to show.

[e,f,m,n]

'e' = scientific notation; defaults to 15 decimal places

'f' = regular floating-point number; defaults to 2 decimal places

'm' = dollar format with dollar sign, thousand's separators and parenthesis for negative numbers; defaults to 2 decimal places.

'n' = number format with thousand's separators; defaults to 2 decimal places

Examples:

```
%f, 1234.5678    = 1234.57
%f, -1234.5678   = -1234.57
%.5f, 1234.5678  = 1234.56780
%.1f, 1234.5678  = 1234.6
%e, 1234.5678    = 1.234567800000000E+003
%e, -1234.5678   = -1.234567800000000E+003
```



```
%m, 1234.5678    = $1,234.57
%m, -1234.5678   = ($1,234.57)
%n, 1234.5678    = 1,234.57
%n, -1234.5678   = -1,234.57
```

Date

'd' = displays the day number without a leading zero (1 - 31)

'dd' = displays the day number with a leading zero (01 - 31)

'ddd' = displays the three-letter day abbreviation (Sun - Sat)

'dddd' = displays the full day name (Sunday - Saturday)

'ddddd' = displays the 'Short Date' (m/d/yyyy)

'dddddd' = displays the 'Long Date' (dddd, mmmm dd, yyyy)

'm' = displays the month number without a leading zero (1 - 12)

'mm' = displays the month number with a leading zero (01 - 12)

'mmm' = displays the three-letter month abbreviation (Jan - Dec)

'mmmm' = displays the full month name (January - December)

'yy' = displays the 2-digit year

'yyyy' = displays the full, 4-digit year

"QUOTED TEXT" = displays the quoted text as-is

Examples:

```
d, 2/7/11      = 7
dd, 2/7/11     = 07
ddd, 2/7/11    = Mon
dddd, 2/7/11   = Monday
ddddd, 2/7/11  = 2/7/2011
dddddd, 2/7/11 = Monday, February 02, 2011
m, 2/7/11      = 2
mm, 2/7/11     = 02
mmm, 2/7/11    = Feb
mmmm, 2/7/11   = February
yy, 2/7/11     = 11
yyyy, 2/7/11   = 2011
"MONTH:" mm, "DAY:" dddd = MONTH: 02, DAY: Monday
```

Time

'ampm' = inserts an 'AM/PM' symbol and converts the nearest preceding hour into 12-hour format

'h' = displays the hour without a leading zero (1 -12)

'hh' = displays the hour with a leading zero (01 -12)

'n' = displays the minutes without a leading zero (0 -59)

'nn' = displays the minutes with a leading zero (00 - 59)

's' = displays the seconds without a leading zero (0 - 59)

'ss' = displays the seconds with a leading zero (00 -59)

't' = displays the 'Short Time' (h:nn ampm)

'tt' = displays the 'Long Time' (h:nn:ss ampm)

"QUOTED TEXT" = displays the quoted text as-is

Examples:

```
h ampm, 2:03 = 2 AM
      14:03 = 2 PM
h, 2:03:09 = 2
hh, 2:03:09 = 02
n, 2:03:09 = 3
nn, 2:03:09 = 03
s, 2:03:09 = 9
ss, 2:03:09 = 09
t, 2:03:09 = 2:03 AM
      14:03:09 = 2:03 PM
tt, 2:03:09 = 2:03:09 AM
      14:03:09 = 2:03:09 PM
"HOUR:" hh, "MINUTE:" nn = HOUR: 02, MINUTE: 03
```

Common Data Formatting Techniques

1. [Asterisk Padding](#)

→ *****

2. Date Formatting

[\(See the date variable formatting page\)](#)

3. [Manual ZIP+4 Formatting](#)

→ #####-####

4. [Masking Data](#)

→ *****

5. [Phone Number Formatting](#)

→ (###) ###-####

6. [Removing Zero Padding](#)

00000#### → ####

7. [Reversing Comma Separated Names](#)
LAST NAME, FIRST NAME → FIRST NAME LAST NAME
8. [Social Security Number Formatting](#)
→ ###-##-####
9. Spelled Out Dollar Amount
123.45 → one hundred twenty three dollars and forty five cents
([See the text variable formatting page](#))
10. [Zero Padding](#)
→ 00000####

Asterisk Padding

(For the purposes of this example, the data to be formatted is stored in a variable named "**DATA**")

1. Create a new text variable for the padded data.
(**PADDED DATA** will be used for this example)
2. Create a function below the variable definition to pad the data:
Result variable = PADDED DATA
Function = Format
Parameter 1 = variable, DATA
Parameter 2 = fixed, %12s
(replace "12" with the desired padding length)
3. Create a function below the padding function:
Result variable = PADDED DATA
Function = Regular expression
Parameter 1 = variable, PADDED DATA
Parameter 2 = fixed,
 - **Replace *all* spaces with asterisks**

```
s/\s/* /g
```

- **Replace *leading* spaces with asterisks:**

```
s/\G\s/*/g
```

4. **PADDED DATA** now has the formatted string.
-

Manual ZIP+4 Formatting

(For the purposes of this example, the data to be formatted is stored in a variable named "**ZIP CODE**")

1. Create a new text variable for the formatted ZIP code
(**FORMATTED ZIP** will be used for this example)
2. Create a function below the variable definition to format the ZIP code
Result variable = FORMATTED ZIP
Function = Regexp
Parameter 1 = variable, ZIP CODE
Parameter 2 = fixed,

```
s/(\d{5})(\d{4})/$1-$2/
```

3. **FORMATTED ZIP** now has the formatted string
-

Masking Data

(For the purposes of this example, the data to be masked is stored in a variable named "**DATA**")

1. Create a new text variable for the masked data
(**MASKED DATA** will be used for this example)
2. Create a function below the variable definition to mask the data
Result variable = MASKED DATA
Function = Regexp
Parameter 1 = variable, DATA
Parameter 2 = fixed,

```
s/^.+(\d{3})$/****$1/
```

3. **MASKED DATA** now has the formatted string
-

Phone Number Formatting

(For the purposes of this example, the data to be formatted is stored in a variable named "**PHONE NUMBER**")

1. Create a new text variable for the formatted phone number
(**FORMATTED PHONE NUMBER** will be used for this example)
2. Create a function below the variable definition to format the phone number
Result variable = FORMATTED PHONE NUMBER
Function = Regexp
Parameter 1 = variable, **PHONE NUMBER**
Parameter 2 = fixed,

```
s/(\d{3})(\d{3})(\d{4})/($1) $2-$3/
```

3. **FORMATTED PHONE NUMBER** now has the formatted string
-

Remove Zero Padding

(This can be done directly when defining a text field/variable with the "**Remove Zeros**" function)

(For the purposes of this example, the data to be formatted is stored in a variable named "**DATA**")

1. Create a new text variable for the formatted data
(**FORMATTED DATA** will be used for this example)
2. Create a function below the variable definition to format the data
Result variable = FORMATTED DATA
Function = Remove Zeros
Parameter 1 = variable, **DATA**
3. **FORMATTED DATA** now has the formatted string

Reversing Comma Separated Names

(This can be done directly when defining a text field/variable with the **"Reverse Text"** function with a **","** in the parameter text box to the right of the function drop-down)

(For the purposes of this example, the name to be reversed is stored in a variable named **"NAME"**)

1. Create a new text variable for the reversed name
(**REVERSED NAME** will be used for this example)
2. Create a function below the variable definition to reverse the name
Result variable = REVERSED NAME
Function = Reverse Text
Parameter 1 = variable, NAME
Parameter 2 = fixed, ","
3. **REVERSED NAME** now has the formatted string

Social Security Number Formatting

(For the purposes of this example, the data to be formatted is stored in a variable named **"SSN"**)

1. Create a new text variable for the formatted Social Security number
(**FORMATTED SSN** will be used for this example)
2. Create a function below the variable definition to format the Social Security number
Result variable = FORMATTED SSN
Function = Regexp
Parameter 1 = variable, SSN
Parameter 2 = fixed,

```
s/(\d{3}) (\d{2}) (\d{4})/$1-$2-$3/
```

3. **FORMATTED SSN** now has the formatted string

Zero Padding

(For the purposes of this example, the data to be formatted is stored in a variable named "**DATA**")

1. Create a new text variable for the padded data.
(**PADDED DATA** will be used for this example)
2. Create a function below the variable definition to pad the data:
Result variable = PADDED DATA
Function = Format
Parameter 1 = variable, DATA
Parameter 2 = fixed, %12s
(replace "12" with the desired padding length)
3. Create a function below the padding function:
Result variable = PADDED DATA
Function = Regular expression
Parameter 1 = variable, PADDED DATA
Parameter 2 = fixed,
 - **Replace *all* spaces with zeros**

```
s/\s/0/g
```

- **Replace *leading* spaces with zeros:**

```
s/\G\s/0/g
```

4. **PADDED DATA** now has the formatted string.

Format with #B

There is the ability to format numeric/currency values without coercing blank to "0". There was a change to allow the use of #B before % in Mapping Format String to indicate to output blank if 0. This is available for:

%d integer

%f Fixed Float

%g General floating point

%n Number floating point

%u unsigned integer
%x hexadecimal
%m Money

It allows Labels before and after. For example, Total #B%d gallons will result in "Total 100 gallons" if 100 is the value. If the Value is 0 the output will be "Total gallons" (one space instead of a number).

Formatting Strings

Additional Format Strings are available for Changing the Case of a string.

There is the ability to use "[LMU]" format strings with labels like the "#B%m" format string.

Text variables can be made lower/mixed/upper case with one of the following format strings:

#L%s #M%s #U%s

Text variables can also be formatted to have labels with the following format string:

This is a label: [%s]

The two formats can be combined.

Regular Expressions

Introduction

Regular Expressions are a widely used method of specifying patterns of text for which to search. Special metacharacters allow one to specify, for instance, that a particular string one is looking for occurs at the beginning or end of a line or contains 'n' recurrences of a certain character.

Regular expressions look difficult for novices, but really, they are very simple and can be a powerful tool.

It is recommended to play with regular expressions using RegExp Studio to help one understand main conceptions. Moreover, there are many predefined examples with comments included into repository of R.e. visual debugger.

A search of the Internet will provide additional documentation and examples of Regular Expressions.

Simple matches

Any single character matches itself, unless it is a metacharacter with a special meaning described below.

A series of characters matches that series of characters in the target string, so the pattern "bluh" would match "bluh" in the target string.

The user can cause characters that normally function as metacharacters or escape sequences to be interpreted literally by 'escaping' them by preceding them with a backslash "\", for instance: metacharacter "^" match beginning of string, but "\\^" match character "^", "\\\" match "\"" and so on.

Examples:

foobar matchs string 'foobar'

\\^FooBarPtr matchs '^FooBarPtr'

Escape sequences

Characters may be specified using an escape sequences syntax much like that used in C and Perl: "\\n" matches a newline, "\\t" a tab, etc. More generally, "\\nn", where nn is a string of hexadecimal digits, matches the character whose ASCII value is nn. If wide (Unicode) character code is needed, one can use "\\x{nnnn}", where 'nnnn' - one or more hexadecimal digits.

\\xnn char with hex code nn

`\x{nnnn}` char with hex code nnnn (one byte for plain text and two bytes for Unicode)

`\t` tab (HT/TAB), same as `\x09`

`\n` newline (NL), same as `\x0a`

`\r` car.return (CR), same as `\x0d`

`\f` form feed (FF), same as `\x0c`

`\a` alarm (bell) (BEL), same as `\x07`

`\e` escape (ESC), same as `\x1b`

Examples:

`foo\x20bar` matchs 'foo bar' (note space in the middle)

`\tfoobar` matchs 'foobar' predefined by tab

Character classes

One can specify a character class by enclosing a list of characters in `[]`, which will match any one character from the list.

If the first character after the `"["` is `"^"`, the class matches any character not in the list.

Examples:

`foob[aeiou]r` finds strings 'foobar', 'foober' etc. but not 'foobbr', 'foobcr' etc.

`foob[^aeiou]r` find strings 'foobbr', 'foobcr' etc. but not 'foobar', 'foober' etc.

Within a list, the `"-"` character is used to specify a range, so that `a-z` represents all characters between `"a"` and `"z"`, inclusive.

If one wants `"-"` itself to be a member of a class, put it at the start or end of the list, or escape it with a backslash. If You want `"]"` you may place it at the start of list or escape it with a backslash.

Examples:

`[-az]` matchs 'a', 'z' and '-'

`[az-]` matchs 'a', 'z' and '-'

[a\~z] matches 'a', 'z' and '-'

[a-z] matches all twenty six small characters from 'a' to 'z'

[\n~\x0D] matches any of #10,#11,#12,#13.

[\d~t] matches any digit, '-' or 't'.

[]~a] matches any char from ']'..'a'.

Metacharacters

Metacharacters are special characters which are the essence of Regular Expressions. There are different types of metacharacters, described below.

Metacharacters - line separators

^ start of line

\$ end of line

\A start of text

\Z end of text

. any character in line

Examples:

^foobar matches string 'foobar' only if it's at the beginning of line

foobar\$ matches string 'foobar' only if it's at the end of line

^foobar\$ matches string 'foobar' only if it's the only string in line

foob.r matches strings like 'foobar', 'foobbr', 'foob1r' and so on

The "^" metacharacter by default is only guaranteed to match at the beginning of the input string/text, the "\$" metacharacter only at the end. Embedded line separators will not be matched by "^" or "\$".

You may, however, wish to treat a string as a multi-line buffer, such that the "^" will match after any line separator within the string, and "\$" will match before any line separator. You can do this by switching On the modifier /m.

The \A and \Z are just like "^" and "\$", except that they won't match multiple times when the modifier /m is used, while "^" and "\$" will match at every internal line separator.

The "." metacharacter by default matches any character, but if You switch Off the modifier /s, then '.' won't match embedded line separators.

TRegExpr works with line separators as recommended at www.unicode.org (<http://www.unicode.org/unicode/reports/tr18/>):

"^" is at the beginning of a input string, and, if modifier /m is On, also immediately following any occurrence of \x0D\x0A or \x0A or \x0D (if You are using Unicode version of TRegExpr, then also \x2028 or \x2029 or \x0B or \x0C or \x85). Note that there is no empty line within the sequence \x0D\x0A.

"\$" is at the end of a input string, and, if modifier /m is On, also immediately preceding any occurrence of \x0D\x0A or \x0A or \x0D (if You are using Unicode version of TRegExpr, then also \x2028 or \x2029 or \x0B or \x0C or \x85). Note that there is no empty line within the sequence \x0D\x0A.

"." matches any character, but if You switch Off modifier /s then "." doesn't match \x0D\x0A and \x0A and \x0D (if You are using Unicode version of TRegExpr, then also \x2028 and \x2029 and \x0B and \x0C and \x85).

Note that "^.*\$" (an empty line pattern) does not match the empty string within the sequence \x0D\x0A, but matches the empty string within the sequence \x0A\x0D.

Multiline processing can be easily tuned for Your own purpose with help of TRegExpr properties LineSeparators and LinePairedSeparator. You can use only Unix style separators \n or only DOS/Windows style \r\n or mix them together (as described above and used by default) or define Your own line separators!

Predefined classes

`\w` an alphanumeric character (including "_")
`\W` a nonalphanumeric
`\d` a numeric character
`\D` a non-numeric
`\s` any space (same as [`\t\n\r\f`])
`\S` a non-space

One can use `\w`, `\d` and `\s` within custom character classes.

Examples:

`foob\d` matches strings like 'foob1r', 'foob6r' and so on but not 'foobar', 'foobbr' and so on

`foob[\w\s]` matches strings like 'foobar', 'foob r', 'foobbr' and so on but not 'foob1r', 'foob=r' and so on

TRegExpr uses properties `SpaceChars` and `WordChars` to define character classes `\w`, `\W`, `\s`, `\S`, so You can easily redefine it.

word boundaries

`\b` Match a word boundary
`\B` Match a non-(word boundary)

A word boundary (`\b`) is a spot between two characters that has a `\w` on one side of it and a `\W` on the other side of it (in either order), counting the imaginary characters off the beginning and end of the string as matching a `\W`.

iterators

Any item of a regular expression may be followed by another type of metacharacters - iterators. Using this metacharacters You can specify number of occurrences of previous character, metacharacter or subexpression.

- * zero or more ("greedy"), similar to {0,}
- + one or more ("greedy"), similar to {1,}
- ? zero or one ("greedy"), similar to {0,1}
- {n} exactly n times ("greedy")
- {n,} at least n times ("greedy")
- {n,m} at least n but not more than m times ("greedy")
- *? zero or more ("non-greedy"), similar to {0,}?
- +? one or more ("non-greedy"), similar to {1,}?
- ?? zero or one ("non-greedy"), similar to {0,1}?
- {n}? exactly n times ("non-greedy")
- {n,}? at least n times ("non-greedy")
- {n,m}? at least n but not more than m times ("non-greedy")

So, digits in curly brackets of the form {n,m}, specify the minimum number of times to match the item n and the maximum m. The form {n} is equivalent to {n,n} and matches exactly n times. The form {n,} matches n or more times. There is no limit to the size of n or m, but large numbers will chew up more memory and slow down r.e. execution.

If a curly bracket occurs in any other context, it is treated as a regular character.

Examples:

`foob.*r` matches strings like 'foobar', 'foobalkjdfk9r' and 'foobr'
`foob.+r` matches strings like 'foobar', 'foobalkjdfk9r' but not 'foobr'
`foob.?r` matches strings like 'foobar', 'foobbr' and 'foobr' but not 'foobalk9r'
`fooba{2}r` matches the string 'foobaar'
`fooba{2,}r` matches strings like 'foobaar', 'foobaaar', 'foobaaaar' etc.
`fooba{2,3}r` matches strings like 'foobaar', or 'foobaaar' but not 'foobaaaar'

A little explanation about "greediness". "Greedy" takes as many as possible, "non-greedy" takes as few as possible. For example, 'b+' and 'b*' applied to string 'abbbbc' return 'bbbb', 'b+?' returns 'b', 'b*?' returns empty string, 'b{2,3}?' returns 'bb', 'b{2,3}' returns 'bbb'.

One can switch all iterators into "non-greedy" mode (see the modifier /g).

Alternatives

One can specify a series of alternatives for a pattern using "|" to separate them, so that `fee|fie|foe` will match any of "fee", "fie", or "foe" in the target string (as would `f(e|i|o)e`). The first alternative includes everything from the last pattern delimiter ("(", "[", or the beginning of the pattern) up to the first "|", and the last alternative contains everything from the last "|" to the next pattern delimiter. For this reason, it's common practice to include alternatives in parentheses, to minimize confusion about where they start and end.

Alternatives are tried from left to right, so the first alternative found for which the entire expression matches, is the one that is chosen. This means that alternatives are not necessarily greedy. For example: when matching `foo|foot` against "barefoot", only the "foo" part will match, as that is the first alternative tried, and it successfully matches the target string. (This might not seem important, but it is important when you are capturing matched text using parentheses.)

Also remember that "|" is interpreted as a literal within square brackets, so if You write `[fee|fie|foe]` You're really only matching `[feio]`.

Examples:

`foo(bar|foo)` matches strings 'foobar' or 'foofoo'.

Subexpressions

The bracketing construct (...) may also be used to define r.e. subexpressions (after parsing). You can find subexpression positions, lengths and actual values in MatchPos, MatchLen and Match properties of TRegExpr, and substitute it in template strings by TRegExpr.Substitute).

Subexpressions are numbered based on the left to right order of their opening parenthesis.

The first subexpression has number '1' (whole r.e. match has number '0' - You can substitute it in TRegExpr.Substitute as '\$0' or '\$&').

Examples:

`(foobar){8,10}` matches strings which contain 8, 9 or 10 instances of the 'foobar'

`foob([0-9][a+])r` matches 'foob0r', 'foob1r', 'foobar', 'foobaar', 'foobaar' etc.

backreferences

Metacharacters \1 through \9 are interpreted as backreferences. \<n> matches previously matched subexpression #<n>.

Examples:

`(.)\1+` matches 'aaaa' and 'cc'.

`(.+)\1+` also match 'abab' and '123123'

`(["']?)(\d+)\1` matches '"13" (in double quotes), or '4' (in single quotes) or 77 (without quotes) etc.

Modifiers

Modifiers are for changing the behavior of TRegExpr.

There are many ways to set up modifiers.

Any of these modifiers may be embedded within the regular expression itself using the (?...) construct.

Also, You can assign appropriate TRegExpr properties (ModifierX for example to change /x, or ModifierStr to change all modifiers together). The default values for new instances of TRegExpr object defined in global variables, for example global variable RegExprModifierX defines value of new TRegExpr instance ModifierX property.

i

Do case-insensitive pattern matching (using installed in your system locale settings), see also InvertCase.

m

Treat string as multiple lines. That is, change "^" and "\$" from matching at only the very start or end of the string to the start or end of any line anywhere within the string, see also Line separators.

s

Treat string as single line. That is, change "." to match any character whatsoever, even a line separator (see also Line separators), which it normally would not match.

g

Nonstandard modifier. Switching it Off You'll switch all following operators into non-greedy mode (by default this modifier is On). So, if modifier /g is Off then '+' works as '+?', '*' as '*?' and so on.

x

Extend your pattern's legibility by permitting whitespace and comments (see explanation below).

r

Non-standard modifier. If is set then range à-ÿ additional include Russian letter ' ', À-ß additional include "'", and à-ß include all Russian symbols.

Foreign users is set by default. To switch if off, set false to global variable RegExprModifierR.

The modifier /x itself needs a little more explanation. It tells the TRegExpr to ignore whitespace that is neither back slashed nor within a character class. You can use this to break up your regular expression into (slightly) more readable parts. The # character is also treated as a metacharacter introducing a comment, for example:

```
(  
(abc) # comment 1  
    | # You can use spaces to format r.e. - TRegExpr ignores it  
(efg) # comment 2  
)
```

This also means that if you want real whitespace or # characters in the pattern (outside a character class, where they are unaffected by /x), that you'll either have to escape them or encode them using octal or hex escapes. Taken together, these features go a long way towards making regular expressions text more readable.

Perl extensions

(?imsxr-imsxr)

You may use it into r.e. for modifying modifiers by the fly. If this construction inlined into subexpression, then it effects only into this subexpression.

Examples:

```
(?i)Saint-Petersburg    matches 'Saint-petersburg' and 'Saint-Petersburg'  
(?i)Saint-(?-i)Petersburg matches 'Saint-Petersburg' but not 'Saint-petersburg'  
(?i)(Saint-)?Petersburg matches 'Saint-petersburg' and 'saint-petersburg'  
((?i)Saint-)?Petersburg matches 'saint-Petersburg', but not 'saint-petersburg'
```