KeyesOverlay™

iSeries PDF Map Tool

Version 7.0, User's Guide

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Installation

Introduction

KeyesOverlay is used for converting standard *SCS spooled files into fully graphical PDF documents, with overlays and images, in either monochrome (black & white) or full color. It is very fast and efficient. It can be used to create individual documents, such as Invoices or Purchase Orders. It can be used to prepare large reports, complete with pictures and images. You can even add PDF Bookmarks to aid in user navigation. It can also be used to create Interactive PDF's that you send to a customer to fill in and send back to you. You can optionally prefill the Interactive fields with data that you already know about each customer.

KeyesOverlay does not function by itself. It is used in conjunction with KeyesMail, KeyesPDF or KeyesArchive. It will enhance any of these products, allowing them to create fully graphical PDF documents for printing, distribution, web publication or e-mailing.

There are no KeyesOverlay API's. After creating a map member, for a document, you will code this member name in the Front Side Overlay parameter of the spooled file attributes. Calling any of the KeyesMail, KeyesPDF or KeyesArchive programs to create a PDF will automatically utilize KeyesOverlay to generate your documents, with overlays, pictures, images, logos, lines, boxes, colors, fonts, bookmarks, and interactive fields.

There are 3 main parts to the KeyesOverlay system:
- **ImageMaker** is a print driver that you can use to create images & overlays from any PC document.
- **MappingTool** is a Java program that you will use on a PC to develop mapping entries for your spooled files. It is a GUI tool that will help you design the PDF document that will be created from your spooled files.
- **KeyesOverlay** programs run on the IBM i. These programs follow your mapping instructions to convert spooled files into completed PDF documents.

Installation Instructions

Sign on as a Security Officer

The following installation procedure will require that you have *ALLOBJ authority, when you restore the library.

Copying KeyesOverlay Programs to a Library

You may place the **KeyesOverlay** programs into any library that you wish. We recommend that you install these programs in its own library called **KOLIB**. Be aware that you will have to add this new library to your KeyesMail, KeyesPDF or KeyesArchive library lists, for it to be available to those systems.

Restoring Instructions:

1. Follow the instructions found in the **Readme.txt** file that you download from our website (www.ckeyes.com). It will use FTP to transfer Save File data to your IBM i.

2. *If this is a New Installation:*

    Enter: RSTLIB SAVLIB(KO07LIB) DEV(*SAVF)
             SAVF(QGPL/KO07SVF) MBROPT(*ALL)
             RSTLIB(**KOLIB**)

    If you are Updating an Existing System:

    Enter: DLTLIB LIB(KOUPD)

    Ignore any "Library not found" message.

    Enter: RSTLIB SAVLIB(KO07LIB) DEV(*SAVF)
             SAVF(QGPL/KO07SVF) MBROPT(*ALL)
             RSTLIB(**KOUPD**)

Updating an Existing System

This program will update or add the KeyesOverlay programs to an existing program library (usually called KOLIB). Choose the desired library name to be updated and code it in the first parameter, below.

1. Prompt the KeyesOverlay Update program.

    Enter: KOUPDATE   then press F4 (Prompt)

2. Fill in the appropriate library names and press Enter:

    KeyesOverlay Program library. . . *kolib*

    KeyesOverlay Update library. . . . *koupd*

3. Follow the instructions for *Restoring the PC Tools Save File*, found on the following pages, to update the tools on your IFS.

4. If this was a change to a new version number of KeyesOverlay, you may have to install a new license number, as described on the following page.

Enter your KeyesOverlay License number

The KeyesOverlay programs will not function until they are activated with a license number. The license number is based on your iSeries or AS/400 serial number.

You must contact Computer Keyes to get a valid license number. You may call, fax or e-mail your request. Be sure to specify your name, company, and other contact information along with the serial number of your iSeries (AS/400).

Note: You may use DSPSYSVAL QSRLNBR to display the serial number of your computer.

Recording the KeyesOverlay License Number:

1. Switch your current library to where your KeyesOverlay programs were installed. This is usually KOLIB.

    Enter: CHGCURLIB *kolib*

2. Start up the program that will record your KO License.

    Enter: KOLICENSE

3. Key your KO License number in the field provided, then press Enter.

KeyesOverlay License Number:

Permanent: _____   S# __-_____

Temporary: _____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

Installing the PC Tools

Tools for your PC are shipped in a Save File called PCTOOLS within the KeyesOverlay library. The tools consist of **KeyesOverlay.ImageMaker** a print driver that can create images and overlays from any PC document and **MappingTool** which is a Java program with a GUI interface that will help you create mapping entries for your spooled files.

These tools will be installed on your iSeries in the IFS, so that they can be shared by anyone developing PDF documents. You may place the tools in any directory on the IFS, however, we recommend that you place them in a new directory called **/KOVERLAY** that will be created in the Root directory.

The following restore procedure can be run for either installing or updating the PC Tools on the IFS.

Restoring the PC Tools Save File:

1. Prompt the Restore PC Tools program.

    Enter: KORSTPCT   then press F4 (Prompt)

2. Fill in the desired **To path** name and press Enter:

    Save file name . . . .   <u>PCTOOLS</u>
    From path . . . .   <u>'/KO07tools'</u>
    To path . . . .   <u>'/*KOVERLAY*'</u>

The folder (koverlay) will be created in your IFS, if it does not already exist, and the new tools will be restored into the folder.

Defining a NetServer File Share

In order to access the PC Tools from a PC you will need to define a File Share for the **KOVERLAY** folder on your iSeries. This can be done using the Operations Navigator for your iSeries.

Using Operations Navigator:

1. Start the **Operations Navigator** from your PC.

2. Under **My Connections** select your iSeries computer by double clicking.

3. Double click **File Systems**, then **Integrated File System**.

4. Open the **Root** directory by double clicking on it. You should see the **KOVERLAY** directory listed under the Root directory.

5. Right click on **KOVERLAY** and select **Permissions**.

6. On the **Permissions** screen set the desired permissions for the user's that will need access to the PC Tools, and press **OK**.

7. Right click on **KOVERLAY** and select **Sharing / New Share...**

8. On the **NetServer File Share** screen change the **Access** parameter to **Read/Write** then press the **OK** button.

This should give you a new shared folder in your PC's Network.

Defining a Network Drive

In order to access the PC Tools each PC will need to define a Network Drive letter (**K:**) that points to the **koverlay** folder on your iSeries.

Mapping the K: drive:

1. Right click on **My Network Places** or **Network Neighborhood** on your PC, then select **Map Network Drive**.

2. Select the **K:** drive. Map this drive letter to your KeyesOverlay directory on the IFS (*\\Qsxxxxxxx\koverlay*). You should be able to use the Browse button to find the **koverlay on iSeries** folder that was defined using the Operations Navigator and select it.

Making a Shortcut to MappingTool

After mapping the **K:** drive, as defined above, you can make a shortcut to **MappingTool** and place this on your desktop.

Making a Shortcut:

1. Double click **My Computer** on your PC.

2. Double click on the **koverlay on 'iseries'** drive that was mapped to the **K:** drive in your Network Drives list. A list of folders should appear.

3. Double click on the **MapTool** folder.

4. Grab the file called **MapTool.bat** with your right mouse button. Drag this to your desktop and release it. Select **Create Shortcuts here**.

This new shortcut will be used to start **MappingTool**.

Installing MappingTool on your PC

MappingTool is typically run directly from the mapped **K:** drive. But, if desired, you can install the tool on your local **C:** drive, to run it from there.

1. Create a new directory in your C: drive. We would recommend that you might call it C:\KOVERLAY.

2. Locate the MapTool folder on the **K:** drive.

3. Drag the entire MapTool folder from the **K:** drive to your **C:** drive to copy all the objects within the folder.

4. Follow the **Making a Shortcut** instruction #4 above, to make a shortcut to the MappingTool from the **C:** drive.

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Java and Memory Requirements

MappingTool will require a fairly new version of the Java Runtime Environment installed on your machine. You should have at least J2SE v5.0 JRE installed. You can see the Java Version using *Control Panel/Add or Remove Programs*. If you need to update Java, you should first remove the old version, then get new software from [*http://java.sun.com*].

MappingTool was designed to run on PC's with a minimum of 256Mb of main memory installed. If you have too little memory, the program may run extremely slow. It will also run very slowly, if you try to use an image that is too large or was generated with too high of a resolution.

Installing ImageMaker 'the Print Driver'

After mapping the **K:** drive, as defined above, **KeyesOverlay.ImageMaker** can be installed on your PC. This print driver will be used to create images and overlays for **MappingTool** and **KeyesOverlay**. You can print to this driver from any PC application, such as a word processor or other graphics program to make TIFF images.

Installing ImageMaker:

1. Double click **My Computer** on your PC.

2. Double click on the **koverlay on 'iseries'** drive that was mapped to the **K:** drive in your Network Drives list.

3. Double click on the **ImageMaker** folder to open it up.

4. Double click on the **Setup.exe** program in this folder.

Follow the instructions on the screen to complete the installation.

Tutorial

This section is a tutorial. It will take you from the beginning to the end of a complete mapping of a spooled file into a PDF document.

For illustration purposes, we will be working with the following spooled file:

KeyesOverlay will be used to create the following PDF document:

Complete the Installation

Each of the following installation steps (from the previous pages) must be completed prior to working with the MappingTool.

1. Ensure that the KeyesOverlay package has been completely installed on your iSeries, in the KOLIB library.

2. Ensure that the **/KOVERLAY** directory has been installed on the IFS and that it has been given the correct Permissions and Share definitions so that you can access it from your PC.

3. Define a **K:** drive in your PC Network that points to the /KOVERLAY directory in the IFS.

4. Make a shortcut to **MappingTool** on your desktop and install **KeyesOverlay.ImageMaker** (the print driver) on your PC.

Creating an Overlay

KeyesOverlay can use most any type of existing Image or PC document as your overlay. You can find instructions for converting various types of documents to an overlay, later in this manual. You can also find instructions on how to crop an image to extract a smaller piece of it, such as a Logo or a Signature.

We have provided a print driver that allows you to generate new images or complete overlays using other PC applications. You can, for example, use any word processor or graphical program on your PC to design a graphical page to be used as an overlay.

1. Create the images or overlays that you wish to use on the PDF pages, using any PC application.

2. Print your overlay images to **KeyesOverlay.ImageMaker**. The images will be placed in the **K:\Images** directory and given a default name.

3. Import those images into the MappingTool where you will save the images with an appropriate name, image compression, and color attributes.

However, it is usually more efficient to create the overlay within the MappingTool itself. This is what we will be demonstrating.

Start the MappingTool

1. Start the MappingTool from the shortcut that was placed on your desktop during the installation process.

Let's get acquainted with the MappingTool. The MappingTool has a split screen allowing you to create mapping entries on the top part of the screen while viewing the completed document on the lower portion of the screen.
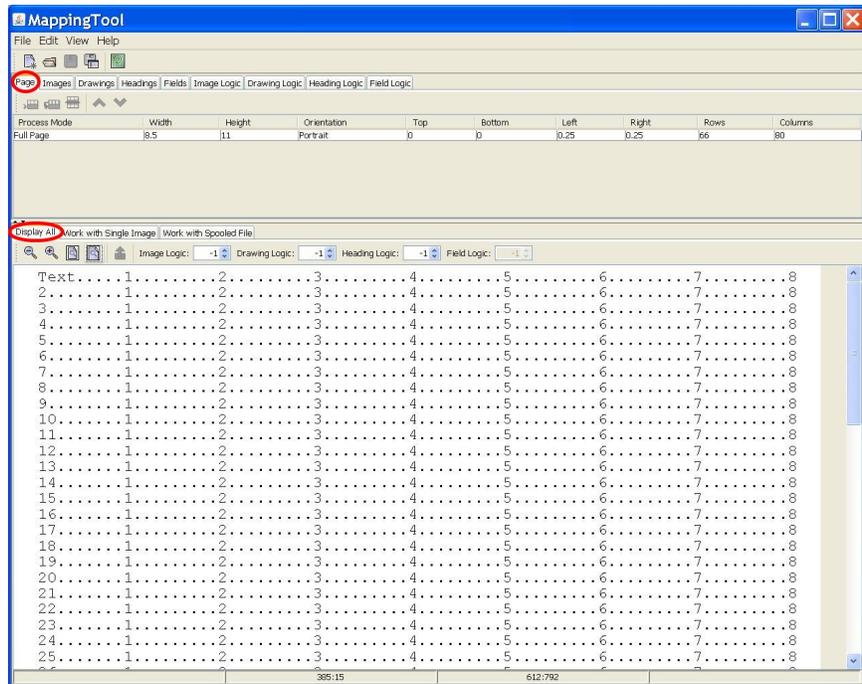
There are nine tabs in the top section and three tabs in the lower section of the screen. You can adjust the relative size of the two sections using a mouse by dragging the bar between the sections.

Top section:
- Page - Defines the page size, rotation and processing mode
- Images - Places overlays or images on the page
- Drawings - Allows you to draw lines and boxes on the page
- Headings - Places heading text on the page
- Fields - Maps spooled file text to the page
- Image Logic - Sets Logic numbers for placing images on a page
- Drawing Logic - Sets Logic numbers for placing lines and boxes on a page
- Heading Logic - Sets Logic numbers for placing heading text on a page
- Field Logic – Sets Logic numbers for processing spooled file text on a page

Lower section:
- Display All - Shows the completed page or lines (for line mode)
- Work with Single Image - Can add, alter, compress and rename images
- Work with Spooled File - Selects printer data to be mapped

Tool bars:

There are tools available on a **tool bar** for each of the tabbed sections in the MappingTool. You will use these tools to perform various tasks.

2. Select the *Page* tab, in the top section of the screen.

3. Define the page size for the PDF document, the orientation, the margins, and the number of rows and columns in the spooled file.

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4. Make sure that the spooled file data appears on the page appropriately, in the Display All tab.

5. Select the *Processing Mode* to be used for the spooled file.

Mapping a Document

The MappingTool will allow you to place images, draw lines and boxes, fill the boxes with any color, and place headings anywhere on the page. It will do this at the same time it is showing you the spooled file data. This will allow you to build an Overlay around the spooled file data.

Open a Spooled File

1. Select the *Work with Spooled File* tab, in the lower section of the screen.

2. Use the **Open** tool from the tool bar to open the spooled file that you downloaded from the iSeries.
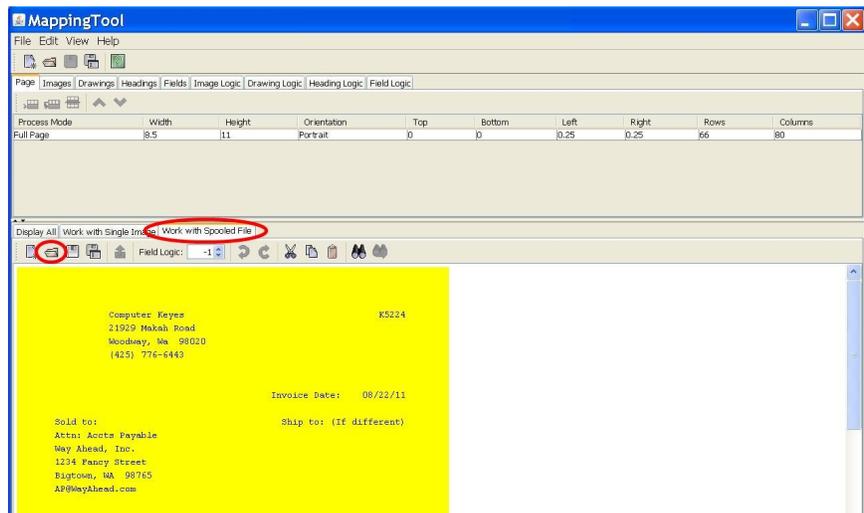
Display All:

Press the *Display All* tab on the bottom section of the screen to see how it looks.

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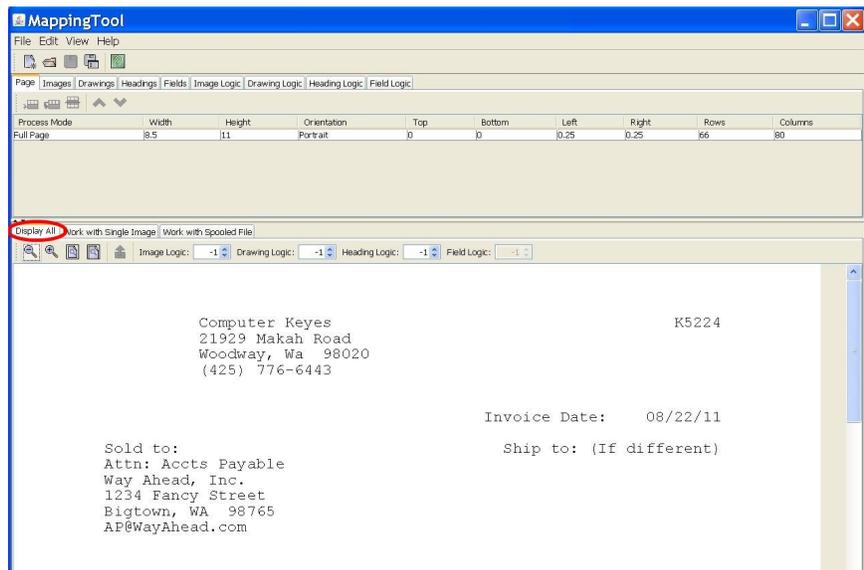
Page Tab and Process Mode

By default the MappingTool starts in **Full Page** processing mode. It assumes a page size of 8.5" x 11" and an 80 byte width. It paints all of the spooled file text onto the screen, with one definition. We wish to change some of the spooled file fields to be different, therefore we will switch the processing mode to **Field Mapping**.

1. Change the Page *Height* to **7** inches. Our invoice is 8.5 x 7 inches.

2. Change the number of *Rows* to **42**. 7 inches times 6 lines per inch gives us 42 rows on the page.

3. Change the *Process Mode* to **Field Mapping**.

When you changed the *Height* and *Rows* values, you might have noticed that the new document was automatically repainted on the *Display All* screen.

Add a Logo

We have supplied a sample logo, in the Samples folder, for you to play with.

1. Select the *Images* tab on the top section of the screen.

2. Select the *Work with Single Images* tab on the bottom section of the screen.

3. Use the **Open an image** tool to open the CKLOGO image from the Samples folder.

4. Press the **Export image** tool and a new line will be sent to the *Images* tab. This places the image on the page.
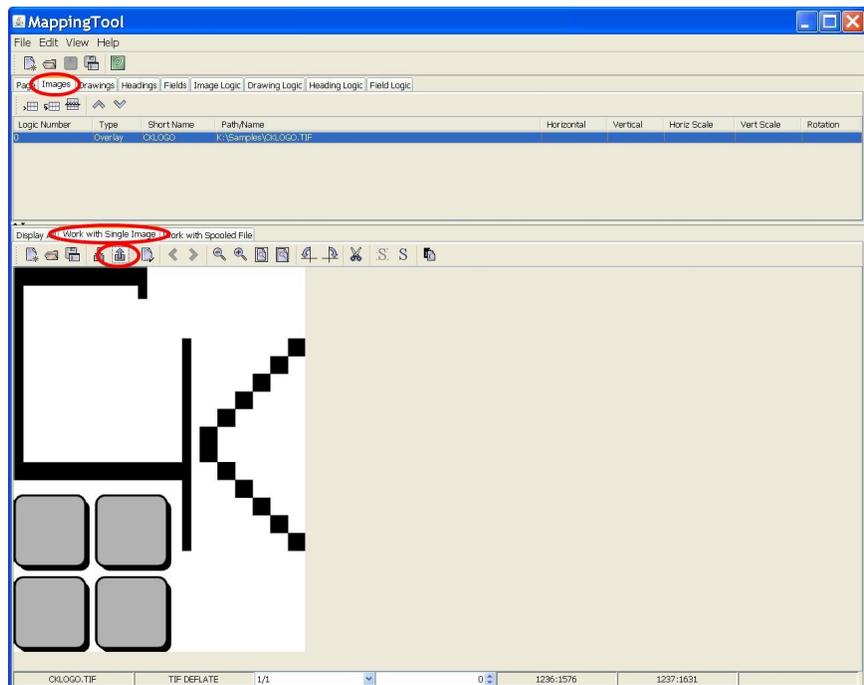
5. Press the *Display All* tab to see the results. The image will appear at its full size on the page. We must size the image and place it where we want.

6. Enter 40, 34, 22, 22 in the Horizontal location, Vertical location, Horizontal Scale, and Vertical Scale, respectively. This will move and size the Logo into the correct spot on the page. The first two numbers are pixels, there are 72 pixels per inch. The last two numbers are a percentage scaling size.
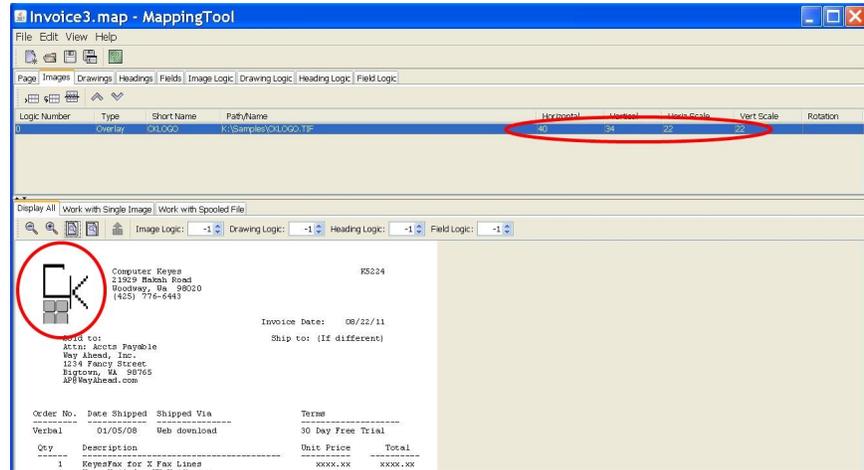
Draw Boxes

To draw a box, you drag a diagonal line onto the page - from the upper left to the bottom right of where you want the box to appear.

1. Switch to the *Drawings* tab, so that we can start making the form.

2. Draw a box by holding the **left mouse** button down while dragging a box on the screen around the spooled file data.

3. Once you have a box on the screen, press the **Export graphic** tool to create a new entry in the *Drawings* tab for that object.
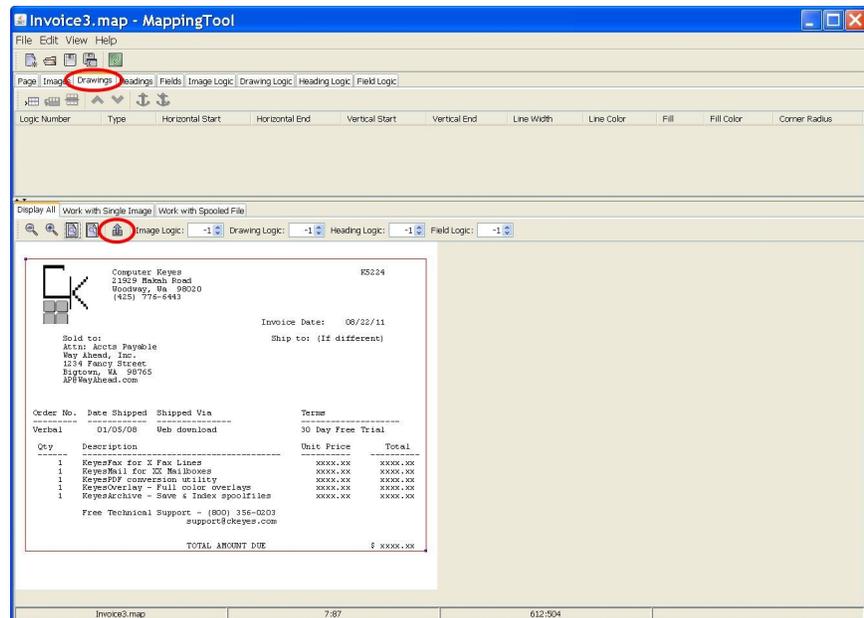
4.   Set the *Line Width*, *Line Color*, *Fill*, *Fill Color*, and *Corner Radius* for the boxes, as desired. The *Corner Radius* is used to make rounded corners, if desired. The value is the radius of a circle in pixels (72 pixels per inch). A value of 18, for example, will make 1/4 inch radius rounded corners. A value of zero will make square corners.

Draw Lines

To draw a line, you drag a line onto the page - from one end to the other of where you want the line to appear.

1.   Make sure that you are on the *Drawings* tab.

2.   To draw a line, hold the **left mouse** button down while you drag a line onto the page.

3.   Press the **Export Graphic** tool. This will create a new entry in the *Drawings* tab for that line.
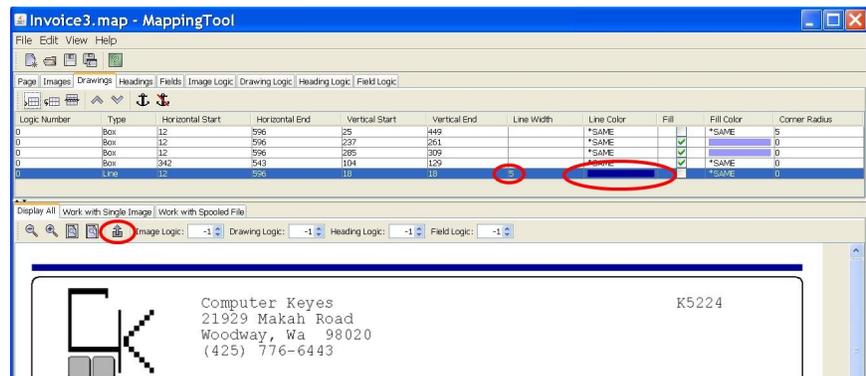
4.   Change the *Line Width* and the *Line Color*, as desired. Line Widths are entered in pixels (72 pixels per inch).

5.   Draw additional lines, as needed. They will take on the same Width and Color values as the previous objects, until you change them.

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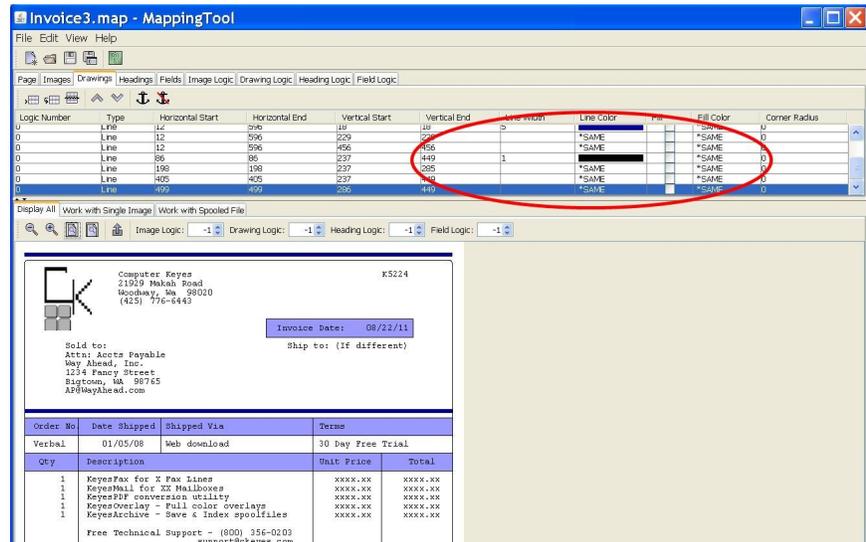
Add Headings

Headings can be added anywhere on the page. You set the size and location by drawing a small rectangle.

1. Switch to the *Headings* tab, so that we can add a heading.

2. Draw a small rectangle on the page, exactly where you want the word **INVOICE** to appear on the page.

3. Press the **Export graphic** tool to create a new entry in the *Headings* tab for that location and size.
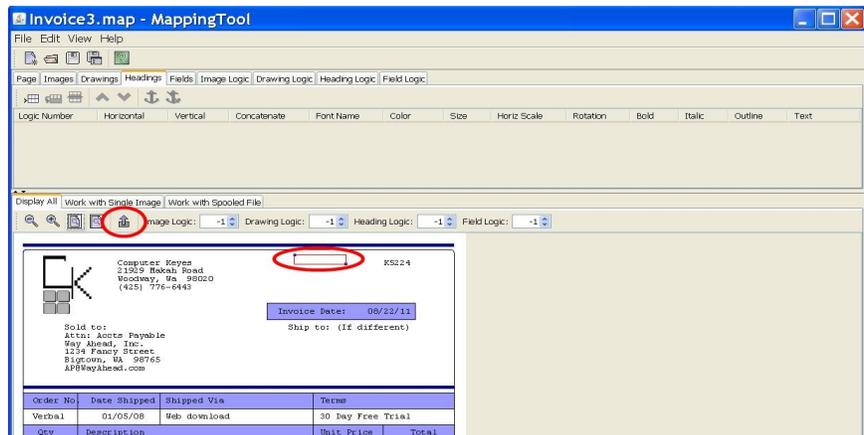
4. The default text for headings is the word **Heading**. Change that word to the desired value - (INVOICE) in the **Text** field in the *Headings* tab.

5. Change the font attributes for the heading, as desired.
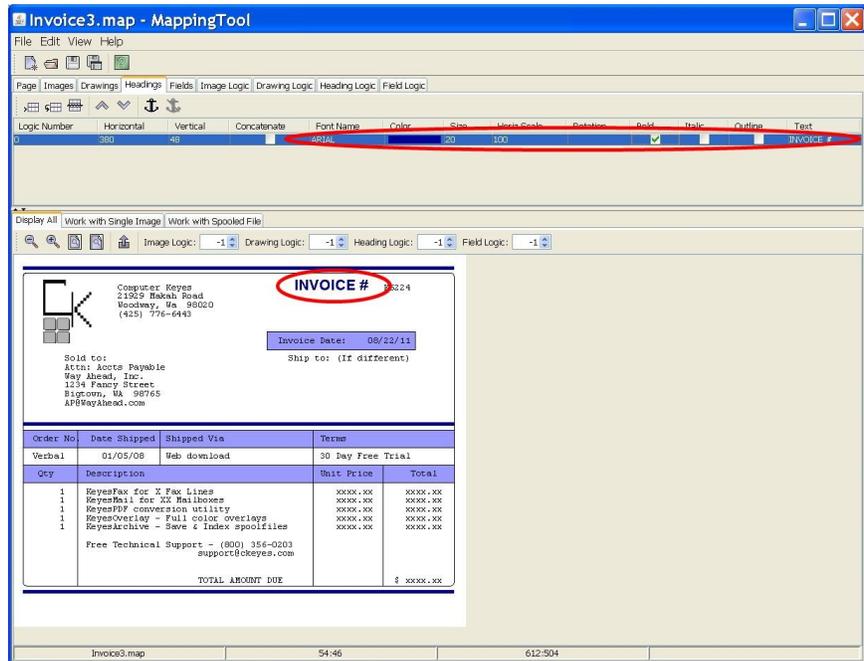
Change Fields

In *Field Mapping* mode whole lines have been painted on the screen. In order to to change the attributes of individual fields on the screen we must remove those lines, and repaint them as individual fields.

1.   Switch to the *Fields* tab, so that we may repaint some fields.

2.   Locate the line of text that you wish to change and select it, by clicking on the line, in the *Fields* tab.

3.   Press the **Remove the selected field** tool. This will remove that line of spooled file text from the document.
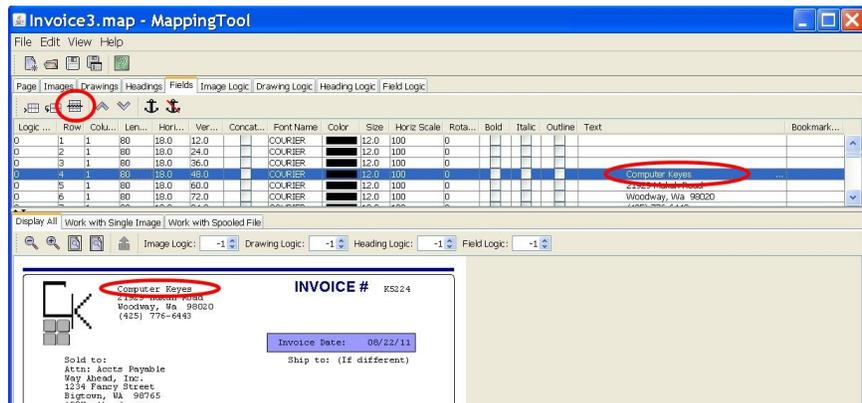
4.   Switch to the *Work with Spooled File* tab, on the bottom portion of the MappingTool. You will notice that the removed lines are no longer yellow in color. All portions of the spooled file text that are painted to the document will appear in yellow.

5.   Select the individual fields that you wish to repaint to the document, with the **Left mouse** button.

6.   Press the **Export Field** tool, to create a new field in the *Fields* tab. The new entry will be placed under the previously selected field.
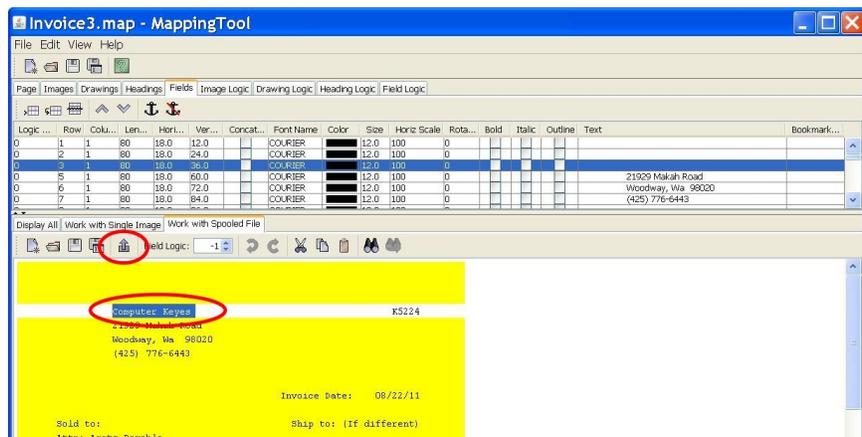
7.   Change the attributes, for the newly added field, as desired. You can view the results on the *Display All* tab, as you go.

8. Add any additional fields, that had been removed from the same line, by selecting the field text and pressing the **Export Field** tool.
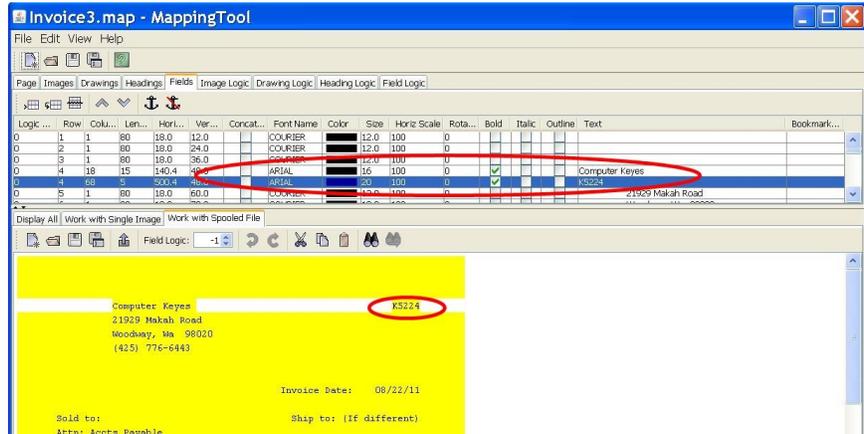
9. Switch to the Display All tab, to review the results.

Completed Invoice

After adding just a few boxes, lines, headings, and changing a couple of fields, we created the following:

Save and Transfer the Map Files

When you have completed the mapping process, the final steps will be to save the Map file and transfer it, along with any images that were used, onto the iSeries.

From the MappingTool:

1. Save the completed Map file to the **K:\Maps** directory.

Transfer the Map file:

2. Using item **1** *Work with Map members* from KOMENU, press **F6** to browse the IFS.

3. Move the cursor to the **+ Maps** line and press **Enter** to open that directory. The Plus sign (+) designates a directory within /KOVERLAY.

4. Find the desired Map file, move the cursor to it and press the **Enter** key to select it.

5. Correct the name, if needed to make a valid iSeries member name. Type in a description for the Map file and press **Enter** again. This will transfer the Map file from the IFS to the PDFMAP file in KOLIB.

```
display-s105p5dm.WS                                          _ □ X
File   Edit   View   Communication   Actions   Window   Help

            Transfer Member from the IFS (KOTRNIFS)
Type choices, press Enter.

To file name . . . . . . . . . . > PDFMAP        Name
Member name  . . . . . . . . . . > Invoicet      Name
Description  . . . . . . . . . .   InvoiceT sample for Manual


Name on IFS  . . . . . . . . . . > Invoicet.map  Character value
From path  . . . . . . . . . . . > '/KOVERLAY/Samples'




                                                        Bottom
F3=Exit    F4=Prompt    F5=Refresh    F12=Cancel    F13=How to use this display
F24=More keys

MA    a              MW                              07/058
  I902 - Session successfully started
```

6. The program will return back to the browse screen for the IFS. This allows you to select additional Map files to transfer, as desired.

7. Press **F3** (Exit) when you are finished transferring Map files.

Transfer the Images:

1. Using item **2** *Work with Image members* from KOMENU, press **F6** to browse the IFS.

2. Move the cursor to the **+ Images** line and press **Enter** to open that directory. The Plus sign (+) designates a directory within /KOVERLAY.

3. Find the desired image, move the cursor to it and press the **Enter** key to select it.

4. Correct the name, if needed to make a valid iSeries member name. Type in a description for the image and press **Enter** again. This will transfer the Image file from the IFS to the PDFIMAGE file in KOLIB.

Use the Map file to make a PDF

Now that you have created and transferred a Map file and any images to the iSeries, it is time to try them out.

1. Code the name of the Map member in the *Front side overlay* attribute for any spooled file that you want to use the Map file on.
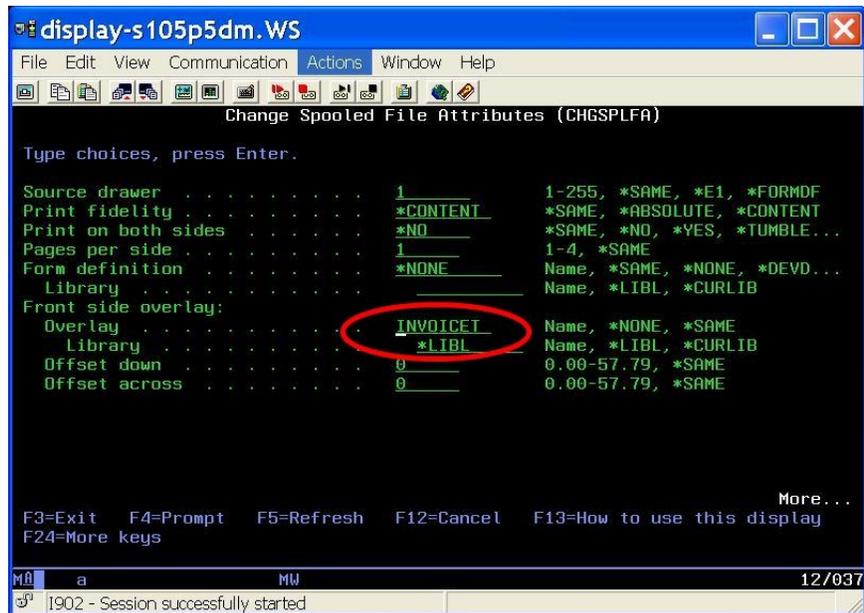
2. Make sure that KOLIB is on the library list.

3. Use KeyesArchive, KeyesMail, or KeyesPDF to convert the spooled file into a PDF.

Mapping a Report

In the previous instructions, we used *Field Mapping* mode to map a document (an Invoice) to create an overlay with fixed locations for the data. In this section we will be learning how to use *Line Logic* mode to map a free flowing report, where each type of line can appear anywhere on a page. We will add PDF Bookmarks to aid the user in navigating the report. Logic entries will be used to determine what type each line is in the spooled file page.

For illustration purposes, we will be working with a sample Profit & Loss Report that is sorted by Store number within Regions:

```
                        Profit & Loss Report
                             by Region
                            January 2008




                Region 4 - Snohomish

Store #22  Greggs Feed & Equipment          Income         Expense           Total

       Clothing/Shoes                     $15,482.00      $8,843.00       $6,639.00
       Equipment sales                    $16,503.00     $25,135.00       $8,632.00-
       Feed                              $125,270.00     $53,125.00      $72,145.00
       Livestock/pets                     $13,053.00      $3,240.00       $9,813.00
       Merchandise                        $72,490.00     $41,040.00      $31,450.00
       Rentals                            $12,470.00        $562.00      $11,908.00

           Total Sales                   $255,268.00    $131,945.00     $123,323.00

       Flood damage repairs                               $9,253.00
       Maintenance                                        $4,220.00
       Vehicles/Gas                                       $5,075.00
       Wages                                             $40,486.00

           Total Overhead                               $59,034.00


           Total Store #22              $255,268.00    $190,979.00      $64,289.00


Store #25  Gold Bar Horse Tack             Income         Expense           Total

       Boots                              $12,372.00      $4,667.00       $7,705.00
       Brushes/Combs                       $2,450.00     $  855.00       $1,595.00
       Clothing                           $18,223.00      $9,742.00       $8,481.00
       Leather Tack                       $42,845.00     $19,774.00      $23,071.00
       Saddles                             $8,453.00      $3,540.00       $4,913.00

           Total Sales                    $84,343.00     $38,578.00      $45,765.00

       Maintenance                                        $2,874.00
       Wages                                             $18,250.00

           Total Overhead                               $21,124.00


           Total Store #25               $84,343.00     $59,702.00      $24,641.00
```

KeyesOverlay will be used to fancy up the report making it easier to pick out important data. Bookmarks will be added, so that a reader can jump directly to specific Stores within any Region. The sample report might look like this, when opened with a PDF reader:

Start the MappingTool

1. Start the MappingTool from the shortcut that you made during the installation process, or press the **New Map File** tool from the upper tool bar, to start a new map file.

2. Select the *Page* tab, in the top section of the screen.

3. Define the page size for the PDF report and the orientation.

4. Select *Line Logic* mode.
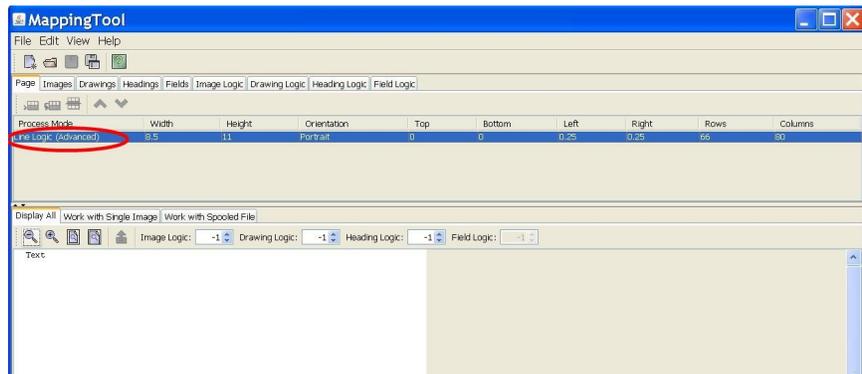
The MappingTool will create a default field definition, in the *Fields* tab, defined with Logic Number **0**. This default line is used to send each spooled file line to the PDF page, that you do not define with another Logic definition.
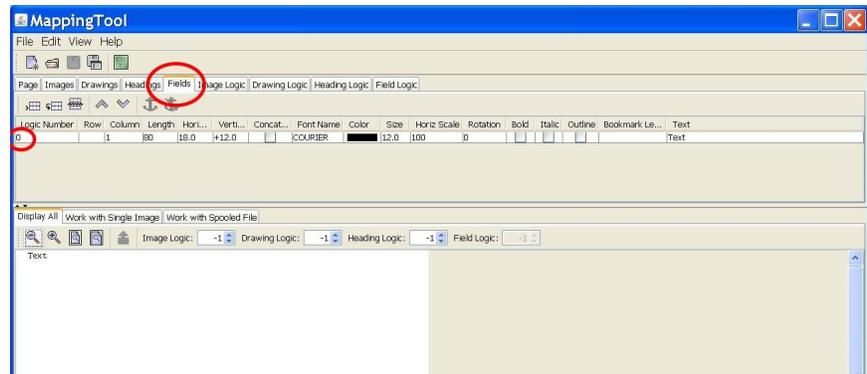
Vertical Motion with Line Logic mode:

You can change the attributes, such as the Font or Color, of the default line, if desired. But, you typically would not want to change the Vertical motion value. The Vertical motion value (+12.0 in this example) has been calculated to ensure that all of the expected Spooled File lines will fit on the page, within the specified Margins. If you change this value to a larger number, the text may no longer fit on the page.

Opening a Spooled File

We have downloaded a sample spooled file for our report, to use with the mapping process.

1. Select the *Work with Spooled File* tab, in the lower section of the screen.

2. Use the **Open** tool from the tool bar to open the spooled file that you downloaded from the iSeries.
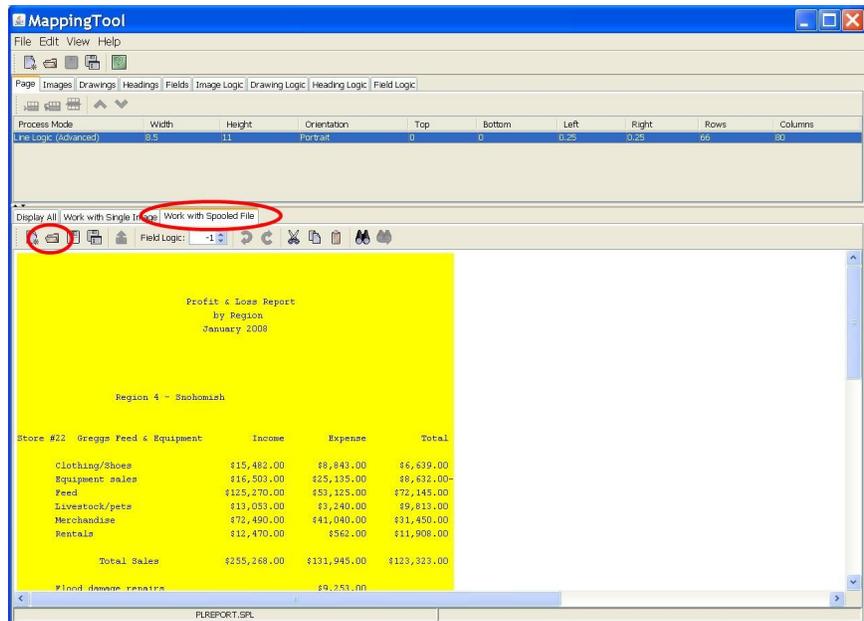
You will be using the *Work with Spooled File* screen to map your Line Logic entries.

Adding Images to the Page

Images used by KeyesOverlay must be compressed properly, in order to function efficiently within a PDF document. The MappingTool will do this for you. It can also Crop images, if you need this done. In our sample report, we will be adding a Logo to the top left corner of each page.

1. Select the *Work with Single Image* tab, in the lower section of the screen.

2. Use the **Open** tool to open an image that you either printed using the ImageMaker print driver, or gathered from another application.

3. Switch to the *Images* tab, in the top section of the screen.

4. Use the **Export image** tool from the tool bar to export the image to your current map entry.
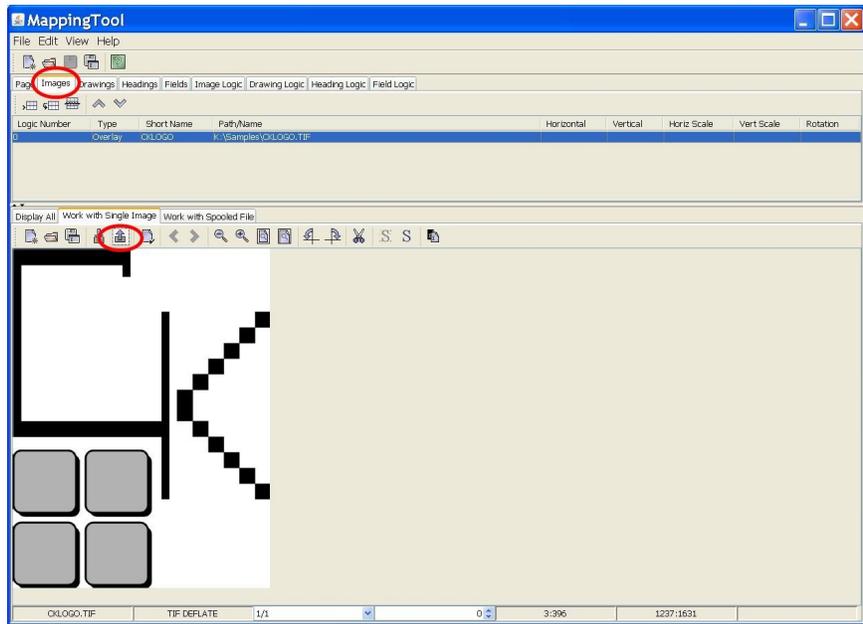
5. Select the *Display All* tab in the lower section of the screen. This will show you how the overlay image will be displayed on the finished page.
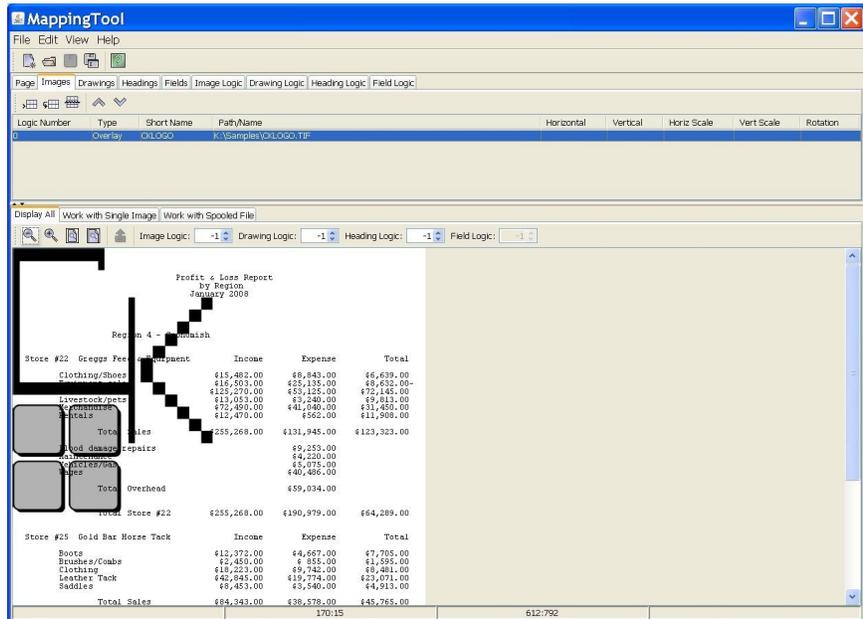
Scaling the Image:

Notice that, in our case, the Logo is displayed too large on the page. We must use Horizontal and Vertical Scaling to shrink the image on the page. With a little experimentation, we determined that 22% scaling produces a reasonable size image for the page. We therefore enter **22** in both the Horizontal and Vertical Scale fields.

Positioning the Image:

6. Using your mouse, you can move the cursor to the location on the page where you would like the image to appear (the top left corner).

7) Press the **right mouse** button and select Move Object. The new positioning will be entered for you and the image will move to that location.
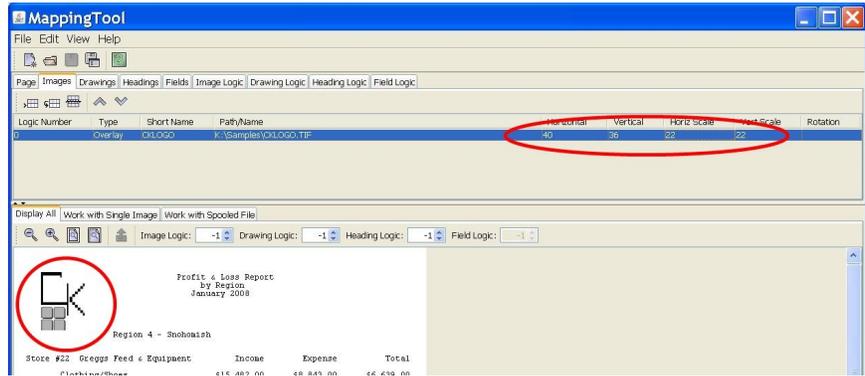
Draw Boxes and Lines

We can further fancy up the page by drawing some boxes and lines in appropriate places on the page.

1. Switch to the *Drawings* tab, in the top section of the screen.

2. Press the **Fit in window** tool, so that you can see the entire page.

2. Drag a box using the **left mouse** button onto the page.

3. Press the **Export graphic** tool to make the new entry.
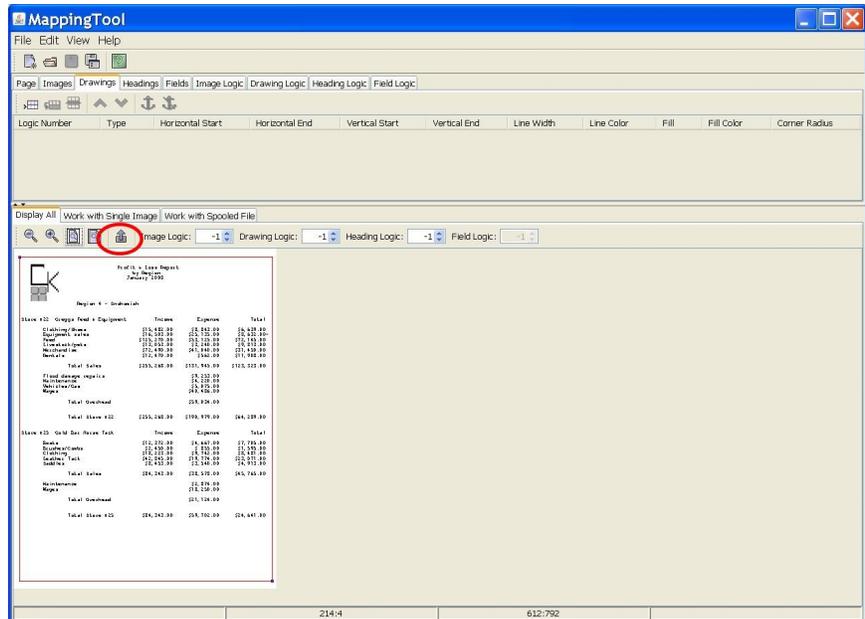
Adding Field Logic Entries

Line Logic works by sending all spooled file lines to the PDF page using the default attributes, defined by the default line definition (Logic number **0**). For any lines that you want to appear differently from the default, you will uniquely identify them using *Field Logic* definitions and provide different attributes using *Field* definitions.

Identifying Lines:

You will use the *Field Logic* screen, to uniquely identify lines that you wish to alter from the default.

In our sample report, we wanted the top three heading lines to be a little more prominent on the page. We chose to have them centered, using an Arial font that is scaled slightly larger than standard. To identify the top three lines, we had to find something that was unique about those lines. In this case, we chose the fact that those three lines are the only ones where the first 31 columns were blank, and the next 20 columns were not blank. We can use these facts to identify the 3 heading lines.

Exporting to Field Logic screen:

1. Select the *Field Logic* tab, in the upper section of the screen.

2. Select the *Work with Spooled File* tab, in the lower section of the screen.

3. Use the **left mouse** button to select the blanks in front of the report name.

4. Press the **Export** tool.
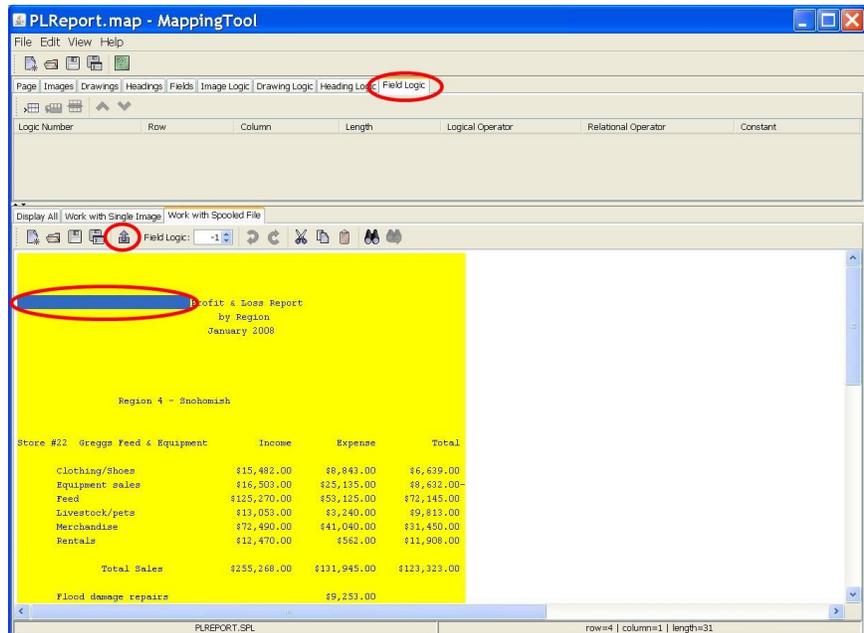
This will create a new logic entry that will select all lines that have blanks in the first 31 positions. The selected lines will turn white on the screen. You will notice that the report name lines are selected, but all of the blanks lines are also selected. We need to further define the logic selection.

5. We must repeat this process to grab the data starting in column 32 to uniquely identify the heading lines of this report.

6. Now we code the appropriate selection criteria to define the Field Logic for the heading lines, as shown below:
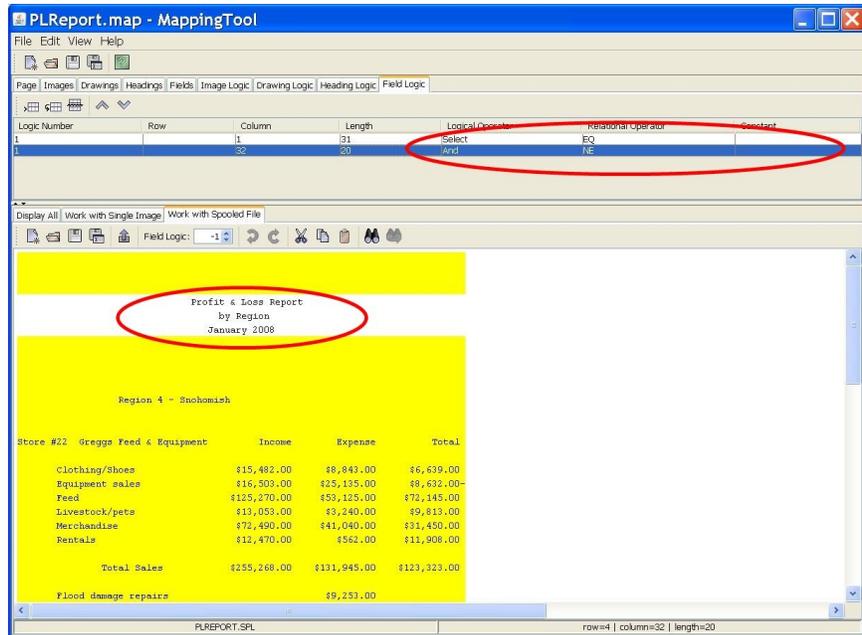
We changed the Logical Operator to "And", the Relational Operator to "NE" and the Constant field to blanks, for this example.

The two Logic Lines that define our Logic Entry **1** now read as follows:

*For any Spooled file line, select Logic number **1** if the data starting in column 1 for a length of 31 is equal to the constant value of blank, AND if the data starting in column 32 for a length of 20 is not equal to blank.*

These two lines of logic uniquely identify the top three heading lines of the spooled file data. You will know that you have the logic correct, when the appropriate lines are selected in the *Work with Spooled File* screen.

Customizing the Selected lines

Now that we have told the system how to identify the heading lines in the spooled file, we can now direct the program how to present those lines to the page. We do this in the *Fields* screen by adding a new entry.

1. Switch to the *Fields* tab, in the upper section of the screen.

2. Using your **left mouse** button select the first (the widest) of the report heading lines.

3. Press the **Export** tool.

In our example, we selected the 20 characters of heading data that we want to customize for Logic number **1**.
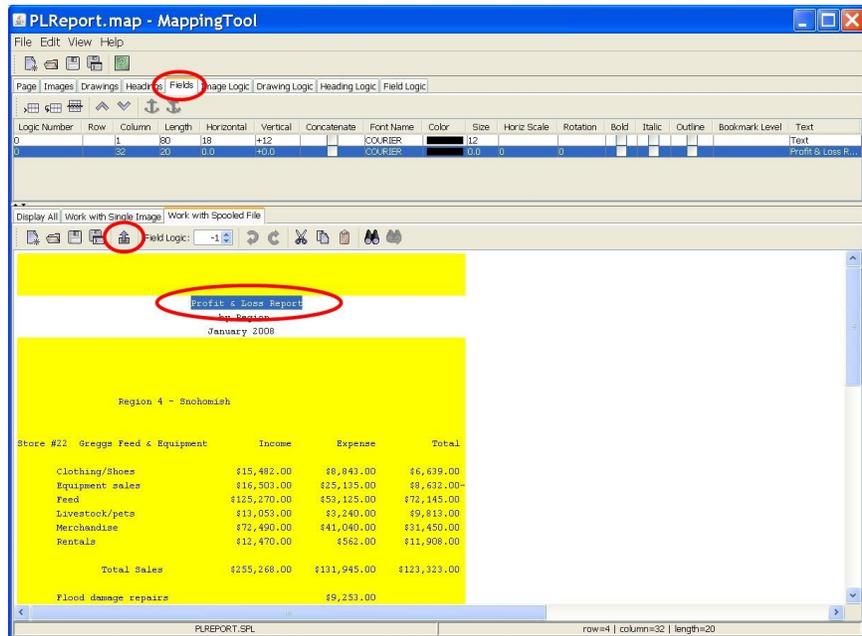
4. Now you can change the attributes for the new Logic number **1** field, to display these lines differently than the default.

5. You can switch to the *Display All* tab to see the results of this new Logic definition, and to help position the fields in the correct horizontal location.
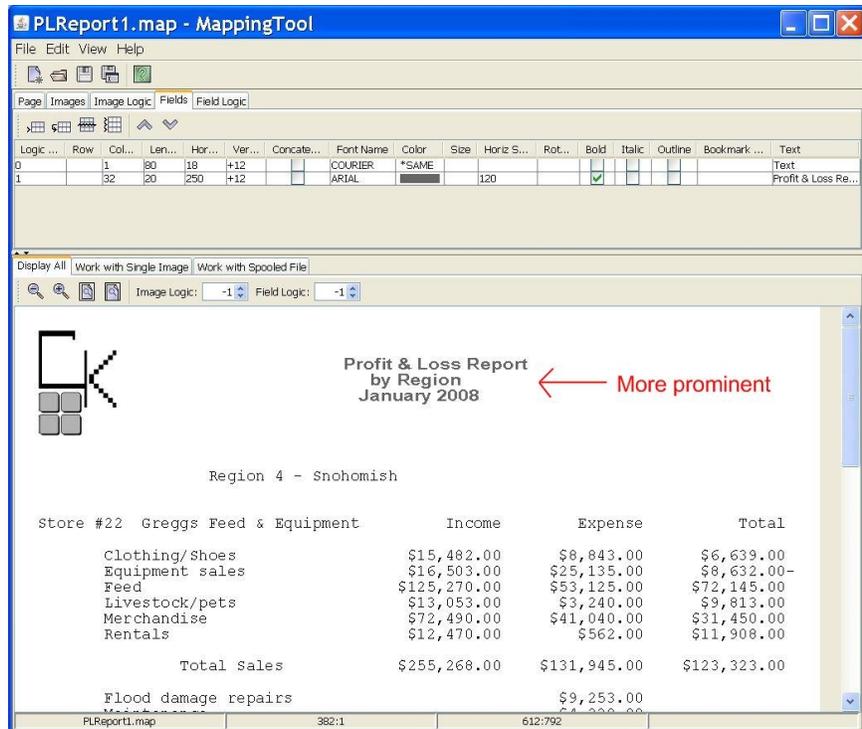
Bookmarks

You can use PDF Bookmarks to help with user navigation of large reports. You do this by assigning a bookmark level to the important lines in the report. In our sample report, the Region lines and the Store # lines would be the appropriate ones.

1. Switch back to the *Field Logic* tab, on the upper portion.

2. Switch to the *Work with Spooled File* tab, on the lower portion.

3. Select the word **Region** and make it logic number **2**.

4. Select the word **Store** and make it logic number **3**.
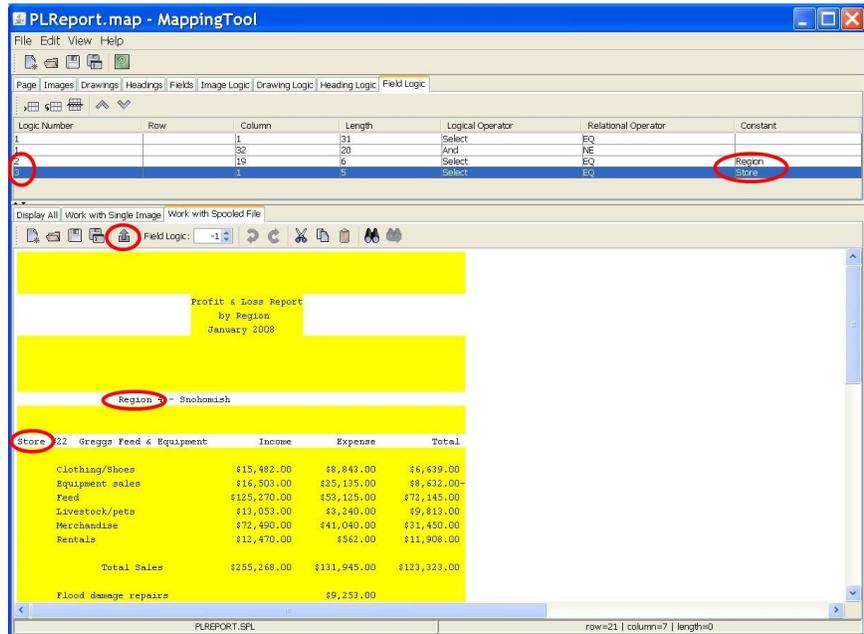
Bookmark attributes:

1. Switch to the *Fields* tab, on the upper portion of the screen.

2. Select the **Region** text from the *Work with Spooled File* screen.

3. Press the **Export field** button and make it Logic number **2**.

4. Select the **Store #** line of text on the *Work with Spooled File* screen.

5. Press the **Export field** button and make it Logic number **3**.

6. Set the attributes for these new logic fields, as desired.

7. Set a Bookmark level of **1** for the Region text and a Bookmark level of **2** for the Store # line.

Vertical Motion

You can change the font, its size, color and other attributes, as desired. You can even change the horizontal location for the fields. It is important, though, that you pay attention to the *Vertical* motion (+12 in our example). In most cases, you would not want to change this value. Otherwise, the lines from the spooled file would not necessarily line up on the page in an orderly manner. It could cause lines to take up too much room and even run off the page at the bottom.

Breaking up a line:

There may be times when you want to break up a line into two or more pieces so that you can select different attributes for each part. We wanted to display any negative values in Red, as an example, so that it would stand out on the report.

To do this, you will want the first part of the line to move Vertically downward, but not the additional parts.

Concatenating fields:

We decided to use the Concatenate feature to attach the two parts of the line together. Concatenation allows a field to immediately follow the preceding line. Concatenation can be a bit tricky, however. You must make sure that there are no blanks at the end of the string that you are concatenating onto. Blanks are trimmed off of the first string, before the second string is concatenated to it.
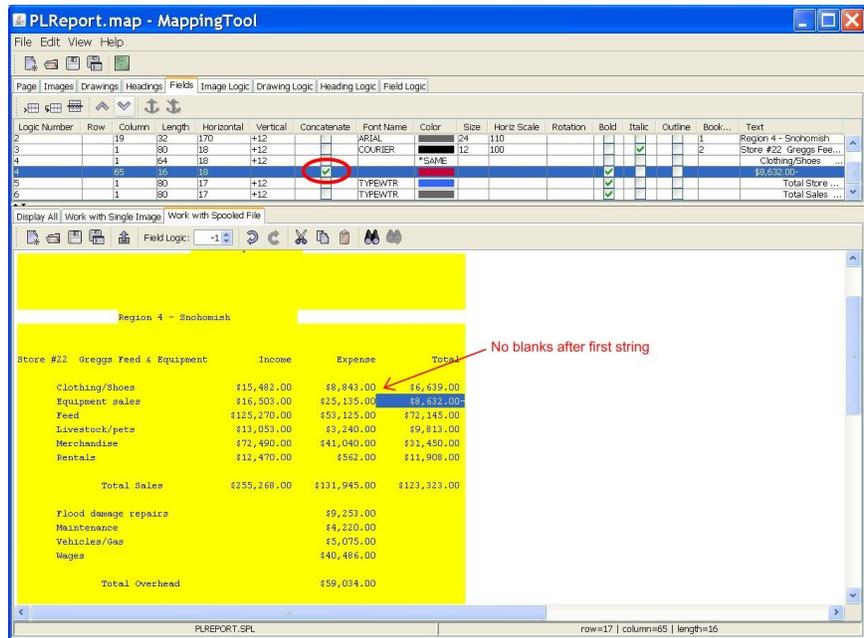
You can see how each Logic definition changes the document on the *Display All* tab, in the lower section of the screen. At first all spooled file lines are sent to the PDF, the same way, using the default field definition. As you add new Logic entries, the report will continue to change.
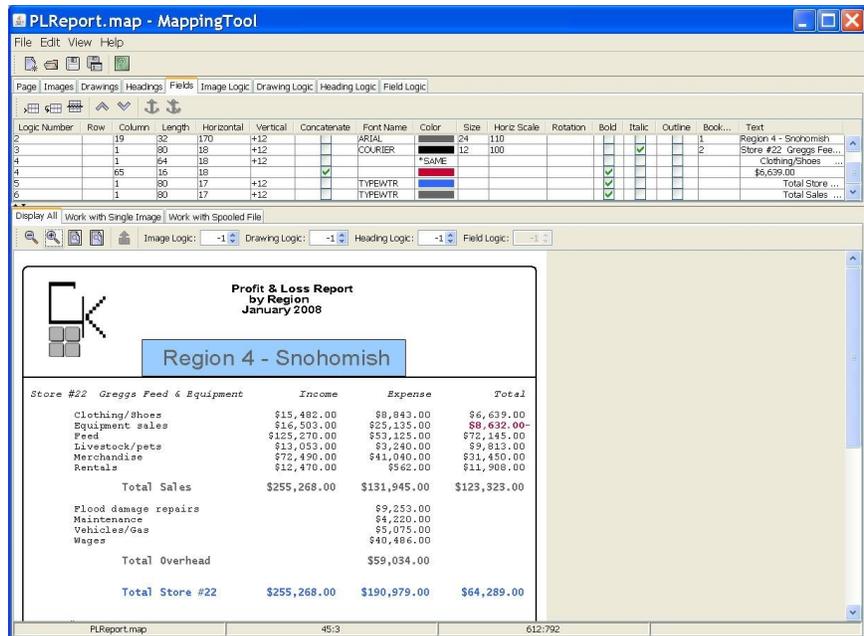
When you have finished mapping the report, follow the "Save and Transfer" instructions found in the previous section of this manual to save the Map file and transfer it to the iSeries along with any images that you have included on the page.

KeyesOverlay Menu

The KeyesOverlay system uses a menu (KOMENU) for transferring objects to and from the IFS.

Displaying the Menu:

1. Be sure that the KeyesOverlay Program library is on your library list. The library is usually called KOLIB.

   Enter: ADDLIBLE kolib

2. Display the KeyesOverlay Menu.

   Enter: GO KOMENU

```
display-s105p5dm.WS

File   Edit   View   Communication   Actions   Window   Help

KOMENU                        KeyesOverlay Menu              12/21/10
JOHN                                                         10:52:06

Select one of the following:


     1. Work with Map members
     2. Work with Image members
     3. Work with Spooled files



    51. KeyesMail Menu
    52. KeyesPDF Menu
    53. KeyesArchive Menu

    90. Sign Off

Selection or command
===> _

F3=Exit   F4=Prompt    F9=Retrieve    F12=Cancel
F13=Information Assistant  F16=AS/400 main menu

MA    a              MW                              20/007
```

Work with Map members

Map entries are used to place spooled file data from a standard *SCS printer file onto a PDF page, with optional overlays, images and bookmarks. Your mapping data is stored in a file called PDFMAP in KOLIB. The PDFMAP file is actually a Source Physical File, that contains 12 characters of a Sequence number and a Date, followed by the mapping data. This allows you to use SEU (Source Entry Utility) to maintain the entries, when they are on the iSeries. You can find information about the Map File file structure in the Appendix.

Transferring Maps to and from the IFS

Original development of the mapping entries and general maintenance is best done using the **MappingTool** on a PC. However, you can manually change an entry that is on the iSeries using **SEU** if you wish. Transfer of these mapping members to and from the IFS can be done using any transfer method available, but can easily be done using the tools that we have provided on KOMENU.

Item #1 (*Work with Map members*) from **KOMENU** (KeyesOverlay Menu) will allow you to transfer map members between the source physical file PDFMAP and the IFS.

Transferring a Map to the IFS:

1. Use **GO KOMENU** to display the KeyesOverlay menu.

2. Select option **1** to work with Map members.

3. Use option **1** to transfer one of the map members to your IFS.

4. Specify the appropriate name and path on the IFS to transfer the map member:

File name	**PDFMAP**
Member name	**MAPMBR**
Name on IFS	*MAPMBR.MAP*
To path	*'/KOVERLAY/Maps'*

Note: You can browse the IFS to see your maps, using **F6**.

Transferring a Map from the IFS:

1. Use **GO KOMENU** to display the KeyesOverlay menu.

2. Select option **1** to work with Map members.

3. Press **F6** to browse the IFS. The contents of /KOVERLAY folder will be shown to you by default.

4. Move the cursor to the desired folder and press **Enter** to open the folder. Move the cursor to a file and press **Enter** to select the file.

5. Specify the appropriate member name and description for the transfer of the map member:

    To file name . . . .   **PDFMAP**____

    Member name . . . .   **Mapmembern**

    Description . . . .   'Sample Map member'_____

    ____

    Name on IFS . . . .   Mapmembername.map

    From path . . . .   '/KOVERLAY/Maps'

Note: A proposed member name will be generated for you by truncating the name of the map member selected from the IFS down to a maximum of 10 characters, without any filename extension. You may have to correct the name to make it a legal iSeries name. iSeries names must start with a letter or $#@*. Following characters can be letters, digits, special characters $#@* or an underscore (_) with no embedded blanks.

Work with Image members

TIFF images can be created for KeyesOverlay using a variety of methods. Your TIFF images are stored in a file called PDFIMAGE in KOLIB.

Color images are best saved using either Deflate or JPeg compression. This will make the smallest TIFF file sizes. Monochrome images work well with Deflate, Packbits, CCITT T-4 or T-6 compression methods. It is recommended that you create the images with 300 dpi resolution, this will give a compact size but still be good for viewing and printing clarity in the PDF documents.

Creating Images using KeyesPDF Utility

You can convert AFPDS or USERASCII spooled files into TIFF images with the KeyesPDF Utility.

1. Create an AFPDS or USERASCII spooled file that contains just your overlay, with no data.

2. Use **GO KUMENU** to display the KeyesPDF Utility menu.

3. Select option **6** to convert a spooled file and specify the user or output queue to search.

4. Locate the spooled file and use option **1** to convert it.

5. Specify the following parameters:

    TOFILE(PDFIMAGE)   TOLIB(KOLIB)
    TOMBR(image-name)   TOTYPE(TIF)

This will create a 300 dpi monochrome TIFF image out of an AFPDS or USERASCII spooled file and place it in the PDFIMAGE file.

Creating Images using KeyesMail

You can convert AFPDS or USERASCII spooled files into TIFF image attachments, then save these images into the PDFIMAGE file using KeyesMail.

1. Create an AFPDS or USERASCII spooled file that contains just your overlay, with no data.

2. Use **GO KMMENU** to display the KeyesMail menu.

3. Select option **1** to Work with KeyesMail.

4. **F6** will create a new piece of mail. You do not need to address the mail nor do you need to give it a subject or a message.

5. After closing the Recipient address window, move the cursor to the Attach> line and press **Enter.** This will open the Attachments window.

6. **F6** will add a new attachment. The type will be **5** (SplF).

7. Move the cursor to <Spool File> and press **Enter** to browse for the spooled file. Be sure to specify a Translation code of **3** (IMG). This will create a 300 dpi monochrome TIFF image for AFPDS or USERASCII spooled files.

8. Use option **1** to save the image as a type **3** (PF) into PDFIMAGE in KOLIB. Be sure to name the member something appropriate.

Creating Images using ImageMaker

ImageMaker is a Color Print Driver that can be used to create full color TIFF images for KeyesOverlay. MappingTool can easily convert the color images to either 8 bit gray scale or monochrome (B/W) images, if this is desirable.

1. Create or display a document that you want to convert to an image, using any desired PC application.

2. Select and print to the **KeyesOverlay.ImageMaker** printer.

    This will render the document into a color TIFF image and write it to the **K:\Images** directory, by default. You can change the default destination by changing the *"Path for Output Files"* located in the Printer Properties/Device Settings.

    Each image will be given a name that starts with the letters "Im" and includes the current Month, Day, and a sequence number.

    (**Im081501.tif**)

3. Open the image in the *Work with Single Image* section of the **MappingTool** program.

4. Save the image with an appropriate name. Be sure to select the desired Color and Compression attributes for the image, on the *Save Image file* screen.

Note: For color images you should choose **RGB (24-bit)**. For monochrome images, you will want **B/W (1-bit)**. We recommend that you save most color images using either **Deflate** or **JPEG** compression. For monochrome images we recommend **CCITT T-6**, as this usually creates the smallest image size.

Using Images from other Products

You can use TIFF images that were created by other products with KeyesOverlay. It is recommended that the images are created at 300 dpi, for the best results in a PDF document.

The TIFF images can be transferred directly to the PDFIMAGE file, using FTP, CPYFRMSTMF, CPYFRMPCD, or any transfer program available. Be sure to send the image file as-is, with no translation, or as a Binary transfer.

The easiest method of transferring an image is to use the KOVERLAY directory in your IFS. This directory should be mapped to a **K:** drive on your PC, for easy access. Objects that you place in the **K:** drive can be easily transferred to the iSeries using items on the KOMENU.

It is recommended that you open the images using the *Work with Single Image* section of the **MappingTool** program, then save them with an appropriate name. In this way you can select the desired Color and Compression attributes for the image.

Transferring Images to and from the IFS

Images can be created either on the iSeries or on a PC, and must be shared between **MappingTool** for development and **KeyesOverlay** for creating PDF documents. Transfer of these images can be done using any transfer method available, but can easily be done using the tools that we have provided.

Item #2 (*Work with Image members*) from **KOMENU** (KeyesOverlay Menu) will allow you to transfer images between the physical file PDFIMAGE and the IFS.

Transferring an image to the IFS:

1. Use **GO KOMENU** to display the KeyesOverlay menu.

2. Select option **2** to work with Image members.

3. Use option **1** to transfer one of the image members to your IFS.

4. Specify the appropriate name and path on the IFS to transfer the image:

    File name . . . .   **PDFIMAGE**
    Member name . . . .   **IMAGEMBR**
    Name on IFS . . . .   *IMAGEMBR.TIF*
    To path . . . .   *'/KOVERLAY/Images'*

Note: You can browse the IFS to see your images, using **F6.**

Transferring an image from the IFS:

1. Use **GO KOMENU** to display the KeyesOverlay menu.

2. Select option **2** to work with Image members.

3. Press **F6** to browse the IFS. The contents of /KOVERLAY folder will be shown to you by default.

4. Move the cursor to the desired folder and press Enter to open the folder. Move the cursor to a file and press Enter to select the file.

5. Specify the appropriate member name and description for the transfer of the image:

    To file name . . . .   **PDFIMAGE**
    Member name . . . .   **Imagemembe**
    Description . . . .   'Sample image member'

    Name on IFS . . . .   imagemember.tif
    From path . . . .   '/KOVERLAY/Images'

Note: A proposed member name will be generated for you by truncating the name of the image selected from the IFS down to a maximum of 10 characters and removing any filename extension. You may have to correct the name to make it a legal iSeries name. iSeries names must start with a letter or $#@*. The following characters can be letters, digits, special characters $#@* or an underscore (_) with no embedded blanks.

Work with Spooled files

Standard *SCS printer files are going to be mapped onto a PDF document. In *Full page* mode, the whole spooled file page will be sent to the PDF with the same fixed font. In *Mapping* mode, individual lines or fields may be mapped to the page with different fonts or attributes. In *Line* mode, each line is defined with Logic to be placed on the page.

Knowing where the fields are on the printer page can be a challenge, unless you have the original DDS or Printer specifications that were used to create the printer files. **MappingTool** will allow you to take a representative version of a spooled file and use it for assistance in mapping the data.

Transferring a Spooled File to the IFS

We recommend that you download a representative spooled file to the IFS so that **MappingTool** has access to it. Choose a spooled file that contains the type of data that you will be mapping to the PDF document.

Item #3 (*Work with Spooled files*) from **KOMENU** (KeyesOverlay Menu) will allow you to select and transfer spooled files to the IFS.

Selecting and transferring a Spooled file:

1. Use **GO KOMENU** to display the KeyesOverlay menu.

2. Select option **3** to work with Spooled files.

3. Specify the desired parameters to select by user or by output queue and press **Enter:**

    Show spooled files for . . . .   *USER_____
    User Id . . . .   *CURRENT__
    Output Queue . . . .   _____

4. Use option **1** to transfer one of the spooled files to your IFS.

5. Specify the appropriate path on the IFS to transfer the spooled file:

    Spooled file . . . .   **FileName**
    Job name . . . .   JobName
      User . . . .   User-Id
      Number . . . .   Number
    Spooled file number . . . .   SplNbr
    To path . . . .   *'/KOVERLAY'*_____
    _____

Note: The file will be given the original name with a **.SPL** filename extension on your IFS.

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MappingTool

MappingTool is used to define how to turn your spooled file into a complete and professional looking document or report. You will map spooled file data onto a page with boxes, lines, headings and images to create a finished PDF document.

Before Starting MappingTool

Before using MappingTool, you should have already gathered the parts that you will be putting together:
● Use **KeyesOverlay.ImageMaker** or another product to create an overlay or images and have these placed in the **K:** drive.
● Download a representative spooled file into the **/KOVERLAY** directory of your IFS.

Start the MappingTool Program

You can start MappingTool from the shortcut that was placed on your desktop during the Installation process. The shortcut starts the Java program from the **K:\MapTool** folder.

MappingTool has a split screen allowing you to create mapping entries on the top part of the screen while viewing the completed document on the lower portion of the screen. You can adjust the relative size of the two sections by dragging the center bar up or down with a mouse.

There are nine tabs in the top section and three tabs in the bottom section of the screen.

Top section:
- Page - Defines the page size, rotation and processing mode
- Images - Places overlays or images on the page
- Drawings - Allows you to draw lines and boxes on the page
- Headings - Places heading text on the page
- Fields - Maps spooled file text to the page
- Interactive - Defines Interactive fields or buttons for a Form.
- Image Logic - Sets Logic numbers for placing images on a page
- Drawing Logic - Sets Logic numbers for placing lines and boxes on a page
- Heading Logic - Sets Logic numbers for placing heading text on a page
- Field Logic - Sets Logic numbers for processing spooled file text on a page
- Interactive Logic - Sets Logic numbers for placing Interactive fields or buttons on a page

Lower section:
- Display All - Shows the completed page or lines (for line mode)
- Work with Single Image - Can add, alter, compress and rename images
- Work with Spooled File - Selects printer data to be mapped

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Defining the Page

1. Select the *Page* tab on the top portion of the screen.

2. Define the Width, Height, Orientation, Margins, number of Rows and Columns for the finished PDF page.

3. Select the appropriate processing mode for this Map file. (See below)
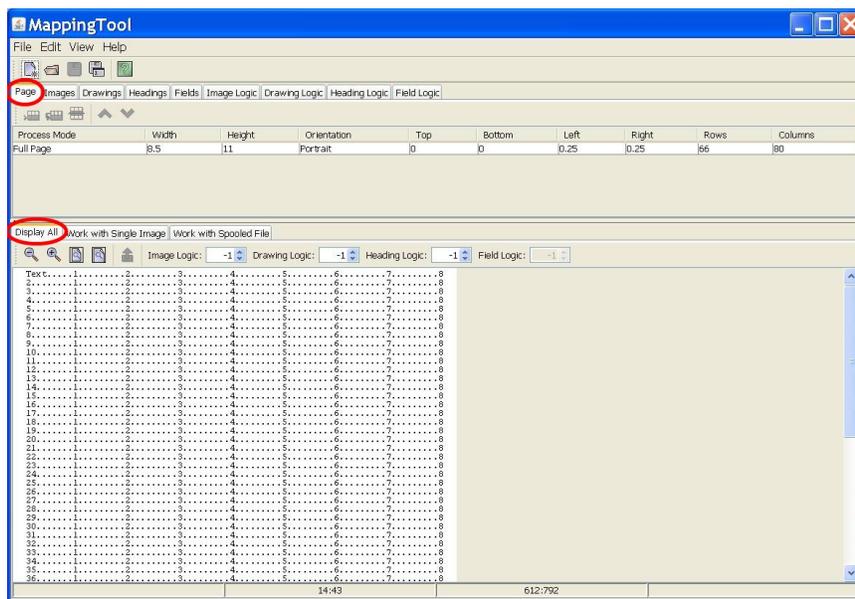
Process Mode:

Full page mode processing is the easiest method to map a spooled file. All spooled file lines are sent to the PDF with a single Field definition entry and an optional overlay. You would use this mode when the whole spooled file is placed on the PDF page, using the same fixed font attributes and sizes.

Field Mapping mode processing gives you the ability to alter the original spooled file data that will be sent to the PDF page. You would use this mode when you wanted to map individual fields to the PDF or change the font attributes for some of the fields.

Line Logic mode processing is the most advanced method. It is used to create reports that are more free flowing, such as Sales Reports or G/L Trial Balances. Logic entries are used to determine what type each line is in the spooled file page. Each line from the page can then be written to the PDF with the desired fonts and sizes. Bookmarks can be added to aid the user in navigating the different sections of the reports.

Width:

The page width is entered in inches with up to 2 decimal places. For example, you may enter 8.5 for letter size, or 8.27 for A4 size paper.

Height:

The page height is entered in inches with up to 2 decimal places. For example, you may enter 11 for letter size, or 11.69 for A4 size paper.

Orientation:

The page orientation is a value that you must select for the page. All objects on the page will be rotated to this orientation for both the screen and the PDF document. Click the field to select one of the available values:
- Portrait - Default value
- Landscape
- Reverse Portrait
- Reverse Landscape

Top Margin:

The top margin is entered in inches with up to 3 decimal places. For example, you may enter .25 for a 1/4 inch top margin. The default is 0, for no top margin.

Bottom Margin:

The bottom margin is entered in inches with up to 3 decimal places. The default is 0, for no bottom margin.

Left Margin:

The left margin is entered in inches with up to 3 decimal places. The default is 0.25 or 1/4 inch left margin.

Right Margin:

The right margin is entered in inches with up to 3 decimal places. The default is 0.25 or 1/4 inch right margin.

Rows:

This is the number of rows or lines that will be in the spooled file. The default value is 66.

Columns:

This is the number of columns or characters wide that will be in the spooled file. The default value is 80.

Cropping an Image

You can crop images with the MappingTool to make a smaller file, or to pick pieces of an image to be included in a PDF document.

1. Select the *Work with Single Image* tab on the lower portion of the screen.

2. Expand the lower portion of the screen by dragging the split pane divider higher.

3. Zoom out so that you can see the entire portion of the image that you want to crop.

4. Move the cursor to the upper left corner of the desired crop. Use the left mouse button to drag a box around the portion of the image that you want to extract and release it.

5. Press the **Crop the image** tool on the tool bar.

6. A *Crop* dialog box will appear with the coordinates of the box that you drew. You can fine tune the coordinates. Press the **OK** button to complete the crop.

7. Use the **Save image as** tool on the tool bar to save the cropped image with an appropriate name.

Compressing an Image

TIFF images that you use can be compressed in a variety of ways. **KeyesOverlay.ImageMaker** uses Packbits to compress the images. This is typically not the best compression. For monochrome (B&W) images we recommend CCITT T-6 compression. Color images can be compressed 10 to 50 times smaller using Deflate compression. For pictures we recommend that you use JPeg compression. Therefore, the first step to creating a map is to properly compress any images that you will be using.

1. Select the *Work with Single Image* tab on the lower portion of the screen.

2. Click the **Open an image** tool from the tool bar.

3. Find the desired image and open it. If the image is located on the **K:** drive, you should be able to access the KOVERLAY folder from *My Computer*.

   When you open an image, the compression method will be shown on the status bar, below the image.

4. You can manipulate the image using the toolbar buttons to rotate, despeckle, crop, or invert the colors, as desired, before saving the image. There are also **Import image** and **Export image** tools on the tool bar, that you can use to select an image for display or send an image to the *Images* tab to create a mapping entry.

5. Use the **Save image as...** tool on the tool bar to save the image. Be sure to select the appropriate name, destination, color, and compression type for the image. We recommend Deflate for color graphics, JPeg for pictures, and CCITT T-6 for monochrome images.

Mapping an Image

1. Select the *Images* tab, on the top portion of the screen.

2. If you would like to use an image that you are already displaying on the *Work with Single Image* screen, you can press the **Export** tool on its tool bar. That image will be added to the *Images* screen.

    As an alternative, you can use the **Add an image** tool in the *Images* tab, then Click in the *Path/Name* field to browse for an image.
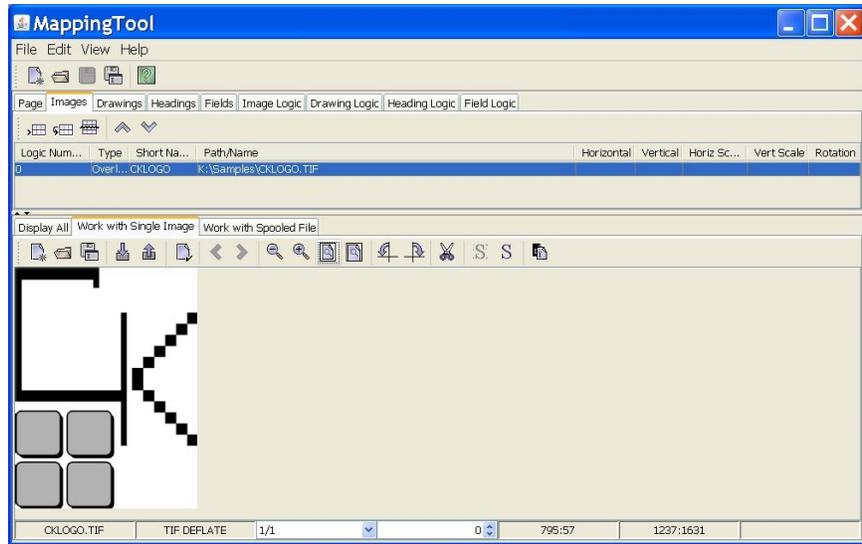
3. Select the *Display All* tab, on the lower portion of the screen. The complete page, with this new image, will appear on the screen.

4. You can move, scale, or rotate the image using the parameters on the *Images* screen. You can also use the **right mouse** button to move the image on the page, to where you want it. Your changes will be reflected on the *Display All* screen.
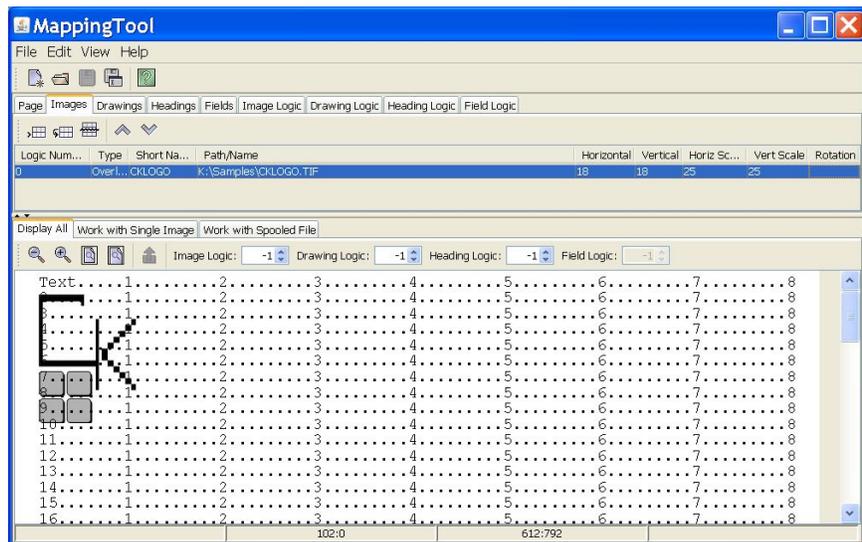
Logic Number:

Use the Logic number field to select when an image will be included on the PDF page. The default Logic number is zero, meaning the image will always be included. If you set the Logic number greater than zero, the image will only be included when that Logic number is selected for the page. The Logic numbers are defined using the *Image Logic* tab.

Type of Image:

Select one of the valid types (After, Before, Duplex, or Overlay). *After* images create a page after the last spooled file page, like a document trailer. *Before* images create a page before the first spooled file page, like a document header. *Duplex* images are placed after each spooled file page and are used for duplex printing. *Overlays* are images that are added to each of the spooled file pages.

Short Name:

The Short Name must follow iSeries member naming conventions. The program will truncate the long name down for you to a maximum of 10 characters without a filename extension. When you transfer the image to the PDFIMAGE file, the member name must match this name.

You may have to correct the name to make it a legal iSeries name. iSeries names must start with a letter or $#@*. The following characters can be letters, digits, special characters $#@* or an underscore (_) with no embedded blanks.

Path/Name:

This is the Path and Name of the image as it is found by the MappingTool program. You can browse for a new image by clicking on this field. You can import this image into the *Work with Single Image* screen using the **Import image** tool on its toolbar.

Horizontal:

The horizontal location of the image on the page, in pixels (72 dots per inch). This position refers to the left side of the image after any rotation.

Vertical:

The vertical location of the image on the page, in pixels (72 dots per inch). This position refers to the top of the image after any rotation.

Horiz Scale:

The horizontal scaling of the image. The default value is 100%, if left blank. The scaling factor is applied before the image is rotated.

Vert Scale:

The vertical scaling of the image. The default value is 100%, if left blank. The scaling factor is applied before the image is rotated.

Rotation:

Select one of the valid rotation values (0,90,180,270) of the image on the page.

Drawing Lines and Boxes

Lines and boxes can be drawn on the page to create a forms overlay.

1. Select the *Drawings* tab, on the top portion of the screen. This is where the Drawings are defined.

2. Select the *Display All* tab, on the lower portion of the screen.

3. Use the **Left mouse** button to drag a line or a box onto the screen, where you want it.

4. Press the **Export graphic** tool. This will generate a new line or box on the page.

5. After exporting, you can change the attributes of the line or box.
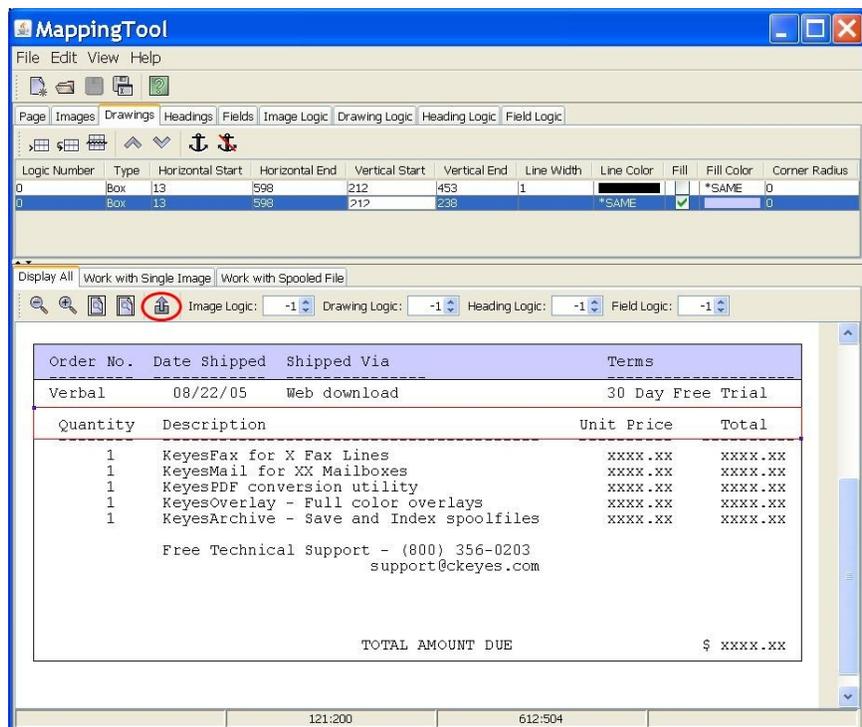
Anchor and UnAnchor tools:

Use the **Anchor** tool to fix the location and attributes for the drawing, on the page. Use the **UnAnchor** tool to make a drawing follow the one above it. If you UnAnchor a group of related lines or boxes, this will allow you to move all of them to a new location. For example, in the above screen, you could UnAnchor the second box to move both boxes up or down, left or right, etc.

Logic Number:

Use the Logic number field to select when a line or box will be included on the PDF page. When you set the Logic number to zero, the drawing will always be included on the page. If you want the drawing to only be included sometimes, you can assign a Logic number to it. The drawing will then only happen if the Drawing Logic definitions for that Logic number is selected.

Type:

Select either Line or Box for the type of drawing you want to make.

Horizontal Start:

The horizontal start location of the line or box on the PDF document. This value is in pixels (72 dots per inch) with up to 2 decimal places. You can enter exact locations or you can enter a Plus or Minus prior to the value to move the drawing in relation to the previous drawings location. If you leave this field blank, it will take on the value of the previous drawing.

Horizontal End:

The horizontal end location of the line or box on the PDF document.

Vertical Start:

The vertical start location of the line or box on the PDF document. This value is in pixels (72 dots per inch) with up to 2 decimal places. You can enter exact locations or you can enter a Plus or Minus prior to the value to move the drawing in relation to the previous drawings location. If you leave this field blank, it will take on the value of the previous drawing.

Vertical End:

The vertical end location of the line or box on the PDF document.

Line Width:

Set the width of the line used to make the line or box on the PDF document. This value is in pixels (72 dots per inch) with up to 2 decimals. If you leave this field blank, it will take on the value of the previous drawing.

Line Color:

Click in this field to get a color chart for selecting a color. If you set this field to *SAME, it will take on the color of the previous drawing.

Fill:

Use this check box to Fill a box with the selected Fill Color.

Fill Color:

Click in this field to get a color chart for selecting a color. If you set this field to *SAME, it will take on the fill color of the previous drawing.

Corner Radius:

Set this value for boxes only, to make rounded corners. This value is in pixels (72 dots per inch) and represents the radius of a circle that will make the rounded corners. A value of 18, for example, would make a rounded corner with a 1/4 inch radius. A value of zero will produce square corners.

Adding Headings

Headings can be added to the PDF page to create a forms overlay.

1. Select the *Headings* tab, on the top portion of the screen. This is where the headings are defined.

2. Select the *Display All* tab, on the lower portion of the screen.

3. Use the **Left mouse** button to drag a small box onto the screen, to represent the size and location where you want the heading text to be placed.

4. Press the **Export graphic** tool. This will generate heading text on the page, with the default text value of "Heading".

5. After exporting, you can change the default text and attributes of the heading, in the *Headings* tab. You can also move a heading using the **Right mouse** button on the *Display All* screen.
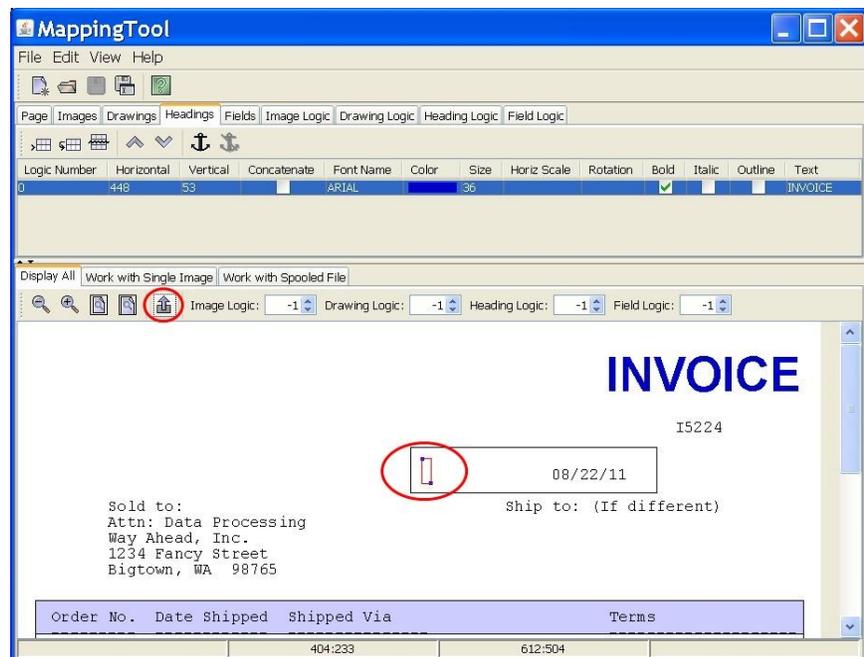
Anchor and UnAnchor tools:

Use the **Anchor** tool to fix the location and attributes for the headings, on the page. Use the **UnAnchor** tool to make the headings follow the one above it. If you UnAnchor a group of related headings, this will allow you to move all of them to a new location or change all of their attributes, by changing the top one.

Logic Number:

Use the Logic number field to select when a heading will be included on the PDF page. When you set the Logic number to zero, the heading will always be included on the page. If you want the heading to only be included sometimes, you can assign a Logic number to it. The heading will then only happen if the Heading Logic definitions for that Logic number is selected.

Horizontal:

The horizontal location of the heading on the PDF document. This value is in pixels (72 dots per inch) with up to 2 decimal places. You can enter exact locations or you can enter a Plus or Minus prior to the value to move the heading in relation to the previous heading location. If you leave this field blank, it will take on the value of the previous heading.

Vertical:

The vertical location of the heading on the PDF document. This value is in pixels (72 dots per inch) with up to 2 decimal places. You can enter exact locations or you can enter a Plus or Minus prior to the value to move the heading in relation to the previous heading location. If you leave this field blank, it will take on the value of the previous heading.

Concatenate:

Use this check box to concatenate this heading text with the previous heading. The previous heading will be right trimmed of all blanks, before the text from this heading is added to the string. If you want one or more blanks between the headings, the blanks must appear on the front of this heading.

Font Name:

Click in this field to get a list of available fonts that you can select. If you leave this field blank, it will take on the value of the previous field. The available fonts are Arial, Comic, Courier, Helvetica, LBright, LConsole, **LSans**, MICR, Palatino, SansSerif, *Script*, Symbol, Times, TypeWtr & ZapfDingbats.

Color:

Click in this field to get a color chart for selecting a color. If you set this field to *SAME, it will take on the color of the previous field.

Size:

The size of the font in points (each point is 1/72 of an inch). If you leave this field blank, it will take on the value of the previous heading.

Horiz Scale:

The horizontal scaling factor (percentage) to be applied to this heading. If you leave this field blank, it will take on the value of the previous field. You can use the Horizontal scaling to fit more characters on a page, to make them short and fat or to make them tall and thin.

Rotation:

You may click on this field to select one of the valid rotation values (0,90,180,270) of the heading on the page. This rotation value is in addition to any page rotation, which rotates all objects on the page. If you leave this field blank, it will take on the value of the previous field.

Bold:

Use this check box for **bolding** the heading text.

Italic:

Use this check box for *italicizing* the heading text.

Outline:

Use this check box to display an outline of the heading text. To outline a field with a different color, you can print the same heading twice in the same location, one with and one without Outline checked.

Text:

This text is used for the heading. Heading text can be up to 80 characters long. If you need a longer string, you can concatenate headings together.

Mapping Fields

Fields are mapped from a spooled file to the PDF page differently, depending on the Process Mode. In *Full page* mode, a single Text record definition will map all of the spooled file lines to the page. In *Field Mapping* mode, each line or individual fields can be mapped to the page separately. The system will automatically create a record for each spooled file line and allow you to remove, alter or supplement those lines, as needed. Invoices and Purchase Orders are examples of documents that might use either *Full page* or *Field Mapping* mode.

In *Line Logic* mode, each line of the spooled file is written to the PDF page relative to the previous line. Each line from the spooled file is written to the PDF, one line at a time. Field Logic is used to determine what type of line is written next. A Sales Report is an example of a document that could be written using *Line Logic* mode.

1. Select the *Fields* tab, on the top portion of the screen. This is where fields for the current mapping will be defined.

2. Select the *Work with Spooled File* tab on the lower portion of the screen.

3. Click on the **Open a text file** tool, if you have not already done so.

4. Find the desired spooled file and open it. If you have downloaded a representative spooled file from your iSeries to the KOVERLAY directory, you should be able to access the file from *My Computer* in the **K:** drive.

5. The definitions that you entered on the *Page* tab will be used to automatically generate the records needed for mapping your spooled file. You may wish to change some of the field attributes. You will be able to see how the spooled file data will be appear in the PDF, with each attribute change.

Full Page mode:

For *Full Page* mode, one line on the *Fields* screen will define every line on the page. You can change the attributes for that one line, but you cannot add any more line definitions. One line does it all.
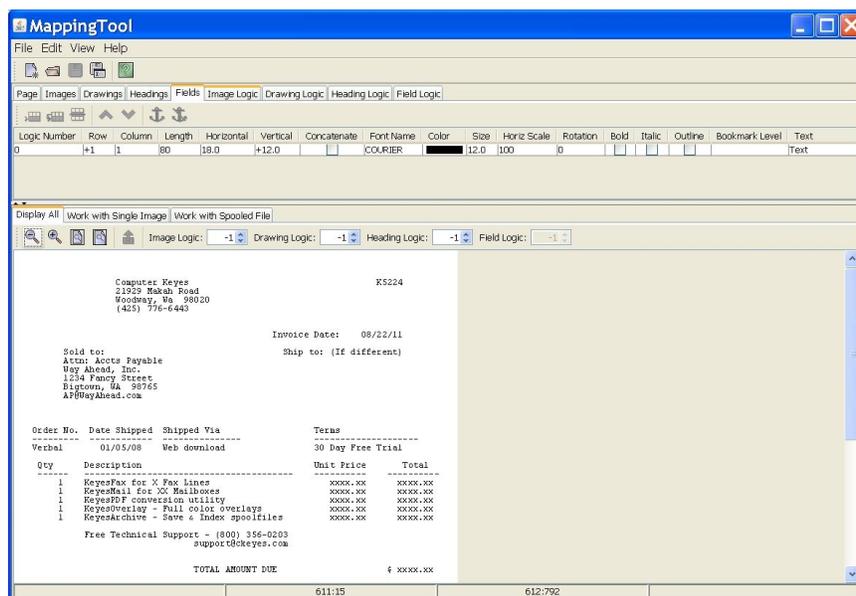
For Field Mapping mode:

6. Field definitions for all lines of the Spooled File text will be automatically included in the *Fields* tab. If you wish to change a field, you would first remove the automatically created definition for the line. The line will turn white on the *Work with Spooled Files* screen.

7. You now select individual fields from the *Work with Spooled Files* screen using the **Left mouse** button. Do not include leading spaces if you want to change the font size or location on the page.

8. Press the **Export field** tool on the tool bar. This will export the selected field to the *Fields* screen. The new fields will be placed directly under the last field that had been exported or selected on the *Fields* screen.
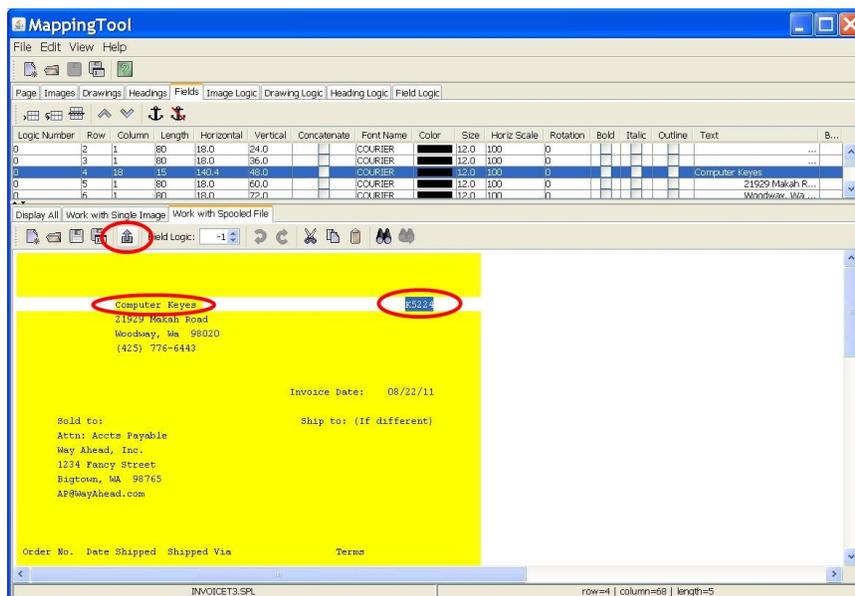
9. Select the *Display All* tab, on the lower portion of the screen. You should see the new fields appearing on the screen where they fell on the spooled file page. This is the original location.

10. Use the *Fields* screen parameters to set the desired font, size and other attributes for the fields.

11. Move the cursor to the location on the screen where you want the selected field to be placed. Press the **Right mouse** button and you can move the field to that location.
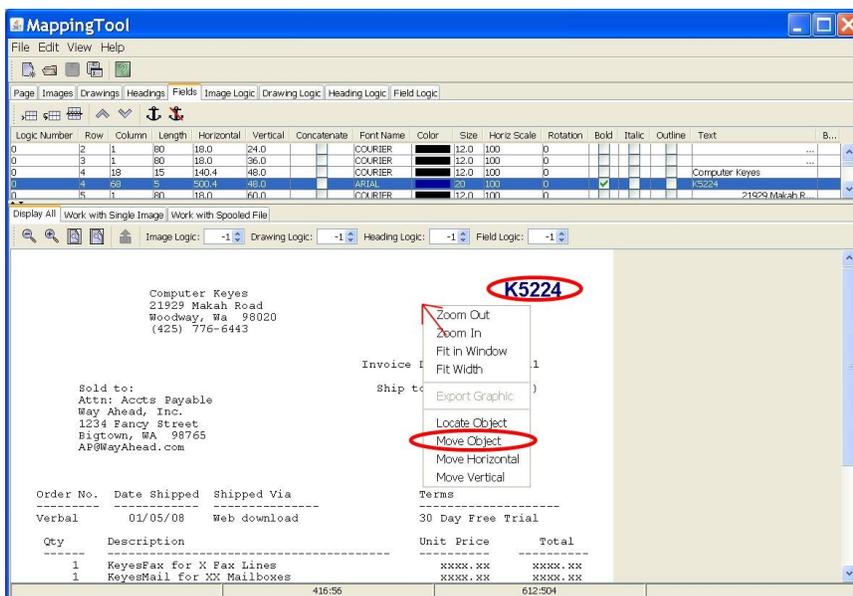
12. Switch back to the *Work with Spooled File* screen to see all of the fields that have already been mapped. Mapped fields appear in yellow.

Anchor and UnAnchor tools:

Use the **Anchor** tool to fix the location and attributes for fields, on the page. Use the **UnAnchor** tool to make a field follow the one above it. If you UnAnchor a group of related fields, this will allow you to move all of them to a new location. For example, in the above screen, you would UnAnchor the Company Name and the three Address lines to make all of them follow any changes that you make to the Attention line.

Logic Number:

Use the Logic number field to select when a field will be included on the PDF page. This is typically only used for *Line Logic* mode processing, but can also be used in *Field Mapping* mode, if you need to. When you set the Logic number to zero, the field will always be included on the page. For *Field Mapping* mode, you would generally leave all the fields with a zero Logic number.

For *Line Logic* mode, you will set a different Logic number, greater than zero, for each group of fields that make up a line. Each group of fields, defined by one Logic number, will be written to the PDF page when that Logic number is selected. The Logic numbers are defined using the *Field Logic* tab.

Row:

The row in the spooled file, where the field will be extracted. For *Full page* mode, set this field to +1, for processing all of the lines of the spooled file.

For *Field Mapping* mode, enter a specific row or you can enter a Plus or Minus prior to the value to select a row in relation to the previous row. For example, a value of +1 would select the next row. If you leave this field blank, it will take on the value of the previous row.

In *Line Logic* mode processing, this field must be left blank. Every row is processed, depending on the Logic records to create the PDF page.

Column:

The column in the spooled file, where the field will be extracted. You can enter a specific column or you can enter a Plus or Minus prior to the value to select a column in relation to the previous field's column. If you leave this field blank, it will take on the value of the previous field.

For *Full page* mode, this will usually be set to 1.

Length:

The length of the spooled file field that will be extracted. This is a required value. For *Full page* mode, set this to the width of the spooled file page.

Horizontal:

The horizontal location of the field on the PDF document. This value is in pixels (72 dots per inch) with up to 2 decimal places. You can enter exact locations or you can enter a Plus or Minus prior to the value to move the field in relation to the previous field location. If you leave this field blank, it will take on the value of the previous field.

For *Full page* mode, set this to the desired left margin. A value of 18, for example, will start the first character at 18/72 or 1/4 inches from the left edge of the page.

Vertical:

The vertical location of the field on the PDF document. This value is in pixels (72 dots per inch) with up to 2 decimal places. You can enter exact locations or you can enter a Plus or Minus prior to the value to move the field in relation to the previous field location. If you leave this field blank, it will take on the value of the previous field.

For *Full page* mode, use a + value to set the line spacing. A +12 value, for example, will allow 66 lines to be placed on the page. (12 x 66 = 792 which is 11 inches long.)

Concatenate:

Use this check box to concatenate this field with the previous field. The previous field will be right trimmed of all blanks, before the text from this field is added to the string. If you want one or more blanks between the fields, the blanks must appear on the front of this field. Do not use this in *Full page* mode.

Font Name:

Click in this field to get a list of available fonts that you can select. If you leave this field blank, it will take on the value of the previous field. The available fonts are Arial, Comic, Courier, Helvetica, LBright, LConsole, **LSans**, MICR, Palatino, SansSerif, *Script*, Symbol, Times, TypeWtr & ZapfDingbats.

Note: Courier, LConsole, and TypeWtr are Fixed fonts. The others are variable fonts. Fixed fonts are more easily lined up in columns. Each character in a word will take up the same amount of room on the page.

For *Full page* mode, you would typically use one of the Fixed fonts.

Color:

Click in this field to get a color chart for selecting a color. If you set this field to *SAME, it will take on the color of the previous field.

Size:

The size of the font in points (each point is 1/72 of an inch). If you leave this field blank, it will take on the value of the previous field.

Horiz Scale:

The horizontal scaling factor (percentage) to be applied to this text. If you leave this field blank, it will take on the value of the previous field. You can use the Horizontal scaling to fit more characters on a page, to make them short and fat or to make them tall and thin.

Rotation:

You may click on this field to select one of the valid rotation values (0,90,180,270) of the field on the page. This rotation value is in addition to any page rotation, which rotates all objects on the page. If you leave this field blank, it will take on the value of the previous field. Do not use this for Full page mode.

Bold:

Use this check box for **bolding** the text.

Italic:

Use this check box for *italicizing* the text.

Outline:

Use this check box to display an outline of the text. To outline a field with a different color, you can print the same field twice in the same location, one with and one without Outline checked.

Bookmark Level:

Bookmarks can be added to the PDF to aid the user in navigating the different sections of a report. Set a level of either 1 or 2 to make a bookmark at that level. Leave this field blank for regular fields. This is typically only used in *Line Logic* mode, but can be used in *Field Mapping* mode.

Bookmarks will only be added to the PDF, when the value of the selected fields actually change. In this way, you can name a field that repeats as a bookmark. Each time the value changes, this will make another bookmark entry in the PDF.

Text:

This text is purely optional, except for constant values. If you leave both the Row and Column parameters blank, this value is used as a Constant. The Constant text is used in place of data from the spooled file. The Length parameter will limit the length of the Constant text.

Interactive Fields

Interactive fields or buttons can be placed on a Form that you send to a customer to fill out and send back to you. Prefill values for the fields can be mapped from a spooled file to the Interactive fields. Interactive Logic can be used to determine which fields or buttons are written to the page. A Questionaire or an Application are examples of documents that could have Interactive fields defined for them.

1. Select the *Interactive* tab, on the top portion of the screen. This is where Interactive fields will be defined.

2. Select the *Work with Spooled File* tab on the lower portion of the screen.

3. Select fields and export them to the *Interactive* tab, if you want to prefill a value for some of the fields.

4. You may copy or add new fields in the *Interactive* tab, if you do not want to prefill a field.
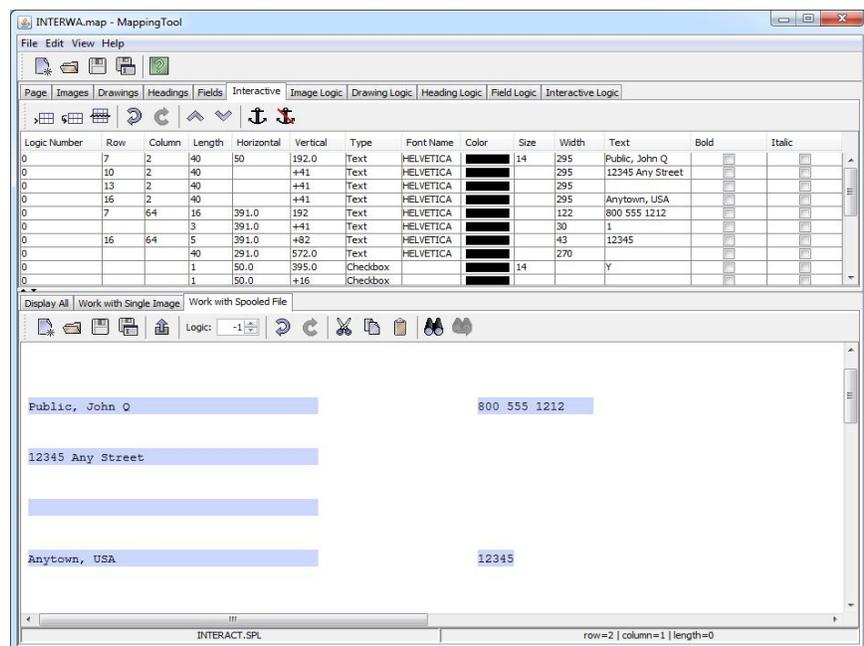
5. Select the *Display All* tab, on the lower portion of the screen. You should see the new fields appearing on the screen where they fell on the spooled file page. This is the original location.

6. Use the *Interactive* screen parameters to set the desired font, size and other attributes for the fields.

7. Move the cursor to the location on the screen where you want the selected field to be placed. Press the **Right mouse** button and you can move the field to that location.
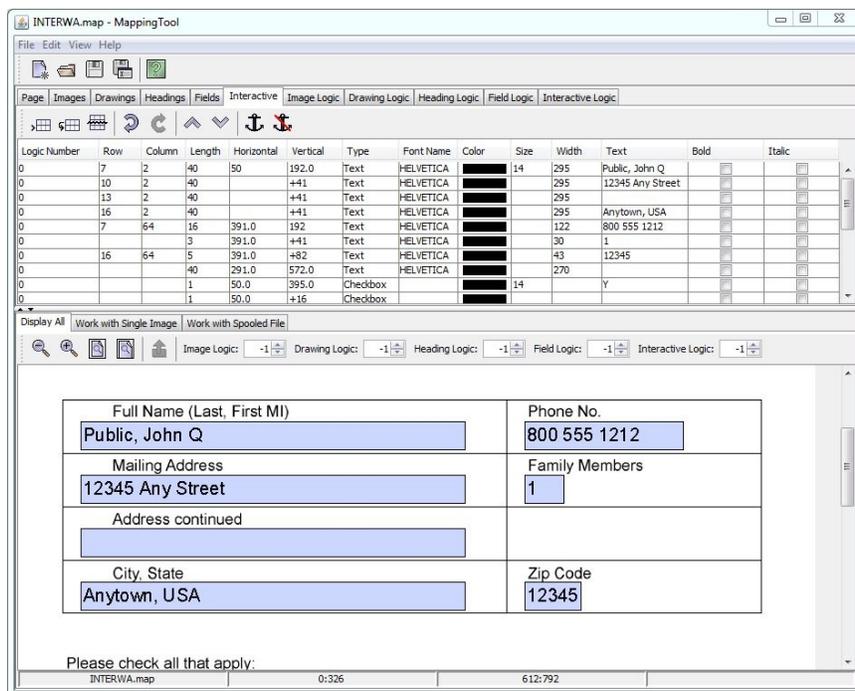
8. You may also add new Interactive Fields by drawing a box, using the **Left mouse** button, and then pressing the **Export Graphics** button.

Anchor and UnAnchor tools:

Use the **Anchor** tool to fix the location and attributes for Interactive fields, on the page. Use the **UnAnchor** tool to make a field follow the one above it. If you UnAnchor a group of related fields, this will allow you to move all of them to a new location. For example, in the above screen, you would UnAnchor the Mailing Address, Address continued and City, State to make all of them follow any changes that you make to the Full Name field.

Logic Number:

Use the Logic number field to select when a field will be included on the PDF page. This is typically used to make different Interactive fields for different pages of a Form. When you set the Logic number to zero, the field will always be included on the page. Each group of fields, defined by one Logic number, will be written to the PDF page when that Logic number is selected. The Logic numbers are defined using the *Interactive Logic* tab.

Row:

The row in the spooled file, where a prefill value will be extracted. Leave this value blank if you are not intending to prefill a field value from the spooled file data. For prefilling: Enter a specific row or you can enter a Plus or Minus prior to the value to select a row in relation to the previous row. For example, a value of +1 would select the next row. If you leave this field blank, it will take on the value of the previous row unless the Column is also left blank. To prefill a Checkbox field, set it to any non-blank value.

Column:

The column in the spooled file, where a prefill value will be extracted. Leave this value blank if you are not intending to prefill a field value from the spooled file data. For prefilling: Enter a Plus or Minus prior to the value to select a column in relation to the previous field's column. If you leave this field blank, it will take on the value of the previous field unless the Row is also left blank.

Length:

The maximum length of the Interactive field. The user will not be able to enter more than this number of characters in a Text field. For Checkbox fields the length must be 1. This is a required value for all but Digital Signatures.

Horizontal:

The horizontal location of the field on the PDF document. This value is in pixels (72 dots per inch) with up to 2 decimal places. You can enter exact locations or you can enter a Plus or Minus prior to the value to move the field in relation to the previous field location. If you leave this field blank, it will take on the value of the previous field.

Vertical:

The vertical location of the field on the PDF document. This value is in pixels (72 dots per inch) with up to 2 decimal places. You can enter exact locations or you can enter a Plus or Minus prior to the value to move the field in relation to the previous field location. If you leave this field blank, it will take on the value of the previous field.

Type:

The type of Interactive field that you are defining. There are currently six types of Interactive fields:

Text: The user types data into the Interactive field up to a maximum length.

Required Text: The field is displayed with a Red line around it to designate a required field. It must be filled out before it can be submitted.

Checkbox: The user selects entries by checking the box.

Digital Signature: The user signs the document digitally.

Hidden Field: Used for passing hidden data such as the form name.

Submit Button: The user presses the button to send the document data to a server to be collected and processed. Please note that the kLink Server running on your IBM i can be used for this purpose. You must provide a URL pointing to the server that will process the submitted form data. The URL (*http://server_address*) can be placed in the Text field, or it can come from the spooled file data.

To use your kLink server, set the URL to something like this:

http://your-IBM-i:18946/cgi-bin/klwbrwcus

Notes: Digital Signatures using a Certificate can only be signed using either a paid for service or using Adobe's Acrobat sofware and can be submitted back to the kLink server. Adobe's Free PDF Reader can Sign any PDF

using a graphical Signature and placed anywhere on the page that you wish, as long as you have not defined either a **Digital Signature** or a **Submit Button** in the PDF document. A Signed document can be saved and emailed or uploaded back to you.

Font Name:

Click in this field to get a list of available fonts that you can select for a Text field. If you leave this field blank, it will take on the value of the previous field. The available fonts are Arial, Comic, Courier, Helvetica, LBright, LConsole, **LSans**, MICR, Palatino, SansSerif, *Script*, Symbol, Times, TypeWtr & ZapfDingbats.

Color:

Click in this field to get a color chart for selecting a color. If you set this field to *SAME, it will take on the color of the previous field.

Size:

The size of the font in points (each point is 1/72 of an inch). If you leave this field blank, it will take on the value of the previous field.

Width:

The width of the Interactive field box. A blue box will appear on the page that is as wide as this value. The user will type in the blue box. If the width is smaller than the maximum length that will fit, the font will automatically shrink to allow the maximum number of characters to be typed. If you leave this field blank, it will take on the value of the previous field. This field is ignored for Checkbox Fields.

Bold:

Use this check box for **bolding** the text.

Italic:

Use this check box for *italicizing* the text.

Text:

This text can be used as constant values. If you leave both the Row and Column parameters blank, this value is used as a Constant. The Constant text is used in place of data from the spooled file for prefilling fields. The Length parameter will limit the length of the Constant text. To prefill a Checkbox field you may use any non-blank character. You should enter a Submit button's URL here, if it is not being taken from the spooled file data.

Locating an Object

After painting multiple objects on the screen, you can find an object using the **right mouse** button.

1. Select the appropriate tab (*Images*, *Drawings*, *Headings, Fields,* or *Interactive*) of the object that you wish to find, on the upper portion of the screen.

2. Select the *Display All* tab, on the lower portion of the screen.

3. Zoom in, if necessary, then put the cursor on the object that you wish to find. Press the **right mouse** button and select the **Locate Object** function.

All objects at that location will be selected for you.

Moving an Object

After selecting object(s) on the screen, you can move the them using the **right mouse** button.

1. Select the appropriate tab (*Images*, *Drawings*, *Headings* or *Fields*) of the object that you wish to move, on the upper portion of the screen.

2. Select the *Display All* tab, on the lower portion of the screen.

3. Select the object, or objects, in the upper portion of the screen. You can use the **Locate Object** function to find it for you, or you can click on the object yourself to select it. The selected object(s) will be highlighted.

4. Zoom in, if necessary, then put the cursor at the location where you wish to move the object. Press the **right mouse** button and select one of the **Move** functions. You can move the object Vertically, Horizontally, or both.

All objects that were selected will move to that location.

Defining Image Logic

Image Logic can be used to define when or which images will be included on each PDF page. If an image is defined with a non-zero Logic number, the Image Logic will be checked for that number to see if it is selected. If not, that Image will not be placed on the page.

1. Select the *Image Logic* tab, on the top portion of the screen.

2. Select the *Work with Spooled File* tab on the lower portion of the screen.

3. Click on the **Open a text file** tool on the tool bar, if you have not already done so.

4. Find the desired spooled file and open it. If you have downloaded a representative spooled file from your iSeries to the KOVERLAY directory, you should be able to access the file from *My Computer* in the **K:** drive.

5. The Spooled File text is intended to give you a quick way of selecting fields to be tested for the Image Logic. Each field that you export from the Spooled File can be sent to the *Image Logic* screen for further definition.

   Select text from the *Work with Spooled File* screen using the **Left mouse** button. Only individual fields or whole single lines may be selected and tested.

6. Press the **Export field** tool on the tool bar. This will export the selected field to the *Image Logic* screen. The new field will be placed directly under the last field that had been exported or selected on the *Image Logic* screen, and given the same Logic Number.

7. Repeat steps 5 & 6 to export a group of fields. As an alternative, you can use the **Add logic entry** or **Copy a logic entry** tool on the *Image Logic* screen to create new fields.

8. The Row, Column, and Length of the selected field is automatically coded on the screen for you. The Logical Operator, Relational Operator and Constant fields are also defaulted to compare equal to the exported field. You must select the desired Logic Number, then change any of the fields necessary to get your desired results.

Notes: Comparisons are treated like a series of OR's, except where you have specifically coded an AND operator.

The Image Logic records for a specific Logic Number are processed from top to bottom, in the order that they were defined. Only records with the Logic Number being tested will be looked at. If a Select statement, with that Logic Number, is satisfied - that Logic number is set. Any images defined with that Logic number will be written to the PDF page.

Logic Number:

The Logic number is used to select which images will be included on the PDF page. As an example, you might have two or more different Logos that you want to use, one for each branch. The Image Logic could check each spooled file page to determine which branch the page was for. In this example, you would define one Logic number for each branch.

Row:

The row in the spooled file, that contains the information that you wish to check. This value is typically set using the Export function from the *Work with Spooled File* screen.

Column:

The column in the spooled file, that contains the information that you wish to check. This value is typically set using the Export function from the *Work with Spooled File* screen.

Length:

The length of the spooled file field that you will be checking. This is a required value that is typically set using the Export function from the *Work with Spooled File* screen..

Logical Operator:

The Logical Operators are SELECT, OMIT, or AND. The select or omit comparison statements are ORed together, unless an AND operator is used. That is, if the select or omit comparison condition is met, that Logic number is either selected or omitted. If the condition is not met, the system proceeds to the next comparison.

When a Select condition is satisfied, that Logic number is set.   The remaining statements are not examined for that Logic number. OMIT is used to omit a Logic number from consideration.

AND is used to combine two or more comparisons together before a Logic number is either selected or omitted.

Relational Operator:

The Relational Operators are EQ, NE, LT, GT, LE, and GE. They are used for comparing the value found at the specified location in the spooled file page, to the Constant named in the following field.

Constant:

This constant value is used in the Select/Omit comparison statements.

Defining Drawing, Heading or Interactive Logic

Drawing, Heading or Interactive Logic can be used to define when or which drawings, headings or Interactive fields will be included on each PDF page. If a drawing, heading or Interactive field is defined with a non-zero Logic number, the Drawing, Heading or Interactive Logic will be checked for that number to see if it is selected. If not, that object will not be placed on the page.

1. Select the *Drawing, Heading or Interactive Logic* tab, on the top portion of the screen.

2. Select the *Work with Spooled File* tab on the lower portion of the screen.

3. Click on the **Open a text file** tool on the tool bar, if you have not already done so.

4. Find the desired spooled file and open it. If you have downloaded a representative spooled file from your iSeries to the KOVERLAY directory, you should be able to access the file from *My Computer* in the **K:** drive.

5. The Spooled File text is intended to give you a quick way of selecting fields to be tested for the Drawing, Heading or Interactive Logic. Each field that you export from the *Work with Spooled File* screen can be sent to the *Drawing, Heading or Interactive Logic* screen for further definition.

   Select text using the **Left mouse** button. Only individual fields or whole single lines may be selected, for testing.

6. Press the **Export field** tool on the tool bar. This will export the selected field to the *Drawing, Heading or Interactive Logic* screen. The new field will be placed directly under the last field that had been exported or selected on the same *Logic* screen, and given the same Logic Number.

7. Repeat steps 5 & 6 to export a group of fields. As an alternative, you can use the **Add logic entry** or **Copy a logic entry** tool on the *Drawing , Heading or Interactive Logic* screen to create new fields.

8. The Row, Column, and Length of the selected field is automatically coded on the screen for you. The Logical Operator, Relational Operator and Constant fields are also defaulted to compare equal to the exported field. You must select the desired Logic Number, then change any of the fields necessary to get your desired results.

Notes: Comparisons are treated like a series of OR's, except where you have specifically coded an AND operator.

The Drawing, Heading or Interactive Logic records for a specific Logic Number are processed from top to bottom, in the order that they were defined. If a Select statement is satisfied, that Logic number is set. Any Drawings, Headings or Interactive fields defined with that Logic number will be written to the PDF.

Logic Number:

The Logic number is used to select which objects will be included on the PDF page. As an example, you might have two or more different Company Names that you want to print on the page, one for each branch. The Drawing, Heading or Interactive Logic could check each spooled file page to determine which branch the page was for. In this example, you would define one Logic number for each branch.

Row:

The row in the spooled file, that contains the information that you wish to check. This value is typically set using the Export function from the *Work with Spooled File* screen.

Column:

The column in the spooled file, that contains the information that you wish to check. This value is typically set using the Export function from the *Work with Spooled File* screen.

Length:

The length of the spooled file field that you will be checking. This is a required value that is typically set using the Export function from the *Work with Spooled File* screen..

Logical Operator:

The Logical Operators are SELECT, OMIT, or AND. The select or omit comparison statements are ORed together, unless an AND operator is used. That is, if the select or omit comparison condition is met, that Logic number is either selected or omitted. If the condition is not met, the system proceeds to the next comparison.

When a Select condition is satisfied, that Logic number is set. The remaining statements are not examined for that Logic number. OMIT is used to omit a Logic number from consideration.

AND is used to combine two or more comparisons together before a Logic number is either selected or omitted.

Relational Operator:

The Relational Operators are EQ, NE, LT, GT, LE, and GE. They are used for comparing the value found at the specified location in the spooled file page, to the Constant named in the following field.

Constant:

This constant value is used in the Select/Omit comparison statements.

Defining Field Logic

Field Logic is typically only used for *Line Logic* mode. However, it can be used in *Field Mapping* mode, if you need to. In *Field Mapping* mode, the system will check the Field Logic for each field that has a Logic number defined. If the Logic number is satisfied (the Logic is selected) then that field will be sent to the page, otherwise it will not. This works no differently than Drawing or Heading Logic, defined previously. For *Line Logic* mode, the system works very differently. The system will run through the Field Logic entries once for each line of the spooled file. The first Logic number that is selected is set ON. The rest are considered OFF.

In *Line Logic* mode, all lines will be sent to the page using the default field definition (Logic number 0) , except for those lines that you customize with Logic entries. The Logic entries can be used to identify specific lines in the spooled file that you want to appear differently than the default. Just before each spooled file line is processed, the Field Logic will be checked. If one of the Logic numbers is set for that line, the Field definitions with that Logic number will be used.

1. Select the *Field Logic* tab, on the top portion of the screen.

2. Select the *Work with Spooled File* tab on the lower portion of the screen.

3. Click on the **Open a text file** tool on the tool bar, if you have not already done so.

4. Find the desired spooled file and open it. If you have downloaded a representative spooled file from your iSeries to the KOVERLAY directory, you should be able to access the file from *My Computer* in the **K:** drive.

5. The Spooled File text is intended to give you a quick way of selecting fields to be tested for the Field Logic. Each field that you export from the Spooled File will be sent to the *Field Logic* screen for further definition.

   Select text from the printer file using the **Left mouse** button. Only individual fields or whole single lines may be selected, to be tested.

6. Press the **Export field** tool on the tool bar. This will export the selected field to the *Field Logic* screen. The new field will be placed directly under the last field that had been exported or selected on the *Field Logic* screen.

7. Repeat steps 5 & 6 to export a group of fields. As an alternative, you can use the **Add logic entry** or **Copy a logic entry** tool on the *Field Logic* screen to create new entries.

8. The Row, Column, and Length of the selected field is automatically coded on the screen for you. The Logical Operator, Relational Operator and Constant fields are also defaulted to compare equal to the exported field.
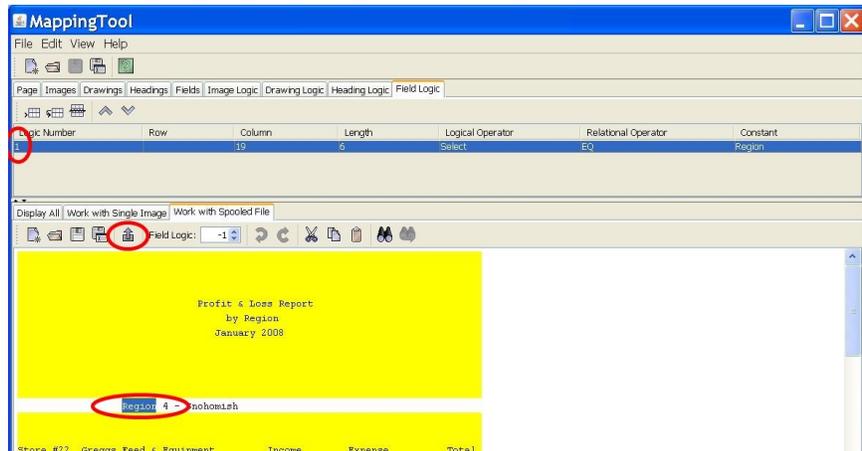
Notes: Comparisons are treated like a series of OR's, except where you have specifically coded an AND operator.

The Field Logic statements are processed from top to bottom, in the order that they were defined. The first Select statement that is satisfied, will set its Logic number. That Logic number is then used to select the corresponding fields to be written to the PDF page from the *Fields* screen.

Logic Number:

The Logic number is used to select which fields will be included on the PDF page. In *Line Logic* mode, each type of line that you want to appear different than the default should be identified by a different Logic number. In this way, you can write the lines to the PDF with the desired attributes. The Logic numbers in the *Field Logic* screen must match the Logic numbers in the *Fields* screen.

Row:

The row in the spooled file, that contains the information that you wish to check. This value is usually left blank for *Line Logic* mode, so that all rows are processed, one at a time. If you code a row in *Line Logic* mode, the Field definition with this Logic number will be used as the default entry (replacing the Logic **0** entry) for any pages that satisfy this logic.

Column:

The column in the spooled file, that contains the information that you wish to check. This value is typically set using the Export function from the *Work with Spooled File* screen.

Length:

The length of the spooled file field that you will be checking. This is a required value that is typically set using the Export function from the *Work with Spooled File* screen..

Logical Operator:

The Logical Operators are SELECT, OMIT, or AND. The select or omit comparison statements are ORed together, unless an AND operator is used. That is, if the select or omit comparison condition is met, that Logic number is either selected or omitted. If the condition is not met, the system proceeds to the next comparison.

When a Select condition is satisfied, that Logic number is set. The remaining statements are not examined for that spooled file line. OMIT is used to omit a Logic number from consideration. The remaining comparisons will continue for the next Logic number, if any exist, until a Select condition is satisfied.

AND is used to combine two or more comparisons together before a Logic number is either selected or omitted.

Relational Operator:

The Relational Operators are EQ, NE, LT, GT, LE, and GE. They are used for comparing the value found at the specified location in the spooled file line, to the Constant named in the following field.

Constant:

This constant value is used in the Select/Omit comparison statements.

Spooled File Commands

There are two different ways to place images or pictures on the PDF page. Defining the images and their fixed locations using the MappingTool is one method. Including image commands inside your spooled file data provides another method. This method gives you the flexibility to position images in variable positions on the page, depending on where you print the commands in your spooled file.

Spooled File example:

As an example of KeyesOverlay's capability, the following spooled file was generated on the iSeries, with ¬**Image** commands embedded on the page.

```
              The Following Destinations are Opening up SOON:

 African Safari                          Exotic Ice Hotel

 ¬Image /Koverlay/Africa.tif,.25,3.75,3     ¬Image /Koverlay/IceHotel.tif,4.5,3.75,3




 Austrailan Adventure                    Great Wall of China

 ¬Image /Koverlay/Australia.tif,.25,3.75,3  ¬Image /Koverlay/China.tif,4.5,3.75,3
```

Notes: In this example, four ¬**Image** commands are strategically placed on the page. Each command names a TIFF image that is stored on the IFS.

As KeyesOverlay processes each spooled file page, it follows the instructions given in the Map member. In this example, the Map member placed a Letterhead image at the top of the page and set a 2 inch top margin. KeyesOverlay then renders any images that are defined in the spooled file, using ¬**Image** commands. Lastly, it moved the spooled file text down under the top margin and used a large Comic font in Italics to print it.

The following PDF was generated directly from the spooled file example:

Image Commands

Image commands can be placed anywhere on the page. The commands will be stripped out of the spooled file, so that they will not print on the PDF document. The images named in the commands will be placed on the page, right were the text of the command would have printed.

¬Image Full-Image-Path,Horizontal-Start,Max-Width,Max-Length

The Vertical Start position is determined by where the spooled file line would have printed on the page, as defined in the Map member. After considering any top or bottom margins, the total number of lines on the page will determine where each line will fall on that page. As an example, for a standard spooled file with no top or bottom margin, the first spooled file line would start at the top edge of the page and the second line would start 1/6th inch below that.

Up to 4 parameters may be specified with each command with no embedded blanks. The first blank will end the command:
- Full Image Path
- Horizontal Start location
- Maximum Width
- Maximum Length

Full Image Path:

The Image Path is a required parameter that must include all folders and the filename, with extension. It specifies where, in the IFS, that the image can be found. All images must be stored as TIFF images. It is recommended that the TIFF images be compressed with either Packbits, Deflate, JPG, CCITT T-4 or T-6 compression, to make a compatible image for the PDF.

Horizontal start location:

The Horizontal start location may be specified in inches. It tells KeyesOverlay how far, from the left edge of the page, that you want the image to appear on the page. A value of 0 will start on the left edge. You may specify up to 3 decimal places. Thus, a value of 1.125 will start the image 1 1/8 inch from the left edge of the page. If this parameter is not specified, a value of 0 will be used.

Maximum width:

The Maximum width may be specified in inches. It tells KeyesOverlay how wide to make the image on the page. You may specify up to 3 decimal places. A value of 3.875 will set the maximum width of the image to 3 7/8 inches. If this parameter is not specified, the maximum width will be set to the distance from the start location to the right edge of the page.

Maximum length:

The Maximum length may be specified in inches. It tells KeyesOverlay how far, down the page, to print the image. You may specify up to 3 decimal places. If this parameter is not specified, the maximum length will be set to the distance from the top of the image to the bottom of the page.

Map Commands

Map commands can be placed anywhere on the page. Only one Map command will be processed per page, usually the last one found on the page. The commands will be stripped out of the spooled file, so that they will not print on the PDF document. This command can be used to change the Map Member used for the current and subsequent pages.

¬Map Map-Member-Name

The Map member used for the current and subsequent pages can be changed by inserting a Map command, for any page in the spooled file. If no Map command is named for a spooled file, the default Map member named in the Front or Back Side Overlay parameter will be used for the entire spooled file.

Map-Member-Name:

This specifies the name of the Map Member that you want to use for this and subsequent pages. If the member named is not found in the PDFMAP file, an error will occur.

Appendix

KeyesOverlay available Fonts

Fixed fonts:

Courier font, **(Bold)**, *(Italic)*, **(Bold/Italic)**
Lucida Console font, **(Bold)**, *(Italic)*, **(Bold/Italic)**
Lucida Sans Typewriter font, **(Bold)**, *(Italic)*, **(B/I)**

Variable fonts:

Arial font, **(Bold)**, *(Italic)*, **(Bold/Italic)**
Comic Sans MS font, **(Bold)**, *(Italic)*, **(Bold/Italic)**
Helvetica font, **(Bold)**, *(Italic)*, **(Bold/Italic)**
Lucida Sans font, (Bold), *(Italic), (Bold/Italic)*
Lucida Bright font, **(Bold)**, *(Italic)*, **(Bold/Italic)**
Palatino Linotype font, **(Bold)**, *(Italic)*, **(Bold/Italic)**
MS Sans Serif font, **(Bold)**, *(Italic)*, **(Bold/Italic)**
*Script (Lucida Handwriting) font, **(Bold)**, (Italic), **(B/I)***
Times Roman font, **(Bold)**, *(Italic)*, **(Bold/Italic)**

Special fonts:

MICR font: 0123456789ABCD
OCR A font: 0123456789ABCD
Symbol font: ∀#∃∍ΑΒΧΔαΦβχ♣♥÷∉©⇐
ZapfDingbats font: ✂✉✇☺✍☛✠♏①②✿✎✍➔

Barcodes:

```
BC_C128  = Code 128
BC_C39   = Code 39 barcode
BC_EAN13 = EAN-13, ISBN(Bookland), ISMN, ISSN, JAN
BC_EAN8  = EAN-8
BC_UPCA  = UPC-A
BC_UPCE  = UPC-E
BC_EANS  = EAN or UPC Supplemental (2 or 5 digit)
BC_QR    = QR Code
BC_QR+M  = QR plus Micro QR Code
```

Using the MICR font

The MICR font can only be used by those who purchase the font. The font that we have used is licensed from Adobe. You can obtain the font from their website at (http://www.adobe.com). Be aware that Adobe has more than one MICR font. We have coded for the **MICR Medium** font which is a Postscript Type I font. This is not the MICR Std font, which is an Open Type font not supported by Java. You can do a search for *MICR Medium OCR-A* to find the correct font on their website.

The font itself is not distributed with the PDF files. If you send a PDF document containing MICR characters, the recipient will need to purchase the MICR Medium OCR-A font, in order to display and print the PDF with any MICR characters.

Using Barcodes

Barcodes can be placed on the page, just like any other data. The Font Size will control both the size of the characters and the size of the barcode symbol, which will appear just above the human readable text. Horizontal Scaling can also be used to widen or narrow the symbol, if desired. Be aware that there are limits to how large or small the symbol will be generated, based on barcode standards.

When using MappingTool, a box will be drawn where the barcode symbol will appear on the page. The box will include any necessary Quiet Zones. This will help you leave enough room for the symbols that will be produced.

Check Digits:

Valid check digits will be generated and included automatically for you, where appropriate. It is recommended that you code a field length that does not include the check digit, for EAN or UPC numbers. If you supply a check digit in your data, it will be used even if it is the wrong value. This can cause the system to produce an invalid barcode. The exceptions are ISBN, ISMN and ISSN numbers. Check digits that you might supply for those numbers will not be used.

ISBN (Bookland) and ISMN Numbers:

ISBN and ISMN numbers can be encoded as EAN-13 barcodes. You must supply either 978 or 979 in front of those numbers, respectively. A valid EAN-13 check digit will be generated for you, replacing any check digit that you might supply.

ISSN Numbers:

ISSN numbers can be encoded as EAN-13 barcodes. You must supply 977 in front of the ISSN number. '00' will be added at the end for you, replacing any ISSN check digit that you might supply. A valid EAN-13 check digit will be added.

Supplementals:

2 digit or 5 digit Supplementals can be added to any EAN or UPC barcode. Supplementals are typically used for publications. It is recommended that you Concatenate the Supplemental to an EAN or UPC barcode, rather than trying to position the symbol yourself. This will ensure that the Supplemental symbol

appears in the correct location, right after an EAN or UPC barcode symbol.

QR Codes:

QR Codes will be generated using the smallest size that will fit all the data.
Select the *BC_QR+M* font if you want to allow Micro QR Codes to be selected.
The maximum amount of data that will fit in a QR Code will depend on the type
of data that is being coded.

For Numbers only - 322 digits (0-9) can be coded.
For Alphanumeric - 195 characters (0-9,A-Z,blank,$%*+-./:) can be coded.
For all 256 Byte data – 134 characters can be coded.

Symbol font Character Map

	4	5	6	7	8	9	A	B	C	D	E	F
0		Π	¯	π			€	°	ℵ	∠	◊	
1	Α	Θ	α	θ			ϒ	±	ℑ	∇	⟨	⟩
2	Β	Ρ	β	ρ			′	″	ℜ	®	®	∫
3	Χ	Σ	χ	σ			≤	≥	℘	©	©	⌈
4	Δ	Τ	δ	τ			⁄	×	⊗	™	™	⎮
5	Ε	Υ	ε	υ			∞	∝	⊕	Π	Σ	⌡
6	Φ	ς	ϕ	ϖ			ƒ	∂	∅	√	⎛	⎞
7	Γ	Ω	γ	ω			♣	•	∩	·	⎜	⎟
8	Η	Ξ	η	ξ			♦	÷	∪	¬	⎝	⎠
9	Ι	Ψ	ι	ψ			♥	≠	⊃	∧	⌈	⌉
A	ϑ	Ζ	φ	ζ			♠	≡	⊇	∨	⎮	⎮
B	Κ	[	κ	{			↔	≈	⊄	⇔	⌊	⌋
C	Λ	∴	λ	|			←	…	⊂	⇐	⌈	⌉
D	Μ	]	μ	}			↑	|	⊆	⇑	{	}
E	Ν	⊥	ν	~			→	—	∈	⇒	⌊	⌋
F	Ο	_	ο				↓	↵	∉	⇓	⎮	

ZapfDingbats font Character Map

Sample Barcodes

Code 128

Barcode 128

Code 39

BARCODE 39

EAN-13

0 123456 789012 12

EAN-8

0123 4565

UPC-A

1 23456 78901 2 12345

UPC-E

0 123456 5

QR Code

Micro QR

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