

# FORMFUSION

## **FormFusion<sup>®</sup> 1.9 Manual**

Document version 1.9.0 – Unix/VMS/NT

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# TABLE OF CONTENTS

<b>TABLE OF CONTENTS .....</b>	<b>2</b>
<b>Contact Evisions .....</b>	<b>8</b>
Technical Support Hours .....	8
HelpDesk .....	8
Category .....	9
Priority .....	10
Version .....	10
Server OS .....	10
Knowledge Base .....	10
Listserv .....	11
<b>What is FormFusion? .....</b>	<b>12</b>
FormFusion Production Suite .....	12
FormStamp .....	12
MapForm.....	12
CaptureForm .....	12
FormDirector .....	12
FormFusion Optional Modules .....	13
Archiver/ArchiveDirector .....	13
EmailDirector.....	13
WebDirector .....	13
ScriptDirector .....	13
<b>How It Works .....</b>	<b>14</b>
The Client Component .....	14
The Server Component .....	14
Processing .....	14
<b>FormFusion Installation .....</b>	<b>15</b>
Downloading and Executing the Software .....	15
Configuring FormFusion Using the Administration Wizard.....	15
Main Menu .....	16
Seeds.....	16

- User ..... 18
- Tables ..... 19
- Security ..... 21
- Licensing ..... 23
- Compiling the FormFusion Server Administrator ..... 24
  - Unix Installation ..... 24
  - VMS Installation ..... 24
  - NT Installation ..... 25
- Compiling the FormFusion Server ..... 25
  - Unix Installation ..... 25
  - VMS Installation ..... 26
  - NT Installation ..... 26
- Adding EVILP to Job Submission ..... 27
  - Unix Installation ..... 27
  - VMS Installation ..... 31
  - NT Installation ..... 31
- FormFusion Developer ..... 33**
- Getting Started with Developer ..... 34**
  - Select a Database ..... 34
  - Log in ..... 34
  - Log out ..... 34
  - Second Session ..... 35
  - Main Sections of the Developer User Interface ..... 36
    - Main Menu ..... 36
    - Toolbar ..... 36
    - Process Tree ..... 36
    - Process Log ..... 36
    - Variables ..... 37
    - Design Window ..... 37
  - Process Tree Organization ..... 38
    - Groups ..... 39
    - Processes ..... 41
    - Special Print Parameters ..... 42
    - Variables ..... 52

Developer Basics Frequently Asked Questions .....	54
<b>FormStamp.....</b>	<b>55</b>
PCL Forms .....	55
Create .....	55
Open .....	55
Rename .....	56
Delete .....	56
Toolbar Options.....	56
Properties .....	57
What are objects? .....	63
Create objects .....	63
Select .....	65
Move .....	65
Resize .....	65
Delete .....	66
Lock in place .....	66
Align multiple objects.....	66
Properties .....	66
Frequently Asked Questions .....	74
<b>MapForm .....</b>	<b>76</b>
MapForm Basics.....	76
Create .....	76
Open .....	76
Rename .....	76
Toolbar Options.....	77
Properties .....	79
Header/Footer Properties.....	81
Floating Fields .....	83
Create .....	83
Edit .....	84
Delete .....	84
Properties .....	84
Offset Fields .....	86
Create .....	86
Edit .....	86
Delete .....	86

- Properties ..... 87
- Frequently Asked Questions ..... 89
- CaptureForm ..... 91**
  - Using CaptureForm and SQL ..... 91
    - Create ..... 91
    - Delete ..... 91
    - Variable Storage ..... 91
  - CaptureForm Variables ..... 92
    - Variable Name ..... 92
    - Description ..... 92
    - Data Type ..... 92
    - Visual Settings (for use in FormStamp) ..... 93
    - Create a Variable ..... 93
    - Delete a Variable ..... 93
  - CaptureForm Queries ..... 93
    - Create ..... 93
    - Open ..... 93
    - Edit ..... 93
    - Order of Execution ..... 96
    - Copy ..... 96
    - Delete ..... 96
    - Rename ..... 97
  - Frequently Asked Questions ..... 97
- FormDirector ..... 99**
  - Using FormDirector ..... 99
    - Create ..... 99
    - Open ..... 99
    - Rename ..... 99
    - Delete ..... 100
    - Copy ..... 100
    - Save ..... 100
    - Properties ..... 100
  - ArchiveDirector ..... 103
    - Details ..... 103
  - EmailDirector ..... 104

- Details ..... 104
- PrintDirector.....107
  - Details ..... 107
  - Break pages on ..... 109
  - Binary format ..... 109
  - Copy generated file to ..... 109
  - Script ..... 109
- WebDirector .....112
  - Detail ..... 112
- Frequently Asked Questions .....113
  - EmailDirector.....**Error! Bookmark not defined.**
- FormFusion Archiver ..... 117**
  - Using Archiver .....117
    - Open ..... 117
    - View ..... 117
    - Log in/Log off ..... 117
    - Close ..... 117
    - Privileged Administration ..... 119
  - Frequently asked questions .....121
- Appendix ..... 123**
  - Licensing .....123
  - Conversion Codes .....123
  - Adding Custom PCL Fonts .....125
  - Conversion.....126
  - Table Guide.....127
    - Core FormFusion Tables ..... 127
    - FormStamp Tables ..... 134
    - MapForm Tables..... 140
    - CaptureForm Tables..... 142
    - FormDirector Tables ..... 143
    - Archiver Tables ..... 147
  - Additional Rosources .....148
    - Introduction for FormFusion Training..... 148
    - FormFusion Tutorial ..... 148

Glossary .....150



## CONTACT EVISIONS

The Evisions, Inc. headquarter is located in sunny Southern California. All correspondence can be directed to the address or email address listed below. We welcome any questions about our products, technical support, and future development.

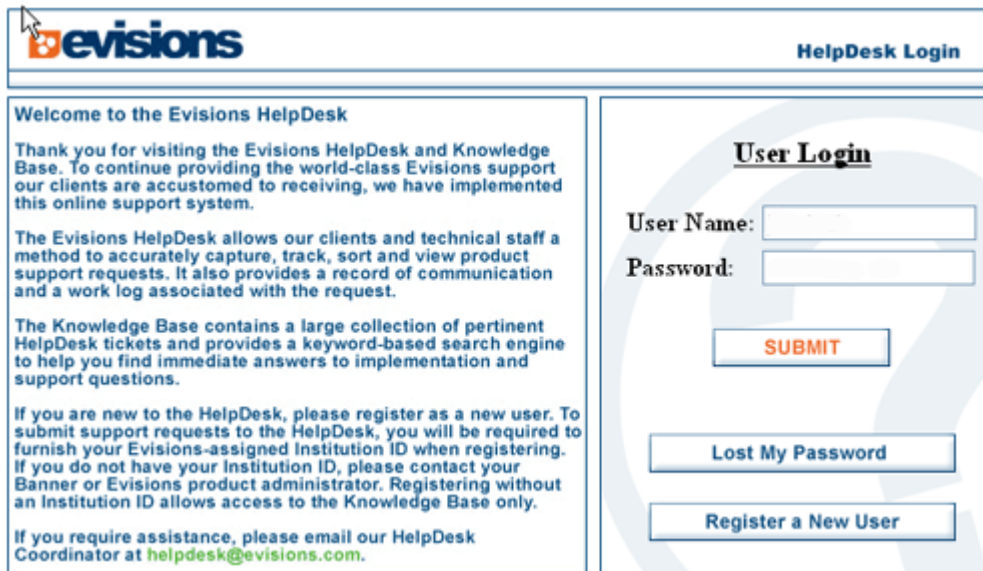
Evisions, Inc.  
14522 Myford Rd.  
Irvine, CA 92606  
Phone 949-833-1384  
Fax 714-730-2524  
<http://www.evisions.com>

## Technical Support Hours

Our friendly technicians are available Monday through Friday 8:00 am to 5:00 pm Pacific Standard Time. We also have an East Coast office available to take technical support calls from 8:00 am to 5:00 pm Eastern Standard Time. Arrangements can be made for after-hour technical consultations.

## HelpDesk

The Evisions HelpDesk is the focal point of our support services. It allows our clients and technicians to accurately capture, track, sort, and view any technical, training, or product requests. It also provides a record of communication and a work log associated with the request.



The screenshot shows the Evisions HelpDesk Login page. At the top left is the Evisions logo, and at the top right is the text "HelpDesk Login". The page is divided into two main sections. The left section, titled "Welcome to the Evisions HelpDesk", contains three paragraphs of text explaining the HelpDesk's purpose and how to use it. The right section, titled "User Login", contains a form with two input fields for "User Name:" and "Password:", a "SUBMIT" button, and two buttons below: "Lost My Password" and "Register a New User".

**Welcome to the Evisions HelpDesk**

Thank you for visiting the Evisions HelpDesk and Knowledge Base. To continue providing the world-class Evisions support our clients are accustomed to receiving, we have implemented this online support system.

The Evisions HelpDesk allows our clients and technical staff a method to accurately capture, track, sort and view product support requests. It also provides a record of communication and a work log associated with the request.

The Knowledge Base contains a large collection of pertinent HelpDesk tickets and provides a keyword-based search engine to help you find immediate answers to implementation and support questions.

If you are new to the HelpDesk, please register as a new user. To submit support requests to the HelpDesk, you will be required to furnish your Evisions-assigned Institution ID when registering. If you do not have your Institution ID, please contact your Banner or Evisions product administrator. Registering without an Institution ID allows access to the Knowledge Base only.

If you require assistance, please email our HelpDesk Coordinator at [helpdesk@evisions.com](mailto:helpdesk@evisions.com).

**User Login**

User Name:

Password:

**SUBMIT**

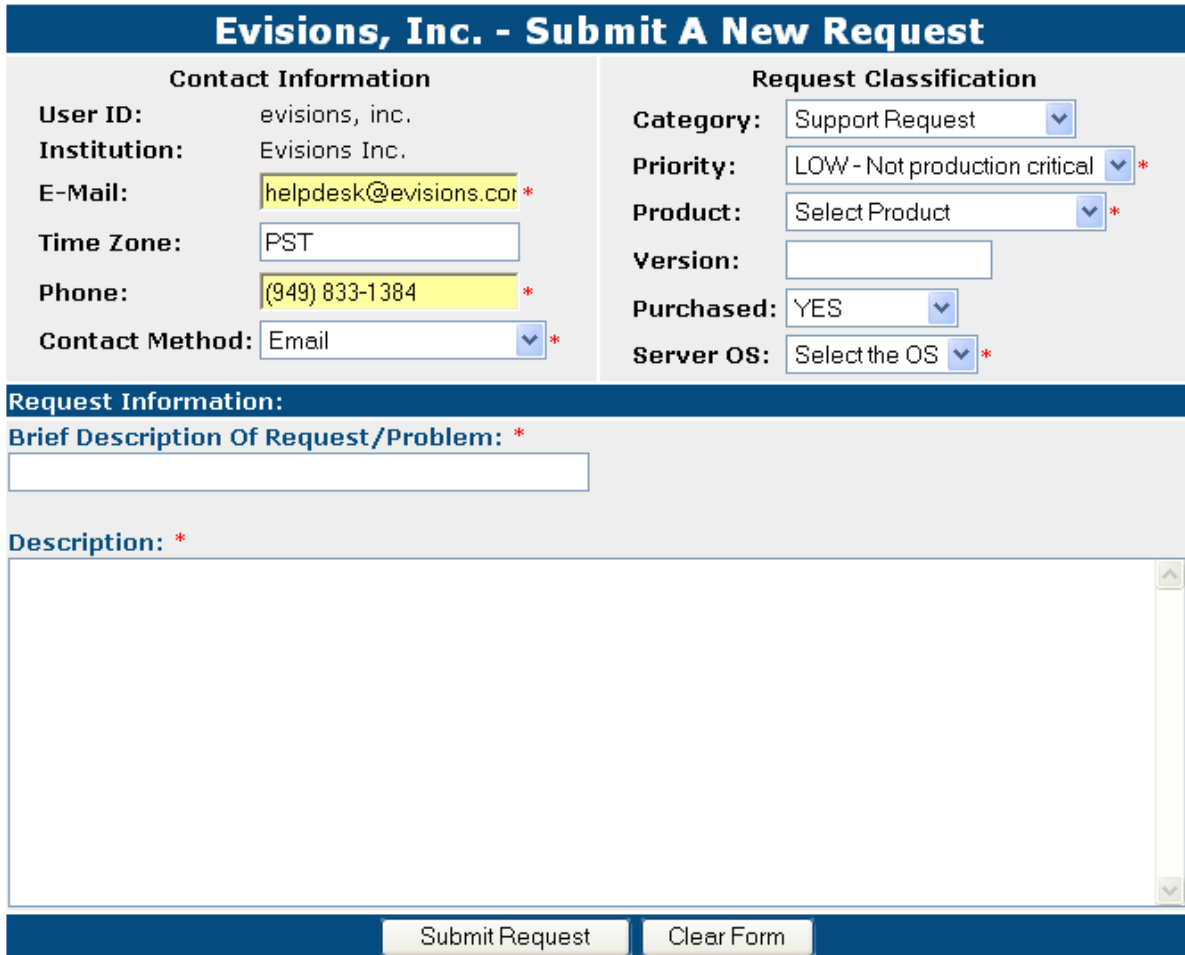
**Lost My Password**

**Register a New User**

We encourage all of our clients to register with the HelpDesk and to utilize it for all requests, comments, or questions. Any support requests made by email, phone, or other methods will be entered as an Evisions HelpDesk ticket.

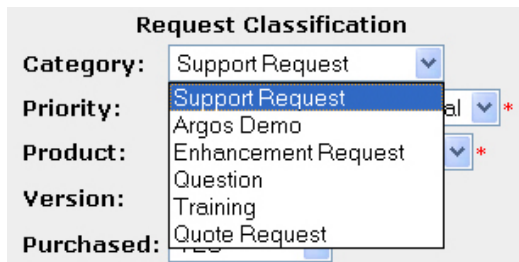
Access the Evisions HelpDesk at <http://helpdesk.evisions.com/>.

\* - Required



Evisions, Inc. - Submit A New Request	
<b>Contact Information</b>	<b>Request Classification</b>
User ID: evisions, inc.	Category: Support Request
Institution: Evisions Inc.	Priority: LOW - Not production critical *
E-Mail: helpdesk@evisions.com *	Product: Select Product *
Time Zone: PST	Version:
Phone: (949) 833-1384 *	Purchased: YES
Contact Method: Email *	Server OS: Select the OS *
<b>Request Information:</b>	
Brief Description Of Request/Problem: *	
Description: *	
Submit Request Clear Form	

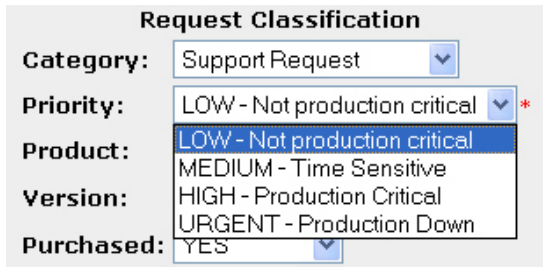
## Category



Request Classification	
Category:	Support Request
Priority:	Support Request
Product:	Enhancement Request
Version:	Question
Purchased:	Training
	Quote Request

The Category field in the HelpDesk Request Classification specifies what type of help or request a client is seeking, and allows the Evisions HelpDesk Coordinator to route the ticket to the proper technician or department.

## Priority



The screenshot shows a 'Request Classification' form with the following fields and values:

- Category: Support Request
- Priority: LOW - Not production critical \*
- Product: LOW - Not production critical
- Version: MEDIUM - Time Sensitive
- URGENT - Production Critical
- URGENT - Production Down
- Purchased: YES

The Priority field indicates the time-critical and production-critical nature of the request. The Evisions technicians make every effort to abide by the response guidelines for each priority level, as noted below.

**URGENT – Production Down:** respond within 1 hour

**HIGH – Production Critical:** respond the same day

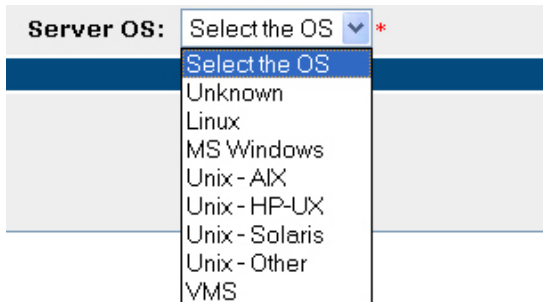
**MED – Time Sensitive:** respond by the end of the next business day

**LOW – Not Production Critical:** respond by the end of the second business day

## Version

The Version field specifies which version of the Evisions product is currently installed.

## Server OS



The screenshot shows a 'Server OS' dropdown menu with the following options:

- Select the OS \*
- Unknown
- Linux
- MS Windows
- Unix - AIX
- Unix - HP-UX
- Unix - Solaris
- Unix - Other
- VMS

The manner in which an Evisions technician handles a request or answers a question can vary depending on the specific operating system the FormFusion server is installed on. Not only do VMS, Unix, and MS Windows commands, language, and environments differ greatly, but the many varieties of Unix also contain their own nuances.

## Knowledge Base

The Knowledge Base is a collection of HelpDesk tickets that provide pertinent answers to common questions and problems that might arise when installing and using Evisions' products.

The Knowledge Base is a valuable tool for clients and our technicians alike, and can be searched by keywords located in the Brief Description, Description, and Solution sections of archived HelpDesk tickets.

### Knowledge Base

**Keywords:**

**Search Fields:**

- Brief Description Of Request/Problem
- Description
- Solution

Access the Evisions Knowledge Base on the HelpDesk Main Menu at <http://helpdesk.evisions.com/>.

## Listserv

The Listserv forums are utilized by hundreds of Evisions clients to provide tips, ask questions, share templates, and assist others in making the most of their Banner input report file.

The FormFusion-specific forums, including **FormFusion** and **Templates**, provide a direct communication with other FormFusion users.

The Evisions technical staff minimally moderates the listserv forums and will occasionally post client-wide notices.

Access the Evisions Listserv forums at <http://www.evisions.com/support/index.asp>.



## WHAT IS FORMFUSION?

FormFusion has the ability to completely replace pre-printed forms and dramatically reduce or eliminate modifications to the Banner baseline processes using the digital "form fusing" process. It allows for limitless layout and graphical improvements, and enables users to select from various destinations for their new digital documents -- printer, e-mail, web, local/network directories, or FormFusion Archiver.

The FormFusion Developer package contains every tool needed to fundamentally change the look and flow of information throughout your institution, including FormStamp, MapForm, CaptureForm, and FormDirector.

For additional FormFusion output destinations, the FormFusion optional modules, Archiver/ArchiveDirector, EmailDirector, WebDirector, and ScriptDirector, can be purchased a la carte.

## FormFusion Production Suite

### FormStamp

- Select a base template designed by Evisions and customize with your own logo, signature, or other graphical elements
- Create new templates from scratch for your institution's needs and requirements
- Run the Banner process and your custom template is digitally "fused" with the input report file
- Alter page orientation, adjust font properties, and add additional copies
- Apply special techniques to templates including creating duplex mailers, adding POSTNET barcodes, and generating letters from Banner

### MapForm

- Use special fields to "remap" the data from the Banner input report file to anywhere on your custom template created in formStamp
- Define dynamic header and footer areas

### CaptureForm

- Create SQL statements to add additional data from Banner tables
- Customize data from the Banner tables to your own specifications using SQL formatting functions

### FormDirector

- Print to any PCL-friendly laser printer

- Automatically direct FormFusion outputs to one or more output destinations when additional FormFusion optional modules are purchased

## FormFusion Optional Modules

### Archiver/ArchiveDirector

Securely store FormFusion outputs in Adobe PDF format using ArchiveDirector and view it with FormFusion Archiver

### EmailDirector

E-mail FormFusion outputs to vendors, employees, students, etc. using email addresses stored in Banner

### WebDirector

Specify an Internet or Intranet location to publish the FormFusion output using a Web Script

### ScriptDirector

Create FormFusion output as Adobe PDF files and save them to a network or a local drive



## HOW IT WORKS

FormFusion is comprised of two components: client/workstation and server software.

### The Client Component

The client is a form development tool that enables a user to specify which Banner processes should be enhanced by the FormFusion server. The client component is used to design the layout of the template and change the way the server component will alter the reports.

The FormFusion client component executes on any 32/64-bit Windows<sup>®</sup> based operating system, and can be installed on individual workstations or as a network application.

### The Server Component

The FormFusion server component that performs the processing of the input report files (ie. Banner .lis or .csv file) generated by Banner is named **evilp**, which stands for Evisions **lp** (line printer). In general, the **evilp** command replaces the print command in your Banner **gjajobs** or **sctban.pm** file. When a user executes a print job from Banner's Job Submission form, **evilp** analyzes whether it should modify the print job or not. Then it either performs the modifications or passes the input report file directly to your print spooler. This makes FormFusion invisible to the end user.

If the process has been configured in the client as a FormFusion process, the server takes the input report file and adds graphical elements and remaps data. Depending on how the template was designed using the client, it also determines where to send the FormFusion output.

The server uses the special print field on the Banner GJAPCTL form to determine how to handle the input report file. This enables the end user to control which template FormFusion should use for a particular process.

### Processing

Before running either of the FormFusion components, the FormFusion Administration Wizard need to be executed. It will create the tables necessary for the client to store configuration information. After design changes are complete, the client updates the tables and exits.



## FORMFUSION INSTALLATION

### Downloading and Executing the Software

Download the FormFusion setup file from the FormFusion Support website, [www.evisions.com/support/formfusion](http://www.evisions.com/support/formfusion), and save the file on your client workstation or network drive.

When you execute this file, the FormFusion application will begin installing. Follow the InstallShield® prompts.

When asked to choose the **Setup Type**, select one of the options using the following guidelines:

For an Administrator's installation, choose the **Full** install option.

For a workstation that is not expected to perform any administration of FormFusion, choose the **Typical User** option.

We recommend that you accept the defaults for all other steps. If you choose the **Custom** option and choose to place the software in a directory other than the default location (**C:\Program Files\Evisions\FormFusion**), please take note of the directory into which you are installing the software.

If FormFusion is installed as a network application, each client workstation will need to have a link to the network version of FormFusion. In addition, there is a file named **network\_install.bat** located in the directory where FormFusion was placed. This file needs to be run on each workstation accessing the network application.

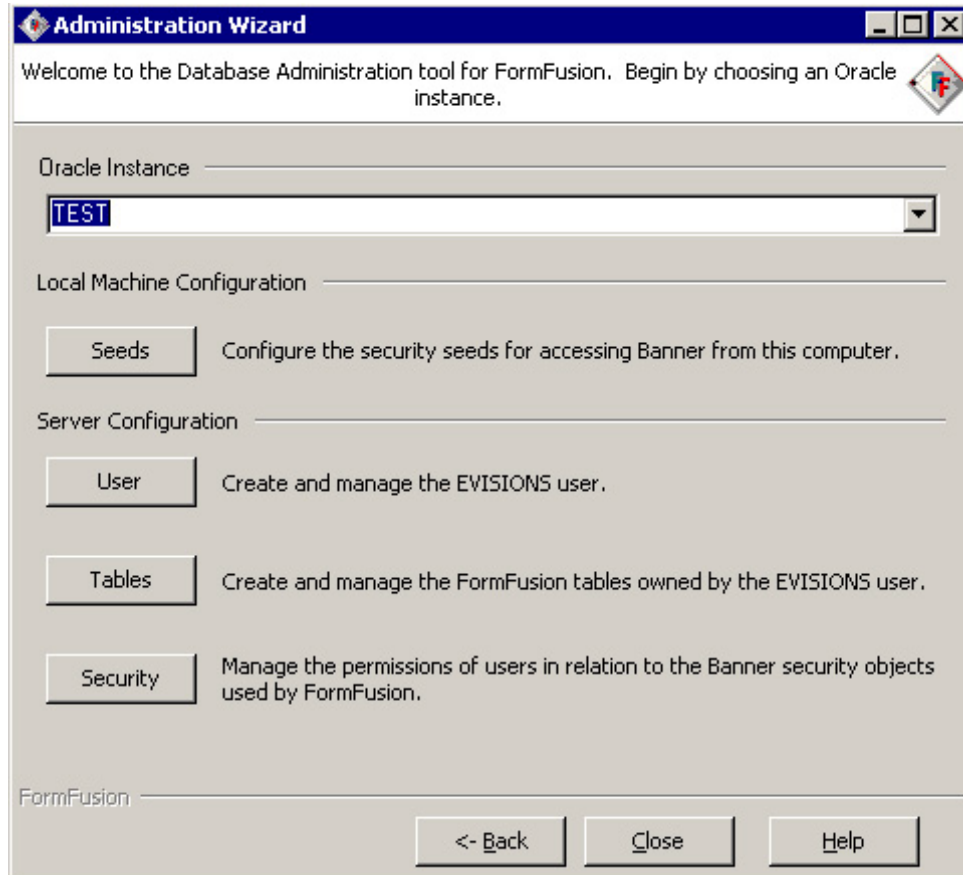
### Configuring FormFusion Using the Administration Wizard

The Administration Wizard is the database administration tool for FormFusion and will walk an administrator through the steps of configuring the Banner database and FormFusion client component.

**NOTE:** IF YOU ARE INSTALLING FORMFUSION FOR THE FIRST TIME, BE SURE TO CONFIGURE YOUR ORACLE NETWORK CLIENT **BEFORE** COMPLETING THE STEPS IN THE ADMINISTRATION WIZARD. THE CONFIGURATION OF ORACLE NETWORK CLIENT IS BEYOND THE SCOPE OF THIS DOCUMENT, AND SHOULD BE PERFORMED BY A DBA FAMILIAR WITH CONFIGURING ORACLE CLIENTS.

## Main Menu

The Administration Wizard can be accessed on the FormFusion Developer's main menu by selecting **Tools/Administration Wizard**.



Select the **Oracle Instance** to configure using the drop-down box. Each instance that uses FormFusion must be configured separately.

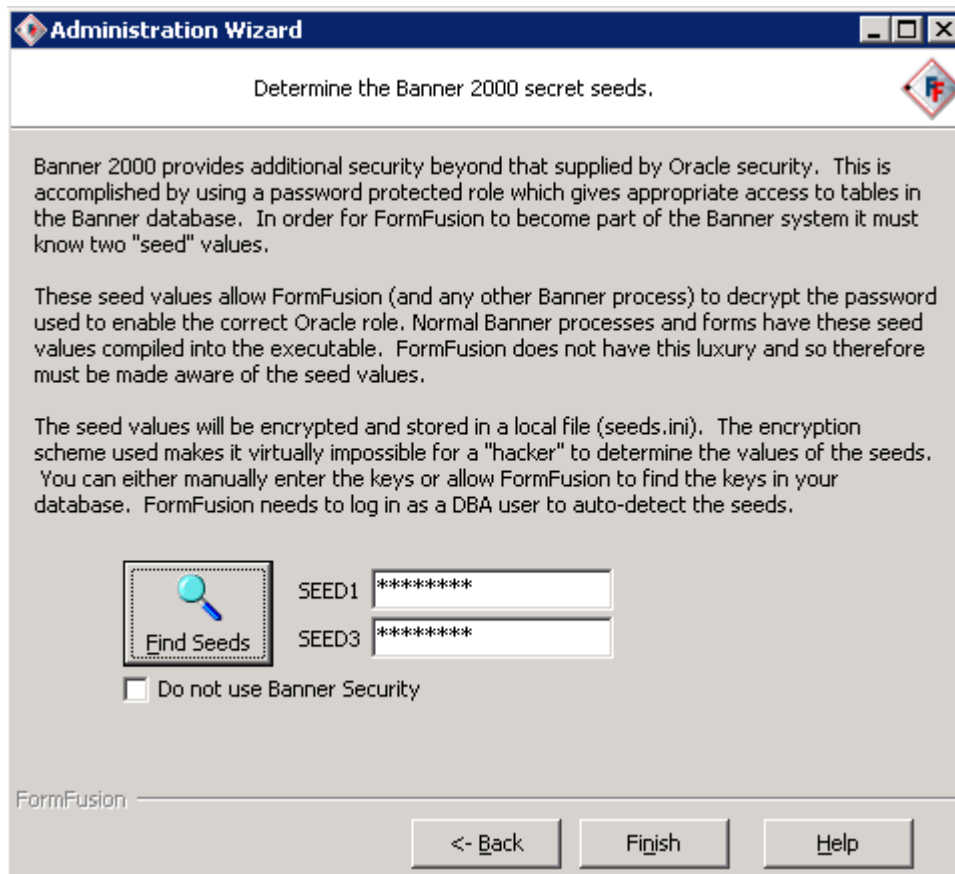
The Local Machine Configuration step must be completed and Seeds must be found on each individual workstation running the FormFusion client for each instance. If it is a network installation, the Seeds step must be completed for each database instance on the network copy of the FormFusion client.

The Server Configuration steps (User, Tables, and Security) need to be completed only once for each database instance on any FormFusion client regardless of whether FormFusion is installed on individual workstations or as a network install.

## Seeds

The Seeds configuration is necessary to allow FormFusion to utilize Banner security by learning the Banner security seeds configured by the Database Administrator when Banner was compiled the first time.

After clicking **Seeds** on the Administration Wizard main menu, please read the **Determine the Banner 2000 secret seeds** section at the top of the screen. This will give you valuable information on how FormFusion interacts with Banner security.



To allow FormFusion to find the seeds, click the **Find Seeds** button and you will be prompted to sign in as a DBA user. The Banner security seeds will be determined and fields **SEED1** and **SEED3** will be populated.

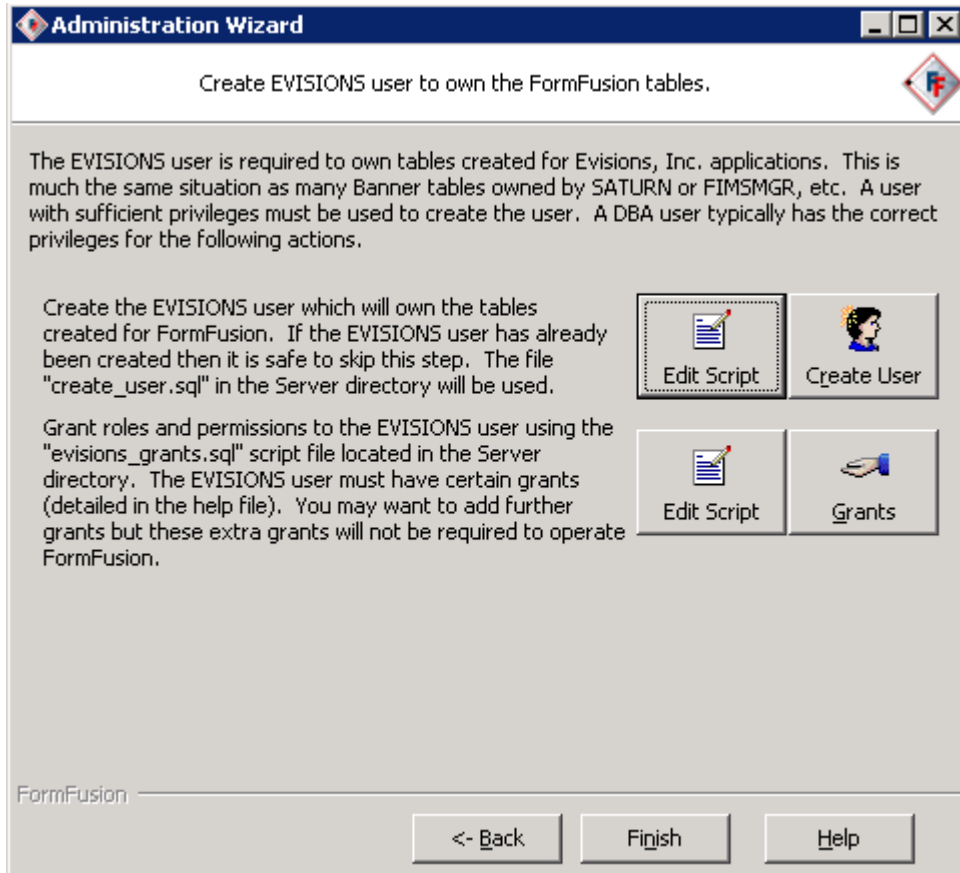
If the database instance does not make use of Banner Security, it may be safe to check the **Do not use Banner Security** box.

**NOTE:** IF YOU ARE PERFORMING A TYPICAL USER INSTALLATION, HAVE ALREADY COMPLETED THE SERVER CONFIGURATION STEPS, AND DO NOT NEED TO CONFIGURE ANOTHER INSTANCE, YOU CAN SELECT **FINISH** ON THIS SCREEN AND **CLOSE** ON THE MAIN MENU TO EXIT THE ADMINISTRATION WIZARD. FOR FULL (ADMINISTRATOR) CONFIGURATIONS, PLEASE PROCEED THROUGH ALL OF THE ADMINISTRATION WIZARD STEPS.

Click the **Back** button to continue the Administration Wizard configuration or the **Finish** button to exit.

## User

The User configuration allows you to create the **EVISIONS** user, which will own the FormFusion tables.



### *Edit Script and Create User*

Before creating the user, click the top-most **Edit Script** button. The script file is named **create\_user.sql** and resides in the **Server** subdirectory.

In the script window, change the password from **U\_PICK\_IT** to the password that will be used by your institution. After creating the user, you need to edit the script again and replace the password with **U\_PICK\_IT** or any other invalid password to protect the new password.

When editing the creation script, you also have the option to change the **DEFAULT** and **TEMPORARY** tablespaces used for this user. Keep in mind that the tablespace requirements for FormFusion may become very large over time, so you should choose a tablespace that will allow for at least 15MB of database disk space for **EVISIONS**. Your institution's requirements might be larger.

After the script has been edited, click the **OK** button to save the script.

Next, click **Create User** to create the **EVISIONS** user.

### *Edit Scripts and Grants*

Once the user account has been created, it must be granted permissions to access data on your database. Click the bottom-left **Edit Script** button to grant permissions to the **EVISIONS** user. Your institution might require certain grants for all users, and you can add these grants at this time. The minimum required grants for the **EVISIONS** user are:

```
RESOURCE, CONNECT, CREATE PUBLIC SYNONYM, BAN_DEFAULT_M, DROP
PUBLIC SYNONYM, CREATE ROLE, UNLIMITED TABLESPACE
```

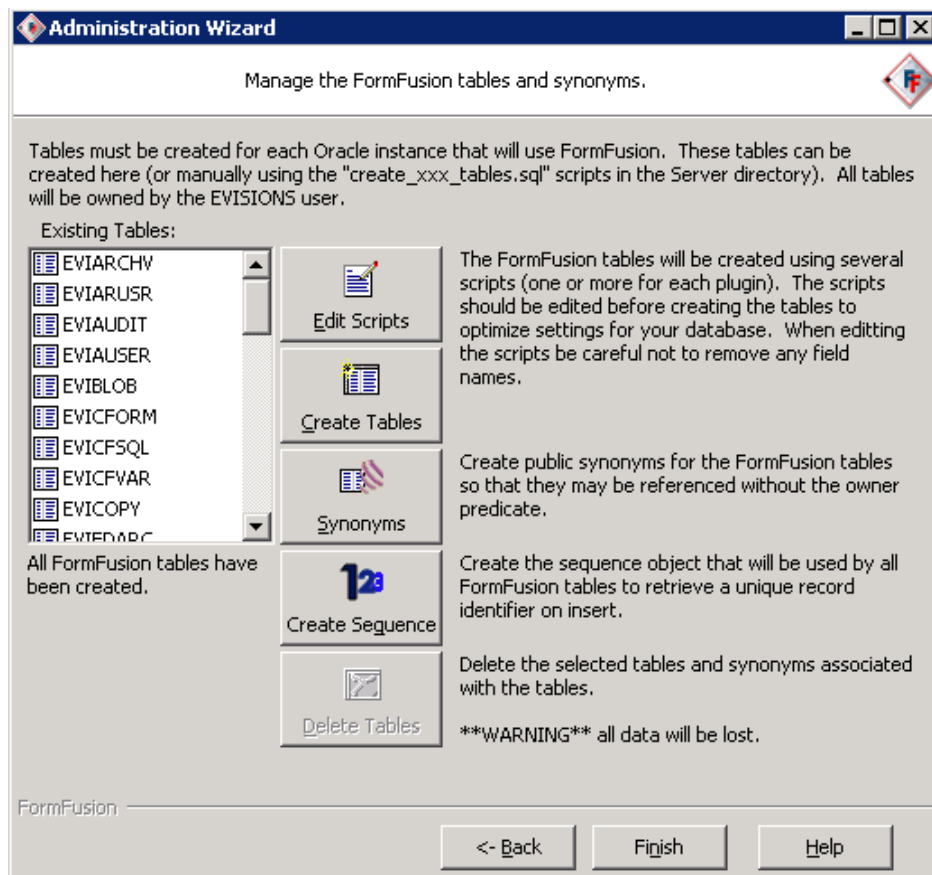
When satisfied with the script, click **Grants** to create the user grants.

Click the **Back** button to continue the Administration Wizard configuration or the **Finish** button to exit.



## Tables

The Tables configuration allows you to manage the FormFusion tables.

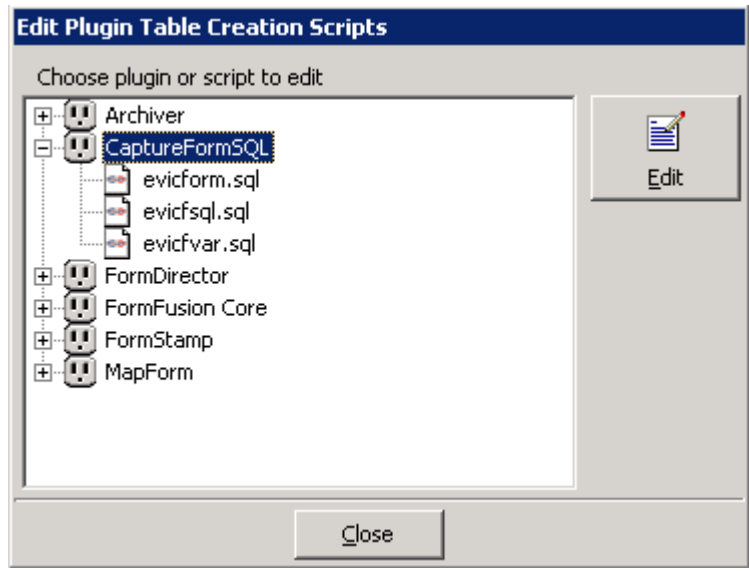
Select **Tables** on the main menu. You will be required to sign in as the **EVISIONS** user with the password configured in the **Create User** step.



All tables required by FormFusion will appear in the **Existing Tables:** list. One of two icons will appear next to the name of the table:

Icon	Meaning
	Created. The table has been created and validated.
	Missing. The table has not yet been created.

Before creating the tables, you may wish to edit the scripts used to create the tables. Click the **Edit Scripts** button to open the **Edit Plugin Table Creation Scripts** dialog.



The scripts are organized in a tree grouped by the FormFusion modules that owns the tables. To edit all tables owned by a module, select the module from the tree and click the **Edit** button. To edit a specific script, expand the module by clicking the plus sign next to the module name, select the script to edit, and click the **Edit** button.

The main reason to edit a script is to add any necessary tablespace constraints to optimize the storage of FormFusion data. If you are unsure what values can be beneficial to your organization, Evisions can help you determine this information. The EVIBLOB table will be the largest table used by FormFusion. This table stores raw binary data information and can get large very quickly.

The table scripts are stored in the **Server** subdirectory.

When satisfied with the table creation scripts, click the **Create Tables** button.

After the tables have been created, click **Synonyms** to create the PUBLIC synonyms for every table. The synonyms are only mandatory if users other than **EVISIONS** will be using FormFusion.

Next, click on the **Create Sequence** button and press **OK** on the pop-up window.

If you need to delete a table, click the **Delete Tables** button. Only do this if you are absolutely positive you want to delete a table. The data will be removed from the database and changes cannot be rolled back.

Click the **Back** button to continue the Administration Wizard configuration or the **Finish** button to exit.

## Security

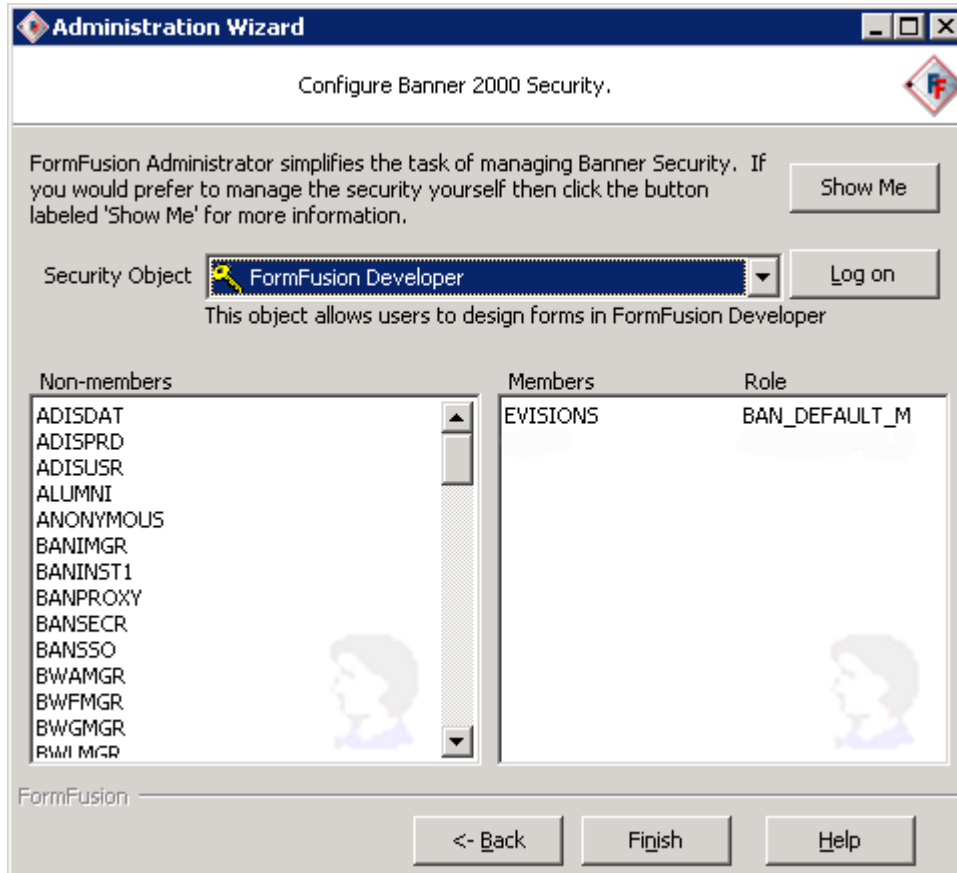
Banner is a large system built on an Oracle database backbone and a multi-user environment that allows many users access to the tables. The user level could range from System Administrator to Part-Time Temporary employee. It is obvious that security plays a large role in making sure only the correct data is accessed by the appropriate user.

On its own, Oracle provides a great amount of security through roles and individual table permissions. This amount of security wasn't sufficient enough for the needs of Banner.

An additional layer of security is managed by Banner and allows specific user access to certain processes. Many classes of security created by Banner exist, but the one that FormFusion makes use of is known as object level security.

You will now need to create and manage the security objects that FormFusion uses within the Banner environment. Click **Security** to continue. You will be required to sign in as the **EVISIONS** user with the password configured in the **Create User** step.

If the FormFusion server code does not exist on the server, you will be prompted to install the source. Click **Yes** to install the server source code. This does not compile the source code but will allow you to compile it later. Click **Next** to continue.



After the source code has been added, you will be given an opportunity to configure Banner Security as it pertains to FormFusion. You need to add three new security objects to Banner Security:

- **FormFusion Developer**
- **FormFusion Server (evilp)**
- **FormFusion Archiver**

You can manage FormFusion security objects from this screen or from normal Banner Security (Banner **GSASECR** Form). Click **Show Me** for instructions on how to add the security objects using Banner.

To use this form to create the security objects, select the security object to configure from the drop-down menu of available objects. You will be prompted to enter the **user name** and **password** of the Banner Security User.

Answer **YES** to create the new objects. This will also grant access for the **EVISIONS** user to the security object.

To add permissions for a user who does not have access to the security object you are configuring, double-click on the user name in the **Non-members** list on the left side of the screen. This scroll down list displays all users who have not been granted permission

to access the security object. The user name you double clicked on will move to the **Members** list on the right that displays all users who have permission to use the security object.

When prompted, assign the default role of **BAN\_DEFAULT\_M**. Repeat for any user who needs access to the selected security object.

The **FormFusion Developer** object should only be given to users or classes of users that require the ability to log into the FormFusion Developer tool to make changes to the FormFusion templates.

The **FormFusion Server (evilp)** object should be given to a user or class that will need to have the ability to run a template from Banner Job Submission. In other words, most people will need access to this object.

Many DBAs assign this object to a generic class that all Banner users are members of. This eliminates the need to have to manually add individual users to this object as you add them to your Banner system.

The **FormFusion Archiver** object should be assigned to users who will need to create archived documents. The same general rule applies to this object that are outlined above. Many DBAs will assign this object to a generic class that all Banner users are members of.

Click **Finish** to return to the Administration Wizard main menu.

To configure another database, repeat the complete configuration process. If you are finished configuring the database(s), click the **Close** button to exit the Administration Wizard.

For more information on creating BANNER roles, adding objects to a role, and granting these roles to end-users using the Security Maintenance Form **GSASECR**, please refer to the Banner documentation.

## Licensing

Every FormFusion Developer client needs to be updated with the license for your institution. The license controls the features that are enabled, as well as other status information.

Within FormFusion Developer, choose **Help/Licensing** from the application menu.

Enter the **Organization Name** and **Licensing Key** you received via e-mail EXACTLY as it appeared in the e-mail. Both fields are case sensitive.

Click on the **Check Key** button to verify which modules have been licensed.

## Compiling the FormFusion Server Administrator

When the client installation is complete, you will find a directory under the FormFusion folder called **Server**. The default path is **C:\Program Files\Evisions\FormFusion\Server**.

You need to transfer the **eviadm.pc** file in this directory to your Unix/VMS/NT host. This file is the source file needed to create the FormFusion Server Administrator, which in turn is used to compile the FormFusion server application (**evilp**).

### Unix Installation

Log on to the Banner account. Answer all prompts with information specific to your system. Make sure you are connected to the database that contains FormFusion. Change to the **\$BANNER\_HOME** directory and create a new directory called **evisions**.

```
cd $BANNER_HOME
mkdir evisions
cd evisions
```

FTP the **eviadm.pc** file from the **C:\Program Files\Evisions\FormFusion\Server** workstation directory into the newly created **evisions** directory using ASCII transfer mode.

Verify that your environment is pointed to the proper **ORACLE\_SID**. Then compile the **eviadm.pc** program by executing the following command:

```
make -f $BANNER_LINKS/sctproc.mk eviadm CHECKOPT=sqlcheck=limited
```

### VMS Installation

Log on to the Banner account. Answer all prompts with information specific to your system. Make sure you are connected to the database that contains FormFusion. Create an **evisions** directory within **BAN\_HOME** and open the new directory.

```
create /dir BAN_HOME:[evisions]
set def BAN_HOME:[evisions]
```

FTP the **eviadm.pc** file from the **C:\Program Files\Evisions\FormFusion\Server** workstation directory into the newly created **evisions** directory using ASCII transfer mode.

Compile the **eviadm.pc** program by executing the following command:

```
@gen$com:sctproc eviadm "limited"
```

## NT Installation

Change to the **\$BANNER\_HOME** directory on your Banner host NT server and create a new directory called **evisions**.

Copy or FTP the **eviadm.pc** file from the **C:\Program Files\Evisions\FormFusion\Server** workstation directory. If using FTP, transfer the file in ASCII mode.

Open the **evisions** directory and set the following environment variables by typing the text below, replacing **PROD** with the appropriate database instance, such as **PPRD**, **TRNG**, **SEED**, etc.

```
ORAENV PROD
```

Set your path according to the specifics of your system. Be sure to use the short directory name if there are spaces or any directory names exceeding eight characters.

```
set EVIPATH=c:\sct\banner\evisions
```

Enter the text below:

```
set INCLUDE=%EVIPATH%;%INCLUDE%
```

Compile the **eviadm.pc** by entering the command below ON ONE LINE with no carriage returns. The text appears on multiple lines below for illustration purposes only!

```
perl %BANNER_HOME%\general\misc\sctproc.pl  
-prog="%EVIPATH%\eviadm.pc"  
-checkopt="sqlcheck=limited include=%EVIPATH%"
```

## Compiling the FormFusion Server

After you have successfully compiled **eviadm**, you can compile the FormFusion Server files. Before you launch **eviadm**, make sure you are in a directory that will allow for the creation of temporary files.

Start **eviadm** by completing the following steps for your system.

## Unix Installation

Enter the following text at the command prompt from **\$BANNER\_HOME/evisions**:

```
$EXE_HOME/eviadm
```

## VMS Installation

Enter the following text at the command prompt from **BAN\_HOME:[evisions]**:

```
run GEN$EXE:eviadm
```

## NT Installation

**NOTE:** IF YOU INTERRUPTED THE INSTALL PROCESS AFTER RUNNING **EVIADM**, BE SURE TO RE-ESTABLISH THE PROPER ORACLE AND BANNER ENVIRONMENTS BY EXECUTING THE **EVI** PATH AND INCLUDE COMMANDS.

Enter the following text at the command prompt from **e:\sct\banner\evisions**:

```
e:\sct\banner\general\exe\eviadm
```

**NOTE:** IN THE TEXT ABOVE, **E:\SCT\BANNER** REPRESENTS YOUR SYSTEM'S PATH TO THE **GENERAL\EXE** DIRECTORY.

You should now see the FormFusion Server Administration menu. This menu will allow you to compile the **evilp** server software. The main menu will present you with two options:

- "A" - Import Tables
- "B" - Compile FormFusion Software

Select option **B** unless Evisions Technical Support provides you with other instructions.

After selecting option **B**, you will be prompted for how you wish the seed values to be detected.

1. Manually type these values
2. Automatically detect (requires a DBA user)
3. Reference seed values in "guassed.h"
- X. Cancel compile

We recommend option **2, Automatically detect**.

Next, you will be presented with the different versions of **evilp** that exist in your FormFusion program table (**EVIPROGRAM**). You will be prompted to enter the version you would like to install. The latest version will be listed as the default.

You should select **version 1.9.x.xxx**. If you do not see this version or a newer version than this one, please contact Evisions Technical Support.

Once you have accepted the default or typed in the version to compile, you will be prompted with the following:

Choose the operation to perform:

- A. Compile/Execute all
  - 1. Execute "sh comppcl.shl"
  - 2. Compile "evilp"
  - X. Exit this menu

Select option **A** unless Evisions Technical Support provides you with other instructions. The **eviadm** program will extract from the database the version you have typed and compile the source code into an **evilp** executable.

**NOTE:** PLEASE LET US KNOW IF THE COMPILATION DID NOT COMPLETE SUCCESSFULLY. YOUR SYSTEM MAY REQUIRE ADDITIONAL FLAGS TO COMPLETE THE COMPILATION.

## Adding EVILP to Job Submission

In order for FormFusion to process your files, you will need to make some changes to the **gjajobs.shl** (Unix), **gjajobs.com** (VMS), or **sctban.pm** (NT) file. These changes will allow Banner to process any job from **GJAPCTL**, even those modified by FormFusion.

If you have separate directories or code trees for different Oracle instances, please edit this file in your PRE-PRODUCTION ENVIRONMENT and test before implementing in a production environment.

**NOTE: OTHER BANNER USERS ON YOUR SYSTEM MAY BE UNABLE TO PRINT WHILE YOU ARE EDITING THIS FILE. IF YOU ARE ON A PRODUCTION SYSTEM, PLEASE PERFORM THE MODIFICATION AND TESTING OF THIS FILE DURING A TIME PERIOD WHEN NO ONE ELSE NEEDS TO PRINT. IF SOMEONE MUST PRINT WHILE YOU ARE EDITING, YOU CAN COPY THE SAVED GJAJOBS FILE BACK TO ITS ORIGINAL FILE NAME TO RESTORE PRINTING CAPABILITIES.**

## Unix Installation

In this step, you will edit the **gjajobs.shl** file in the **\$BANNER\_LINKS** directory.

Make a backup copy of **gjajobs.shl** by typing:

```
cd $BANNER_LINKS
cp gjajobs.shl gjajobs_orig.shl
```

Edit your **gjajobs.shl** file and find the section of code where **LANDSCAPE** and **PORTRAIT** are defined. It should look similar to:

```
case `echo $7 | tr "[a-z]" "[A-Z]"` in
  LANDSCAPE) FORM=" -o land";;
  PORTRAIT) FORM=" -o port";;
  "") FORM=" -o land";;
  *) FORM=" $7 ";;
```

Add the **PROBABLY\_FF** line after the **\*)** as shown below.

```
case `echo $7 | tr "[a-z]" "[A-Z]"` in
  LANDSCAPE) FORM=" -o land";;
  PORTRAIT) FORM=" -o port";;
  "") FORM=" -o land";;
  *) FORM=" $7 "
      PROBABLY_FF="YES";;
```

Next, find the section of code where **PRNTOPT** is passed the print command used at your site. The section should start with:

```
if [ "$6" = "default" ] || [ "$6" = "" ]
then
  PRNTOPT="lp $FORM"
else
  PRNTOPT="lp -d$6 $FORM"
fi
```

Change both the **then** and **else** part of the command by adding a line to each section. Copy and paste the **PRNTOPT** line in each section and change the variable name to **PRNTFF**. Then, remove the **\$FORM** variable from the new **PRNTFF** variable and add a **-c** flag.

Also, add a check for the **GLRLETR** process so that FormFusion will handle it properly. The entire **if** statement should now read:

```
if [ "$6" = "default" ] || [ "$6" = "" ]
then
  PRNTOPT="lp $FORM"
  PRNTFF="lp -c"
else
  PRNTOPT="lp -d$6 $FORM "
  PRNTFF="lp -c -d$6"
fi
```

```

if [ "$PROG" = "GLRLETR" ] && [ "$FORM" = " $7 " ]
  then
    EXT="doc"
  else
    EXT="lis"
fi

```

**NOTE:** A SPACE BEFORE AND AFTER THE EQUAL SIGN IS REQUIRED. A SPACE BEFORE AND AFTER EACH BRACKET IS ALSO REQUIRED.

When a user requests a report process from Job Submission, and FormFusion does not process the file because no Special Print command has been specified, FormFusion passes the input report file to the **PRNTOPT** command.

When FormFusion does process an input report file, FormFusion passes the new output file to the **PRNTFF** command. This ensures that FormFusion forms print properly without affecting the Banner baseline printing process.

Please contact us if graphics printed from FormFusion appear garbled or run onto many pages. We can give you the required flags to add to the **PRNTFF** variable in the section above so your graphics will print properly.

The above example assumes use of the **lp** print command. If you use **lpr** or **qprt** print commands, please refer to the following examples:

```

lpr -P$6
qprt -P$6 -c -dp -Bnn -j0 -J! -Z!

```

Immediately after the **fi** command of the GLRLETR section in GJAJOBS.shl, add the line of text shown below. Enter the text ON ONE LINE with no carriage returns. The text appears on three lines below for illustration purposes only!

```

EVIPRINT="$EXE_HOME/evilp -eviuser $3 -evipass $4 -eviproc $1 -evispp
$FORM -evilis $H/$TEMP.$EXT -eviout /tmp/ -evipthru $PRNTOPT -eviprint
$PRNTFF"

```

You will then need to find the line that contains the **export** command and add the new **EVIPRINT** variable to the list of other variables being exported.

```

# Export all variables so they can be accessed by submitted shl script
#
export JOB PROC UID PSWD UIPW PRNTOPT PRNT FORM LOG TEMP ONE_UP SUBTIME
PROG H EVIPRINT

```

Next, find the portion of your **gjajobs.shl** that actually creates the command to print the file. Find the section that reads:

```
if [ "$6" != "NOPRINT" -a "$6" != "DATABASE" ]
then
  echo 'if [ -r $H/$TEMP.lis ]'           >> $H/$TEMP.shl
  echo 'then'                             >> $H/$TEMP.shl
  echo '$PRNTOPT $H/$TEMP.lis 1>>$LOG 2>&1'>> $H/$TEMP.shl
  echo 'fi'                               >> $H/$TEMP.shl
  fi
```

Replace **echo '\$PRNTOPT \$H/\$TEMP.lis 1>>\$LOG 2>&1' >> \$H/\$TEMP.shl** with the modification for FormFusion as shown:

```
if [ "$6" != "NOPRINT" -a "$6" != "DATABASE" ]
then
  echo 'if [ -r $H/$TEMP.lis ]'           >> $H/$TEMP.shl
  echo 'then'                             >> $H/$TEMP.shl
  # Evisions mod for FormFusion
  if [ "$PROBABLY_FF" = "YES" ]
  then
    echo '$EVIPRINT 1>>$LOG 2>&1'         >> $H/$TEMP.shl
  else
    echo '$PRNTOPT $H/$TEMP.lis 1>>$LOG 2>&1'>> $H/$TEMP.shl
    fi
  echo 'fi'                               >> $H/$TEMP.shl
fi
```

**NOTE:** A SPACE BEFORE AND AFTER THE EQUAL SIGN IS REQUIRED. A SPACE BEFORE AND AFTER EACH BRACKET IS ALSO REQUIRED.

Find the section **Undefine all variables that were set by this process.** Add **EVIPRINT=""** to the list.

Below that section you will find the line that contains the export command to export the cleared variables. Add the **EVIPRINT** variable to the list:

```
# Export cleared variables
#
export JOB PROC UID PSWD UIPW PRNTOPT PRNT FORM LOG TEMP ONE_UP SUBTIME
PROG H EVIPRINT
```

**Save** and exit.

## VMS Installation

In this step, you will be editing your **gjajobs.com** file in the **GEN\$COM** directory.

Create a backup of the **gjajobs.com** file by typing:

```
SET DEF GEN$COM
COPY GJAJOBS.COM GJAJOBS_ORIG.COM
```

Locate the parameter that reads:

```
$ FORM :=
```

Add another line beneath it that contains a new **EVIFORM** parameter that reads:

```
$ EVIFORM :=
```

Locate the section of code that reads:

```
$ NO_FORM:
$ FORM:="/FORM=' 'P7' "
```

Add another line directly beneath the **FORM** variable definition that reads:

```
EVIFORM:="' 'P7' "
```

**NOTE:** *THERE ARE NO SPACES BETWEEN THE SINGLE QUOTES.*

Find ALL the lines that read:

```
$ WRITE COMFILE "$ PRINT/DELETE ' 'PRNT' ' 'FORM' ' 'TTIME'.LIS"
```

Change them to the following lines:

```
$ WRITE COMFILE "$ DEASSIGN SYS$INPUT"
$ WRITE COMFILE "$ EVIPPGRM := $GEN$EXE:EVIPPGRM"
$ WRITE COMFILE "$ EVILP := $GEN$EXE:EVILP"
$ WRITE COMFILE "$ EVILP -EVIUSER ' 'P3' -EVIPASS ' 'P4' -EVIPROC ' 'P1' -"
$ WRITE COMFILE " -EVISPP 'EVIFORM' -EVIPTHRU PRINT/DELETE ' 'PRNT' -"
$ WRITE COMFILE " ' 'FORM' -EVILIS ' 'TTIME'.lis -EVIPRINT -"
$ WRITE COMFILE " PRINT/PASSALL/DELETE ' 'PRNT' "
```

**Save** and exit.

## NT Installation

Locate the **sctban.pm** file in the **\sct\banner\general\misc** directory.

Edit the file and locate the **PRNT** command in the **sctban\_do\_non\_db\_print** function. The **PRNT** command reads:

```
open(PRNT, "|print \\D\:${sctban_printer_name}
${sctban_file_name}.lis >${sctban_file_name}.stdout
2>${sctban_file_name}.stderr");
```

Change the **PRNT** command as shown in the example below while adding your path to the **general\exe** directory. In the example, we are using **E:\sct\banner\general\exe** as the directory containing the **evilp.exe** file.

Notice how you need two **\\** for each literal **\**. This is because PERL interprets **\\** as **\** when executing the statement below. Enter the text of this statement ON ONE LINE with no carriage returns. Your text editor (such as Notepad) may wrap the lines but will not put a carriage return at the end of each line.

```
open(PRNT, "|e:\\sct\\banner\\general\\exe\\evilp -eviuser
${sctban_user_id} -evipass ${sctban_password} -eviproc
${sctban_process_name} -evispp ${sctban_form} -evilis
${sctban_file_name}.lis -eviprint print \\D\:${sctban_printer_name} \-
eviphru print \\D\:${sctban_printer_name} >>${sctban_file_name}.log
2>>${sctban_file_name}.log");
```

**NOTE:** AGAIN, PLEASE MAKE SURE THAT YOU MAKE THIS MODIFICATION AT A TIME WHEN TAKING DOWN THE PRINTING SERVICES FROM BANNER WILL **NOT** BE A PROBLEM. IF YOU MAKE A MISTAKE OR A TYPOGRAPHICAL ERROR, YOUR BANNER PRINTING COULD BE NEGATIVELY AFFECTED.



# FORMFUSION DEVELOPER

Please reference this screen shot and the [glossary](#) at the end of this manual for definition and explanation of the terms used throughout the manual.

The screenshot shows the FormFusion Developer 1.9 interface. The main window displays a design window with a grid and a text area containing a lease order form. The interface includes a menu bar (File, Edit, View, Tools, Window, Help), a toolbar, a process tree on the left, and a floating fields list. The design window shows a form with fields for amount, buyer, description, and vendor information. The process tree shows a hierarchy of processes including 'PO' and 'fpapord'. The floating fields list includes 'Amount', 'BO Num', 'Buyer', 'DeliverDate', 'Description', 'FOB', 'Item', 'PageNo', 'PODate', 'PONum', 'Terms', 'UnitPrice', 'UOM', 'VendAddress', 'VendID', and 'VendName'. The design window shows a form with fields for 'Net 10', 'Jack Prove', 'Not applicable', and 'Lease Or LEASE OR PROPERTY AT 319 W MAIN STRE ARTESIA, NEW MEXICO 88211 Purpose of Change Order: Change Document Index 9330 Leases/Real Estate FY 06-07 NMSU PERIOD: 7/1/06 - 6/30/'.

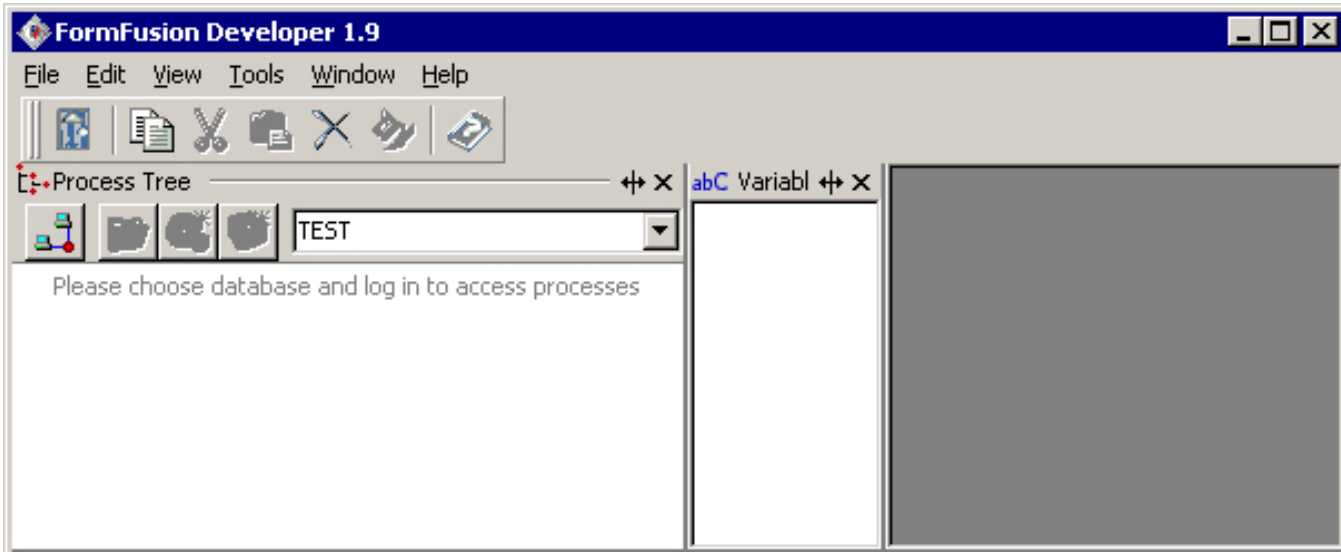
Labels in the image point to the following components:

- Database Instance drop-down box
- Log off button
- Tool Bar
- Main Menu
- Process Name
- Group Name
- Special Print Parameter
- PCL Form
- Design Window
- First Session
- Second Session
- Log off button



## GETTING STARTED WITH DEVELOPER

To get started with FormFusion Developer, you need to sign in to a session. On the left-hand side of the application window, you will find a panel with four buttons and a drop-down menu box located under the heading **Process Tree**.




### Select a Database

Select the Oracle SQL\*Net database instance name you would like to connect to. The names in the **database instance name** drop-down box  are read from the **tnsnames.ora** file. If the database instance name is not in the drop-down box, you may type it into the edit box.

Every time you exit FormFusion, the last database instance used in a session is saved to the Windows<sup>®</sup> Registry. The next time you return to FormFusion, it will be displayed in the database instance name drop-down box automatically.


### Log in

After you choose the database instance name, click the **Log in to the Oracle instance** button  or enter the shortcut keys **CTRL+L**. Type your user name and password at the prompt, then click the **Login** button or press **ENTER**.

Once you have logged into a session, you will see a view of the process tree structure. The tree view will only contain groups or processes if you have installed the Evisions sample templates or have created forms for your institutions' use. See **Tree View Organization** for more information on how the tree view is structured.

The database instance name drop-down box will gray out, disallowing the option to change the database instance.

## Log out

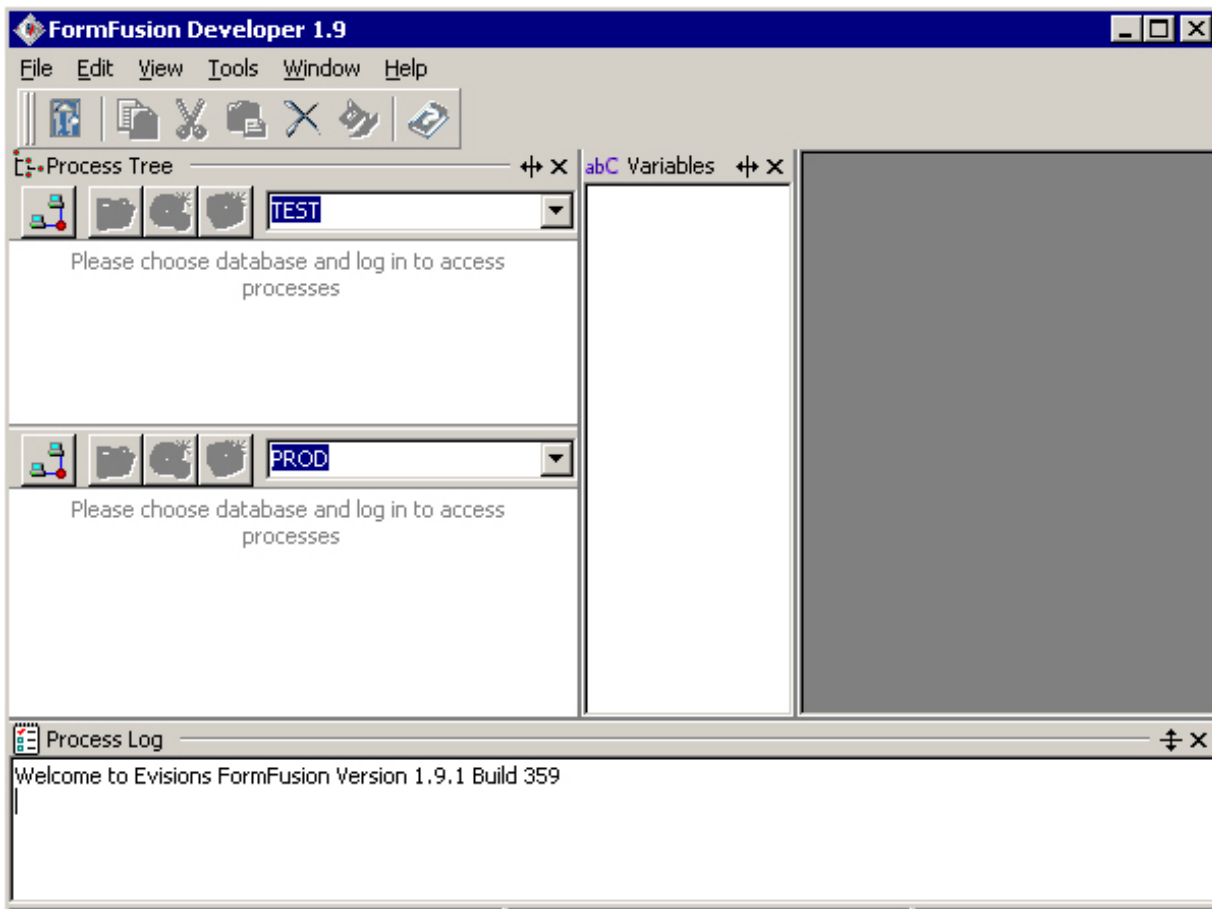
After you have signed in to a database instance, the **Log In** button will become the **Log Out** button . Click this button to log off from the database instance.

The database instance name drop-down box will become active again allowing connection to a different database instance.

## Second Session

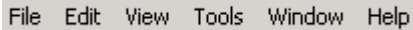
To copy or move process nodes across sessions, FormFusion offers the ability to sign in to two Oracle database instances at the same time. Launch this option by selecting **View ->Second Session** from the main menu.

By dragging a tree node from one session's tree view to the other, the node can be copied or moved. Both sessions are fully functional.



## Main Sections of the Developer User Interface

### Main Menu



The main menu is located at the very top of the User Interface. The six main categories, **File**, **Edit**, **View**, **Tools**, **Window**, and **Help**, remain constant, but the sub-categories and selections under each main category will change depending on what is selected in the process tree or is active in the design window.

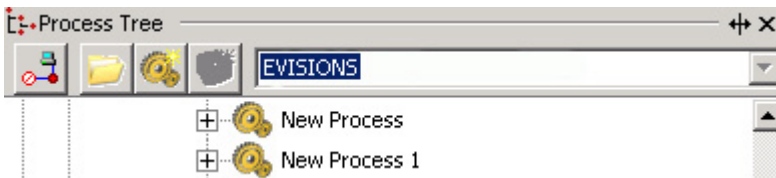
### Toolbar



The toolbar is located directly beneath the main menu. The seven default buttons, **Exit**, **Copy**, **Cut**, **Paste**, **Delete**, **Edit**, and **Help**, remain constant, although some of these buttons will become active or inactive depending on what is selected in the process tree or is active in the design window.

Additional toolbars will appear to the right or below the main toolbar while navigating through FormFusion Developer.

### Process Tree

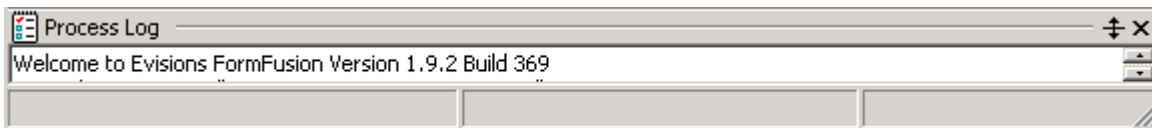


The process tree is located under the toolbar. To close the **Process Tree** pane, click the **Close** button at the top right-hand corner of the window.

To resize this section, select the right-hand edge of the **Process Tree** pane, hold down the left mouse button and drag to the desired size.

To reopen the process tree, use the **View/Process Tree** option on the main menu.

### Process Log



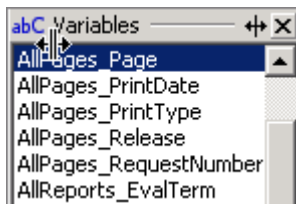
The process log is located at the bottom of the user interface.

To close the **Process Log** pane, click the **Close** button at the top right-hand corner of the window.

To resize this section, select the top edge of the **Process Log** pane, then hold down the left mouse button and drag to the desired size. To clear the process log, click on the icon preceding the **Process Log** title or right-click inside the **Process Log** pane and select **Clear Log**.

To reopen the process log, use the **View/Process Log** option on the main menu or double-click the gray bar at the bottom of the Developer window.

## Variables



The **Variables** pane lists all of the variables defined in mapForm and captureForm, as well as the reserved variables pre-defined in FormFusion. The mapForm and captureForm variables will not appear in this list until they have been committed to the database.

To open the variables list, use the **View/Variable Reference** option on the main menu.

To close the variables list, click the **Close** button at the top right-hand corner of the window.

To resize this section, select the right edge of the **Variables** pane, then hold down the left mouse button and drag to the desired size.

## Design Window

The design window is the right-hand pane in FormFusion Developer. What appears in the design window depends on the module you are working in.

When creating captureForm queries, the design window becomes a SQL Builder.

When working in mapForm, the design window becomes a numbered grid containing the input report file you have imported for mapping. An additional pane containing the floating fields and offset fields created in mapForm will appear between the **Process Tree** pane and the design window.

When designing PCL Forms, the design window becomes a workspace with rulers for measuring.






## DEVELOPER BASICS






### Process Tree Organization

The layout and organization of the Developer process tree can also be thought of as the view into the FormFusion tables residing in the Oracle database. Each entry in the tree view is called a tree node or node for brevity. Each node represents an entry in one or more of the FormFusion tables.

When you select nodes in the tree view, additional options may become available under **Edit** and **Tools** on the main menu.

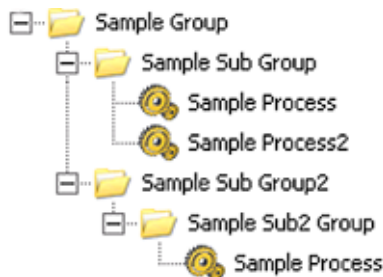
Node type	Description
 Group	Each group node is pulled from the EVIPGRP table. A group can contain only other group nodes or process nodes and has no configurable properties of its own. A group can be added to the root level (no parent node). For more information, see <a href="#">Groups</a> .
 Process	Each process node is pulled from the EVISCTP table. A process can only contain a special print parameter node. There are no configurable properties to a process. A process can be added to the root level (no parent node). For more information, see <a href="#">Processes</a> .
 Special Print Parameter (SPP)	Each Special Print Parameter is pulled from the EVISPP table. A Special Print Parameter can only contain process modifier nodes. For more information, see <a href="#">Special Print Parameters</a>

**Process Modifier** nodes add a new feature to a special print parameter. Each process modifier is a configurable node and may or may not have any child nodes.


Process Modifier Node	Description
 CaptureForm	The CaptureForm node is linked to EVIPMOD using the EVICFORM table. For more information, see <a href="#">CaptureForm Queries</a>
 FormDirector	The FormDirector node is linked to EVIPMOD using the EVIFDDIR table. Each director uses a different table to store its information: EVIFDARC, EVIFDEML, EVIFDPRT, EVIDSQL and EVIFDWEB. For more information, see <a href="#">FormDirector</a>
 MapForm	The MapForm node is linked to EVIPMOD using the EVIMAPF table. For more information, see <a href="#">MapForm</a>
FormStamp provides two process modifier nodes.	
 PCL Form	The PCL Form node is linked to EVIFSTMP using the EVIPCLF table. For more information, see <a href="#">FormStamp</a>
 MAC File	The MAC File node is rarely used and is merely a non-editable PCL file. Properties for the MAC File are same as those of the PCL Form. The MAC File cannot be opened.

## Groups

A group allows you to organize several processes together under one node. A group is only used for organizational purposes and has no effect on the number of processes that can be created.




## Create

To create a group at the root level, select the empty area of the process tree view, then either right-click and choose **New->Group**, click the **Group** button  next to the database instance name, or use the **Edit/New->Group** option on the main menu.

To create a group under an existing group, select the group node, then right-click and choose **New->Group**, click the **Group** button next to the database instance name, or use the **Edit/New->Group** option on the main menu.

The node will appear and prompt you for a group name. Any descriptive name you choose is allowed for group nodes. After typing the name, press **Enter**.

### ***Copy/Move***

To copy a group, select the group node, then either click the **Copy** button  on the toolbar, right-click and choose **Copy**, or use the **Edit/Copy** option on the main menu. The group will be copied and pasted at the same level.


Another method of copying or moving a group is to hold down the left mouse button when selecting the group node and drag it either to another group, the white area in the process tree area, or a process tree in another session. When you release the mouse button, you will be prompted with three options: **Move Here**, **Copy Here**, or **Cancel**.

The **Move Here** option will remove the group from its original location to a new location. The **Copy Here** option will add the group to the new location, as well as retain a copy of the group in the original location. **Cancel** will negate the action.

### ***Rename***

To rename a group, select the group node, then either right-click the node name and choose **Rename** or use the **Edit/Rename** option on the main menu. Type the new name and press **Enter**.

### ***Delete***

To delete a group, select the group node, then right-click and choose **Delete**, click the **Delete** button  on the toolbar, or use the **Edit/Delete** option on the main menu.

**NOTE: ALL PROCESSES, SPECIAL PRINT PARAMETERS, AND PROCESS MODIFIERS UNDER THE GROUP WILL ALSO BE DELETED.**

### ***Import from a file***

To import a file to the root level, select the empty area of the process tree then right-click and choose **Import from File**.

To import into an existing group, select the group node, then right-click and choose **Import from File** or use the **Tools/Import from File** option on the main menu.

Use the **Import a FormFusion file** dialog box to locate and open the appropriate folder and file. All FormFusion Export files will have an **.ffe** extension.

The imported file will be placed beneath the currently selected group, and the tree structure within that file will be created.

### ***Export to a file***

To export a group to a file, select the group node, then either right-click and choose **Export to File** or use the **Tools/Export to File** option on the main menu.


Use the **Export a FormFusion file** dialog box to locate and open the appropriate folder. In the **File name:** field, type a name for the file and click the **Save** button.

FormFusion Export files are assigned the extension **.ffe**. All groups, processes, special print parameters, and process modifiers under the group will be exported to the file you specify.

## **Processes**

A process node corresponds to the name of a Banner process.


### ***Create***

To create a process at the root level, select the empty area of the process tree view, then right-click and choose **New->Process**, click the **Process** button  next to the database instance drop-down box, or use the **Edit/New->Process** option on the main menu.

To create a process under an existing group node, select the group node, then either right-click and choose **New->Process**, click the **Process** button next to the database instance drop-down box, or use the **Edit/New->Process** option on the main menu.

The node will appear and prompt you for a process name. The process name MUST correspond exactly to the Banner process name. After typing the name, press **Enter**.

### ***Copy/Move***

To copy a process, select the process node, then right-click and choose **Copy**, click the **Copy** button  on the toolbar, or use the **Edit/Copy** option on the main menu. The process will be copied and pasted at the same level.


Another method of copying or moving a process is to hold down the left mouse button when selecting the process node and drag it either to a group node, the white area in the process tree area, or a process tree in another session. When you release the mouse button, you will be prompted with three options: **Move Here**, **Copy Here**, or **Cancel**.

The **Move Here** option will remove the process from the original location and add it to the new location. The **Copy Here** option will add the process to the new location and retain a copy of the process in the original location. **Cancel** will negate the action.

## ***Rename***

To rename a process, select the process node, and either right-click and choose **Rename** or use the **Edit/Rename** option on the main menu. After typing the name, press **Enter**.

## ***Delete***

To delete a process, select the process node, then click the **Delete** button  on the toolbar, right-click the node name and choose **Delete**, or use the **Edit/Delete** option on the main menu.

**NOTE: ALL SPECIAL PRINT PARAMETERS AND PROCESS MODIFIERS UNDER THE PROCESS WILL ALSO BE DELETED.**


## ***Export to a file***

To export a process to a file, select the process name, then either right-click the node name and choose **Export to File** or use the **Tools/Export to File** option on the main menu.

Use the **Export a FormFusion file** dialog box to locate and open the appropriate folder. In the **File name:** field, type a name for the file and click the **Save** button.

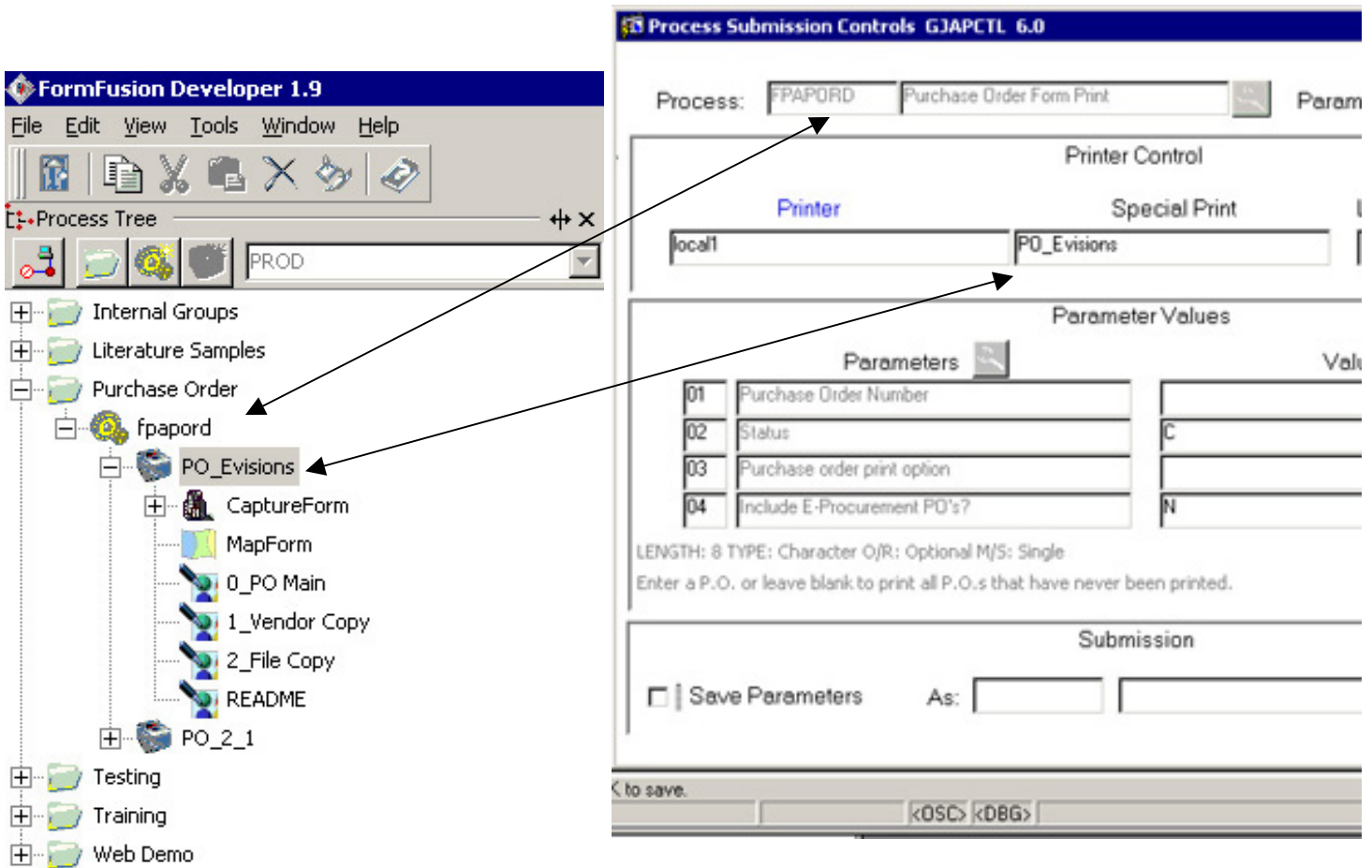
FormFusion Export files are assigned the **.ffe** extension. All special print parameters and process modifiers under the process will be exported to the file you specify.

## **Special Print Parameters**

A Special Print Parameter  is the key node that triggers the FormFusion server to take special action on the baseline output file.

In the figure below, notice how the process node in FormFusion Developer corresponds to the Process field on the **GJAPCTL** form in Banner.


The special print parameter node in FormFusion Developer corresponds to the Special Print field on the **GJAPCTL** form in Banner.



When a matching special print parameter is found during run time, all process modifiers created to enhance the output stream will be read from the Oracle database and executed accordingly.


If the process is run without the special print parameter defined, the process modifiers created in FormFusion will not be called, and Banner baseline output will print.

## Create

To create a special print parameter, select the process node, then click the **Special Print Parameter** button  next to the database instance name, right-click the node name and choose **New->Special Print Parameter**, or use the **Edit/New->Special Print Parameter** option on the main menu.

The node will appear and prompt you for a special print parameter name. The special print parameter name can be any descriptive name you choose (without spaces), but must correspond exactly to the special print parameter name you type in the Special Print field on the Job Submission (**GJAPCTL**) form when running the process in Banner. After typing the name, press **Enter**.

## Copy/Move

To copy a special print parameter, select the **Special Print Parameter** node, and click the **Copy** button  on the toolbar, right-click the node name and choose **Copy**, or use the **Edit/Copy** option on the main menu. The special print parameter will be copied and pasted at the same level.


Another method of copying or moving a special print parameter is to hold down the left mouse button when selecting the **Special Print Parameter** node and drag it either to a process node in the current session or in another session. When you release the mouse button, you will be prompted with three options: **Move Here**, **Copy Here**, or **Cancel**.

The **Move Here** option will remove the special print parameter from the original location and add it to the new location. The **Copy Here** option will add the SPP to the new location, as well as retain a copy of the special print parameter in the original location. **Cancel** will negate the action.

## Rename

To rename a special print parameter, select the **Special Print Parameter** node, and either right-click the node name and choose **Rename** or use the **Edit/Rename** option on the main menu. After typing the name, press **Enter**.

## Delete

To delete a special print parameter, select the **Special Print Parameter** node, and click the **Delete** button  on the toolbar, right-click the node name and choose **Delete**, or use the **Edit/Delete** option on the main menu.

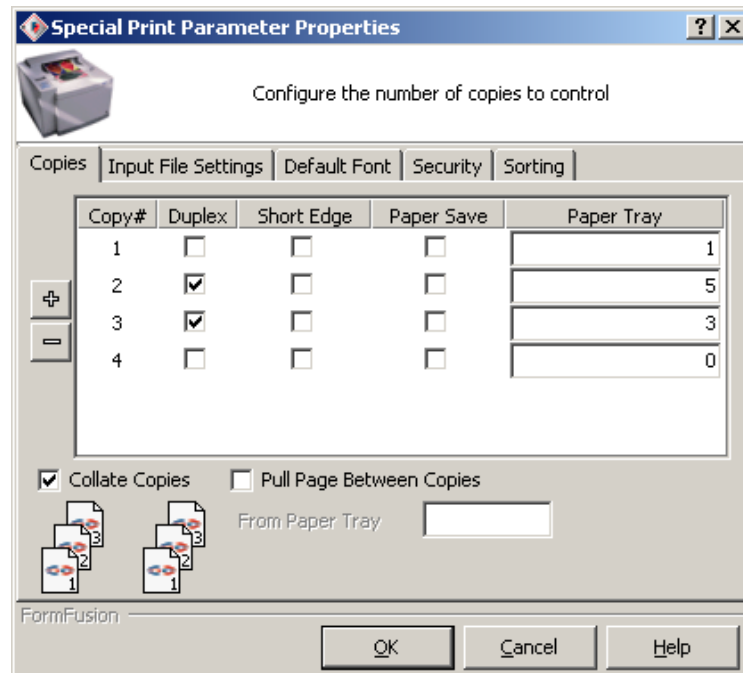
**NOTE: ALL PROCESS MODIFIERS UNDER THE SPECIAL PRINT PARAMETER WILL ALSO BE DELETED.**

## Properties

To access or modify the special print parameter properties, select the **Special Print Parameter** node, and either right-click the node name and choose **Properties**, or use the **Edit/Properties** option on the main menu.



The properties for a special print parameter are separated into logical groups and can be accessed by clicking on the appropriate tab at the top of the dialog box.

## Copies



### Copy #

The number of copies to process and their specific properties are listed in the white area of the dialog box.

To add a new copy to the list, click the **Add Copy** button . A new copy with the default properties will appear at the bottom of the list. To remove a copy, click the **Remove Copy** button . The bottom-most copy will be removed.

After removing a copy, it may be necessary to edit the PCL Form properties beneath the special print parameter and re-assign the **Print on Copies** value. See [PCL Form Overlay](#) for more details.

### Duplex

To enable the duplex feature, click the **Duplex** checkbox. Duplex printing will result in both sides of the paper being printed. Duplex only applies to copies that are actually printed on paper and the printer must have duplex printing capability.

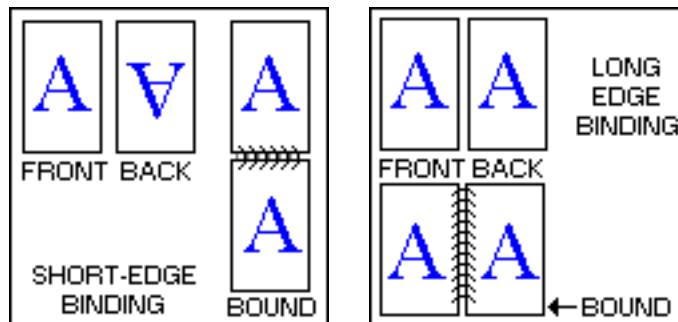
**NOTE:** BE CAREFUL WHEN USING THIS FEATURE, SINCE FORMFUSION WILL TRY TO PRINT DUPLEX EVEN IF YOUR PRINTER DOES NOT SUPPORT DUPLEX PRINTING.

For more information on how to control which PCL Forms print on the front or back of each duplex copy, see [PCL Form Overlay](#).

### Short Edge

The short edge feature controls the orientation of the backside of a duplex printed page or the binding of the page.

Click the **Short Edge** checkbox to enable short-edge binding. Short-edge binding is commonly used for papers that will be bound like a flip-open notebook. Refer to the images below for an example.



Long-edge binding is used for papers that will be bound like a standard book. To enable long-edge binding, clear the **Short Edge** checkbox.

### Paper Save

The paper save option reduces the amount of paper that will be used to print the entire copy if you are not printing duplex.

Click the **Paper Save** checkbox to specify that each side of the page will be one page from the input report file.

### Paper Tray

FormFusion allows you to control which paper tray a copy will feed from. This is especially useful when multiple copies are requested and each must be printed on different types of paper.

To specify a paper tray, type the **Paper Tray** value for the desired copy. This value differs from printer to printer and may not correspond to the physical paper tray number stamped on the printer itself. The paper tray value should be the PCL escape command value and might be defined in the printer's user manual.

For example, to feed from tray 3 on an HP 8000/5000 printer, the actual escape sequence is **esc&I5H**. Thus, you would type '5' in the **Paper Tray** field.

Leave this value as '0' to use your printer's default paper tray.

### ***Collate Copies***

The collate copies feature allows you to choose how the printed copies will be sorted.

Click the **Collate Copies** checkbox to print the first page of all copies together, followed by the second page of all copies and so on.

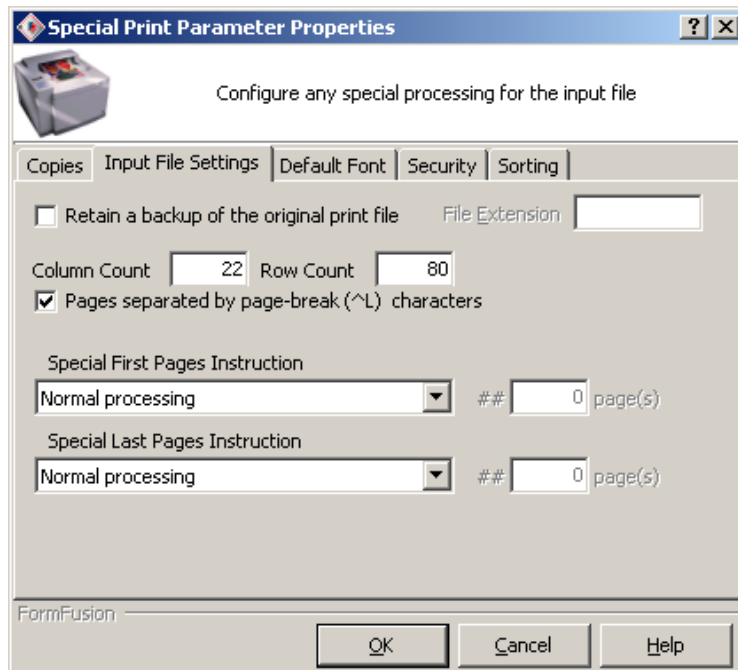
Clear the **Collate Copies** checkbox to print all pages of the first copy together, followed by all pages of the second copy together, etc.

### ***Pull Page Between Copies***

This feature allows you to pull a separate page between copies and specify which paper tray the page should be pulled from.

For example, if you have a pre-printed announcement that needs to be collated with the output from a process, you could put the announcement in a different paper tray, click the **Pull Page Between Copies** checkbox, and designate which **Paper Tray** to pull the announcement from. When the process is run, each set of copies will be separated by the announcement.

## **Input File Settings**



### ***Retain a backup of the original print file***

To make a copy of the baseline input report file for backup purposes, click the **Retain a backup of the original print file** checkbox. The copy will be in the

same directory as the original input file with the same name and a default file extension of **\_bak**. A different file extension may be designated in the **File Extension** field.

### ***Column Count***

When you import an input report file in mapForm, the column count value will default to the longest line in the file. However, if you know the sample does not contain the longest possible number of columns, you can manually type the number of columns in the **Column Count** field and press **Enter**.

### ***Row Count***

If the input file does not contain page break characters, you can manually set the number of lines per page. Enter the number of lines in the **Row Count** field and press **Enter**. This option is helpful when you are trying to map fields for a multiple page input report file.

### ***Pages separated by page-break character (^L) characters***

If the original input report file contains page-break characters to designate the end of every page, click the indicator checkbox.

**Row Count** and **Pages separated by page-break** work together to interpret the input report file correctly.

To instruct FormFusion to read the <row count> number of lines for each page, clear the **Pages separated by page-break** checkbox. If FormFusion encounters a page-break, that page will end regardless of the number of rows read.

If the **Pages separated by page-break** checkbox is clicked, FormFusion will read up to <row count> number of lines per page. If a page-break hasn't been found by the time <row count> lines have been read, the remaining lines will be skipped until a page-break character has been found.

### ***Special First Pages Instruction***

This feature gives you three choices on handling the first page(s) of the input file.

**Normal processing** - the first page(s) will be treated like all other pages. This is the default setting.

**Print first ## pages without modification** –the specified number of pages will print as the input report file text with no FormFusion modifications. The default font will be used for this output.

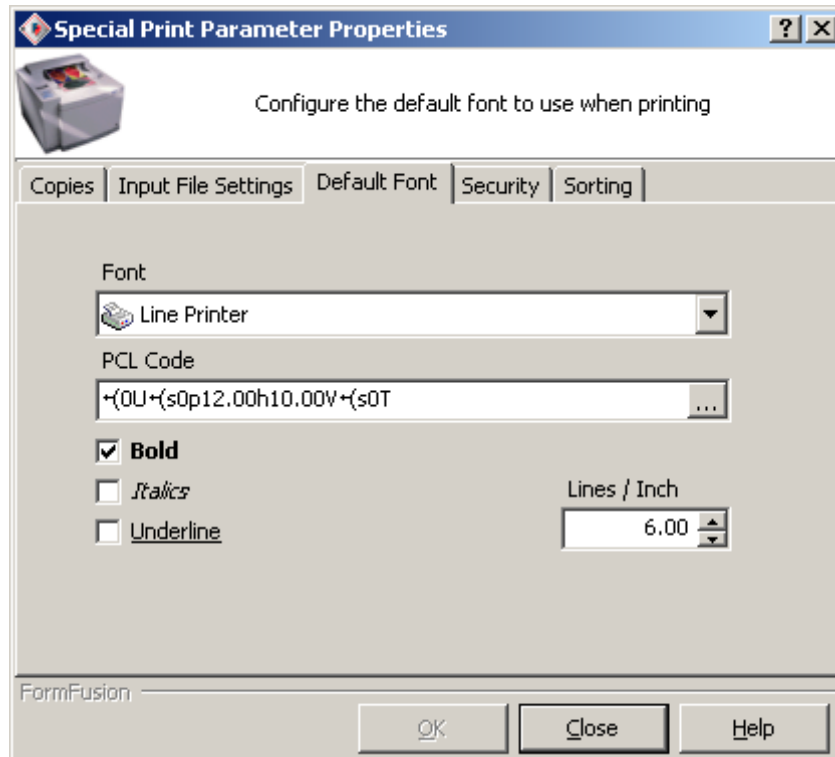
**Do not print first ## pages** – the specified number of pages will not print.

**##page(s)** field indicates how many pages will be affected by the **Special First Pages Instruction** field.

### **Special Last Pages Instruction**

This feature's options are the same as the **Special First Pages Instruction**, but the actions are performed on the last page(s) of the input report file.

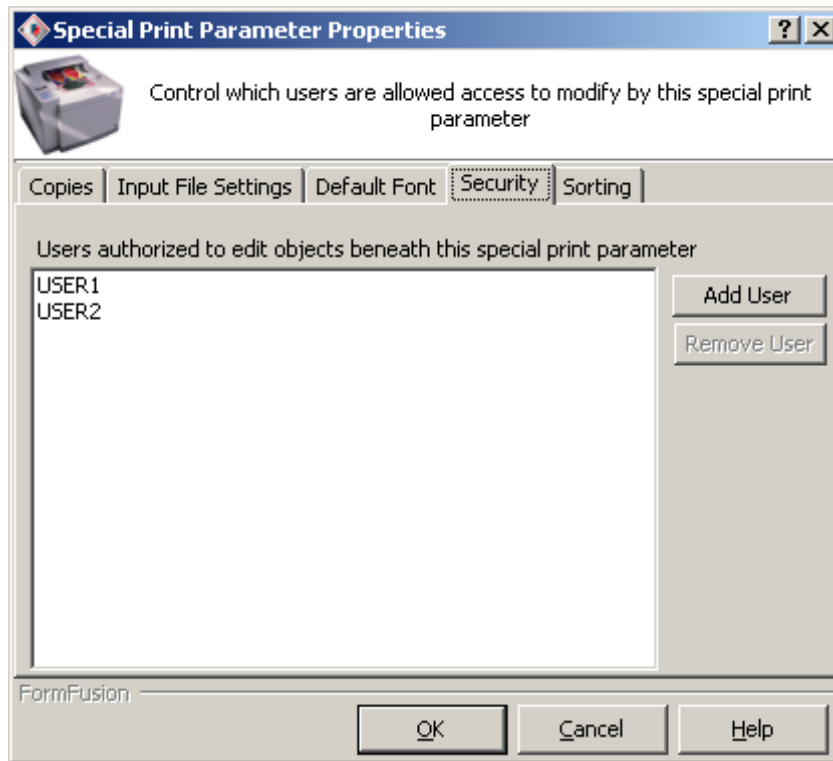
### **Default Font**



The **Default Font** tab allows you to set the default font used to render text when no other font has been specified.

Properties and control of the font name, pitch and height, bold, italics, underline, and lines per inch are described in detail in formStamp object formatting.

## Security



The **Security** tab allows you to add another level of internal security for your FormFusion templates and objects. You can utilize this feature to prevent non-authorized users from editing your important departmental or organizational forms.

If the list is empty, any user with permissions to access FormFusion Developer can modify the objects under the special print parameter. This is the default setting for each special print parameter.

To authorize a certain user, add the user name to the list. Once a user name or multiple user names have been added to the list, all non-listed users cannot edit the special print parameter or any process modifier beneath it.

### **Add User**

Click the **Add User** button to add a user to the list. You will be prompted for the user name.

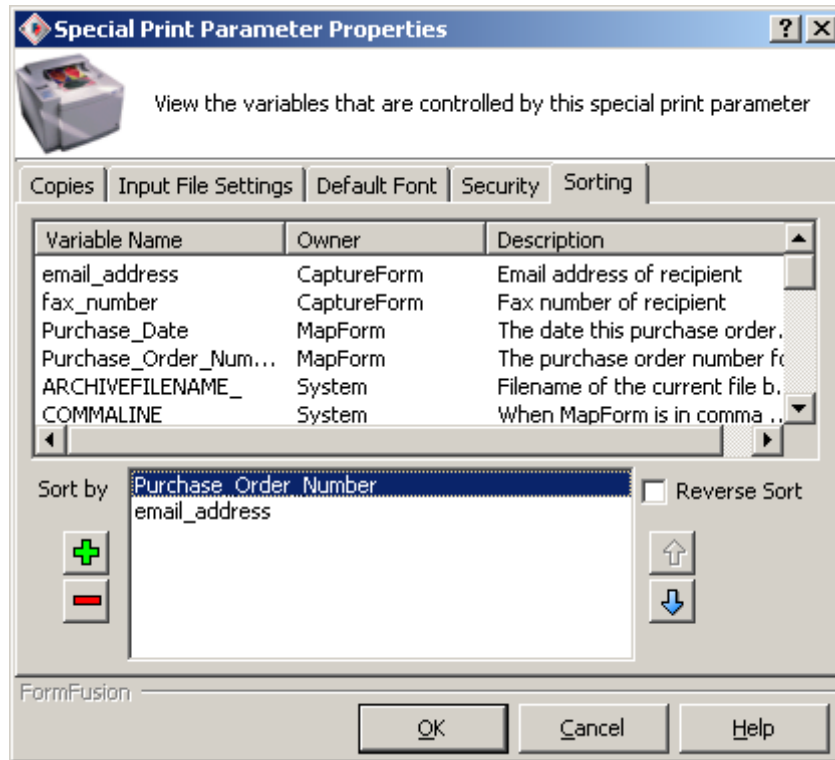
### **Remove User**

Select the user name in the list and click the **Remove User** button to remove the selected user from the list.

It is possible to lock yourself out from being able to edit the forms if you don't add your name to the list of authorized users. You will receive a warning if doing so.

**NOTE:** ONLY THE USERS IS IN THIS USER LIST CAN MODIFY THE TEMPLATE. IF YOU CHOOSE TO USE THIS OPTION, WE RECOMMEND YOU ADD AT LEAST TWO USERS. THIS WILL PREVENT SITUATIONS WHERE A USER IS OUT OF THE OFFICE, MAKING THE TEMPLATE INACCESSIBLE TO ANYONE ELSE.

## Sorting



Use the special print parameter sort properties to eliminate the need to modify baseline Banner code to sort output in the desired order.


Sorting is achieved by comparing the value of FormFusion-defined variables on each page. Sorting is performed on the server without modifying the original input report file.


All mapForm variables are valid for use and many of the system variables are also valid. Some system variables, such as **FILENAME\_**, are not valid since the value will be empty during the comparison.

captureForm variables are valid for use depending on when the variable is populated. Only queries that execute before each page are available to use as a sort variable.

The top white area contains all of the variables that exist beneath this special print parameter, and shows the process modifiers that own the variable name. Variables cannot be edited from this location.

The bottom white area lists the currently applied sorting variables. If no variables are present in this list, then sorting will not occur. The sort will occur in the order that the variables are listed. Use the up and down arrows to determine the correct sort order of variables. To reverse the sort order, click the **Reverse Sort** checkbox.

A sort variable can be added to the sort list by selecting the variable in the top list and clicking the **Add** button , or double-clicking the variable name in the top list.

A sort variable can be removed from the sort list by selecting the variable and clicking the **Remove** button .

## Variables

Variables within FormFusion give you the ability to extend the scope of data included on your PCL Forms. Variables can be created within mapForm or captureForm and can be used across all FormFusion modules.

MapForm gives you the ability to create floating fields or offset fields to map the data contained in the baseline input report file.

You can create variables within captureForm in the variable storage and populate these variables when you write a **SELECT** statement in a captureForm query.

### *Format and Reference*

Variable names must be unique beneath a special print parameter. They must start with an alpha character (a-z or A-Z). After the first character, the following characters are valid: alphanumeric (a-z, A-Z, 0-9), underscore (\_), and dollar sign (\$). A variable name cannot contain spaces, so we suggest using the underscore character instead. Variable names are limited to 32 characters.

A variable is referenced using a colon followed by the variable name. For instance, if you want to reference a variable named **My\_Company\_Address**, you would reference it as **:My\_Company\_Address** in FormFusion. These variables are called bind variables and they can be referenced in formDirector and captureForm.

### *Reserved Variables*

Reserved variables are defined and used by the FormFusion server component and can be referenced, but never overwritten. The general format of global reserved variables is the variable name in uppercase letters with an underscore appended to the end.

The current reserved variables defined within FormFusion include:

ARCHIVEFILENAME_	Filename of the current file being created for archiveDirector. No path.
COMMLINE_	When mapForm is in comma-delimited mode this variable contains the entire line read in with commas still in place.
DEBUG_	Set to 0 if not running in debug mode, 1 if in debug mode.
EMAILFILENAME_	Name of the current file being created for emailDirector. No path.
FAXFILENAME_	Not in current use, but still reserved.
FILENAME_	Name of the current output file being referenced with fully qualified path. This can change depending on what area the server software is executing.
FILENAME_UUENCODED_	Filename of the current file to be emailed, UU encoded for transfer. No path.
LISFILENAME_	Name of the original input report file. The fully qualified path.
PRINTCOMMAND_	The command configured to print a job in the FormFusion server process.
PRINTFILENAME_	Filename of the current file being created for printDirector. No path.
PROCESS_	The name of the process being extended.
PTHRUCOMMAND_	The command used for passing a job thru to the FormFusion server process.
SCRIPTFILENAME_	Filename of the current file being created for scriptDirector. No path.
SCRIPTPATH_	The path to the current file being created for scriptDirector.
SYSDATE_	The system date at the time the server started execution.
TEMPPATH_	The path used to create temporary files.
USERNAME_	The name of the user running FormFusion server.
WEBFILENAME_	Filename of the current file being created for webDirector. No path.

Reserved variables are referenced in the same manner as other variables. For example, to reference the system date variable you would type **:SYSDATE\_**.



## Developer Basics Frequently Asked Questions

### Why is there no option for remembering my password?

**A:** Most Windows<sup>®</sup> programs offer the ability to remember passwords. This makes the task of logging on to programs or web pages easier for the user. There is really no inherent danger in saving the passwords for most Windows<sup>®</sup> based applications since Windows<sup>®</sup> 95/98 security is relatively easy to break anyway. However, the Oracle database and other Oracle-based programs do not make a practice of saving passwords since this is an enormous security risk. Our program follows suit in that passwords will never be remembered.

### How do I load the Evisions template I downloaded from your website?

**A:** After saving the template file (.ffe) to your system, follow the directions for importing a file. Use the **Import a FormFusion file** dialog box to locate the saved file. Then, modify the template for your institution and paper stock, if printing.

### When I attempt to open a process, a window pops up that says 'This process is presently being edited by another user. Would you like to try to open the process again?' Why can't two users edit at the same time?

**A:** When a user opens a process, it is locked and cannot be accessed by another user. Once the original user finishes editing, saves the changes, and closes the process, the process will be available to other users. If more than one user was allowed to edit at the same time, modifications would get lost or overwritten.



## FORMSTAMP

FormStamp is the core module used by FormFusion Developer to create the visual layout and design of the finished FormFusion output. It is a virtual drawing board, allowing you to draw lines, create text objects, and add graphics to determine how the final form will look.

In addition to the basic drawing tools, formStamp also brings together elements from other FormFusion Developer modules. These include offset and floating fields created in mapForm, along with the SQL results from captureForm queries.

There is no guesswork involved in what the final formFusion output will look like, since what you see on the screen is what the output will look like when the process is run within the Banner environment. Should you run a process that does not have a digital template defined by a special print parameter, FormFusion will not interfere in any way.



## PCL Forms

A PCL Form is a digital template designed by you that will be "stamped" onto the laser form when the report or process is run from the server. The formStamp module becomes active when you open a PCL Form.

There is no limit to the number of PCL Forms you can design for a process.

### Create

To create a PCL Form, select the **Special Print Parameter** node beneath the process you would like to modify, then either right-click and choose **New->PCL Form** or use the **Edit/New->PCL Form** option on the main menu.

The node will appear and prompt you for a PCL Form name. The name of the form is important only to you since it is not referenced by the server component. The name could indicate the options of the form, such as **Copy 1 Front Side**. After typing the name, press **Enter**.

When you create a form, it is not automatically active. You must open it to begin editing.

### Open


To open a PCL Form, double-click a **PCL Form** node, or right-click the **PCL Form** node, then either choose **Open** or use the **Edit/Open** option on the main menu.

The PCL Form will appear in the design window to the right of the process tree view. If the form was already open, but hidden underneath another PCL Form, mapForm, or captureForm SQL Builder, it will become active again in the design window.

## Rename

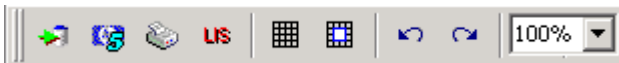
To rename a PCL Form, select the **PCL Form** node, then either right-click the node name and choose **Rename** or use the **Edit/Rename** option on the main menu. After typing the name, press **Enter**.

## Delete


To delete a PCL Form, select the **PCL Form** node, and then click the **Delete** button  on the toolbar, right-click the node name and choose **Delete**, or use the **Edit/Delete** option on the main menu.

## Toolbar Options

When a PCL Form is active, the toolbar directly below the main menu will display the tools available. A tool button will turn on as the option becomes available, and will gray out when the option is not available.




## Save

To save changes to an active PCL Form, either click the **Commit** button  on the toolbar, or right-click on the form in the design window and choose **Commit Changes**. This button will be grayed out unless a change has been made on the form.

Two types of saves occur when committing. First, all objects are saved to the Oracle database in their respective tables. After the objects are saved, the form is converted to PCL5 code and saved to the EVIFSTMP table for later retrieval by the server component.

## Export as a PCL5 File


To export the PCL Form as a PCL5 file, click the **Export as PCL5** button  on the toolbar. Use the **Save As:** dialog box to locate and open the appropriate folder. In the **File name:** field, type a name and click the **Save** button.

## Print


To print the PCL Form, click the **Print** button  on the toolbar or right-click on the form in the design window and choose **Test Print**.

All objects including lines, graphics and text will print. Variables created in mapForm and captureForm will not appear on the printout, since they are not populated until the process is run in Banner using the Oracle database. You must print to a PCL5 compatible printer.


## LIS

To overlay a page of the input report file located in mapForm onto the PCL Form, click the **Overlay LIS** button . If the lis file contains multiple pages, a dialog box will appear to ask you to choose the page to overlay.

## Toggle Grid

To toggle the displaying of the grid lines, click the **Toggle grid lines** button  on the toolbar.

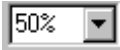
## Snap to Grid

When this option is active, objects added to the form are placed on the nearest grid point. To toggle this option on or off, click the **Snap object to grid** button  on the toolbar.

## Undo/Redo Last Command

To undo the last command, click the **Undo** button . To redo the last undone command, click the **Redo** button .

## Change View Magnification

To change the size of the PCL Form in the window, select a preset value from the drop-down box  or type the desired magnification and press **Enter**.

## Properties

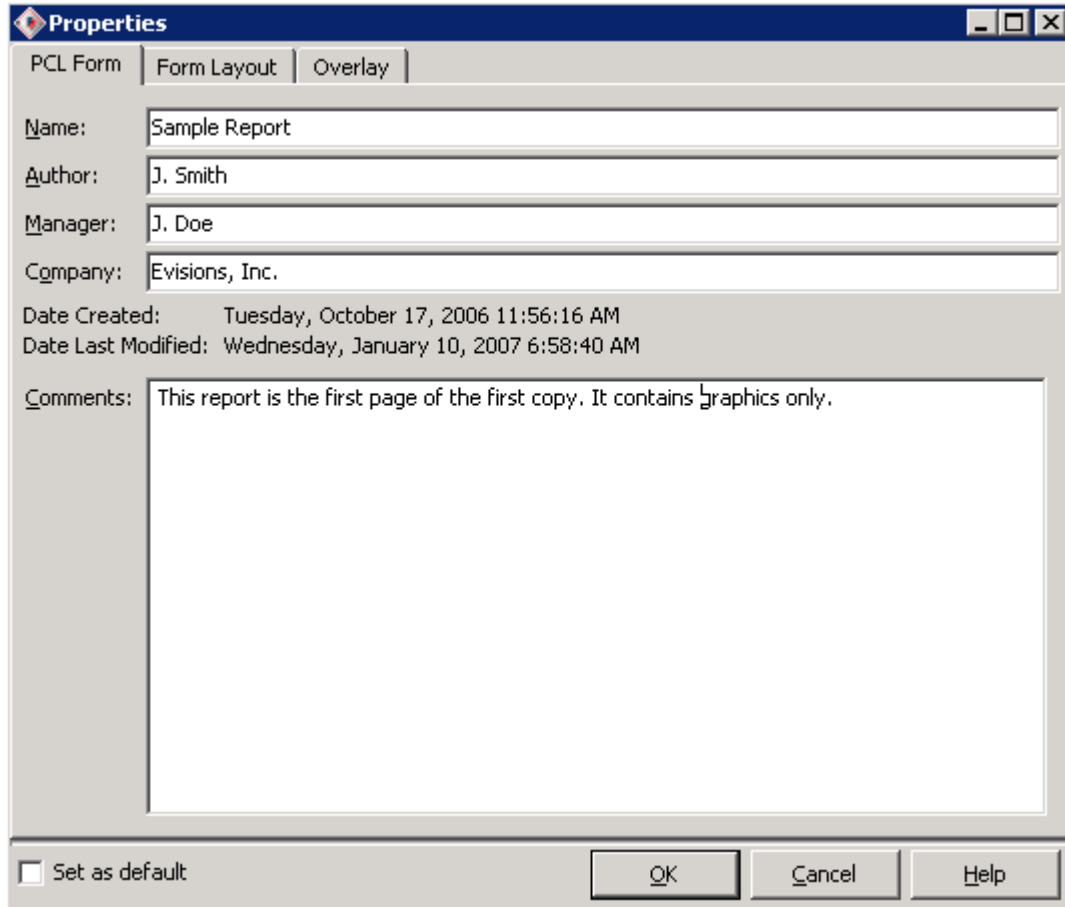
The **PCL Form Properties** dialog allows you to set the properties for each form.

To access all of the properties for a specific form, open the form you wish to edit. You can access the properties without opening the form, but the **Form Layout** tab will not be available.

To open the **Properties** dialog box, select the PCL Form node, then either right-click and choose **Properties**, use the **Tools/PCL Form Options** option on the main menu, or enter **Ctrl+O** on the keyboard.

For users that have printers with duplex ability, these properties also allow you to specify whether or not to print the form on the front or back of the page. Other advanced features within this section of the properties allow you to load forms into printer memory.

## PCL Form

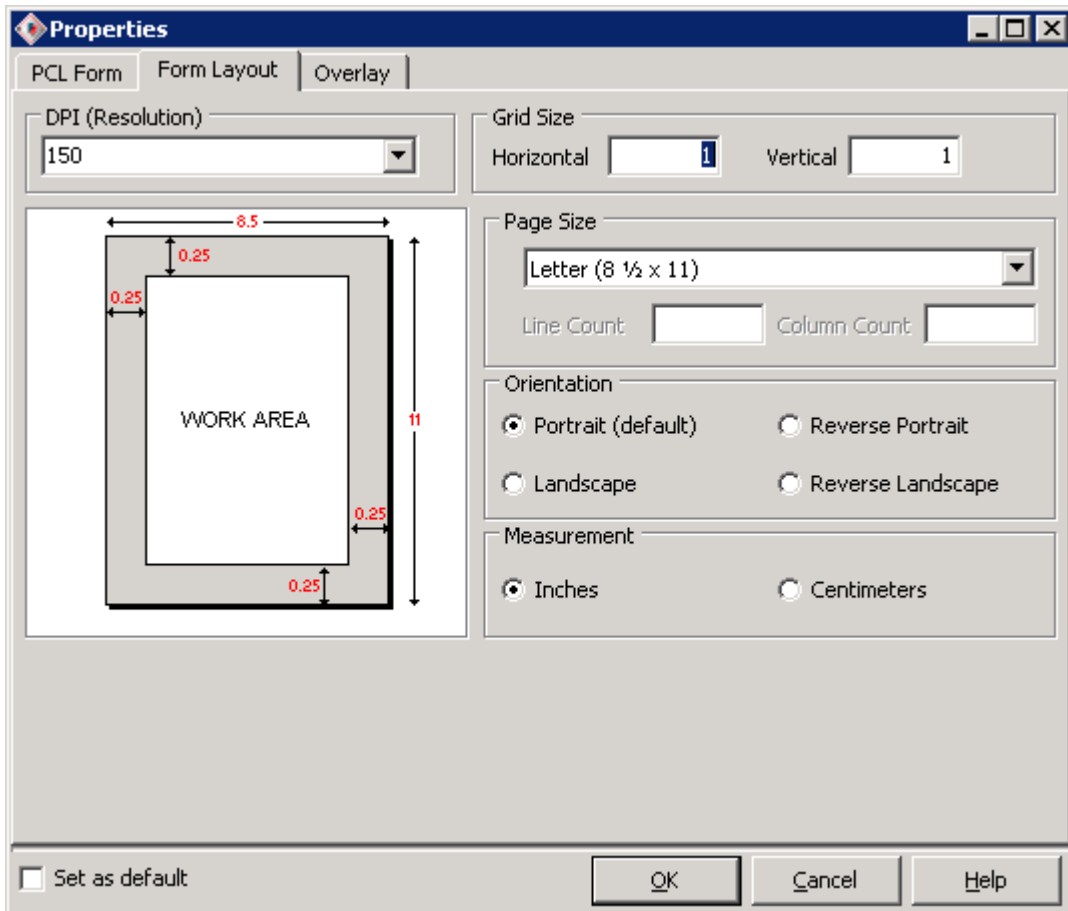


Under the **PCL Form** tab, you can edit the form name, author, manager, company, and any comments about the form. These fields are for internal management and are not used by FormFusion.

### Set as default

To set the current **PCL Form** tab settings as the default settings, click the **Set as default** checkbox.

## Form Layout



### DPI (Resolution)

The resolution of the form controls the sharpness of the printed page and is calculated in DPI (dots per inch).

To change the form resolution, select the desired resolution from the existing settings in the **DPI (Resolution)** drop-down menu. The higher the number, the better the resolution. However, setting this option higher requires more memory for graphics and text boxes. The output from most printers looks fine at 300 dpi or 600 dpi.

### Grid Size

The grid size controls the width and the height of the grid lines when they are displayed on pcl form. The grid lines aid in aligning graphics and will not show in the FormFusion output.

To change the grid size, enter the desired width of the grid in the **Horizontal** field, and desired height of the grid in the **Vertical** field.

## Page Size

To specify the page size of the PCL Form, select the correct paper type from the **Page Size** drop-down menu. The most common International paper types are available.

The width and height of each paper type is listed next to the name. A diagram of the paper type, showing the measurements of the page and the available work area will appear in the white box on the left.

Measurements on the diagram and in the **Page Size** drop-down menu will be displayed in the current measurement mode (inches or centimeters).

The **Line Count** and **Column Count** fields are not operational and will be utilized in a future version of FormFusion.

## Orientation

To control the physical direction the form should display on the FormFusion output, click the **Portrait (default)**, **Landscape**, **Reverse Portrait**, or **Reverse Landscape** radio button.

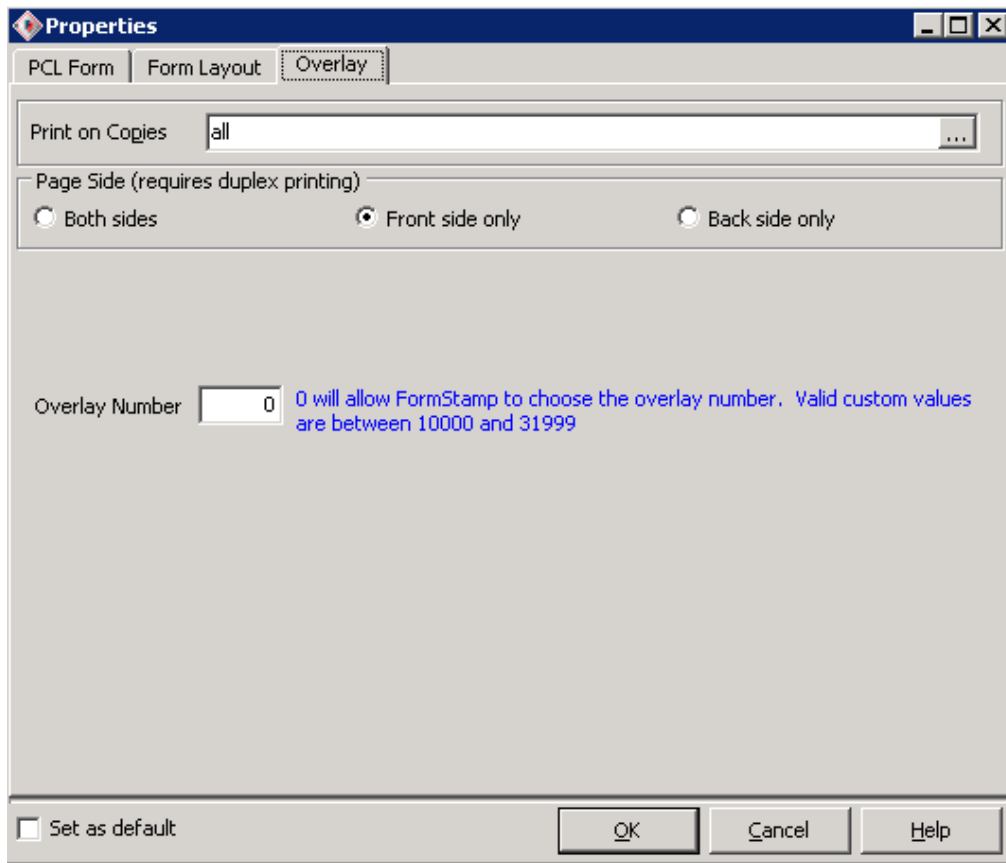
## Measurement

To change the unit of measurement for the page size, grid size, and the placement of objects on the form, click the **Inches** or **Centimeters** radio button.


## Set as default

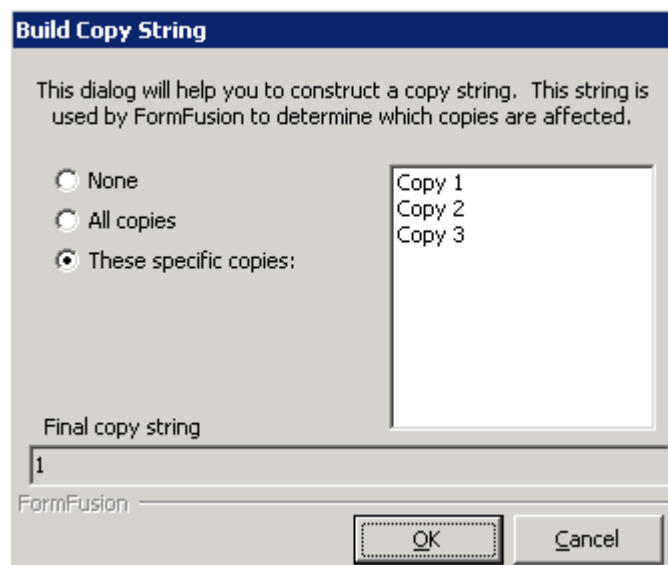
To set the current **Form Layout** tab settings as the default settings, click the **Set as default** checkbox.

## Overlay



## Print on Copies

To select which copies the PCL Form will print on, click the ellipsis button , and the **Build Copy String** dialog window will allow you to create a copy string.



When you choose one of the **None**, **All copies**, or **These specific copies**: radio buttons, the **Final copy string** field will be automatically populated with the correct copy string. If you want to print one or more specific copies, highlight the specific copy in the white, right-hand side window. Hold the **Ctrl** key on the keyboard to choose more than one.

When a copy string is not specified in the **Print on Copies** field in the Overlay tab, the form will print on all copies. If a form is being modified, not currently needed, or should not print on any form, you can type **0** in this field.

### Page Side (requires duplex printing)

To specify which side of the page the form will print on, choose the **Both sides**, **Front side only**, or **Back side only** radio button. Printing on both sides of the paper requires a printer with duplex printing capability.

### Overlay Number

An overlay number is a PCL term. Also known as a macro, the overlay contains all of the graphics, text, lines, etc. that will print for the form. FormFusion will automatically number macros sequentially starting with 1 and stopping before 10000.

If you would like to take control of the macro number, you may choose a number between 10000 and 31999. All other values will be invalid. The most common reason for changing the overlay number is when using the conditional overlay logic.

### Set as default

To set the current Overlay tab settings as the default settings, click the **Set as default** checkbox.



## OBJECTS

### What are objects?

An object is any item that can be placed onto a PCL Form, such as lines, rectangles, images, and text. These objects are used to help enhance the overall appearance of a form.

### Create objects

To create an object, click the appropriate object type button on the toolbar. When you bring the mouse cursor to the design window, the cursor will appear in a cross shape. Hold down the left-mouse button and drag the cursor to create the size and shape of the object.




Once the object is created, the toolbar will contain four object-editing toolbar buttons, **Change fill color**, **Change line and border color**, **Change font color**, and **Change line width**. Depending on the object, certain buttons will appear active or inactive.



At its core, formStamp is a PCL authoring tool. The PCL language has only one shape, the rectangle. FormStamp extends this basic functionality by providing the line, rectangle, grid, text, data field, and image objects.


#### *Line*

A line  is the most basic object type. A line can be drawn either vertically or horizontally. Diagonal lines do not exist in PCL.

To draw a line on a PCL Form, click the **Change draw mode to draw lines** button on the toolbar. Situate the cursor over the correct location on the PCL Form, hold down the left-mouse button, and draw the line to the size you desire.


#### *Rectangle*

A rectangle is much like a line except that it has the ability to resize in both vertical and horizontal directions. A rectangle also has a fill style for the background color as well as a line color. Rectangles are used to denote areas of importance, organization, or to change the color of a background area.

To draw a rectangle on a PCL Form, click the **Change draw mode to rectangle objects** button  on the toolbar. Situate the cursor over the correct location on the PCL Form, hold down the left-mouse button, and draw the rectangle to the size you desire.


## ***Grid***

Grids can be used for several reasons. In many occasions, grids are used to indicate areas of repetitive data from sources such as mapForm variables.

To draw a grid on a PCL Form, click the **Change draw mode to draw line grids** button  on the toolbar. Situate the cursor over the correct location on the PCL Form, hold down the left-mouse button, and draw the grid to the size you desire.

## ***Text***


Text objects combine the functionality of rectangles with the necessity to create areas of written information on the form. Text objects can use any Windows® or PCL font and can be displayed using a variety of formatting options.

To draw a text object on a PCL Form, click the **Change draw mode to text objects** button  on the toolbar. Situate the cursor over the correct location on the PCL Form, hold down the left-mouse button, and draw the text object to the size you desire.

A dialog will appear asking for the text to place in the object. The text will be formatted using default formatting options.

## ***Data Fields***

Data fields, variables created in mapForm or captureForm or reserved variables, can be added to the PCL Form in two ways.

One way to add a data field is to click the **Draw a pre-defined data field object** button  on the toolbar. Situate the cursor over the correct location on the PCL Form, and click the left-mouse button.

The object properties window will appear for you to choose which data field to draw. The size of the data field object is pre-determined by the size of the variable created in mapForm or captureForm.

Another way to add a data field is to select the variable name from the variables reference pane, hold down the left-mouse button, and drag it to the desired location on the PCL Form.


## Images

Images are graphical elements used to display logos, signatures, watermarks, etc. The use of logos and watermarks creates a professional appearance, and the addition of signatures can reduce the amount of manual processing required.

Color or black and white images can be added to the form, but all images will appear as black and white in the FormFusion output.

FormFusion supports the following image file formats:

JPEG	*.jpg or *.jpeg
Bitmaps	*.bmp
Icons	*.ico
Metafiles	*.wmf or *.emf
Portable Network Graphics	*.png
GIF Image	*.gif

To place an image on a PCL Form, click the **Change draw mode to image objects** button  on the tool bar. Situate the cursor over the correct location on the PCL Form, and click the left-mouse button.

Use the **Load Image** dialog box to locate and open the appropriate folder and file.

## Select

You can select multiple objects by holding the **Shift** key down while selecting objects. Every action described below for one object can be performed on a selected group of objects in the same manner.

When an object is selected, it is highlighted and its sizing handles are displayed.

## Move

To move an object, select the object, hold the left-hand mouse button, and drag the object to the new position.


To move an object in small increments, select the object then hold the **CTRL** key while pressing the arrow key in the direction you want to move the object.

## Resize


To resize an object, select the object, then click and drag a sizing handle until the object is the desired size.

To resize an object in small increments, select the object then hold the **SHIFT** key while pressing the arrow key in the direction you want to increase or decrease the size of the object.

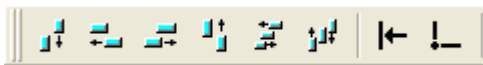
## Delete

To delete an object, select the object, then click the **Delete** button  on the toolbar, right-click the object and choose **Delete**, or use the **Edit/Delete** option on the main menu.

## Lock in place

To lock an object in place on a form, select the object, then click the **Lock selected object in place** button  on the toolbar. This will protect the object from accidental mouse clicks and drags. You can still, however, modify the object properties.

## Align multiple objects



The alignment tools are disabled until multiple objects are selected.

There are eight ways to align multiple objects:

Bottom Align Selected Objects	Left Align Selected Objects
Right Align Selected Objects	Top Align Selected Objects
Center Selected Objects Horizontally	Center Selected Objects Vertically
Force Objects to Intersect	Force Objects to Meet at a Point

To align objects, hold down the **Shift** key and select each object, then click the appropriate button on the toolbar.

## Properties

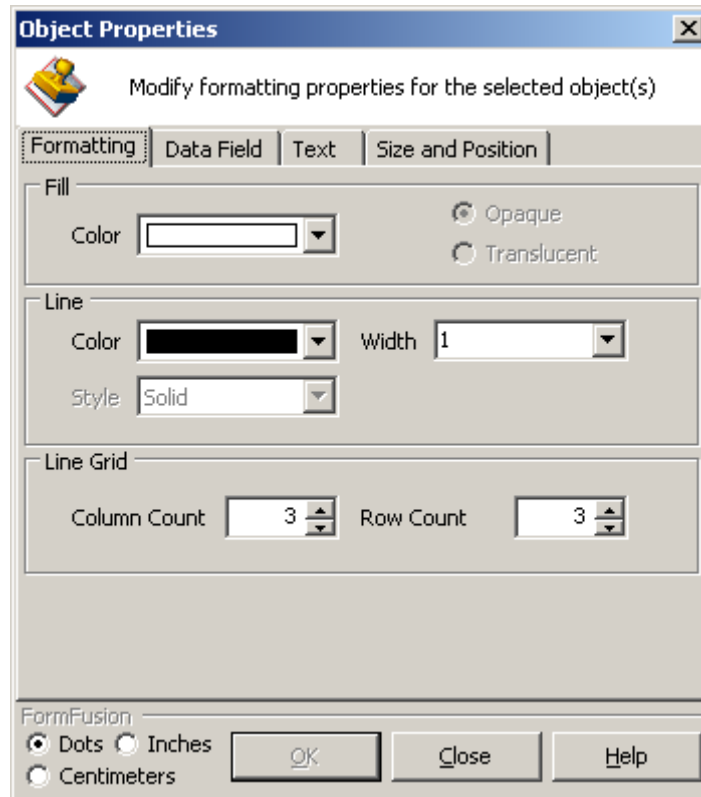
To open the **Object Properties** dialog box, select the object, then right-click the object and choose **Format Object**, or double-click the object on the PCL Form.

This dialog allows you to modify the properties of a single object or multiple objects. If editing multiple objects at the same time, only the values that are the same for all objects will be displayed, while the values that are not the same will be displayed as either blank or disabled.

Each type of object will have different properties to modify and different tabs enabled. All objects will have a **Size and Position** tab.

To change the unit of measurement for all objects on the form and their measurement properties, click the **Dots**, **Inches** or **Centimeters** radio button at the bottom of the **Object Properties** dialog.

## Formatting



### Fill Color

The fill color changes the grayscale shade that is displayed in the background of rectangle, grid, and text objects.

To change the fill color, select the color from the existing settings in the **Color** drop-down menu.

The **Opaque** and **Translucent** radio buttons are not currently active in FormFusion.

### Line/Border Color

The line color changes the grayscale shade of the border for line, rectangle, grid, and text objects.

To change the line color, select the color from the existing settings in the **Color** drop-down box. You can either choose Transparent for color or enter '0' for width to eliminate the box around the text.

## Line/Border Width

To change the line width, select the width from the existing settings in the **Width** drop-down box or type the desired width and press **Enter**.

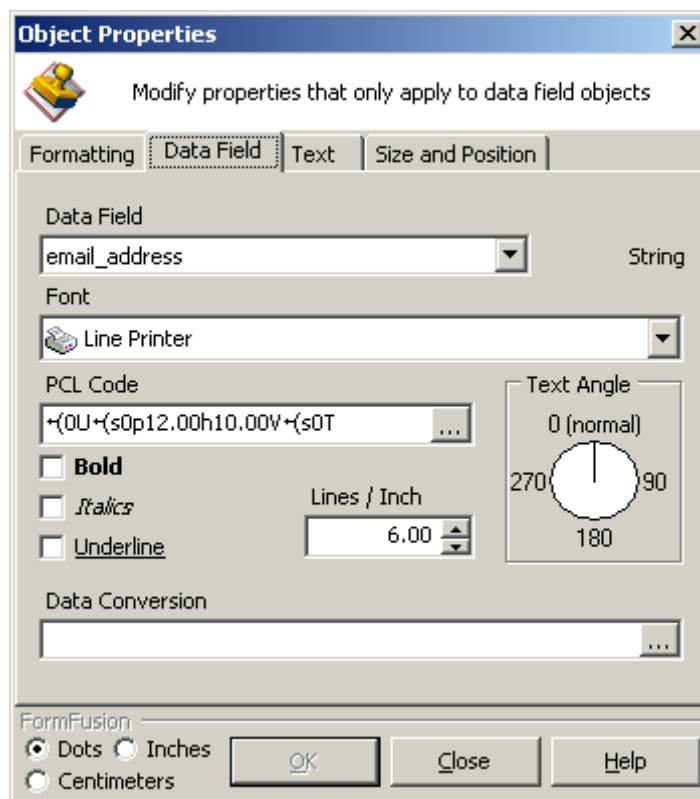
The **Style** drop-down box is not currently active in FormFusion.

## Line Grid

For grid objects, use the **Column Count** and **Row Count** fields to change the size of the grid. Grids have a minimum of 1 column and 1 row.

## Data Field

The **Data Field** tab contains the configurable properties of a data field. This dialog will appear when creating a data field object for the first time, and can be modified afterwards.




## Data Field

To choose the variable that the data field will use for its data, select the variable in the **Data Field** drop-down box. The data type of the variable selected is displayed to the right of the box.

## Font

To choose the font to render this data field in, select the font in the **Font** drop-down box. Only PCL fonts are displayed.

## PCL Code

This edit box contains the PCL code that will be sent to the printer before the text of the data field is printed. The PCL codes control the font and many formatting characteristics. To edit the height and/or pitch of the font, click the ellipsis button  to the right of the edit box.

## Text Angle

This controls the angle that the text should display. **0** is normal (left to right) and is the default. Other choices are **90 degrees** (bottom to top), **180 degrees** (right to left), and **270 degrees** (top to bottom).


## Formatting

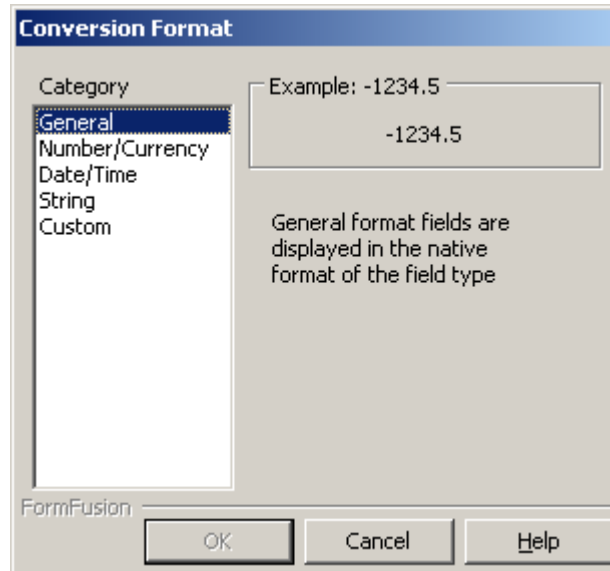
Check or uncheck the formatting boxes to enable/disable the feature. Choices are: **Bold**, **Italics**, and **Underline**.

## Line Spacing

This controls the number of lines that should print within an inch on the printed page. The default is 6 for a 12-pitch font.

## Data Conversion

This is an advanced edit box used to format the variable before printing. Click the ellipsis button  to the right of the edit box to display the **Data Conversion** dialog.



This dialog controls how the data field will be converted when printed by FormFusion. Pre-created conversion types can be selected in the **Category** list box on the left of the dialog. Some of these pre-created types will have configurable options. An example of how the data will appear when printed is displayed at the top of the dialog. When finished, click **OK** or **Cancel**.

### ***Number/Currency Conversion***

Used for numeric data (real or integer), choose **Number/Currency** in the **Category** list box to display the configurable options to the right. You can control the number of decimal places to display, the characters used for the thousandths place, the character used for the decimal place, negative numbers display, and the currency character.

### ***Date/Time Conversion***

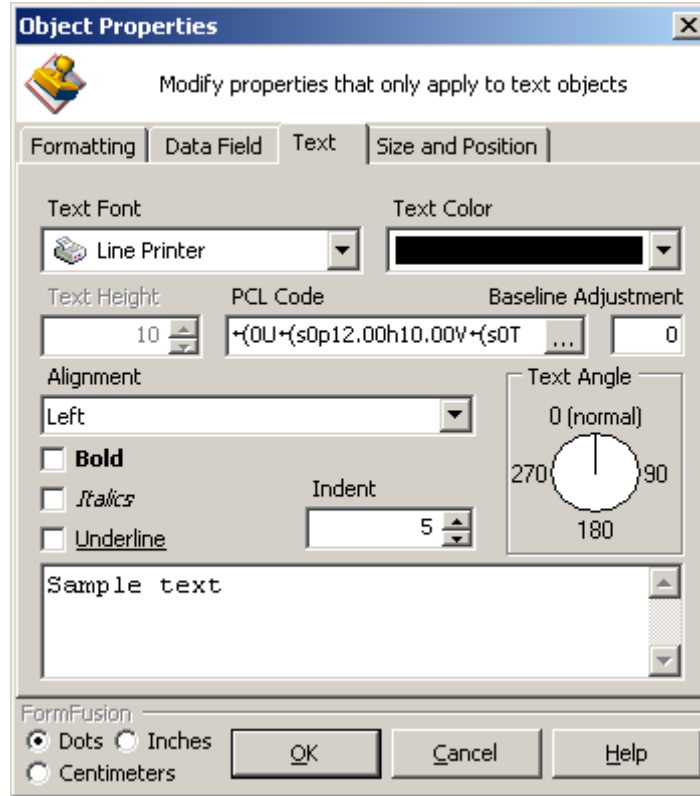
Used for date field types, choose **Date/Time** in the **Category** list box to display the configurable options on the right. You can control how the date and time are displayed or if they should display at all. You can also control AM/PM status and the order in which the date and time are displayed relative to each other.

### ***Custom***

For custom conversion, please reference the Appendix-[Conversion](#) Format

## Text

The **Text** tab controls the bulk of configurable properties of a text object and is only available when editing a text object.



### Text Font

Choose the font to render this text in. All True-Type® and PCL fonts are displayed in this drop-down combo box.


### Text Color

Choose the grayscale shade to render the text in.

### Text Height

Enabled for True-Type® fonts, this spin button controls the height or the point size of the font.

## PCL Code

Enabled for PCL fonts only, the edit box contains the PCL code that will be sent to the printer before the text is printed. The PCL codes control the font and many formatting characteristics. To edit the height and/or pitch of the font, click the ellipsis  button to the right of the edit box.

## Baseline Adjustment

Enabled for PCL fonts only, the edit box is an advanced feature that is provided to help align text properly on the printed page. PCL fonts are always aligned to the baseline, which can vary from font to font. FormFusion approximates the baseline according to the height of the font but this approximation may be off significantly from the actual baseline. Enter a value other than 0 to adjust the baseline. Negative numbers move the text up on the page while positive numbers move the text down.

## Alignment

To align the text, choose **Left**, **Right**, or **Center** from the Alignment drop-down box.

## Text Angle

This controls the angle that the text should display. **0** is normal (left to right) and is the default. Other choices are **90 degrees** (bottom to top), **180 degrees** (right to left), and **270 degrees** (top to bottom).

## Formatting

To format a text, check or uncheck the formatting boxes. Choose **Bold**, **Italics**, or **Underline**.

## Indent

To determine the amount of indentation from the border before displaying any text, click the up/down arrow or enter the amount of indentation in the **Indent** edit box.

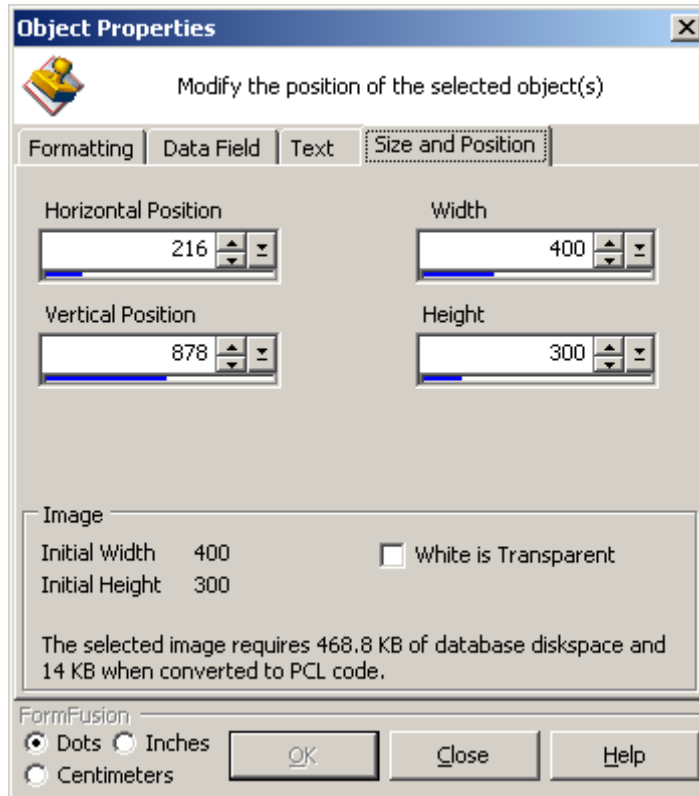
## Text

The bottom edit box displays a sample of the printed text. Text objects can be modified in this edit box.

## Size and Position

The **Size and Position Tab** controls the position and the size of the selected object.

To control the top, left, width, and height of the object, either enter the value or click the spin buttons for the Horizontal position, Vertical position, Width, and/or Height.



## Image

This area will only appear if an image object is selected. The initial width, height and estimate of the amount of space this image consumes in the database is displayed. The initial width and height will vary depending on the size of the image.

## White is Transparent

If the white area of the image prevents data from show through, click the **White as Transparent** check box. This will have the effect of making the image translucent on the printed page.



## Frequently Asked Questions

### **I want to draw circles on my form. Why is there no circle shape?**

**A:** PCL only has the ability to draw rectangles. While circles are possible, the overhead involved in creating a filled or outline circle makes the file size grow rather large. If you need a circle, either create a bitmap and import it or create a text box and use one of the Symbol or Wing ding fonts. Use the Windows<sup>®</sup> tool Character Map to assist in finding the correct circle for you.

### **I want to place a data field on a PCL Form but the data field object button is disabled. Why does this happen?**

**A:** FormStamp checks whether any variables have been defined for its parent special print parameter. If there are no variables, this button will be disabled since there are no fields that can be added. Variables can be created in either captureForm or mapForm.

### **Why won't the "Add Data Field" button enable even though I've defined fields in a mapForm?**

**A:** This occurs if the changes to the mapForm node have not been committed to the database. Once committed, formStamp will detect the valid fields present and enable the button.

### **I have created a rather large number of mapForm fields and don't want to add and position each one by hand. Is there an automated process?**

**A:** Yes. Choose the PCL Form and select **Tools/Add All Data Fields** from the menu. This will add all the mapForm data fields that are not currently on the form in approximately the correct location. Once added, all fields will be selected so all the objects can simply be dragged to the correct locations.

### **I want to check the text objects for spelling errors. Does formStamp have a spelling checker?**

**A:** Currently, formStamp does not make use of any spell checking software. It may be a feature that may become available in the near future.

## **Is there any way to make the Left Margin smaller? I have looked and cannot find a way to change the Left Margin.**

**A:** Laser Printers do not allow you to print within .25-inch of the page so we have built that margin into FormFusion. This will prevent anyone from attempting to print any data in this section.



## MAPFORM

MapForm is a module used to define the layout of the FormFusion output file by mapping various areas of the text-based input report file. It is a flexible and feature-robust tool that allows developers to draw boxes around areas on the input file and assign a variable name to these areas. Once all of the necessary areas on the input file are mapped, these variables can be dragged and dropped on the pcl forms using formStamp.

One of the challenges with a product that relies upon text-based input files is that many areas you may want to map move around on a page and may not exist in the same location on successive pages. MapForm addresses this issue with many advanced features, which allows you to create dynamic mapping entries by using header or footer information and by combining with searchable columns.



## MapForm Basics

MapForm gives you the ability to move data from the input report file without modifying the baseline code.

### Create

To create a mapForm, select the **Special Print Parameter**, then either right-click and choose **New->MapForm** or use the **Edit/New-> MapForm** option on the main menu.

### Open


To open a mapForm, select the **MapForm** node, then right-click and choose **Open**, use the **Edit/Open** option on the main menu, or double-click the **MapForm** node.

The node will appear in the design window, an area to the right of the process tress view. If there are multiple pages, use the **Display the next page as sample** button on the toolbar to navigate through.

### Rename

To rename a mapForm, select the **MapForm** node, then either right-click and choose **Rename** or use the **Edit/Rename** option on the main menu. After entering the name, press **Enter**.

## Delete

To delete a mapForm, select the **MapForm** node, then either right-click and choose **Delete** , click the **Delete** button on the toolbar, or use the **Edit/Delete** option on the main menu.


When a mapForm is deleted, all data fields defined will no longer be available in formStamp or captureForm.

## Toolbar Options

When a mapForm is active, the toolbar directly below the main menu will display the tools available. A tool button will turn on as the option becomes available, and will gray out when the option is unavailable.




## Save


To save or commit changes to an active mapForm, either click the **Commit** button  on the toolbar, or right-click on the form in the design window and choose **Commit Changes**. This button will be grayed out unless a change has been made on the form.

As with all other FormFusion Developers modules, all setup and design information is stored in your Oracle environment.


## Fetch a Sample Report

To locate and open the input report file, click the **Fetch a Sample Report** button  on the toolbar. If the file does not yet exist, run the process through Banner to produce it. When creating an input report file, it is always a good idea to fill each field with maximum data length. If there are multiple pages in the input file, go through each page to see if there are any misalignments. You may have to adjust the mapForm properties. The "lines per page" is very critical to successfully mapping the fields on a page.


## Selection

To enable data field selection on the design window, click the **Selection** button . To select multiple fields, click the left mouse button and drag the mouse over all the desired fields.

### ***Draw Floating Field***

To begin the task of drawing floating fields to create mapForm variables, click the **Draw Floating Field** button . See [Floating Fields](#) for more help on working with this field.


### ***Draw Offset Field***

To begin the task of creating offset field to create mapForm variables, click the **Draw Offset Field** button . See [Offset Fields](#) for more help on working with this field.


### ***Undo/Redo Last Command***

To undo the last command, click the **Undo** button . To redo the last undone command, click the **Redo** button .


### ***Edit Field Properties***

This option is enabled when either a floating field or an offset field is selected. Click the **Edit Field Properties** button  to edit the selected field properties.


### ***Edit Header/Footer Properties***

To edit the properties of the header and footer of a mapForm, click the **Edit Header/Footer Properties** button . See [Header/Footer Properties](#) for more detailed information.

### ***Decrease Displayed Font Size***

To decrease the font size of the mapForm input report file text, click the **Decrease Displayed Font Size** button .



### ***Increase Displayed Font Size***

To increase the font size of the mapForm input report file text, click **Increase Displayed Font Size** button .

### ***Page***

This edit box displays the current viewing page.

## Previous/Next page

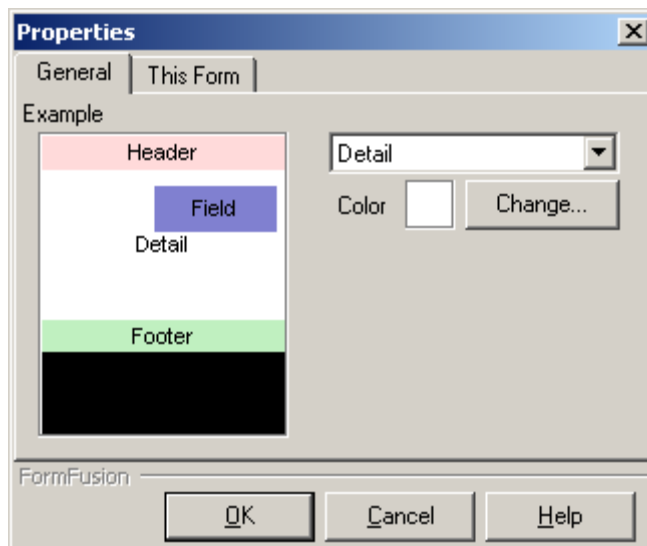
To display the previous report page, click the **Previous Page** button . To display the next report page, click the **Next Page** button .

## Properties

The MapForm properties dialog allows you to customize the look of the mapForm editor and modify the properties specific to an active mapForm node.

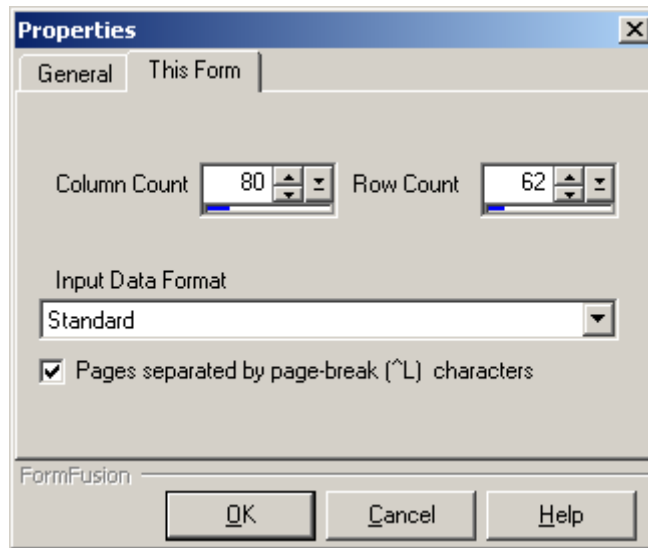
To open the **Properties dialog** box, select the **Mapform** node, either right-click the **MapForm** node and choose **Form Properties**, use the **Tools/MapForm Options** option on the main menu, or enter **Ctrl+O** on the keyboard.

### General



On the **General** tab, you are free to modify the colors used to represent specified areas of a mapForm. Current areas are Detail, Field, Footer, Header, and Next Page.

## This Form



Most of the options found here are subsets of those that can be found in the special print parameter properties.

### Column/Row Count

In some instances, your input file may have data that is not displayed in mapForm. Use the **Column/Row Count** fields to adjust the screen to view all data or eliminate excess columns and rows.

To increase the number of columns shown within mapForm, use the **Column Count** field to manually change the number of columns and press **Enter**.

To increase the number of rows shown within mapForm, use the **Row Count** field to manually change the number of columns and press **Enter**.

### Input Data Format

To specify the format of the input data file, choose the format from the drop-down menu.

**Standard** format: for normal processing of input report files.

**Comma-delimited** format: for input files like .csv files that have been generated with fields separated by commas.

## Pages separated by page-break character (^L) characters

If the original input file contains page-break characters to designate the end of every page, click the checkbox.


**Row Count** and **Pages separated by page-break** work together to interpret the input file correctly.

To instruct FormFusion to read the <row count> number of lines for each page, clear the **Pages separated by page-break** checkbox. If FormFusion encounters a page-break, that page will end regardless of the number of rows read.

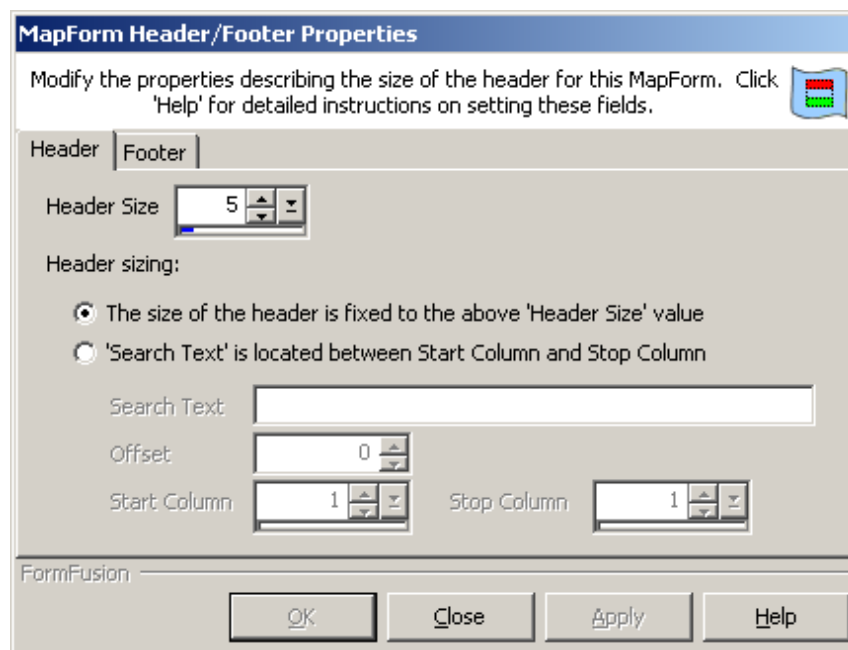
If the **Pages separated by page-break** checkbox is clicked, FormFusion will read up to <row count> number of lines per page. If a page-break has not been found by the time <row count> lines have been read, the remaining lines will be skipped until a page-break character has been found.

## Header/Footer Properties

The **Header/Footer Properties** dialog is used to modify the header and footer areas of the report.

To access the Header/Footer Properties, click the **Edit the header and footer area definition area** button  on the tool bar.

### Header



The dialog box is titled "MapForm Header/Footer Properties". It contains a description: "Modify the properties describing the size of the header for this MapForm. Click 'Help' for detailed instructions on setting these fields." There are two tabs: "Header" (selected) and "Footer". Under the "Header" tab, there is a "Header Size" spinner set to 5. Below it, "Header sizing:" has two radio buttons: "The size of the header is fixed to the above 'Header Size' value" (selected) and "'Search Text' is located between Start Column and Stop Column". There is a "Search Text" text box. Below that, "Offset" is a spinner set to 0. "Start Column" and "Stop Column" are spinners, both set to 1. At the bottom, there are "OK", "Close", "Apply", and "Help" buttons. The "FormFusion" logo is in the bottom left corner.

## Header Size

To change the header size, use **Header size** spin button. It can be dynamically altered using the Header Sizing option.

## Header Sizing

Click the appropriate radio button to control the format of the header area.

**The size of the header is fixed...:** specifies that the header size should remain constant from page to page and use the above value.

**'Search Text' is located between...:** specifies that the header size can change from page to page. A key text value will be searched for starting after the above header size value.

## Search Text

To control the text that should be searched for below the Header Size value indicated above, type the text in the edit box. The text is case insensitive and leading and trailing spaces are trimmed before the comparison.

## Offset

Once the text is found, the header size will be adjusted relative to the row the text was found on. This value can be negative.

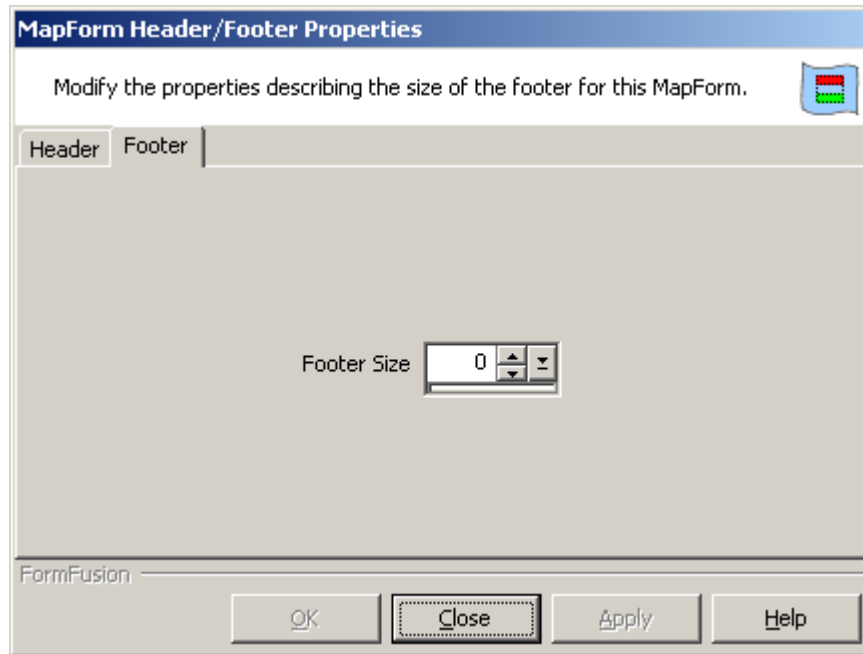
## Start Column

To specify the column to begin searching for the text, use the spin button. Valid values are from 1 to the width of the input report file.

## Stop Column

To specify the column to stop searching for the text, use the spin button. Valid values are from 1 to the width of the input report file minus the starting column.

## Footer



### Footer Size

To change the size of the footer area, use the spin button. Currently, the footer size is not dynamically sizeable, but the footer does move up and down as the size of the page changes.

Click **OK** to save the changes and close to this dialog. Click **Close** to cancel any changes made. Click **Apply** to apply any changes made to the areas. The dialog will remain open and the changes can be viewed on the form. Click **Help** to bring up this help page.



## Floating Fields

A floating field is the main field type created on a mapForm. You will want to use this type of field to define areas in the input report file that do not move around depending on the page.

### Create


To enable drawing of floating fields, click the **Draw Floating Field** tool button  on the tool bar.

To create the floating field, select the area you want to define by clicking the left mouse button and dragging it over the text area. When the mouse is released, the **Field Name** dialog box will appear and prompt you to type the field name. Enter the name and click **OK**. An unlimited number of floating fields can be created and each name must follow the variable naming convention. After the field is created, it will appear in the Floating Fields list to the left of the mapForm window.

## Edit

To edit the floating field variable, select the variable name in the Floating Field list and double-click, double-click the variable on the mapForm, or click the **Edit Field Properties** tool button on the tool bar.

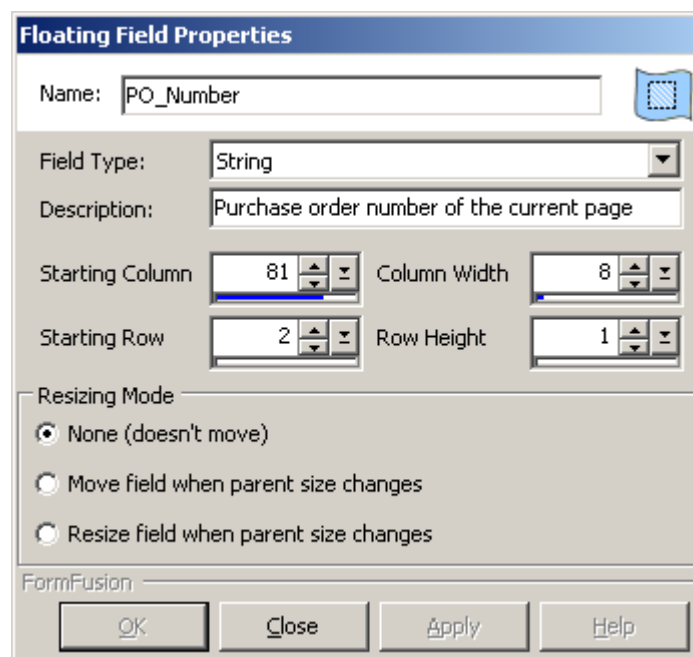
## Delete

To delete the floating field variable, select the variable name from the Floating Fields list or on the mapForm, then right-click and choose **Delete**, choose **Edit/Delete** from the main menu, or click the **Delete** button  from the toolbar.

If the field has already been inserted into a PCL Form, it will automatically be deleted from the form. Once a field has been deleted, any reference to it, whether it is in captureForm or formDirector, will no longer be valid and should be manually edited.

## Properties

The **Floating Field Properties** dialog will assist you in modifying the properties of a floating field.



The screenshot shows the "Floating Field Properties" dialog box. It has a title bar with the text "Floating Field Properties". Below the title bar is a "Name:" label followed by a text input field containing "PO\_Number" and a small icon of a floating field. Below that is a "Field Type:" label followed by a dropdown menu showing "String". Below that is a "Description:" label followed by a text input field containing "Purchase order number of the current page". Below that are four spinners: "Starting Column" (81), "Column Width" (8), "Starting Row" (2), and "Row Height" (1). Below these is a "Resizing Mode" section with three radio buttons: "None (doesn't move)" (selected), "Move field when parent size changes", and "Resize field when parent size changes". At the bottom of the dialog is a "FormFusion" label and four buttons: "OK", "Close", "Apply", and "Help".

## ***Name***

This is the name assigned to a floating field. The name must follow the variable naming convention. See [Variables](#) for more details.

## ***Field Type***

To choose the field type the field is expected to hold, click the **Field Type** drop-down menu button and select from the following options: **Unknown, Date, Float, Integer,** or **String**.

The default type is a **String** since mapping text from an input report file creates the floating field. You are free to change this value to other field types in which case the server will convert the field before the variable is populated.

## ***Description***

To indicate any additional information about this field, enter the description into the edit box. This is optional and this value is not used by FormFusion.

## ***Starting Column***

To change the starting column, click the spin button. It denotes the starting column (left side) of the field in mapForm. Valid values are from 1 to the width of the input report file.

## ***Column Width***

To set the column width of a floating field, click the spin button. Valid values are from 1 to the width of the input report file minus the starting column.

## ***Starting Row***

To change the starting row, click the spin button. It denotes the starting row (top side) of the field on the mapForm. Valid values are from 1 to the height of the input report file.

## ***Row Height***

To set the row height of a floating field, click the spin button. Valid values are from 1 to the height of the input report file minus the starting row.

## ***Resizing Mode***

To controls the way the floating field reacts to changes in the size of its parent area (which can be the header, detail, or footer), choose from the following options:

**None (doesn't move):** default setting and will leave the field where it is currently at on its parent area. The size and location of the field remains constant.

**Move field when parent size changes:** instructs the field to move up if the parent area shrinks or move down if the parent area grows. The size of the field remains constant.

**Resize field when parent size changes:** instructs the field to shrink if the parent area shrinks or grow if the parent area grows. The location of the field remains constant.


Click **OK** to save the changes and close this dialog. Click **Cancel** to cancel any changes made. Click **Apply** to apply any changes made to the field. The dialog will remain open and the changes can be viewed on the form. Click **Help** to bring up this help page.



## Offset Fields

An offset field should be used when a simple floating field is not sufficient. Use this type of field for the areas in the input report file where the data does not remain in the same location page by page. This type of field searches for key text information in the input report file and allows you to map a field from the top-left of where the search text was found.

### Create


To create an offset field, click the **Create an Offset Field** tool button  on the tool bar. You will be prompted to enter the field name. Type the name and click **OK**. This will bring up the **Field Name** dialog box. An unlimited number of offset fields can be created and each name must follow the variables naming convention.

### Edit

To edit an offset field variable, select the name from the offset fields list, then right-click the name and choose **Edit** or click the **Edit Field Properties** button  on the tool bar.

You can also edit by double-clicking the name in the Offset Fields list or by choosing **Edit/Properties** from the main menu.

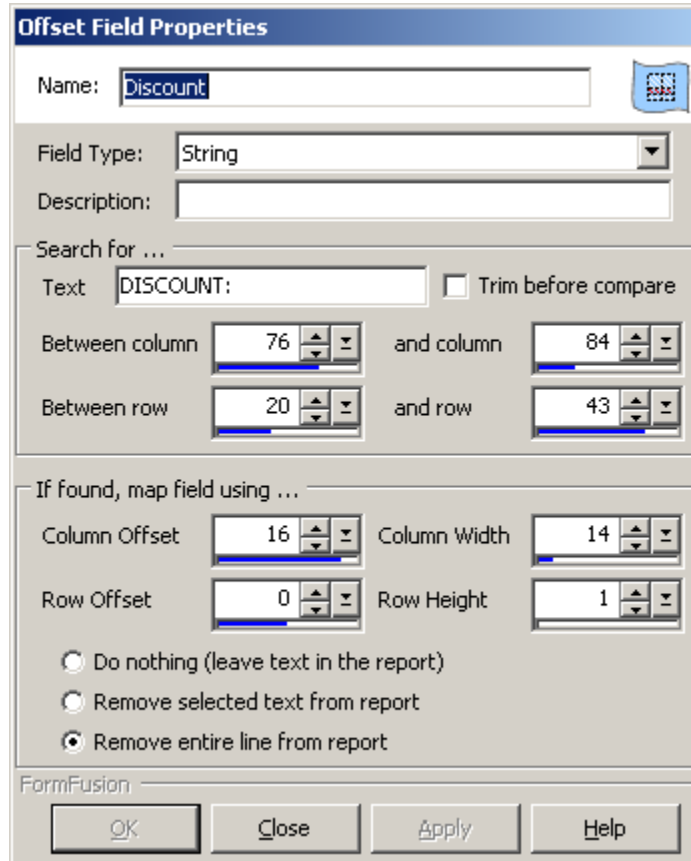
### Delete

To delete an offset field variable, select the name from the offset fields lists, then right-click the name and choose **Delete** , click the **Delete** button on the toolbar, or Choose **Edit/Delete** from the main menu.

If the field has already been inserted into a PCL Form (formStamp), it will automatically be deleted from the form. Once a field has been deleted, any reference to it, whether it is in captureForm or formDirector, will no longer be valid and should be manually edited.

## Properties

The **Offset Field Properties** dialog will assist you in modifying the properties of an offset field.



### *Name*

This is the name that has been assigned to an offset field. See [Variables](#) for the naming convention.

### *Field Type*

To choose the field type of variable format the field is expected to hold, click the **Field Type** drop-down menu button and select from the following options: **Unknown**, **Date**, **Float**, **Integer**, or **String**.

The default type is a **String** since mapping text from an input report file creates the floating field. You are free to change this value other field types in which case the server will convert the field before the variable is populated.

### ***Description***

To indicate any additional information about this field, enter the description into the edit box. This is optional and the value is not used by FormFusion.

### ***Search for ...***

This section defines properties about the text that will be searched for.

#### **Text**

To define the search text, enter the text in the edit box. Check the **Trim before compare** box to trim any preceding or trailing spaces from the report file text before comparing. The comparison is not case sensitive.

#### **Between column ... and column**

To set the column area to search for the text, use the spin button. The text search is limited to between these columns. By default, the entire form is searched.

#### **Between row ... and row**

To set the row area to search for the text, use the spin button. The text search is limited to between these rows. By default, the entire form is searched.

### ***If found, map field using ...***

This section defines the offset field's mapping value.

#### **Column Offset**

This is an offset value relative to the first position of the search text defined in the edit box.

#### **Column Width**

To set the column width of an offset field, click the spin button.

#### **Row Offset**

This is a row offset value relative to the top row position of the search text defined in the edit box.

## Row Height

To set the row height of a floating field, click the spin button. Valid values are from 1 to the height of the report file minus the starting row.

## Manipulating mapped text

To control the way the offset field will treat the text of the input report file once the mapping is complete, choose from the following options:

**Do nothing (leave text in the report):** default setting and will leave the text on the report after mapping.

**Remove selected text from report:** instructs the server to remove the mapped area from the report.

**Remove entire line from report:** instructs the server to remove the mapped area, and all text to the left and right of the mapped area, from the report.

Click **OK** to save the changes and close this dialog. Click **Cancel** to cancel any changes made. Click **Apply** to apply any changes made to the field. The dialog will remain open and the changes can be viewed on the form. Click **Help** to bring up the help page.



## Frequently Asked Questions

**I've noticed that the properties of a special print parameter and the properties of a mapForm both have a "Pages separated by page-break", "Column Count", and "Row Count" fields. What is the difference?**

**A:** There is no difference between these three properties in the special print parameter and mapForm. These fields are actually stored in the special print parameter properties and mapForm makes use of them.

**When I change the font size of mapForm, why doesn't the font size for the data field change in formStamp?**

**A:** The font size in mapForm is for visual purposes only. It enables you to view more or less of the sample file as needed. It has no effect on the actual font used to render the text later. That is controlled in formStamp by selecting the object properties and changing the font.

**I have defined a variable by selecting a field in mapForm. I use that field to create a new variable in captureForm, then place the captureForm variable onto the formStamp page. When executed on the server, only the captureForm field displays, none of my original output prints. I want to use mapForm but I don't want to select all of the printable fields and draw them on the PCL Form. How can I do this?**

**A:** The server notices that you have defined a mapForm process modifier, so none of the original page text will print on the laser form unless explicitly drawn on a PCL Form. You can add the original output text by creating one large field in mapForm and then placing that data field on the PCL Form. Use the **Send To Back** command on the field to put it behind any lines, text, or graphics you've created.

**When my process is run, in which order are my mapform variables assigned their value?**

**A:** 1. Offset fields alphabetically.  
2. Floating fields.  
3. Capture Form in the order of the queries listed.

**What is the difference between floating fields and offset fields? When would you use one instead of the other?**

**A:** The main difference between floating and offset fields is the type of data they are used to map. Floating fields are used for data that you know will be in the same location on each page of the input report file. Offset fields are used for data that may shift up and down each page of the input report file.

With an offset field, you have limited search capability on each page of the input report file. In the **Offset Field** properties, you define the search text and the area (starting/ending row/columns) to search in. Once the searched text is found, you can define an offset from the search text position in rows/columns. The data found in this offset location will be what is stored in the variable.

You can also use offset field to remove extra data that you do not want to show up in your floating filed variables. This is possible since the offset fields are evaluated BEFORE the floating fields.



## CAPTUREFORM

CaptureForm is a module used within FormFusion Developer to perform a variety of functions. Its primary use is to retrieve information not on the input report file from the Oracle environment for use on the output file. Other uses of captureForm include mathematical calculations, inserting or deleting information in your Oracle environment, and formatting character strings. You can use the fields created in mapForm within any of the captureForm SQL statements.




## Using CaptureForm and SQL

### Create

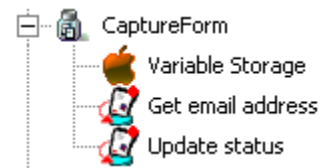
To create a captureForm, select the **Special Print Parameter** node, then either right-click and choose **New->CaptureForm**, or use the **Edit/New->CaptureForm** option on the main menu. After creating a new captureForm, there will not be any queries. See [CaptureForm Queries](#) to learn how to manage query nodes beneath a captureForm node.

### Delete

To delete a captureForm, select the **CaptureForm** node, then either right-click and choose **Delete** , or use the **Edit/Delete** option on the main menu. All of the queries owned by the captureForm will be deleted as well as the variables.

### Variable Storage

Once a captureForm is created, a Variable Storage node is also created. This node is owned by the captureForm and gives access to all variables created in captureForm.



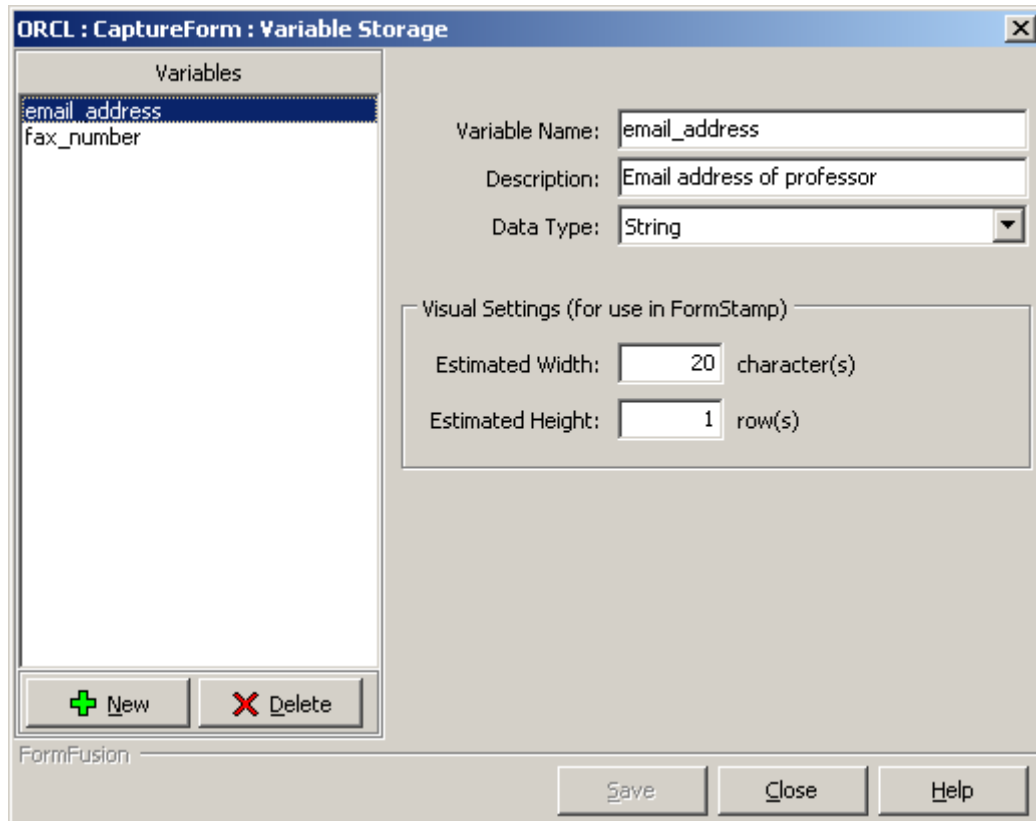
### Open

To open the Variable Storage Dialog, double-click the **Variable Storage**. You can also right-click the **Variable Storage** and choose **Open**, or use the **Edit/Open** option on the main menu.



## CaptureForm Variables

This is the **Variable Storage Dialog** box. It allows you to manage the variable names owned by the captureForm.



### Variable Name

To give the variable a name, enter the name in the edit box. See [Variables](#) for the naming convention.

### Description

To describe the general purpose of the variable, enter the description in the edit box. This is an optional field and is never used by FormFusion. The text is limited to 96 characters.

### Data Type


To specify the expected format of the variable, use the **Data Type** drop-down box to choose from the following **Unknown**, **Date**, **Float**, **Integer**, and **String**. If the

specified format of the variable differs from the actual format retrieved from the database, the data will be converted before the variable is populated.


## Visual Settings (for use in FormStamp)

The two fields in this area, **Estimated Width** and **Estimated Height**, are used to estimate the maximum area the variable will take up if ever placed onto a formStamp PCL Form. These values do not limit the amount of data retrieved from the database.

## Create a Variable

To create a new variable, click the **New** button  and populate the edit boxes to the right of the variable list with details.

## Delete a Variable

To delete a variable, select the variable from the variable list and click the **Delete** button . The variable will only be removed from the database and not from any query nor from the pcl form. You will need to manually edit any areas that make use of the deleted variable.



## CaptureForm Queries

Using the captureForm queries, you can pull data that is not on the input report file from the database tables.

### Create

To create a captureForm query, select the **CaptureForm** node, then either right-click and choose **New->CaptureForm Query**, or use the **Edit/New->CaptureForm Query** option on the main menu.

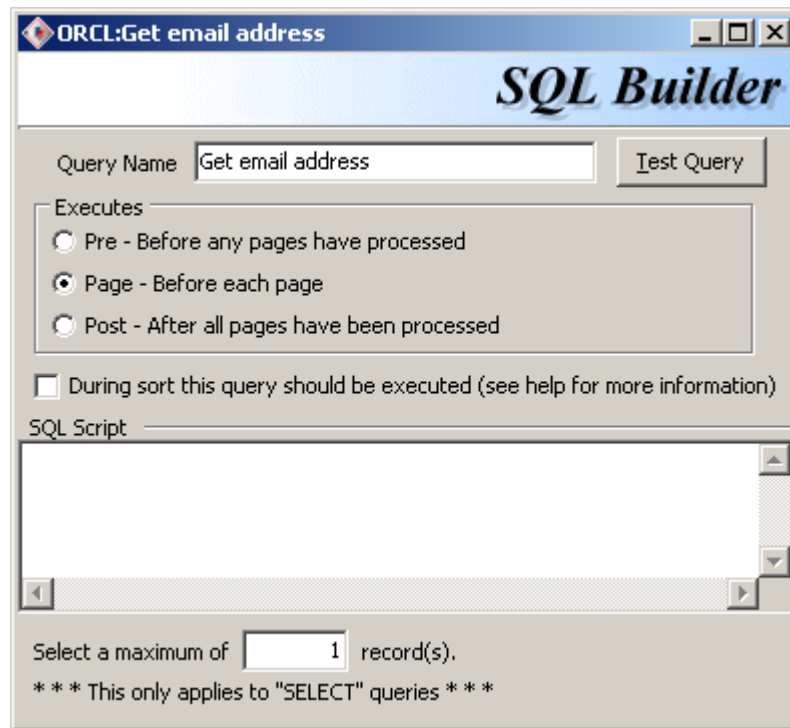
### Open

To open a captureForm query, select the **CaptureForm Query**, then either right-click and choose Open or use the **Edit/Open** option on the main menu.

You can also double-click the **CaptureForm query**.

### Edit

To edit a captureForm query, open the query window. A SQL Builder window will open, allowing you to modify the query.



## Query Name

This is the name of the query as it appears in the tree view. The query name allows you to create a descriptive name for the query and is not used by FormFusion. The length of the name is limited to 64 characters.

## Executes

The Executes area allows you to control when the query will execute. It shows how the queries will be executed at various stages when the server application runs. Most queries will be **Page** queries.

Click the **Pre** radio button to execute the query before any data has been processed on the server side. This means that you can create a SELECT query that will populate a variable, and it will not change during the execution of the server program. Your organization's PO Box is unlikely to change from page to page therefore the **Pre** query would be the best option in this instance.

Click the **Page** radio button to execute the query before each page is processed. The queries will execute after the mapForm fields have been evaluated so mapForm variables can be used as search criteria.

Click the **Post** radio button to execute the query after the entire job is complete.

Click the **Test – Will not execute on server** radio button to turn off queries for testing or troubleshooting purposes.

### ***During sort this query should be executed***

To facilitate the sorting process, you must specify which queries should be executed during the sort. This decreases program latency by only executing the queries that you instruct FormFusion to execute. Sorting is performed before the processing of the report file is begun.

### ***SQL Script***

To write the SQL query, type in this edit box. Any standard SQL statement can be entered here, including statements like SELECT, INSERT INTO, UPDATE, and DELETE. Variables from the variable list can be used almost anywhere in the query. The most common use for variables are in the INTO clause of a SELECT statement or in the WHERE clause.

The following are some examples of queries and their use:

```
select EMPFIRST || EMPMIDDLE, EMPLAST
  into :EmpFirst_and_M, :EmpLast
  from EMP
  where EMPID = :employee_ID
```

The above query retrieves the First Name, Middle Name, and Last Name fields from the EMP table and places the results into variables **EmpFirst\_and\_M**, and **EmpLast**. The constraint placed on the search is that EMPID should equal the value contained in **employee\_ID**, which is defined either in captureForm or mapForm.

```
update EMP
  set EMPFULLNAME = :EmpLast || ', ' || :EmpFirst_and_M
  where EMPID = :employee_ID
```

The above query updates the records for the employee with ID equal **employee\_ID** in the EMP table. It would combine the two string variables created in the above SELECT query into one string and place that value into **EMPFULLNAME**.


### ***Select a maximum of # record(s).***

To specify the maximum number of records to retrieve and place into the variables in the INTO clause of a SELECT statement, enter a number into the edit box. This field is only used for SELECT statements.

## Test Query

To test the query without committing the results, click the **Test Query** button. You will be prompted for the values of all bind variables in the query.

## Commit Changes

To commit or save changes to a query, click the **Commit** button  above the Query Name edit box. This button will not be shown unless a change has been made on the form or after the change has been committed. Similarly, if you made a mistake, you can click the **Revert Changes** button, which will revert all changes since the last commit.

## Order of Execution


CaptureForm queries are executed in the order they appear in the tree view. This means that queries higher in the tree will execute before queries lower in the tree.

### Change order

To change the order of query execution, select the query node, then either right-click and choose **Move Up** or **Move Down**, or use the **Edit/Move Up** or **Move down** on the main menu. You will immediately see the query list change.


Another method of rearranging the query is holding down the left mouse button when selecting the query, and dragging it to before or after the query it should execute. When you release the mouse button, you will be prompted with three options: **Move Before**, **Move After**, or **Cancel**. Choose the appropriate action. If the query is dropped on a query that executes during a different time (**Pre**, **Page**, **Post**), the query that was dropped will use the new execution.

## Copy

To copy a query, select the **query** node, then right-click and choose **Copy**, click the **Copy** button  on the tool bar, or use the **Edit/Copy** option on the main menu.

Another method of copying a query is holding down the left mouse button when selecting the query node, and dragging it to another captureForm query node. When you release the mouse button, you will be prompted with three options: **Copy Here**, **Move Here**, and **Cancel**. Select the appropriate action.

## Delete

To delete a query, select the **query** node, then right-click and choose **Delete**, click the **Delete** button  on the tool bar, or use the **Edit/Delete** option on the main menu.

## Rename

To rename a query, select the **query** node, then either right-click and choose **Rename** or use the **Edit/Rename** option on the main menu. After typing the name, press **Enter**.



## Frequently Asked Questions

**I have several queries and two of them are dependent on the results of a third SELECT query. How can I tell captureForm to execute that query first?**

**A:** The server will execute the queries in the order they are listed in the query list. Use the **Move up** and **Move down** buttons to place the SELECT query above the queries that are dependent upon the results.

**How to put page numbers on the forms when the page number is not in the lis file?**

**A:** First set up two variables. You can call them `page_no` and `this_page_no`. The order of query execution matters so edit a query to set `page_no` to 0. This query should execute before any pages have processed.

```
select 0  
into :page_no  
from dual
```

Next, edit another query to execute before each page and it would look something similar to:

```
select page_no + 1, decode( :Continued, NULL, 0, page_no + 1)  
into this_page_no, page_no  
from dual
```

This above query should execute before each page. To print the page number on the form, place `this_page_no` on the `pcl` form.

## Is there a way of establishing a constant variable that would retain its value for the duration of the job?

**A:** Go into the captureForm statement and in the **Executes** section, select **Pre - Before any pages have processed**. This will execute the query only once before any pages of the .lis file are processed and the variable value will remain constant.

For example: Birthdate and SSN

```
SELECT 'Date of Birth: ' || TO_CHAR(SPBPERS_BIRTH_DATE, 'MM-DD') || '-
      XXXX', DECODE(SPBPERS_SSN, NULL, 'Student Number: XXX-XX-
      ' || substr(SPRIDEN_ID, 6, 4), 'Student Number: XXX-XX-
      ' || substr(SPBPERS_SSN, 6, 4))
FROM SPBPERS, SPRIDEN
INTO :birthdate, :student_no
WHERE SPBPERS_PIDM = :pidm
AND SPRIDEN_PIDM = :pidm
```

## Getting a lot of error messages in log file after running GLRLETR. There are three distinct error messages, but they repeat dozens of times, for just one student record. The three messages are:

Variable "none" hasn't been previously defined. Using empty string ""  
 Variable "medium" hasn't been previously defined. Using empty string ""  
 Variable "" hasn't been previously defined. Using empty string ""

**A:** Usually you get above error messages when you do one of these two things:

1. Accidentally use the colon ':' character as punctuation and forget to dereference it using a '\.

For instance, you might say:

Please remit payment to:

in the email body. You SHOULD have:

Please remit payment to\:

2. You had a variable either in mapForm or captureForm, placed it on your PCL form, then deleted it from mapForm or captureForm. This leaves an empty or blank variable box in the PCL form.



## FORMDIRECTOR

FormDirector is a module used within FormFusion Developer to direct the FormFusion output to a variety of destinations. The current output options are: **Archive**, **Email**, **Printer**, **Script(PL/SQL)**, and **Web**. By default, a FormFusion output will go to the printer.

The following are FormDirector optional modules:

- **Archiver/ArchiveDirector**: Securely stores FormFusion output in Adobe PDF format in the FormFusion tables. The ArchiveDirector is used to access these pdfs.
- **EmailDirector**: E-mail FormFusion output to vendors, employees, students, etc. using email addresses stored in Banner.
- **PrintDirector**: Used to override the default print command in gjabjobs or sctban.
- **WebDirector**: Specify an Internet or Intranet location to publish the FormFusion output using a custom OS or Script command.
- **ScriptDirector**: Create FormFusion output as Adobe PDF files and save them to a network or local drive, or to a database table.

There is also logic built into FormDirector, which allows for the creation a workflow routine based upon successful completion of the various output options. For example, FormFusion can direct the output to email and only print if the email did not execute. Each copy coming from FormFusion can have a separate set of formDirector settings. It has the ability to email the first copy of the output but send the second copy to the web.



## Using FormDirector

### Create

To create a cormDirector, select the **Special Print Parameter** node, then either right-click and choose **New->FormDirector**, or use the **Edit/New->FormDirector** option on the main menu.

### Open

To open a cormDirector, double-click the node.

### Rename

To rename a formDirector, select the **FormDirector** node, then either right-click and choose **Rename** or use the **Edit/Rename** option on the main menu. After typing the name, press **Enter**.

## Delete

To delete a formDirector, select the **FormDirector** node, then click the **Delete** button  on the toolbar, right-click and choose **Delete**, or use the **Edit/Delete** option on the main menu.

## Copy

A formDirector cannot be copied to the same special print parameter node but you can make a copy in a different SSP node. To copy the formDirector, hold down the left mouse button when selecting a **FormDirector** node and drag it to a different special print parameter node. When you release the mouse button, you will be prompted with three options: **Copy Here**, **Move Here**, and **Cancel**.

The **Move Here** option will remove the formDirector from the original location and add it to the new location. The **Copy Here** option will add the formDirector to the new location, as well as retain a copy of the formDirector in the original location. **Cancel** will negate the action.

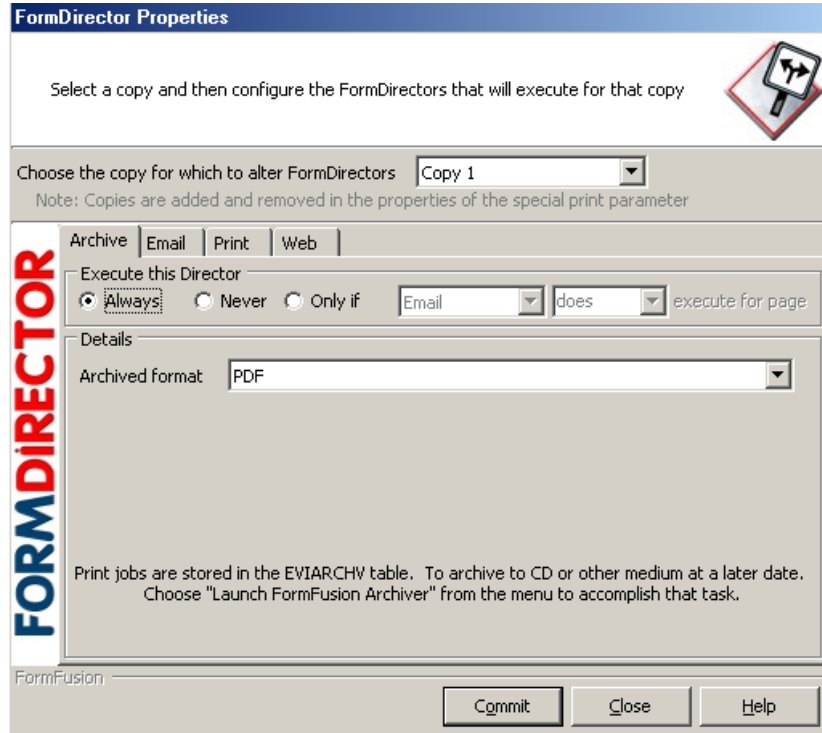
## Save

To save or commit changes, click the **Commit button**  or use the **Ctrl+O**.

## Properties

The **FormDirector Properties** dialog allows you to set properties for each copy.

To open the Properties dialog box, select the **FormDirector** node, then either right-click and choose **Properties**, or use the **Edit/Properties** option on the main menu.



## Choose the Copy

The FormFusion output is on a copy-by-copy basis. To view all the copies for a process, click the **Choose the copy for which to alter FormDirectors** drop-down menu. Choose the copy you want to set up.

Once you select the copy to work with, you can choose the appropriate settings for each optional module.

## Execute this Director

All copies can have their own set of rules for directing the FormFusion output. Each formDirector module can be executed according to the following conditions:

### Always

Click the **Always** radio button to always direct the output to the destination of the formDirector optional module selected

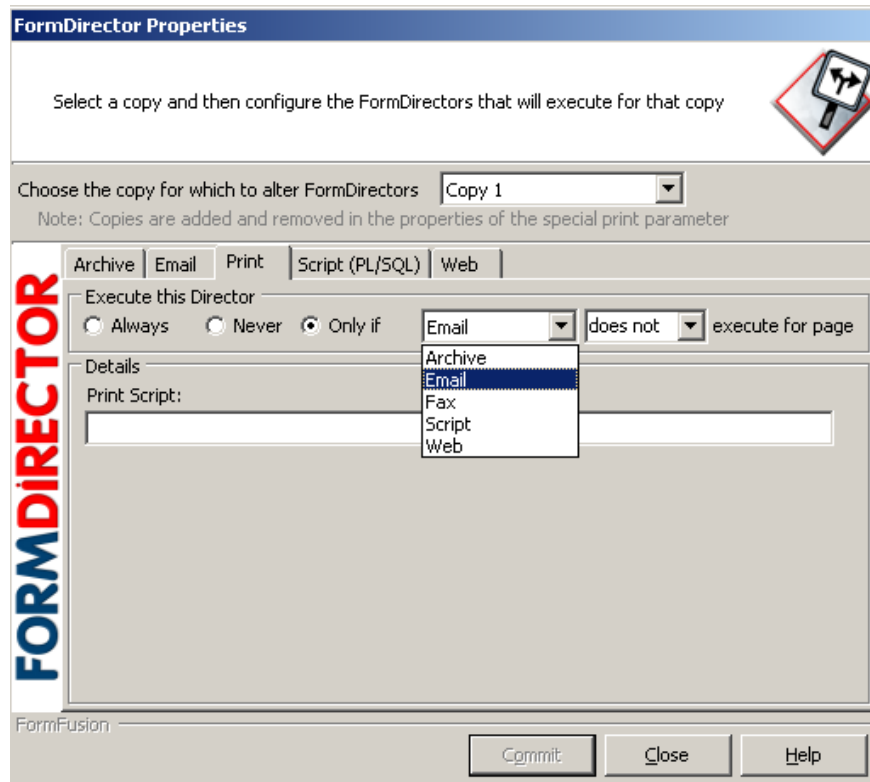
### Never

Click the **Never** radio button to never direct the output to the destination of the formDirector optional module selected.

## Only if

To direct to the destination of the FormFusion optional module selected (i.e. Archive, Email, Print, Distribute/Web) only if the *Execution Condition* is met, select this radio button.

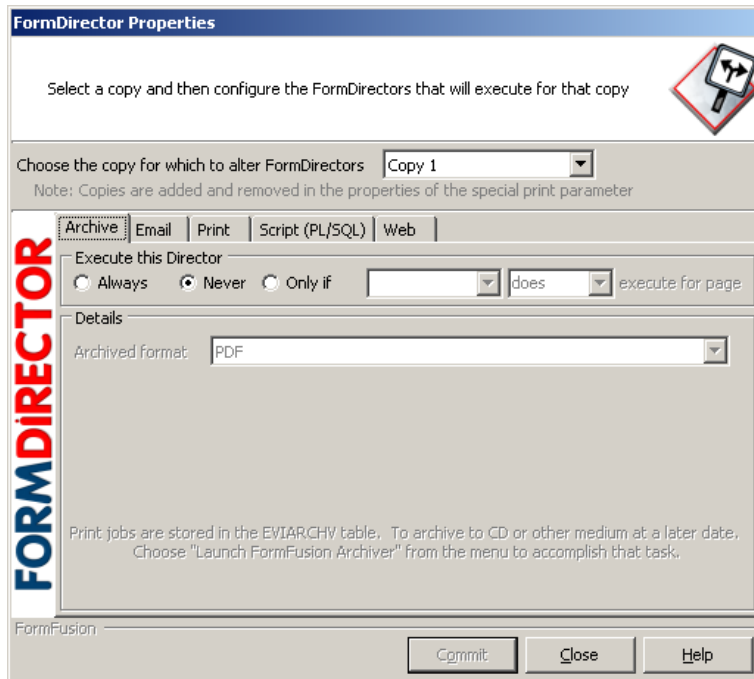
The execution condition determines whether a formDirector module will execute. If the condition is true, the module executes. For instance, we can set the condition for Print to execute only if Email does not execute.





## ArchiveDirector

ArchiveDirector stores PDF/PCL versions of the output to the EVIARCHV and EVIBLOB tables for later use in FormFusion Archiver.



## Details

To choose the type of format you want to archive the output, select from the **Archived format** drop-down menu.

### ***PCL***

A native PCL format of FormFusion that can be sent directly to any PCL printer.

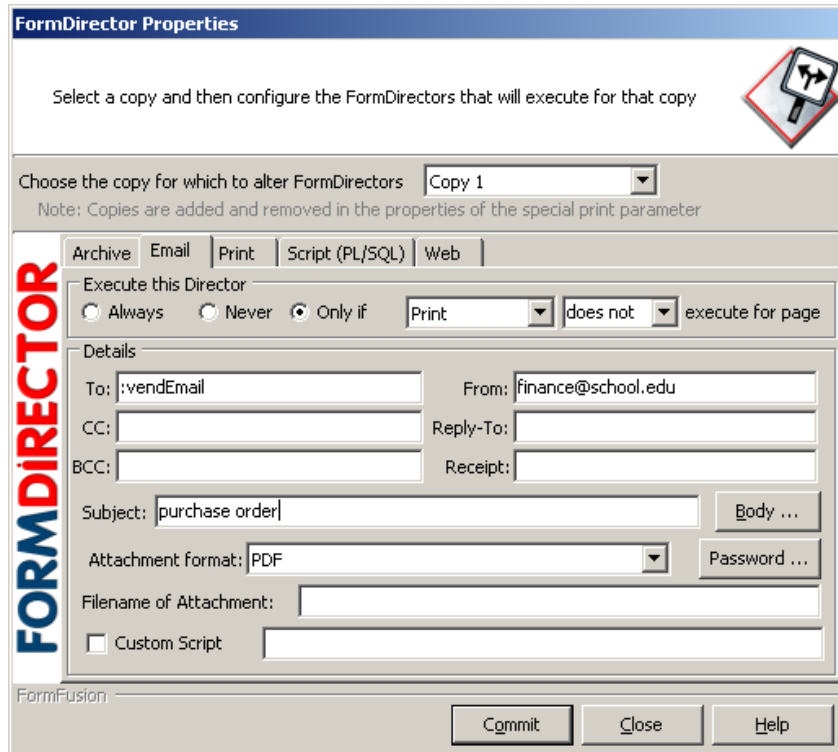
### ***PDF***

A format created by Adobe® and widely used across the industry. PDF converted documents are generally 3 to 10 times larger than PCL documents.



## EmailDirector

Use the EmailDirector properties to send the output as an email attachment using the sendmail standard. Most UNIX environments will have this application installed and included in the search path.



### Details

To edit the details of email, enter the text into all applicable edit boxes. In each edit box, you can use any variables defined in mapForm or captureForm using the bind variable notation. For example, create a SQL statement that captures the email address of a student and store the results into a variable named Student\_Email. To access this variable, type **:Student\_Email**.

#### To

To direct the email to a specific recipient, type the address or use the bind variable in the edit box. Commas should separate multiple recipients.

#### From

To include a return address, type the address where the email is being sent from and where a recipient can send a reply to in the edit box.

## ***CC***

To include any additional recipients and display the recipient address, type the address in the edit box. Commas should separate multiple recipients.

## ***BCC***

To include additional recipients without displaying the recipient address, type the address in the edit box. Commas should separate multiple recipients.

## ***Subject***

To disclose a short description of what the email is about, enter the text in the **Subject** edit box.

## ***Receipt***

To specify the email address that will request a return receipt when the recipient(s) read the email, type the address in the edit box. Please be advised that not all email servers support this feature.

## ***Body***

To include a message in the body of the email, click the **Body** button. When the **Body** button is clicked, a **Modify Body** edit box will appear. Enter the text, then click **OK** or **Cancel**.

## ***Attachment format***

The **Attachment format**: drop-down menu allows you to choose how the FormFusion output file will be formatted.

**Unformatted LIS**: Original text

**No attachment**: Send only the email body

**PCL**: Native PCL format of FormFusion which can be sent directly to any PCL printer

**PDF**: Converted PDF version

**Unformatted in body**: Attachment will be appended to the end of the body rather than as an attachment.

## ***Filename of Attachment***

To name the attachment, as it will be stored in the email, type the filename in the edit box. If this field is left blank, a default name will be used. For example, **FormFusion.XXX** where **XXX** is either PDF or PCL.

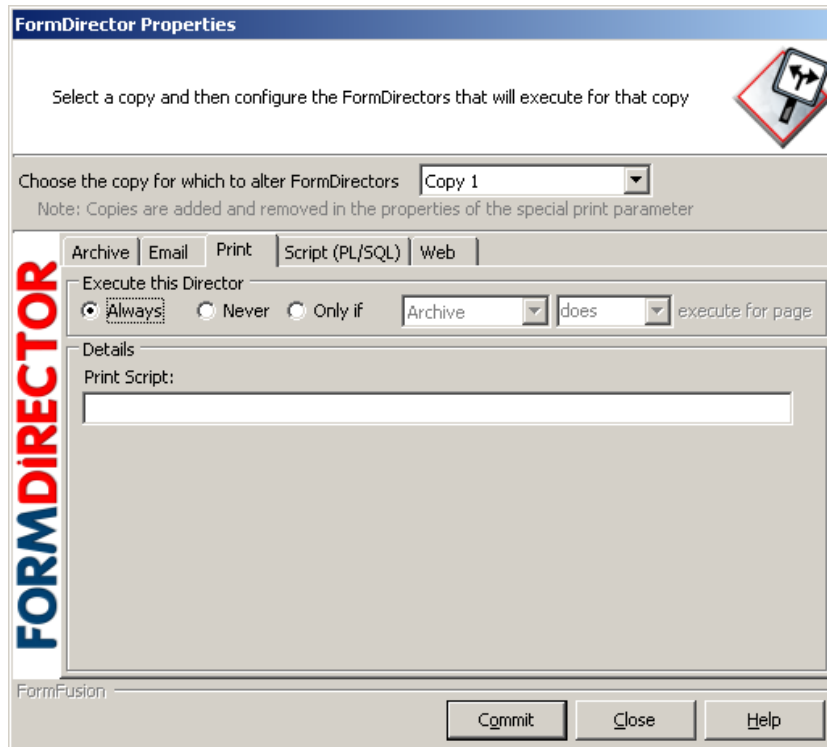
## *Password*

To protect the attachment, add a password by clicking the **Password** button. When you click the **Password** button, you will be prompted for an encrypted password. Enter the password, then click **OK** or **Cancel**. Any variable from mapForm or captureForm can be used as all or part of the password.



## PrintDirector

FormFusion already supports printing to a PCL5 compliant printer without the use of PrintDirector. This module is provided to allow different copies to be printed to different printers or to turn off printing.



### Details

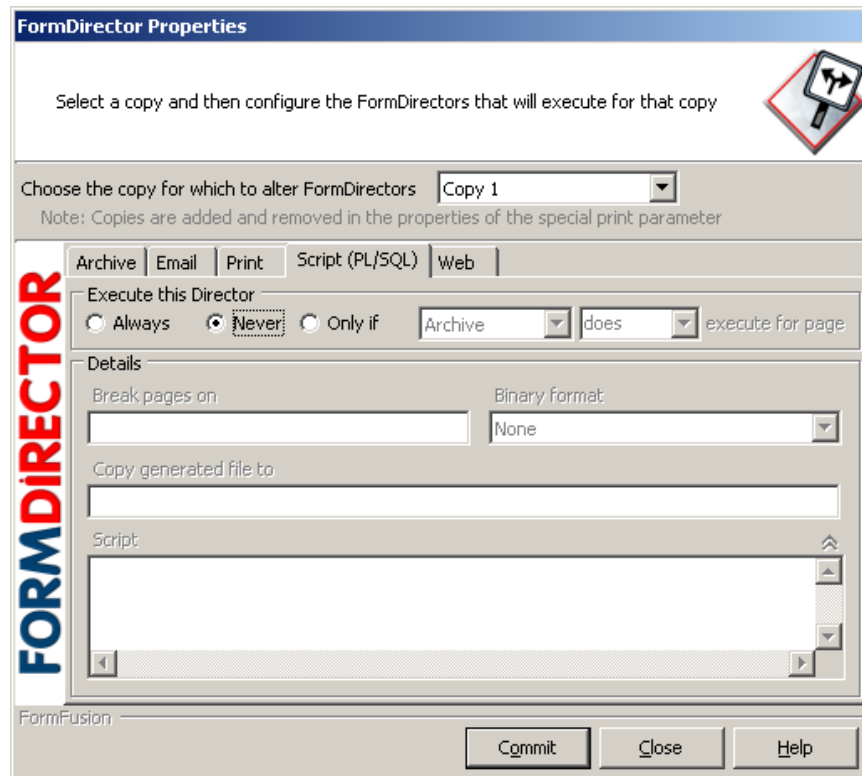
To create a custom print command, enter the command in the edit box. For example, a script to print the currently created file to the printer named Joe might look like this:

```
lp -d Joe :FILENAME_
```

If you do not want multiple copies to go to different printers, leave the script field blank. The FormFusion server finishes executing and it will send the entire print job to the default printer.



## ScriptDirector



The FormDirector Script (PL/SQL) tab allows you to parse and store process output files into individual files. Depending on how the fields in scriptDirector are populated, the individual files can be stored in the database, on the file system, or both.

The scriptDirector can be used with SunGard's new e-Bill functionality in Banner version 7.3. SunGard has enhanced both Student Self-Service Banner (SSB) and Accounts Receivable Internet Native Banner (INB) to allow students and back office staff to view the statement output of the Student Billing Statement process, TSRCBIL, when converted to PDF format and stored.

Specific instructions on how to use scriptDirector to parse the .lis file and save the PDF files will be discussed in the next few pages. Please refer to SunGard's AR 7.3 Release Guide and FAQs for additional instruction on the e-Bill functionality within Banner, including new table structures, Oracle directory creation and API specifics.

The Details section in scriptDirector contains 3 required fields, **Break pages on**, **Binary format and Script**, and one optional field, **Copy generated file to**.

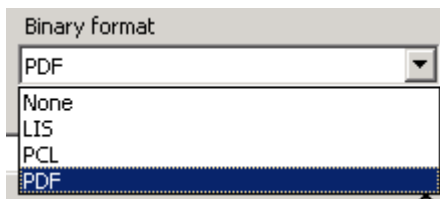
## Break pages on



A mapForm or captureForm variable should be entered with a colon preceding the variable name. This field determines how scriptDirector will parse the output file into individual files.

In the example above, the **stmt\_number** variable might be defined and populated in a mapForm offset field. The value used for this variable should be present on each page of the output file and positioned consistently from page to page.

## Binary format



Choose the binary format that scriptDirector should use to create the files.

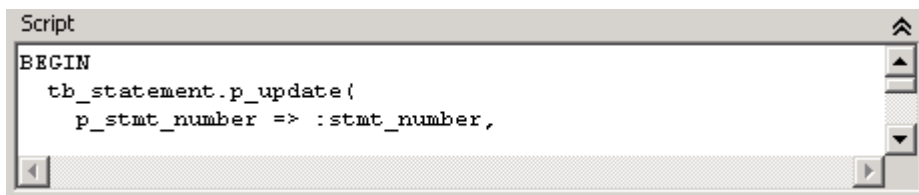
## Copy generated file to



This optional field should be populated with a directory path when scriptDirector is used to store each individual file into the file system.

In the example above, the **MyFileName** variable could be created in captureForm and populated with the statement number or any other data value unique to that file.

## Script



```

BEGIN
  tb_statement.p_update(
    p_stmt_number => :stmt_number,
  
```

PL/SQL scripting code should be entered to perform the actual processing of the output file parsing and storing.

The double-arrow symbol above the scroll bar can be selected to increase the size of the **Script** window. The other fields in the **Details** section will be hidden until the double-arrow is selected again.

### *Storing files to the database*

Example script to store the individual files into the Banner database:

```
BEGIN
  tb_statement.p_update(
    p_stmt_number => :stmt_number,
    p_blot_code   => 'PDF',
    p_directory   => 'EVISIONS_DIR',
    p_filename    => :SCRIPTFILENAME_,
    p_email_addr  => :stu_email,
    p_data_origin => 'FormFusion');
  gb_common.p_commit();
END;
```

In this example, the two FormFusion variables, **stmt\_number** and **stu\_email** would have previously been defined in `mapForm` or `captureForm`. The variable **:SCRIPTFILENAME\_** is a pre-defined variable that holds the name of the temporary file created during processing.

### *Storing files to a file system*

Example script to store the individual files on the file system:

```
BEGIN
  tb_statement.p_update(
    p_stmt_number => :stmt_number,
    p_blot_code   => 'PDF',
    p_directory   => 'EVISIONS_DIR',
    p_filename    => :MyFileName,
    p_loadfromfile => 'N',
    p_email_addr  => :stu_email,
    p_data_origin => 'FormFusion');
  gb_common.p_commit();
END;
```

In this example, the three FormFusion variables, **stmt\_number**, **MyFileName**, and **stu\_email** would have previously been defined in `mapForm` or `captureForm`.

In order to process the files, use BANINST1 to create an Oracle directory logical that points to the folder where the files are located, and grant read access. If loading from the temporary directory used by job submission and Evisions in the gjajobs script, this might take the form:

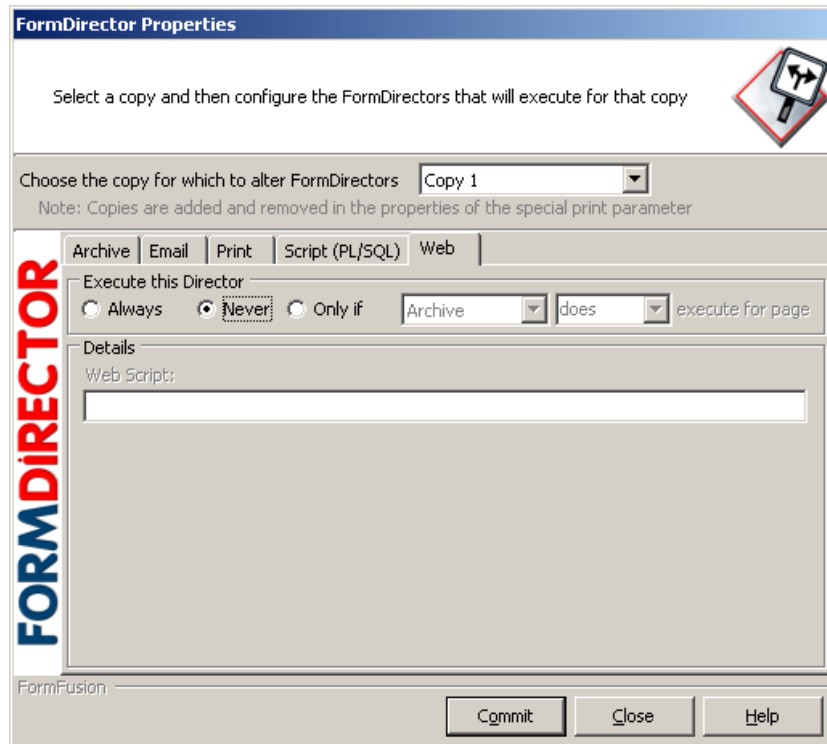
```
create or replace directory EVISIONS_DIR as '/tmp';
create public synonym EVISIONS_DIR for EVISIONS_DIR;
grant read on directory EVISIONS_DIR to ban_default_m;
(or whatever role you used for FORMFUSION_SERVER access)
```

**Note:** *It is important that the Oracle directory points to the same directory FormFusion stores its temporary files. If FormFusion stores the temporary files in /jobsub/ and the Oracle directory is looking in /tmp you will get an error saying the pdf does not exist. You can specify which directory FormFusion should save it's files to with the `-eviout` flag in `gjajobs.shl` (Unix), `gjajobs.com` (VMS), `sctban.pm(NT)`.*



## WebDirector

Use the WebDirector to specify a particular location of Internet/Intranet to publish the FormFusion output. It is possible to pass the FormFusion output file to a certain directory where the web page will access it. You can also pass it to a third party imaging system such as Banner Xtender to display. You can put any valid system command in the script field on the web tab. The file is stored in pcl format.



### Detail

Enter the custom web script here. You can put any valid system command in the script field on the web tab. For example, the script to copy the web director file might be:

```
cp :FILENAME_ $HTTP_BASE/recent_files/:FILENAME_
```



## Frequently Asked Questions

### *How does formDirector know if an email did not execute?*

**A:** FormFusion server does not know if the email was delivered successfully or if the address was valid. The server decides if the email is executed by checking the TO address. If this field blank, then it is a non-executing status. If you have a hard-coded address in the TO clause rather than a variable retrieved by mapForm or captureForm, then the email will always be in executed status.

### *Why should I use Evisions' version of Sendmail?*

**A:** The Evisions sendmail process sends off the email to your local email server. In other words, your email server views this Evisions sendmail process just like any other email client that your employees may be running (i.e. Outlook, Eudora, Groupwise, etc..) to connect and send emails. An email is delivered to its destination by the email server.

There are several distinct advantages to our version of sendmail:

1. There is no standard for email on NT or VMS and it was getting more difficult for FormFusion to have the ability to work with all the various 3rd party email drivers on various systems.
2. The standard vanilla version of sendmail on most Unix systems has a feature that is less than desirable for most FormFusion processes. That is, the generic version of sendmail will return mail that does not have a valid address to the Unix account that is calling sendmail process rather than the **From:** address in FormFusion. As you can imagine, it is hard to know what FormFusion documents did not make it to their destination without a good return path for invalid documents. Our version of sendmail allows this to work seamlessly with the Email Director tab in FormFusion. Whatever email address is specified in the **From:** field on the email tab in FormFusion is the address that the email will return to if it encounters a bad address.
3. Our version of sendmail is much more efficient than the standard versions of sendmail as it was written specifically for FormFusion and is optimized for this use only.
4. Our version of sendmail is more secure in that it only knows how to read a MIME file and does not have the ability to UUENCODE an attachment, etc. FormFusion takes care of all the hard work and when it calls sendmail, a MIME file already exists with all necessary formatting, etc.
5. Our version of sendmail uses authentication before passing off a mail message to your email server. This keeps you from having to allow RELAYING from your Banner host system - eliminating the potential for a malicious user to use your server for SPAM.

***We entered `http://www.anyschoolinfo.htm` and getting the following when we receive the email:***

***`httpÿÿÿÿik~@//www.anyschoolinfo.htm`***

***Is there a way to have the system look at the ":" as a character instead of the bind variable?***

**A:** FormFusion interprets the ':' as a bind variable and treats the characters after it as a variable. If you place a backslash before the colon, it will act as an escape and should print the http address correctly.

`http\://www.stfrancis.edu/creditcd.htm`

***How does formDirector know if a printDirector did not execute?***

**A:** The Print, Archive, and Web Directors always execute. There is no logic for determining if the script is invalid or if an INSERT could not be performed. However, You create logic such that printDirector will only execute if emailDirector does not, and archiveDirector will execute only if printDirector does, then if emailDirector does execute, printDirector will not. Hence archiveDirector will not.

***Can you print labels with FormFusion?***

**A:** It depends greatly on the process. If the output is fixed with several addresses already on the same page on the input report file, it would be a simple matter to use mapForm to just position it onto the output where you would like. If it is in a different layout, it would require more modification.

An alternative option is our Argos product. Argos has just about every known type of blank mailing label stock already built in and ready for use.

***Is there a way to create label output from a comma delimited map form file?***

**A:** Yes. The problem is when you want more than one label printed per page. Unfortunately, FormFusion was not designed to create mailing labels in bulk. One possibility is if everything is a fixed size format for the address, you could map address on the file and put them on the final label according to your stock. However, it is not a .CSV in that case.

If it is all in CSV format, you might want to research a Word Merge document.

Also if you have our Argos product, you can use Argos, which was designed to be able to create mailing labels. It even comes with several hundred, if not thousands, of blank label stock formats already built in. All you would need to do is select the address you want printed on them.

### ***I am getting no output when I run my process through Banner.***

**A:** Try the following troubleshooting process:

1. Check the log file for errors.
2. Check user read/write permissions in the /tmp directory.
3. Check the gjajobs for spelling, punctuation, and spacing problems.
4. Make sure there is not a formDirector that is only used to print.
5. Be sure not to use "DATABASE" in the printer box on the job submission screen. The logic in gjajobs.shl prevents the EVILP process from being called if DATABASE is selected as a printer and it appears as if testing is failing.
6. Be sure to put the correct printer in the Job Submission **Printer** field.
7. If none of above steps fixes the problem, submit a HelpDesk ticket for additional troubleshooting assistance.

### ***Why do we have extra pages printing when we run and print our process?***

**A:** There are few places where it may be originating.

If it is an extra page in the input report file, select the **Special Print Parameter** node, right click and choose the **Properties**. On **Input File Settings** tab, set the first to not print.

If the blank page is originating from the print controller, you will have to speak to a system admin to see if there is a command line switch to suppress the extra header page.

### ***Is there a way to use FormFusion to automatically ftp a file to a ftp server? It would be very neat idea if it was possible to have a input report file (ie. .lis/csv file) could be ftped to another location.***

**A:** This can be accomplished by using the FormDirector's emailDirector or the printDirector. There is a custom script edit box in both of these Directors. The main difference between the two is that the e-mail tab would only be called when the value entered in the TO field changes. The print tab is called at the end of the process. To use, just merely call the FTP script passing any value you wish.

For example, you would do the following in the custom script section on the print tab if you had a script called ftp.shl in your links directory:

\$BANNER\_LINKS/ftp.shl : FILENAME\_

### ***Portrait vs Landscape setup***

**A:** You can check each form in FormFusion by opening up the form and then right clicking on the form name, selecting 'Properties,' and then the 'Form Layout' tab. On this screen you'll be able to define the orientation of the form as Portrait (default) or Landscape.

### ***Is there a limitation of how many lines of text that you can enter in body of email?***

**A:** There is not a limitation to the amount of text that can be included in the body of an email.

### ***Do the files that are in the /var/tmp directory (-eviout) stay forever or are they eventually deleted? Are they used when a person looks at the archive?***

**A:** These files are the temp files for the output and are deleted when the job has completed its processing. When a user looks at archived jobs, they are looking at data stored in the EVI tables inside the Banner table space.



## FORMFUSION ARCHIVER

The FormDirector Archiver maintains a searchable database of all the stored process output files. It allows for retrieval, viewing, and re-printing of the previously run jobs.



### Using Archiver

Use the formFusion archiver to show a listing of all archived PDF/PCL files that are stored in the FormFusion EVIARCHV table. To view the PDF files, a PDF viewer must be installed on your system. If a PDF viewer is not installed on your system, a product like Adobe Reader is available for downloading from the Internet. Similarly, you must have a PCL viewer installed on your system to view the PCL files. Please go to Visual Software's website to obtain a PCL viewer if you do not have a PCL viewer.

#### Open

To open the formFusion archiver, use the **Tool/FormFusion Archiver** from the main menu. You will be prompted to login. Enter your Oracle **Username** and **Password**, choose a database from the **Database** drop-down box, and click **OK**. When you are logged in, a list of archived processes will appear.

#### View

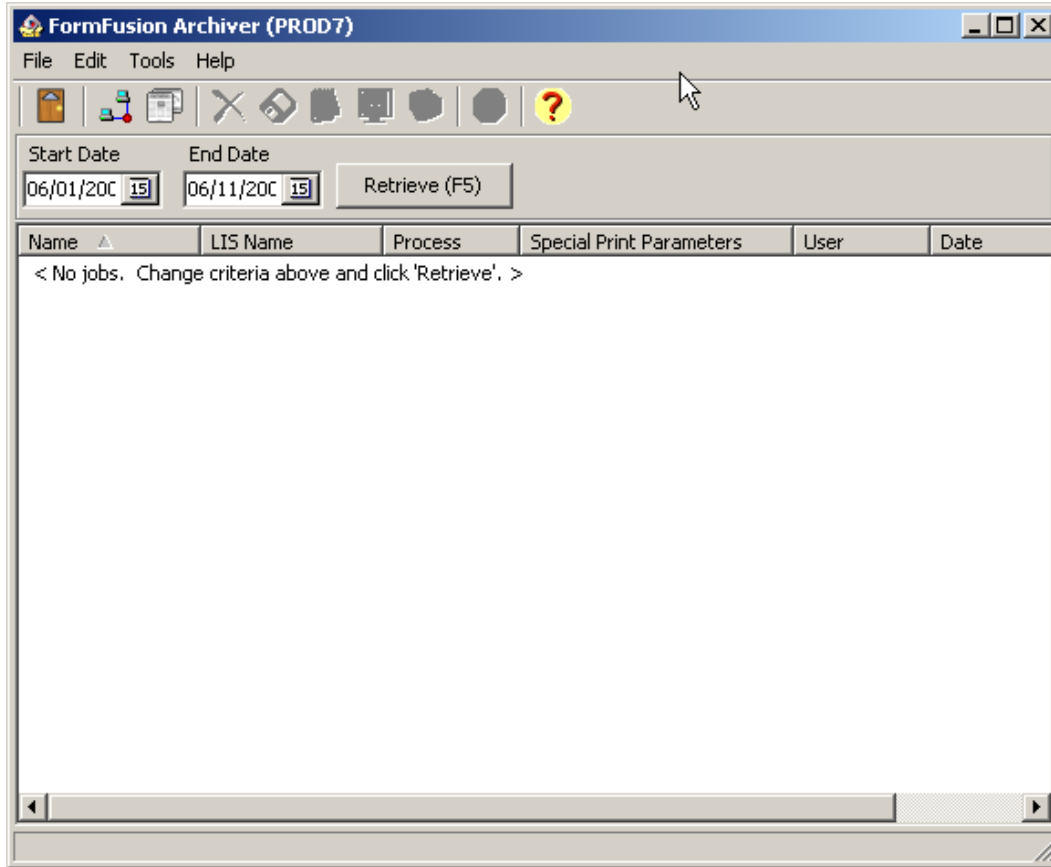
To view an archived file, right-click the process name, then choose **View** and the associated viewer installed on your PC will be launched.

#### Log in/Log off

To log in or log off from the formFusion archiver, click the **Log in/Log off** button on the main menu.

#### Close

To close the formFusion archiver, log off and click the **Close** button on the upper right corner of the window.



### ***Start/End Date***

To limit the archived file retrieval between a specific time periods, select the dates using the **Start** and **End Date** calendar buttons.

### ***Retrieval***

To retrieve the archived files, click the **Retrieve** button or use the **F5** button on your keyboard.

### ***Name***

This is the name of the archived file.

### ***LIS Name***

This is the name of the input report file that ran with the process.

### ***Process***

This is the name of the process that created the archive file.

### Special Print Parameter

This is the special print parameter that was used to run the process.

### User

This is the user who ran the process and created the archive file.

### Date


This is the date when the archived file was created.

## Privileged Administration

The privileged administration allows an administrator to grant a user the ability to delete, or view archived records. An added user will be given access to the archived table.

**Note:** This is separate from the Banner security.

**Administer Processes**



This dialog will allow an administrator to grant users to edit/delete/view records from the EVIARCHV table. Adding a user will enable him or her access to the archived table. This is separate from Banner Security which should be configured using GSASECR.

Process Name:

Users with Privileges to Process:

User	SPP	D/V

**Privileges**

Delete Records

View Archived Files

Expiration Date (mm/dd/yyyy):

Specific SPP (blank for any)

FormFusion

## ***Process Name***

To choose a process name you want to give privilege to, select from the **Process Name**: drop-down box.

## ***Users with Privilege to Process***

This list box displays all the users and their privileges, **Delete records** and/or **View archived files**.

## ***Privileges***

Click the **Delete Records** checkbox to permit record deletion.

Click the **View Archived Files** checkbox to permit archived file viewing.

## ***Expiration Date***

To choose the expiration date for the privileges, click the **date** button and select the date using the calendar.

## ***Specific SPP***

Enter the **Specific Special Print Parameter** that the user will have privilege to in this edit box. Leaving the edit box empty will give a user privileges to any special print parameter.

## ***Add Privilege***

To add a privilege, click the appropriate privilege checkbox followed by the **Add privilege** button. You will be prompted to type the name of the user to add privileges for.

## ***Remove Privilege***

To remove the privilege, select the user from the **Users with Privileges to Process** list box, check **Delete Records** and/or **View Archived File**, and click the **Remove Privileges** button.

## ***Modify Privilege***

To modify the privilege, select the user from the **Users with Privileges to Process** list box, check **Delete Records** and/or **View Archived File**, and click the **Modify Privileges** button.



## Frequently asked questions

### Where are the FormFusion archiver files are stored? Are they on Evisions Server or Oracle database under Evisions?

- A. The actual archive files are stored in the EVIBLOB table in the database. You can find out which ones by joining to the EVIARCHV table by the BLOB\_ID.

You can see a complete listing of all the Tables by going into FormFusion, clicking on HELP-> Index, and then looking up the Table Guide or the [Table Guide](#) at the end of this manual.

### Can we archive old lis files?

- A. If you still have the .lis files from those runs, you can run them through Form Fusion again and set Form Director up to just send to Archive, but not print. If you do not have the .lis files anymore, you will need to run the process again to recreate the .lis files and then archive them.

### Can we retrieve images of forms created before we turned on Form Director?

- A. If you still have the .lis files from those runs, you can run them through FormFusion again and set up formDirector to just Archive, but not print. If you do not have the .lis files, you will need to run the process again to recreate the .lis files and archive.

If you need to print from FormFusion via command prompt, please go to <http://www.evisions.com/support/formfusion/>.

### The alignment of the reprint coming out of Adobe is NOT the same as the "non-pdf" version that just goes through the formfusion template to the printer. Adobe seems to have added a few extra lines towards the top of the form.

- A: Factors that cause alignment differences between direct printing and printing pdf generated files are:

1. The default printer settings (properties) in Adobe are often set to **auto center and rotate**. Un-check this attribute, and any others (ie. scaling at other than 100%) that may alter the raw file when it is sent to the printer.

2. Be sure to use a post-script printer driver, not a PCL driver, when you are printing pdf files.

**One of the processes is running 12,000 records using archive mode. It is causing our /var/tmp directory to fill up. The files have to be deleted regularly so it does not reach 100%. And killing the job is not an option.**

**A:** With a big job (1000+) that has to print AND archive, we recommend splitting the process into two distinct runs. Try the following setup:

1. Create two separate special print parameters where both templates are identical except the method of output. The first special print parameter will be setup only to print and setup a second special print parameter to archive.
2. Run the process as normal the first time using the first special print parameter, which will produce your input report file (ie. .lis/.cvs file) in the jobsub directory and print.
3. Now run that same input report file through FormFusion again via command prompt.

Splitting the job up allows you to create the printed output in a much more rapid fashion, while running the archival template during system downtime.

In order to fix the "/var/tmp directory filling up" issue, try directing these temp files to a different file structure where there is more space. This is achieved by looking in gjajobs.shl file and changing the value following the "-eviout" flag.

**I am trying to archive my W2 process. I see an entry in the EVIARCH table for the run but when I log into the FormFusion archiver, I don't see them.**

**A:** If the records for the archive are in the table but you cannot see them, you probably do not have permissions. There are two places to check. First, check the permission setting in the Administration Wizard. In Administration Wizard, click the **Security** button and enter the password then select **FormFusion** from the drop-down box. Make sure the user name is in the **Members** list. This is the security object that allows you to use the archiver. Next, check the privileges in the archiver and make sure the user in the list of users.

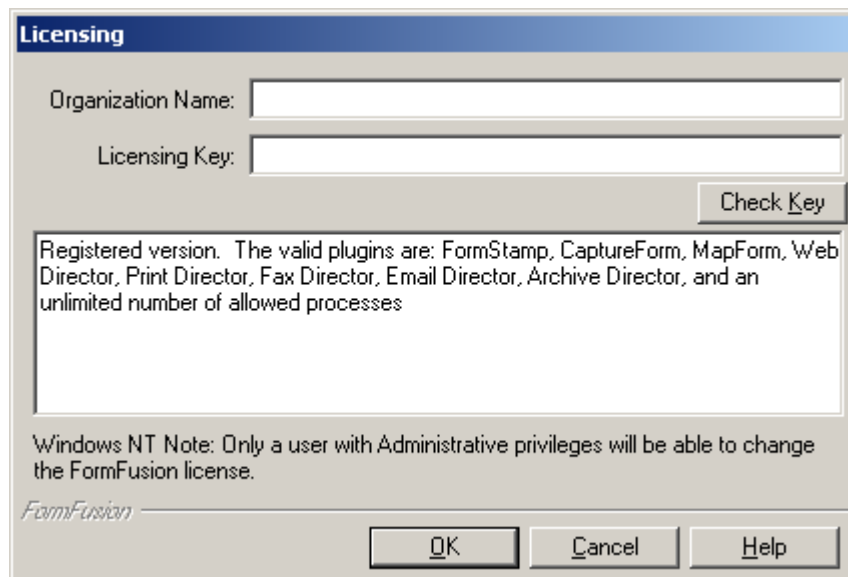


## APPENDIX

### Licensing

In order to use FormFusion, you must be given access to certain modules. Enter the Organization Name and the License Key that was provided to you by Evisions into the appropriate edit boxes. Click **Check Key** button to verify that the license is valid. The information about this key will be displayed in the memo box for your verification.

Licenses are specific to your organization. Please do not give keys to other clients even if they have a demo version of our software. Licenses may not be shared.



### Conversion Codes

Following is a summary of the conversion format for hand-entering data conversions into the *custom* conversion edit box.

The basic format is as such (no spaces):

**{pre characters} [{conversion type character} {conversion codes}] {post characters}**

**{pre characters}** is characters to display before the converted text.

**{conversion type character}**

- #** Specifies numeric conversion
- D** Specifies date/time conversion

**{ conversion codes }**

*numeric conversion A~B~C~D~E~F*

- A** The minimum number of characters to the left of the decimal place to print.
- B** The negative number format, - to display a negative sign, ( to enclose in parentheses, [ to enclose in square brackets, { to enclose in curly brackets, < to enclose in angle brackets.
- C** When minimum number of characters (A) is not met, this is the character to fill the space with.
- D** Character to use as thousandths separator (comma).
- E** Character to use as decimal point.
- F** Number of decimal places to print.

Example:

`#[#5~(~0~,~.~2]->` would print the number -45 as: `$(00045.00)->`

*Date/time conversion [!][{format} ^[{separator}] ^[{format ...}][~am~pm~]*

- !** Used to signify 24-hour time. Leave out for standard 12-hour time format.
- fo** Can be any one of the following date formatting strings:
 

M	Month	1 - 12
MM	Month	01 - 12
MMM	Month	Jan - Dec
MMMM	Month	January - December
D	Day	1 - 31
DD	Day	01 - 31
Y	Year	Example: 1
YY	Year	Example: 01
YYYY	Year	Example: 2001
H	Hour	1 - 12 or 0 - 23
HH	Hour	01 - 12 or 00 - 23
N	Minute	0 - 59
NN	Minute	00 - 59



S	Second	0 - 59
SS	Second	00 - 59

Enclosed in caret (^) symbols this specifies the text to display in between format strings.

The text to display for AM

The text to display for PM

Example:

`***[D!MMM^ ^dd^, ^yyyy]***` might print the date: `***Feb 29, 2002***`

## Adding Custom PCL Fonts

FormFusion is designed to allow the use of built-in printer fonts as well as custom fonts used by your institution. The default fonts in the fsfonts.ini file are standardized fonts used by all PCL5 printers. There are many more built-in printer fonts for higher-end printers, but Evisions has decided not to include those fonts to avoid potential confusion.

Adding custom fonts to the fsfonts.ini file is simple. If the printer does not support the custom font for some reason, then the printer defaults to Arial, Line Printer, or another font that closely resembles the font you expect. If more than one workstation needs to edit a form using the custom font, the custom font must be installed in the fsfonts.ini file on all workstations.

To add your font, add a new section to the fsfonts.ini file found in the directory where FormFusion is installed (C:\Program Files\Evisions\FormFusion). For example, to add a font named Gorgon, add the following:

```
[Gorgon]
```

Beneath the newly created font section, add one or more of the following arguments in the form of **argument = value**:

Allow  
Formatting

Instructs FormFusion if the font parameters can be formatted. There are some fonts that need to be a specific pitch and height and will not work

	using any other setting. Valid values are 0 (do not allow formatting) and 1 (allow).
Built In	Instructs FormFusion to create different PCL codes to enable the font. A built-in font is one that exists in the printer. A non built-in font is one that must be sent to the printer for the font to print correctly. Valid values are 0 (not built-in) and 1 (built-in).
Display Font	This is the name of the Windows™ font that should be used to display the font from inside FormFusion. Currently FormFusion does not read PCL font files to correctly display the font while editing forms.
Filename	This value is the filename of your custom PCL font. Add this value only if using a non built-in font. The font must exist in the "Fonts" subdirectory and the value of these parameters must not contain any directory or path information.
Fixed	This value instructs FormFusion to treat the font as a "fixed-width" font (meaning all characters of the font are exactly the same width). Different rules apply for fixed-width versus proportional fonts. Valid values are 0 (proportional) and 1 (fixed-width).
Font Height	The default font height that will be displayed when the font is first selected.
Font Pitch	The default font pitch that will be displayed when the font is first selected.
ID	The PCL font ID for both built-in and non built-in fonts. This is the code that allows the printer to uniquely select a font. For custom fonts that make use of a font file please contact Evisions for assistance.
Symbol Set	This is an advanced setting that controls the regional symbol set to be used for the font.
Use Formatting	This value instructs FormFusion to create specific PCL codes to enable the font. Some fonts do not allow formatting parameters and will not work if any are used. Valid values are 0 (don't use formatting codes) and 1 (use formatting codes).

Once the above steps have been done and the font file exists in the "Fonts" subdirectory, FormFusion will automatically add the new custom font to the EVIFONT table the next time FormFusion connects to the database.

The only problem is with using custom fonts when sending the output via email or archiving in the PDF format. The application, which we licensed to perform the PCL to PDF conversion, may incorrectly translate certain fonts to the PDF format.

## Conversion

This dialog appears when attempting to log into a database that is an older format than what is currently supported. Each new version of FormFusion might add new database tables or change fields in existing tables.

This dialog will convert your database to the latest version. Since some conversion tasks are network intensive, this should be performed on a computer on the network with a fast connection to the Oracle server. The conversion dialog will automatically determine which tables need to be updated and will prompt you whenever a task needs to be completed.

All the conversion changes are saved to the database. Depending on your current database version, there might be 1 or 2 steps for conversion. Once completed, the database will be up-to-date and ready for use. Each database instance will need to be converted separately.

## Table Guide

FormFusion is a database driven application. Every operation performed by FormFusion is tied to the Oracle database in one manner or another. FormFusion creates many tables of its own to manage the nodes and objects created and tracked by FormFusion and its modules. The following tables describe each table owned by FormFusion and their functionality.

### Core FormFusion Tables

EVIAUDIT		
Stores auditing information when certain events occur from within FormFusion.		
Field	Type	Description
EVIAUDIT_DATE	DATE	Date the event took place
EVIAUDIT_DESCRIPTION	VARCHAR2(128)	Description of the event

EVIAUSER		
Contains the names of users allowed to access a specified table name with a specified record ID. This is used internally by FormFusion and should only be modifiable by the EVISIONS user		
Field	Type	Description
EVIAUSER_ID	INT	Unique record ID

EVIAUSER_FLAGS	INT	Permissions flags for the user
EVIAUSER_TABLE	VARCHAR2(16)	The name of the table this entry was created for
EVIAUSER_TABLE_ID	INT	The record ID of the above table
EVIAUSER_USERNAME	VARCHAR2(64)	The username of the person that has been granted/revoked privileges

## EVIBLOB

This table stores the Binary Large Objects (BLOB -- Long Raw) for several different tables. All PCL data, PDF documents, graphics, etc are stored here. This table can grow extremely large and will have much data added and removed over its lifetime

Field	Type	Description
EVIBLOB_ID	INT	Unique record ID
EVIBLOB_EVIBLOB_ID	INT	Link to main EVIBLOB record, 0 = none
EVIBLOB_SIZE	INT	Number of bytes of data in EVIBLOB_DATA
EVIBLOB_DATA	LONG RAW	The binary data, multi-use, multi-purpose
EVIBLOB_COMPRESSED	INT	Compression used, 0 = none (raw)

## EVICOPY

Contains one record for each copy of a special print parameter

Field	Type	Description
EVICOPY_ID	INT	Unique record ID
EVICOPY_EVISPP_ID	INT	Link to EVISPP record

EVICOPY_DUPLEX	INT	Controls duplex setting
EVICOPY_SHORTEDGE	INT	Controls the long/short edge setting
EVICOPY_PAPERSAVE	INT	Controls the paper save mode
EVICOPY_TRAYNUM	INT	Specifies the tray number to print to

## EVILOCK

Used for locking certain EVISIONS tables beyond the support offered by the Oracle lock convention.

Field	Type	Description
EVILOCK_ID	INT	Unique record ID
EVILOCK_GUID	CHAR(38)	Unique computer ID that issued the lock
EVILOCK_REFNUM	INT	Reference number used by the calling lock routine
EVILOCK_DATE	DATE	Date the lock was issued
EVILOCK_TABLE	VARCHAR2(20)	Table that has been locked
EVILOCK_USER	VARCHAR2(64)	User name that issued the lock

## EVIPGRP

Holds definitions of the process group nodes

Field	Type	Description
EVIPGRP_ID	INT	Unique record ID
EVIPGRP_EVIPGRP_ID	INT	Link to parent EVIPGRP record
EVIPGRP_NAME	VARCHAR2(64)	Name of this process group

## EVIPMOD

Holds definitions of the process modifier nodes

Field	Type	Description
EVIPMOD_ID	INT	Unique record ID
EVIPMOD_EVIPROC_ID	INT	Link to EVIPROC record
EVIPMOD_EVISPP_ID	INT	Link to EVISPP record
EVIPMOD_NAME	VARCHAR2(64)	Name of this process modifier
EVIPMOD_ORDER	INT	Order of execution, obsolete
EVIPMOD_CREATE_DATE	DATE	Date of creation
EVIPMOD_MODIFY_DATE	DATE	Date of last modification

## EVIPROC

Describes each process modifier (plugin) type

Field	Type	Description
EVIPROC_ID	INT	Unique record ID
EVIPROC_OBJTYPE	VARCHAR2(32)	Object type, used internally
EVIPROC_ORDER	INT	Order of execution (deprecated)
EVIPROC_PATH	VARCHAR2(255)	Path to module(deprecated)
EVIPROC_PLUGINID	VARCHAR2(64)	Unique ID of module
EVIPROC_VERSION	VARCHAR2(10)	Database version of module tables (deprecated)

## EVIPROGRAM

Contains each file necessary to compile the server side software

Field	Type	Description
EVIPROGRAM_NUM	INT	Unique record ID
EVIPROGRAM_VERSION	VARCHAR2(10)	Version of server to compile file with
EVIPROGRAM_PROG_NAME	VARCHAR2(15)	Filename of the file
EVIPROGRAM_PROG_TEXT	LONG	File data
EVIPROGRAM_COMPILE	INT	Special flag used by eviadm

## EVISCTP

Holds records for each process node.

Field	Type	Description
EVISCTP_ID	INT	Unique record ID
EVISCTP_EVIPGRP_ID	INT	Link to parent process group record in EVIPGRP
EVISCTP_NAME	VARCHAR2(64)	Name of process.

## EVISPP

Holds records for each special print parameter node.

Field	Type	Description
EVISPP_ID	INT	Unique record ID
EVISPP_EVISCTP_ID	INT	Link to parent process record in EVISCTP

EVISPP_NAME	VARCHAR2(64)	Name of special print parameter
EVISPP_COLLATE	INT	Controls the collate setting
EVISPP_COLCOUNT	INT	Number of expected columns in report file
EVISPP_ROWCOUNT	INT	Number of expected rows in report file
EVISPP_PAGEBREAKS	INT	Controls the page break setting
EVISPP_PULLSHEET	INT	Controls the pull sheet between copies setting
EVISPP_PULLTRAY	CHAR(1)	Tray to pull the sheet from
EVISPP_RETAINEXT	VARCHAR2(10)	Holds the extension to use if retaining report file
EVISPP_RETAINORIG	INT	Controls the retain original report setting
EVISPP_FIRST_MODE	INT	Specifies what to do with the first X number of pages
EVISPP_LAST_MODE	INT	Specifies what to do with the last X number of pages
EVISPP_FIRST_NUM	INT	Used with EVISPP_FIRST_MODE (X number of pages)
EVISPP_LAST_NUM	INT	Used with EVISPP_LAST_MODE (X number of pages)
EVISPP_FONTNAME	VARCHAR2(64)	Name of the default font
EVISPP_FONTPITCH	FLOAT	Default pitch for default font
EVISPP_FONTHEIGHT	FLOAT	Default height for default font
EVISPP_FONTSTYLE	VARCHAR2(4)	Default style for default font
EVISPP_FONTPCL	VARCHAR2(128)	Default PCL string for default font

EVISPP_LPI	FLOAT	Lines per inch for default font.
EVISPP_REVERSE_SORT	CHAR(1)	Controls the reverse sorting setting

## EVISPVAR

Holds the variables defined beneath a special print parameter node.

Field	Type	Description
EVISPVAR_ID	INT	Unique record ID
EVISPVAR_EVIPMOD_ID	INT	Link to owning EVIPMOD record
EVISPVAR_NAME	VARCHAR2(32)	Name of the variable
EVISPVAR_DESCRIPTION	VARCHAR2(96)	Description/purpose of variable
EVISPVAR_VARTYPE	INT	Expected data type
EVISPVAR_COL	INT	Column to find variable (MapForm)
EVISPVAR_COLCOUNT	INT	Width of variable
EVISPVAR_ROW	INT	Row to find variable (MapForm)
EVISPVAR_ROWCOUNT	INT	Height of variable

## EVIVSORT

Holds the variables that will be used to sort the output pages on the server.

Field	Type	Description
EVIVSORT_EVISPP_ID	INT	Link to owning EVISPP record
EVIVSORT_ORDER	INT	Order to apply this sorting field

EVIVSORT_VARIABLE	VARCHAR2(32)	Name of the variable to sort by
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## FormStamp Tables

EVIFPCL		
Description		
Field	Type	Description
EVIFPCL_EVIFSTMP_ID	INT	Unique record ID and link to EVIFSTMP
EVIFPCL_AUTHOR	VARCHAR2(64)	
EVIFPCL_COLCOUNT	INT	
EVIFPCL_COMMENTS	VARCHAR2(255)	
EVIFPCL_COMPANY	VARCHAR2(64)	
EVIFPCL_DPI	INT	
EVIFPCL_GRIDX	FLOAT	
EVIFPCL_GRIDY	FLOAT	
EVIFPCL_LINECOUNT	INT	
EVIFPCL_MANAGER	VARCHAR2(64)	
EVIFPCL_MEAS	INT	
EVIFPCL_ORIENTATION	INT	
EVIFPCL_PAGESIZE	INT	
EVIFPCL_RULERBOTTOM	INT	

EVIFPCL_RULERLEFT	INT	
EVIFPCL_RULERRIGHT	INT	
EVIFPCL_RULERTOP	INT	

## EVIFONTS

### Description

Field	Type	Description
EVIFONTS_ID	INT	Unique record ID
EVIFONTS_NAME	VARCHAR2(64)	
EVIFONTS_EVIBLOB_ID	INT	
EVIFONTS_PCL_ID	INT	

## EVIFSTMP

### Description

Field	Type	Description
EVIFSTMP_EVIPMOD_ID	INT	Unique record ID and link to EVIPMOD
EVIFSTMP_EVIBLOB_ID	INT	
EVIFSTMP_COPY_NUM	VARCHAR2(255)	
EVIFSTMP_OVL_NUM	INT	
EVIFSTMP_OVL_PAGE	INT	
EVIFSTMP_OVL_SIDE	INT	

## EVIPCLO

### Description

Field	Type	Description
EVIPCLO_ID	INT	Unique record ID
EVIPCLO_EVIFPCL_ID	INT	
EVIPCLO_BOTTOM	FLOAT	
EVIPCLO_LEFT	FLOAT	
EVIPCLO_RIGHT	FLOAT	
EVIPCLO_TOP	FLOAT	
EVIPCLO_LOCKED	INT	
EVIPCLO_NAME	VARCHAR2(25)	
EVIPCLO_ORDER	INT	
EVIPCLO_TRANSPARENT	INT	

## EVIPDTAF

### Description

Field	Type	Description
EVIPDTAF_EVIPCLO_ID	INT	Unique record ID and link to EVIPCLO
EVIPDTAF_EVISPVAR_ID	INT	
EVIPDTAF_FONTNAME	VARCHAR2(64)	
EVIPDTAF_FONTPITCH	FLOAT	

EVIPDTAF_FONTHEIGHT	FLOAT	
EVIPDTAF_DATACONV	VARCHAR2(128)	
EVIPDTAF_FONTSTYLE	VARCHAR2(4)	
EVIPDTAF_ANGLE	FLOAT	
EVIPDTAF_PCLCODE	VARCHAR2(128)	
EVIPDTAF_LPI	FLOAT	

## EVIPIMG

### Description

Field	Type	Description
EVIPIMG_EVIPCLO_ID	INT	Unique record ID and link to EVIPCLO
EVIPIMG_IMAGE_TYPE	VARCHAR2(5)	
EVIPIMG_EVIBLOB_ID	INT	
EVIPIMG_BRIGHT_ADJ	FLOAT	
EVIPIMG_CONTRAST_ADJ	FLOAT	

## EVIPLGRD

### Description

Field	Type	Description
EVIPLGRD_EVIPCLO_ID	INT	Unique record ID and link to EVIPCLO
EVIPLGRD_FILLCOLOR	INT	Internal color

EVIPLGRD_LINECOLOR	INT	Color of lines
EVIPLGRD_LINESTYLE	INT	Style of lines
EVIPLGRD_LINEWIDTH	INT	Width of lines
EVIPLGRD_COLCOUNT	INT	Number of columns
EVIPLGRD_ROWCOUNT	INT	Number of rows

## EVIPLINE

### Description

Field	Type	Description
EVIPLINE_EVIPCLO_ID	INT	Unique record ID and link to EVIPCLO
EVIPLINE_LINECOLOR	INT	
EVIPLINE_LINESTYLE	INT	
EVIPLINE_LINEWIDTH	INT	

## EVIPRECT

### Description

Field	Type	Description
EVIPRECT_EVIPCLO_ID	INT	Unique record ID and link to EVIPCLO
EVIPRECT_FILLCOLOR	INT	
EVIPRECT_LINECOLOR	INT	
EVIPRECT_LINESTYLE	INT	

EVIPECT_LINEWIDTH	INT	
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## EVIPTTEXT

### Description

Field	Type	Description
EVIPTTEXT_EVIPCLO_ID	INT	Unique record ID and link to EVIPCLO
EVIPTTEXT_ALIGN	INT	
EVIPTTEXT_ANGLE	FLOAT	
EVIPTTEXT_FILLCOLOR	INT	
EVIPTTEXT_FONTCOLOR	INT	
EVIPTTEXT_FONTNAME	VARCHAR2(64)	
EVIPTTEXT_FONTSIZE	FLOAT	
EVIPTTEXT_FONTSTYLE	VARCHAR2(4)	
EVIPTTEXT_INDENT	INT	
EVIPTTEXT_LINECOLOR	INT	
EVIPTTEXT_LINESTYLE	INT	
EVIPTTEXT_LINEWIDTH	INT	
EVIPTTEXT_TEXT	LONG	
EVIPTTEXT_PCLCODE	VARCHAR2(128)	
EVIPTTEXT_FONTPITCH	FLOAT	
EVIPTTEXT_BASELINEOFF	INT	

EVIPTEXT_PCLPITCH	FLOAT	
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## MapForm Tables

EVIMAPF		
Contains the information for a single MapForm		
Field	Type	Description
EVIMAPF_EVIPMOD_ID	INT	Unique record ID and link to EVIPMOD
EVIMAPF_EVIBLOB_ID	INT	Associated LIS file
EVIMAPF_FORMAT	INT	Format of LIS file, 0 = normal, 1 = comma-delimited
EVIMAPF_HEADER_SIZE	INT	Size of the header area
EVIMAPF_HEADER_SIZING	INT	The method of sizing the header area: 0 - size always remains the same 1 - size is adjusted by OFFSET rows using a column search for SEARCHTEXT
EVIMAPF_HEADER_SEARCHTEXT	VARCHAR2(64)	Text to search for when SIZING is 1
EVIMAPF_HEADER_OFFSET	INT	Number of rows to offset header size when SIZING is 1
EVIMAPF_HEADER_COLUMN	INT	Starting column to search for text when SIZING is 1
EVIMAPF_HEADER_COLUMN_COUNT	INT	Width of column to search for text when SIZING is 1
EVIMAPF_FOOTER_SIZE	INT	Size of the footer area

## EVIMFAFLD

Describes all floating fields created on a MapForm.

Field	Type	Description
EVIMFAFLD_EVIMFFLD_ID	INT	Ties this record to EVIMFFLD
EVIMFAFLD_OWNER_ID	INT	Owning area of the Mapform 0 - detail 1 - header 2 - footer
EVIMFAFLD_RESIZE_MODE	INT	The style of resizing for this field 0 - none 1 - move 2 - resize

## EVIMFFLD

Contains all fields created on a MapForm.

Field	Type	Description
EVIMFFLD_EVISPVAR_ID	INT	Unique record ID and link to EVISPVAR
EVIMFFLD_EVIMAPF_ID	INT	The owning Mapform
EVIMFFLD_FIELD_TYPE	INT	Easy method of determining what type of field this record is

## EVIMFOFLD

Describes all offset fields created on a MapForm.

Field	Type	Description
EVIMFOFLD_EVIMFFLD_ID	INT	Unique record ID and link to EVIMFFLD
EVIMFOFLD_START_ROW	INT	Upper row to begin searching
EVIMFOFLD_START_COLUMN	INT	Left-most column to begin the search for SEARCH_TEXT

EVIMFOFLD_STOP_ROW	INT	Bottom row to stop searching
EVIMFOFLD_STOP_COLUMN	INT	Right-most column to stop the search for SEARCH_TEXT
EVIMFOFLD_SEARCH_TEXT	VARCHAR2(64)	Text to search for in mapped field
EVIMFOFLD_TRIM	CHAR(1)	'Y' means trim the text to be compared to SEARCH_TEXT before comparing
EVIMFOFLD_MAPPING_AREA	INT	If SEARCH_TEXT is found, controls what happens to mapped area 0 Nothing 1 Text is removed (left blank) 2 Entire line is removed

## CaptureForm Tables

### EVICFORM

Holds references to each CaptureForm process modifier

Field	Type	Description
EVICFORM_EVIPMOD_ID	INT	Unique record ID and link to EVIPMOD record

### EVICFSQL

Holds each query created for a CaptureForm process modifier

Field	Type	Description
EVICFSQL_ID	INT	Unique record id
EVICFSQL_EVICFORM_ID	INT	Link to EVICFORM record
EVICFSQL_NAME	VARCHAR2(64)	The name of this query

EVICFSQL_EVIBLOB_ID	INT	The text of the SQL statement, record in EVIBLOB
EVICFSQL_MAXRECORDS	INT	The maximum number of records to retrieve
EVICFSQL_APPLIED	INT	The group to execute this query in, pre(0), page(1), post(2)
EVICFSQL_ORDER	INT	The order to execute, in same APPLIED group
EVICFSQL_USEINSERT	CHAR(1)	True if this query should be used during a sort operation

### EVICFVAR

Specifies which variables defined in EVISPVAR are CaptureForm variables

Field	Type	Description
EVICFVAR_EVISPVAR_ID	INT	Unique record ID and link to EVISPVAR

## FormDirector Tables

### EVIFDDIR

Description

Field	Type	Description
EVIFDDIR_EVIPMOD_ID	INT	

### EVIFDARC

Description

Field	Type	Description
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EVIFDARC_ID	INT	Unique record ID
EVIFDARC_EVIFDDIR_ID	INT	
EVIFDARC_EXECUTE	INT	
EVIFDARC_DEPEND	INT	
EVIFDARC_DEPENDCOND	INT	
EVIFDARC_COPY	INT	
EVIFDARC_FORMAT	INT	

## EVIFDEML

### Description

Field	Type	Description
EVIFDEML_ID	INT	Unique record ID
EVIFDEML_EVIFDDIR_ID	INT	
EVIFDEML_EXECUTE	INT	
EVIFDEML_DEPEND	INT	
EVIFDEML_DEPENDCOND	INT	
EVIFDEML_COPY	INT	
EVIFDEML_TO	VARCHAR2(255)	
EVIFDEML_CC	VARCHAR2(255)	
EVIFDEML_BCC	VARCHAR2(255)	
EVIFDEML_SUBJECT	VARCHAR2(255)	

EVIFDEML_RECEIPT	VARCHAR2(255)	
EVIFDEML_BODY	LONG	
EVIFDEML_FORMAT	INT	
EVIFDEML_FROM	VARCHAR2(255)	
EVIFDEML_FILENAME	VARCHAR2(64)	
td>EVIFDEML_SCRIPT		
VARCHAR2(255)		

## EVIFDFAX

### Description

Field	Type	Description
EVIFDFAX_ID	INT	Unique record ID
EVIFDFAX_EVIFDDIR_ID	INT	
EVIFDFAX_EXECUTE	INT	
EVIFDFAX_DEPEND	INT	
EVIFDFAX_DEPENDCOND	INT	
EVIFDFAX_COPY	INT	
EVIFDFAX_PHONE_NUM	VARCHAR2(64)	
EVIFDFAX_SCRIPT	VARCHAR2(255)	

## EVIFDPRT

### Description

Field	Type	Description
EVIFDPRT_ID	INT	Unique record ID
EVIFDPRT_EVIFDDIR_ID	INT	
EVIFDPRT_EXECUTE	INT	
EVIFDPRT_DEPEND	INT	
EVIFDPRT_DEPENDCOND	INT	
EVIFDPRT_COPY	INT	
EVIFDPRT_SCRIPT	VARCHAR2(255)	

## EVIFDWEB

### Description

Field	Type	Description
EVIFDWEB_ID	INT	Unique record ID
EVIFDWEB_EVIFDDIR_ID	INT	
EVIFDWEB_EXECUTE	INT	
EVIFDWEB_DEPEND	INT	
EVIFDWEB_DEPENDCOND	INT	
EVIFDWEB_COPY	INT	
EVIFDWEB_SCRIPT	VARCHAR2(255)	

## Archiver Tables

### EVIARCHV

Holds the variables that will be used to sort the output pages on the server.

Field	Type	Description
EVIARCHV_ID	INT	Unique record ID
EVIARCHV_PROCESS	VARCHAR2(64)	The process that this document was created for
EVIARCHV_LISNAME	VARCHAR2(64)	The name of the LIS file of the report
EVIARCHV_SPP	VARCHAR2(32)	The special print parameter this process was run with
EVIARCHV_JOB_DATE	DATE	The date this job was processed
EVIARCHV_JOB_USER	VARCHAR2(64)	The user that processed the job
EVIARCHV_ARC_DATE	DATE	The date this document was archived
EVIARCHV_ARC_USER	VARCHAR2(64)	The user that archived the document
EVIARCHV_EVIBLOB_ID	INT	Link to EVIBLOB record that holds the document
EVIARCHV_CDNUM	VARCHAR2(15)	CD number, used during archiving
EVIARCHV_REFNUM	VARCHAR2(15)	Unique CD reference number
EVIARCHV_NAME	VARCHAR2(32)	Name of the archived document
EVIARCHV_COMMENTS	VARCHAR2(255)	Any comments made by users
EVIARCHV_EXP_DATE	DATE	Date the document should expire
EVIARCHV_FLAGS	INT	Special meaning inside of FormFusion Archiver
EVIARCHV_FORMAT	VARCHAR2(15)	Format the document has been stored in.

## EVIARUSR

Contains the names of users allowed access to specific processes in regards to FormFusion Archiver.

Field	Type	Description
EVIARUSR_ID	INT	Unique record ID
EVIARUSR_USERNAME	VARCHAR2(64)	Username being granted access
EVIARUSR_PROCESS	VARCHAR2(32)	Process the user can access
EVIARUSR_SPP	VARCHAR2(32)	Special print parameter the user can access
EVIARUSR_FLAGS	INT	Permission flags
EVIARUSR_EXP_DATE	DATE	Expiration date of permission

## Additional Resources

### Introduction for FormFusion Training

The *Introduction to FormFusion Training*, which you can attend multiple times free of charge, is offered every week for those new to FormFusion or for those who need a refresher course on any basic tools of FormFusion. You can sign up on our calendar at <http://www.evisions.com/calendar>

### FormFusion Tutorial

Additional training materials, including tutorials and PDF documents on various FormFusion functions and topics, can be downloaded from the Evisions web site at <http://www.evisions.com/support/tutorial.asp>.

### *Multimedia Demos*

- Import/Export
- FormStamp
- MapForm
- CaptureForm

- FormDirector

### ***PDFs***


- FormFusion Overview
- Logging into FormFusion
- Importing Templates
- Offset Fields
- Distributed Printing
- Creating Multiple Copies
- CaptureForm/SQL
- Conditional Overlays
- Adding and Manipulating Fonts and Graphics
- Wrapping Banner Data
- Creating Solaris Print Filters

### ***Special Topics***

- Using Custom Paper with FormFusion – PowerPoint
- Setting up FormFusion for GLRLETR – Client Whitepaper
- Using FormFusion Email with 3<sup>rd</sup> Party Systems – Client Whitepaper

## Glossary

Vocabulary	Definition
<b>Administrator</b>	A FormFusion administrator is who has full access to the Database and is responsible for configuring FormFusion.
<b>Adobe PDF</b>	<p><i>Portable Document Format</i>, a file format developed by Adobe Systems. PDF captures formatting information from a variety of desktop publishing applications, making it possible to send formatted documents and have them appear on the recipient's monitor or printer as they were intended. To view a file in PDF format, you need Adobe Reader, a free application distributed by Adobe Systems.</p> <p>(Webopedia 14 June 2007 &lt;<a href="http://www.webopedia.com/TERM/P/PDF.html">http://www.webopedia.com/TERM/P/PDF.html</a>&gt; )</p>
<b>Baseline input file</b>	Normal Banner output with just text and requires a pre-printed stock.
<b>Bind variable</b>	Any variable name followed by a colon that is used in mapForm or captureForm.
<b>Client</b>	A form development tool that enables a user to specify which Banner processes should be enhanced by the FormFusion server.
<b>Core module</b>	MapForm, CaptureForm, FormDirector.
<b>Developer</b>	A person who will modify the FormFusion templates.
<b>Evilp</b>	Command that replaces the print command in your gjajobs or sctban file. This command determines whether a process is a FormFusion process or not, then sends the input report file from Banner to printer, email, archive, printer, or a third party imaging system.
<b>EVISIONS user</b>	Required to own tables created for FormFusion.
<b>FTP</b>	<p>File Transfer Protocol is used to transfer data from one computer to another over the Internet, or through a network.</p> <p>(Wikipedia 14 June 2007 &lt;<a href="http://en.wikipedia.org/wiki/File_Transfer_Protocol">http://en.wikipedia.org/wiki/File_Transfer_Protocol</a>&gt; )</p>
<b>Help Desk</b>	A help system for Evisions where clients with an account can open up request ticket.
<b>Knowledge Base</b>	A collection of HelpDesk tickets that provide pertinent answers to common questions and problems that might arise while installing or using any Evisions' products.

<b>Input report file</b>	The ascii text file created in Banner and used by FormFusion to enhance the output and a professional looking form. Initially stored on the server side, it has to be 'ftp'ed to the Window side before it can be imported into FormFusion for modification. Examples of the input report file are .lis and .doc files.
<b>Optional modules</b>	ArchiveDirector, EmailDirector, ScriptDirector, WebDirector.
<b>Process</b>	A job that is run through Banner to create an input report file for FormFusion server.
<b>Seeds</b>	The seeds values stored in a local file(seeds.ini) allow FormFusion to decrypt the password used to enable the correct Oracle role. It is required in order for FormFusion to become part of the Banner system.
<b>Server</b>	The executable that processes the banner output according to the rules set in the FormFusion client.
<b>Spin Box</b>	
<b>Support request</b>	Any trouble-shooting or product support requested by a client.
<b>Template</b>	A design layout of the forms created in FormFusion.
<b>User</b>	A person who usually submits the Banner job and who may not modify the FormFusion templates.