

FORMFUSION

TECHNICAL PRODUCT DESCRIPTION

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Baseline/Before

Subj	Crse	Sec	P/T	Camp	Title	Grd	Creds	EarnHr	GPA	Hr	QualPt	GPA
ACCT	2320	001	1	M	Intermediate Accounting I	B	3.00	3.00	3.00	9.00		
COMA	1120	001	1	M	Public Speaking	C	3.00	3.00	3.00	6.00		
HIST	1201	001	1	M	The United States to 1877	A	3.00	3.00	3.00	12.00		
MGMT	2006	001	1	M	Info. Sys. for Management	A	3.00	3.00	3.00	12.00		
PHIL	1500	001	1	M	Logic	A	3.00	3.00	3.00	12.00		
STAT	2108	001	1	M	Intro. to Statistics II	D	3.00	3.00	3.00	3.00		

After
FormFusion

Allan Thompson
345 King Street
Malvern, PA 19355



EVISIONS UNIVERSITY

STUDENT GRADEMAILER
18818 Teller Avenue, Ste. 250
Irvine, CA 92612
(949) 833-1384

Bob Jones
123 Main Street
Town, CA 12345

Student ID#: 99999999

Major
Accounting

Undergraduate

Course Name	Course Number	Section	P/T	Campus	Course Title	Grade	Credit Hours	Earned Hours	GPA Hours	GPA	
CHCR	CE933	07	E	W	CC Creative Art 5	Z	0.30	0.00	0.00	0.00	
CHCR	CE933	12	E	W	CC Making Mealtime Creative	Z	0.30	0.00	0.00	0.00	
CHCR	CE933	14	E	W	CC Creative Movement in Music	Z	0.30	0.00	0.00	0.00	
								0.00	0.00	0.00	.00

Major	Academic Standing
Undeclared	Good Standing
Level	Term
Continuing Education	Fall 1999

	Earned Hours	GPA Hours	Grade Points	GPA
Cumulative	.00	.00	.00	.00
Transfer				
Overall	.00	.00	.00	.00

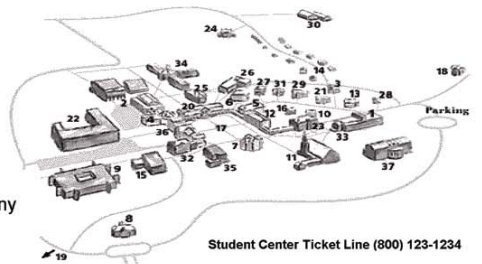
GRADING SYSTEM

4.0 - Outstanding	1.0 - Deficient	AU - Audit
3.5 - Excellent	0.0 - Failed	FA - Failed to Attend
3.0 - Good	S -- Satisfactory	PR - In Progress
2.5 - Above Average	U -- Unsatisfactory	WF - Withdraw Failing
2.0 - Average	Q -- Qualified	WP - Withdraw Passing
1.5 - Below Average	NQ - Not Qualified	

I - Incomplete -- In order to become passing grades, incompletes must be fully satisfied by the end of the semester.

Be Sure to Visit the Newly Remodeled Student Center at Anderson Hall (#32)

Dec. 14 Chamber Chorale Performance
Dec. 23 "Global Understanding" presented by Donavan MacIlheny
Jan. 11 Britney Speers, In Concert



Student Center Ticket Line (800) 123-1234

Baseline/Before

P0000015 Page 1
07/07/93

300000020

ARCO Manufacturing Co., Inc.
123 Main
Anytown PA 19341

222 EAST ST.
EAST CAMPUS
COLLEGETOWN PA 19341

07/09/93

**After
FormFusion**

Net 30 Days

FOB Shipping Point 222

- 1 3110000000
Tablets, Ruled, 8.
- 2 3120000000
Pens, Black, Fine
- 3 3200000000
Supplies, Classro
- 4 3210000000
Markers, Whiteboar
- 5 3110000000
Tablets, Ruled, 8.
- 6 3120000000
Pens, Black, Fine



Banner Sample
Purchasing Department
18818 Teller Ave., Suite 250 Irvine, CA 92663
Voice: (949) 833-1384 Fax: (949) 833-0327

PURCHASE ORDER
Number: **P0000027**
Please show this number on all packages and documents related to this order
Date: 03/18/95
Vendor: @00000018

Sample Vendor
18818 Teller Avenue
Irvine CA 92612

Bill To:
876 Main Street
Irvine CA 92612

INVOICES MUST BE ITEMIZED SHOWING QUANTITY,
UNIT PRICE AND TOTAL. INVOICE IN DUPLICATE.

Requisition #:
TAX EXEMPTION #: 1-23-4567890

PLEASE ACKNOWLEDGE RECEIPT OF THIS ORDER AND GIVE DEFINITE DELIVERY DATE

Item	Item Description	Units	Unit Price	Extended Price
1	3110000000 Tablets, Ruled, 8.5x11	600.00 EA	.4500	270.00
2	3120000000 Pens, Black, Fine Point	190.00 EA	5.5500	1,054.50
3	3200000000 Supplies, Classroom	35.00 BOX	10.0000	350.00
4	3210000000 Markers, Whiteboard	40.00 BOX	10.0000	400.00
5	1222000000 Chair, Folding, Metal	10.00 EA	10.0000	100.00
				DISCOUNT: .00
				ADDL CHARGES: .00
				TOTAL TAXES: .00

FOB: FOB Shipping Point

TOTAL: 2,174.50

TERMS: 2% 10 Days

BUYER: Teresa Samoza

AUTHORIZED SIGNATURE: *Bob Jones*

PLEASE SEE TERMS AND CONDITIONS ON REVERSE SIDE

3110-11003-1430	270.00
3110-11004-1430	1054.50
3110-11005-1430	350.00
3110-11006-1430	400.00
3110-11007-1430	100.00

ACCT DATA

ACCT DATA

ACCT DATA

Vendor/Originator Copy

FormFusion® Suite

Technical Product Description

FormFusion will fundamentally transform the appearance, data content, and flow of Banner® data at your institution. Over 300 SCT Banner® sites around the world, are reducing costs, saving time, making work easier, and opening up entirely new possibilities for the appearance and distribution of Banner information.

Taking the output directly from SCT Banner®, FormFusion® allows the user to add and delete data, text and graphics, and then distribute the output where and when they require. All of this is done without any reprogramming of the SCT Banner® baseline code.

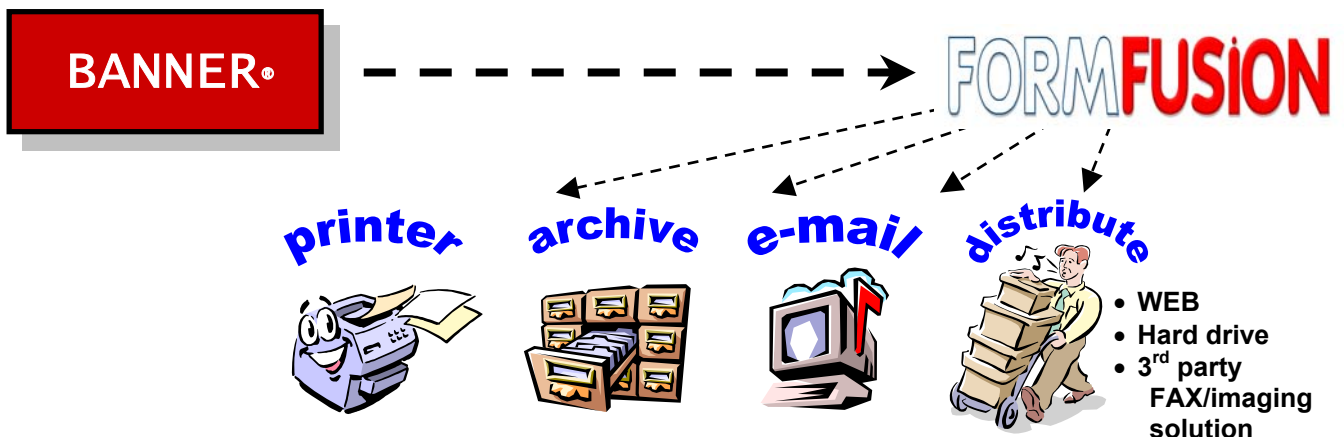
With **FormFusion®**, you can produce World Class output that any institution would be proud to provide to their employees, customers, vendors, and/or students.

No additional hardware is required and no modifications are made to your SCT Banner® system. Only a single PC installation is required. Once configured, everything else resides on your existing Banner host server. It runs invisibly, and does all its work without any user interaction. No end-user training is required.

BEFORE EVISIONS

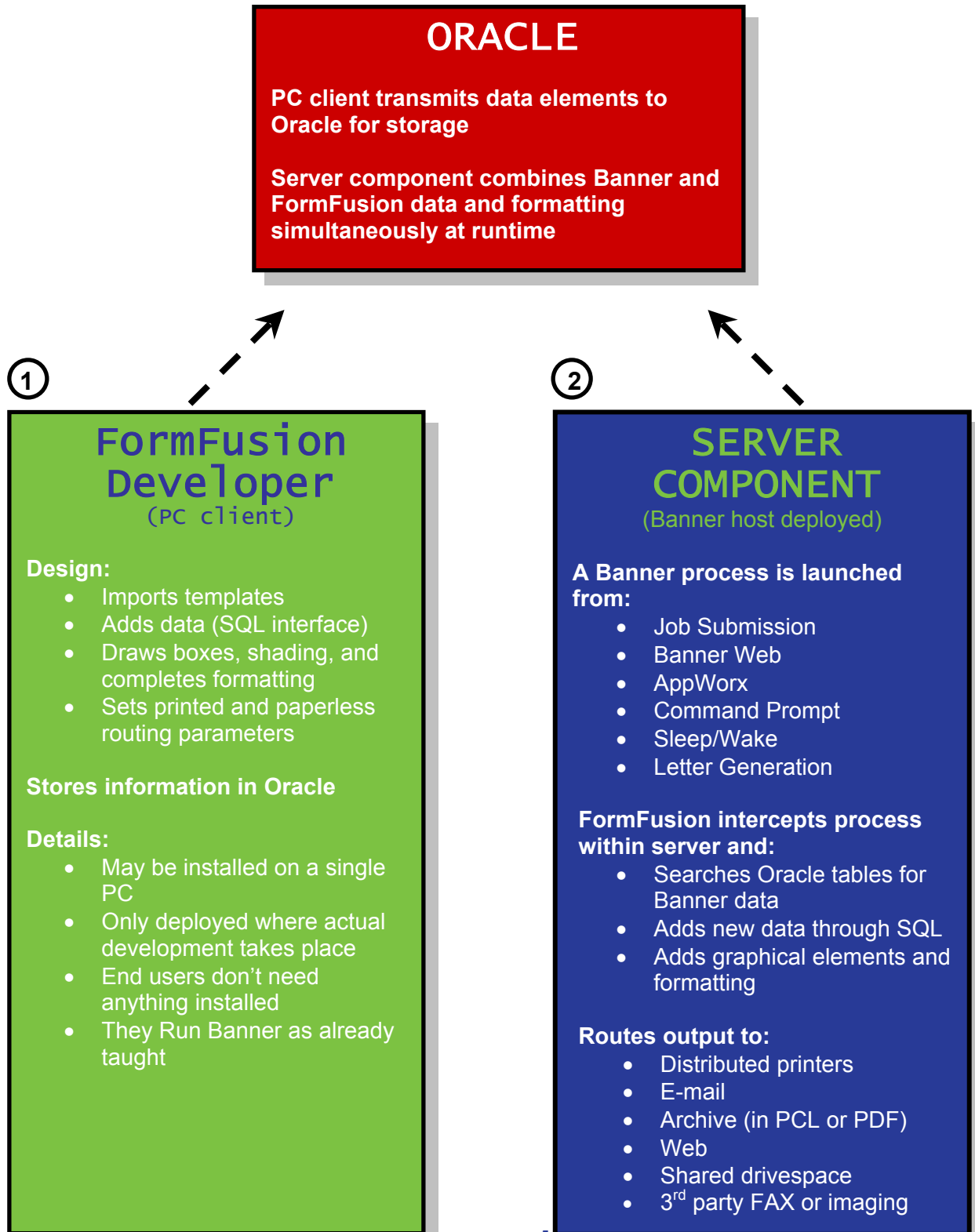


AFTER EVISIONS



The two major components of FormFusion® Suite:

1. PC based design and data content tool
2. SCT Banner® host server deployed distribution management system



1. FormFusion® *Developer*

FormFusion® **Developer** is the centerpiece of the FormFusion® Suite workstation software. It is the design, layout, and data content module that is used to either import and modify, or “build” your output from the ground up. **Developer** only needs to be installed on a single PC for FormFusion® to operate. **Developer** runs on any Windows platform.

Once the look, and distribution parameters are set, end-users simply run SCT Banner®, and the rest occurs invisibly on the SCT Banner® host server.

The **Developer** module consists of three major components – **MapForm**, **FormStamp**, and **CaptureFormSQL**.

NOTE: This document delves into technical detail and explores many of FormFusion’s features. There are innumerable components to this product that will allow you to do amazing things. Remember, you can in just minutes, open a template, modify it for your use, and put it in production. Much of what you will now read can be done in phases. Getting up and running can be as rapid as you like.

Evisions is always ready to help with free training, or you can contract with us to complete templates to your specifications on an hourly basis. Just ask!

MapForm

MapForm is used to “map” SCT Banner® data fields to which you can assign variable names. This allows you to create a collection of data elements that you can drag and drop, and paste into other plug-ins as needed. All the SCT Banner® templates that Evisions ships have this already done for you. Simply drag the data fields where you want them on the page. Copy them, and use them elsewhere. Change the size. You have the tools to change where the data is located and how it looks.

Advanced users can also use the mapping feature to capture fields other than those we’ve already named for you. Use them as you desire, and build custom output.

MapForm also has new features, beginning in v1.5 that allow you to search for text (the word “total”, for example), then offset the field to capture or collect the associated value. Thus, search a finance report for the word “total”, and then capture the data that is to the right of this word as the “amount” to be printed or used in a calculation.

You can also use it to accommodate resizing headers and footers that allow the parent section to grow/shrink according to the amount of data in the section. Now data that is not ‘locked down’ in one spot on the SCT Banner® output can be captured and moved to where YOU want it.

FormStamp

FormStamp is the first step, the designing tool, used to create the template or form. It is also the means by which you import Evisions' already feature-packed templates for easy completion and implementation. **FormStamp** allows you to replace preprinted forms, and develop new ones from scratch. It is comprised of familiar drawing tools: lines, shapes, shading, fonts, outlines, alignment features, graphical import, and more. It is as simple to use as any paint, drawing, or graphics program with which your users may already be familiar.

In addition to **MapForm** and **FormStamp**, **CaptureFormSQL** makes the Director module a highly valuable data content tool.

CaptureFormSQL

CaptureFormSQL allows users to easily add data to the report and perform mathematical calculations. This element is crucial, as it lets users add the important data they need to their output. As with the other changes, SQL does this without changing your underlying code. It's an indispensable tool help you make SCT Banner® "say" what you want. You'll see more details below.

Using simple SQL statements a user can call more advanced functions provided by SCT Banner®. SQL statements can be written to create tables and/or update values. Queries can be written to execute only once before or after the list file is processed, or designed to execute for every page.

With **CaptureFormSQL**, any returned value is mapped to a variable with properties you have assigned. Thus, if a query is written that returns more than one row, you define the query to accept the number of rows expected.

1a. MAPFORM

Associate a variable name to a field in the list file

Floating Fields		1	2	3	4	5	6	7	8	9			
Campus		1234567890123456789012345678901234567890123456789012345678901234567890											
CourseName	1												
CourseNum	2												
CourseTitle	3	Subj	Crse	Sec	P/T	Camp	Title	Grd	Creds	EarnHr	GPA Hr	QualPt	GPA
CreditHrs	4	ACCT	2320	001	1	M	Intermediate Accounting I	B	3.00	3.00	3.00	9.00	
CumEarnHrs	5	COMM	1120	001	1	M	Public Speaking	C	3.00	3.00	3.00	6.00	
CumGPA	6	HIST	1201	001	1	M	The United States to 1877	A	3.00	3.00	3.00	12.00	
CumGPAHrs	7	MGMT	2006	001	1	M	Info. Sys. for Management	A	3.00	3.00	3.00	12.00	
CumGradePts	8	PHIL	1500	001	1	M	Logic	A	3.00	3.00	3.00	12.00	
DeansList	9	STAT	2108	001	1	M	Intro. to Statistics II	D	3.00	3.00	3.00	3.00	
EarnedHrs	10												
GPA	11												
GPAHrs	12												
Grade	13												
Level	14												
lvl	15												
Major	16	Allan Thompson			210009405	199520	Total	18.00	18.00	54.00	3.00		
OverallEarnHrs	17	345 King Street											
OverallGPA	18	Malvern, PA 19355											
OverallGPAHrs	19												
OverallGPApts	20												
PT	21												
Section	22												
Standing	23												
StudentID	24						Cumulative	66.00	66.00	192.00	2.90		
StudentInfo	25												
Offset Fields	26												
	27	Major	Accounting			Academic Standing	Good Standing		Dean's List				
	28												
	29												

Fig. 3 – Sample MapForm Session

MapForm is the plug-in used by the FormFusion® **Developer** to define the layout of the SCT Banner® report file being submitted to FormFusion® for enhancement. With traditional methods of printing reports, the output from the report is fixed, limiting your options. In order to move these areas you must modify the process code, recompile, and test the output until the text lines up appropriately on the page.

MapForm gives you the ability to move the output without modifying the baseline code. **MapForm** allows you to draw boxes around areas on the form and assign a "name" to these areas. Once you have outlined all of the important areas on the input file you can drop this information on the final output using **FormStamp**.

The use of **MapForm** is easy. First, a sample print file from the process being enhanced is imported into **MapForm**. This print file should be in the format that the process would normally produce. Once imported, each page will be shown a page at a time. You are free to navigate through the pages as necessary. Using the mouse, the designer draws boxes called "floating fields" around the data. Each field is appropriately named to denote what information will normally appear at that location. (See. Fig. 3)

Example: Let's assume that you pulled into **MapForm** a sample Grade Mailer output file. By viewing on-screen, you could highlight the "Course Number" column on the printed form and create a field name called "**CourseNum.**" (See. Fig. 3)

One of the challenges with a product that relies upon input "text-based" files lies in that many elements that you may want to "map" move around on a page and may not exist in the same location on successive pages. For example, on a multi-page Purchase Order, only the last page will contain the information on *Additional Charges*, *Discount Amounts* and *Taxes*. Or on Student Rosters, the header area might grow or shrink depending on the number of professors teaching a course. **MapForm** has addressed this issue with advanced features. **MapForm** provides the ability to searching for certain text that might or might not be present as well as define headers that shrink and grow from page to page.

If you do not add a **MapForm** node beneath the Special Print Parameter, all the text from the original list file will be displayed in a 10 pitch Line Printer font in the original locations. Once a **MapForm** has been created for a Special Print Parameter, *only* the fields placed on the form will print. All other text from the report are assumed to be un-needed and will be discarded.

1b. FORMSTAMP

Add Logos

Add additional text

Map a variable to the location you want it to print

Add graphical elements, boxes, shading

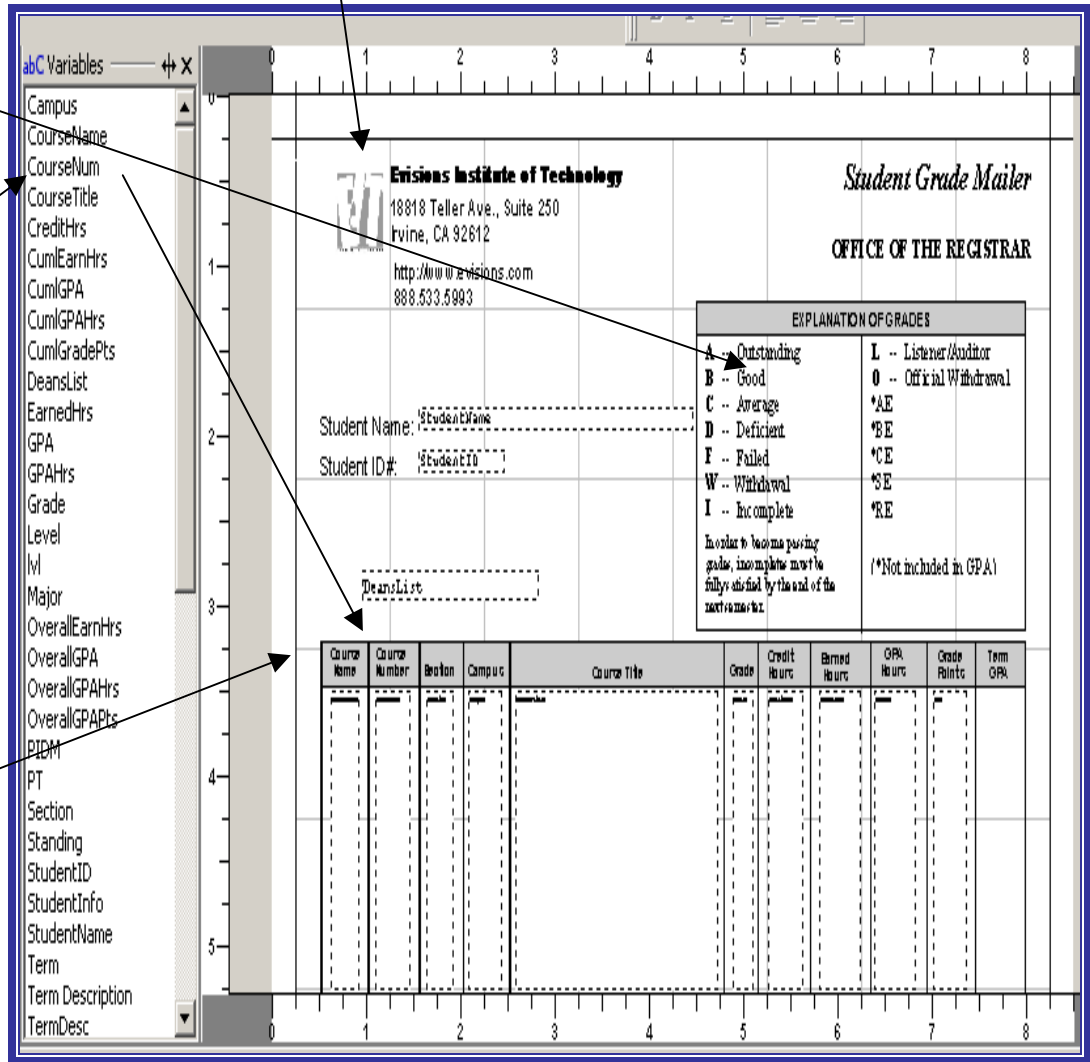


Fig. 4 – Sample *FormStamp* Screen

FormStamp is the core plug-in used by FormFusion® **Developer**. **FormStamp** is the tool that is used to create the visual layout of the finished documents. **FormStamp** is a What-You-See-Is-What-You-Get (WYSIWYG) tool. Using **FormStamp**, the designer adds the graphical elements, such as logos, signatures, boxes, etc., that will print on the final output. (See Fig. 4).

In addition to the basic drawing tools, **FormStamp** also brings together elements from other FormFusion® **Developer** plug-ins. These include dropping mapped fields (**MapForm**) onto your final output along with custom SQL results (**CaptureForm**).

One can begin by simply creating a form or template that will overlay the data stream coming from a SCT Banner® process. Or, better yet, begin with the sample templates provided. Evisions has already created templates for the most requested SCT Banner® processes.

Pages can be easily formatted by the addition of graphical elements such as boxes, lines, shading, logos and signatures. **Developer** frees you from being limited to baseline appearance. By clicking and dragging, data is easily moved to where you want it. With a simple click, you can modify the font size and type. Just as easily, changes to orientation and paper size can be made.

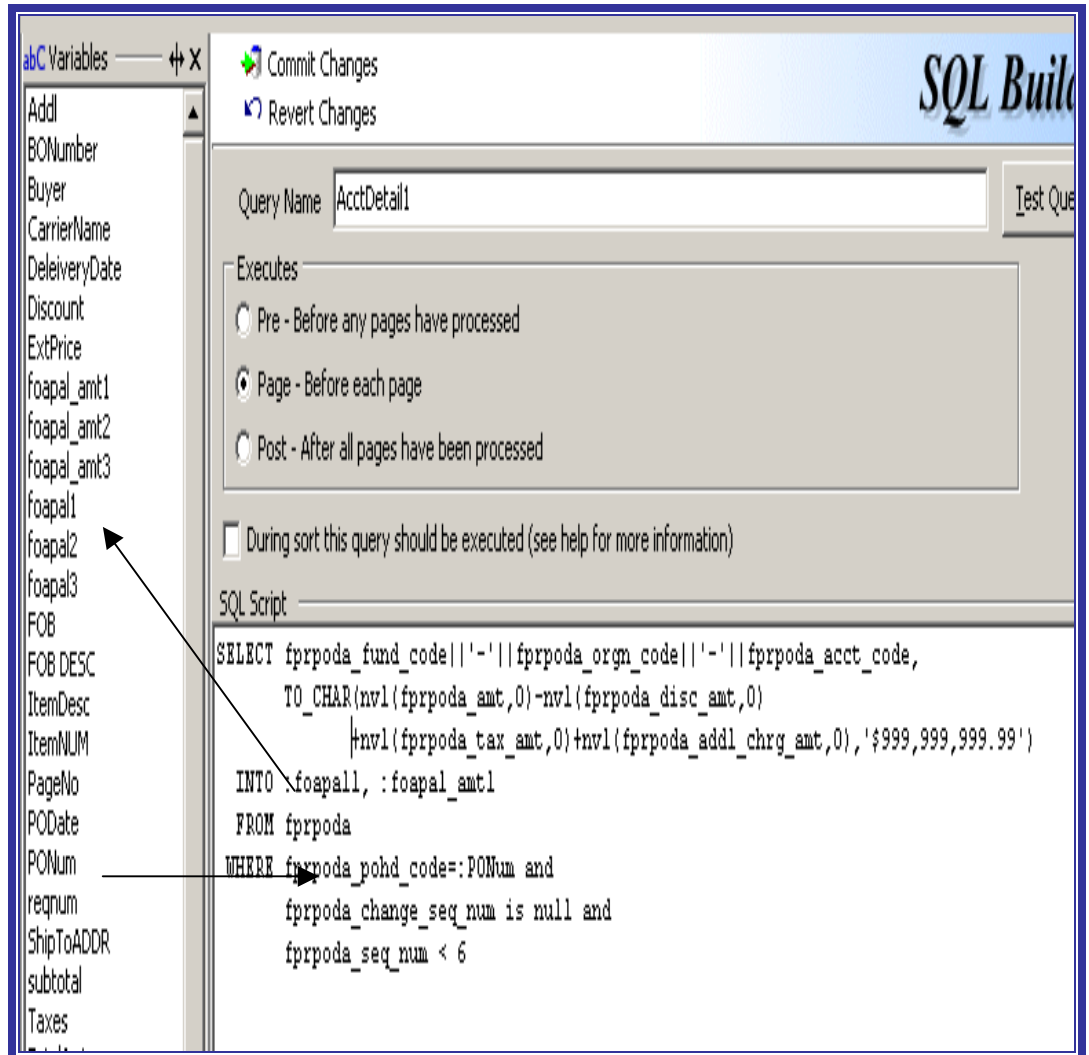
Multiple copies can be created—each with a different appearance. **Developer** allows you to define the number of copies and select the corresponding "digital template" to be used for each copy. For example, a signature could be printed on the original copy and no signature on additional copies.

Output can be pulled from different trays. The original copy of a process could be printed on high quality paper and additional copies on lower cost paper stock pulled from a different tray.

In **Developer**, there is no limit to the number of "digital templates" you can design for any SCT Banner® process. Also, should you run a process that does not have a digital template defined, FormFusion® Suite will pass it on to the normal output method. All of this is transparent to the end user submitting the job.

One result of using **FormFusion®** is the immediate obsolescence of many costly pre-printed forms. No longer will you need to throw out boxes of pre-printed forms because of a logo or signature change, or due to improper storage. The cost savings are tremendous using blank stock vs. preprinted. Now you can create a digital document unique for your site or campus. Output can be quickly customized to reflect different logos for different campuses without the need to change paper stock in the printer.

1c. CAPTUREFORM-SQL



Using data defined on MapForm, data from any existing SCT Banner table can be quickly retrieved into new variables that can now be mapped onto the FormStamp template

Fig. 5 - Sample CaptureFormSQL screen

CaptureFormSQL is a plug-in used within FormFusion® **Developer** to perform a variety of functions. The primary use of **CaptureFormSQL** is to retrieve additional information from your Oracle environment for use on your document's output. However, it can also be used to include items such as mathematical calculations, inserting or deleting information in your Oracle environment and formatting character strings.

With all **CaptureFormSQL** statements you can use "fields" from the **MapForm** module to aid in your selection criteria within the SQL statement. Thus, you have the ability to use information on the document to tie back to various pieces of database information.

With this feature, virtually any information stored in SCT Banner®'s tables can be added to the output. Possibilities are endless! The capabilities of this module cannot be overstated. Valuable information can be added to any SCT Banner® processes.

The above example (see Fig. 5) shows how by using **CaptureFormSQL** with the SCT Banner® Purchase Order Process (FPAPORD) the accounting or FOAPAL information can be quickly retrieved based on the Purchase Order number printed on the original list file. This information can now be 'mapped' to the new form and will print at the time the purchase order is printed.

2. FORMDIRECTOR

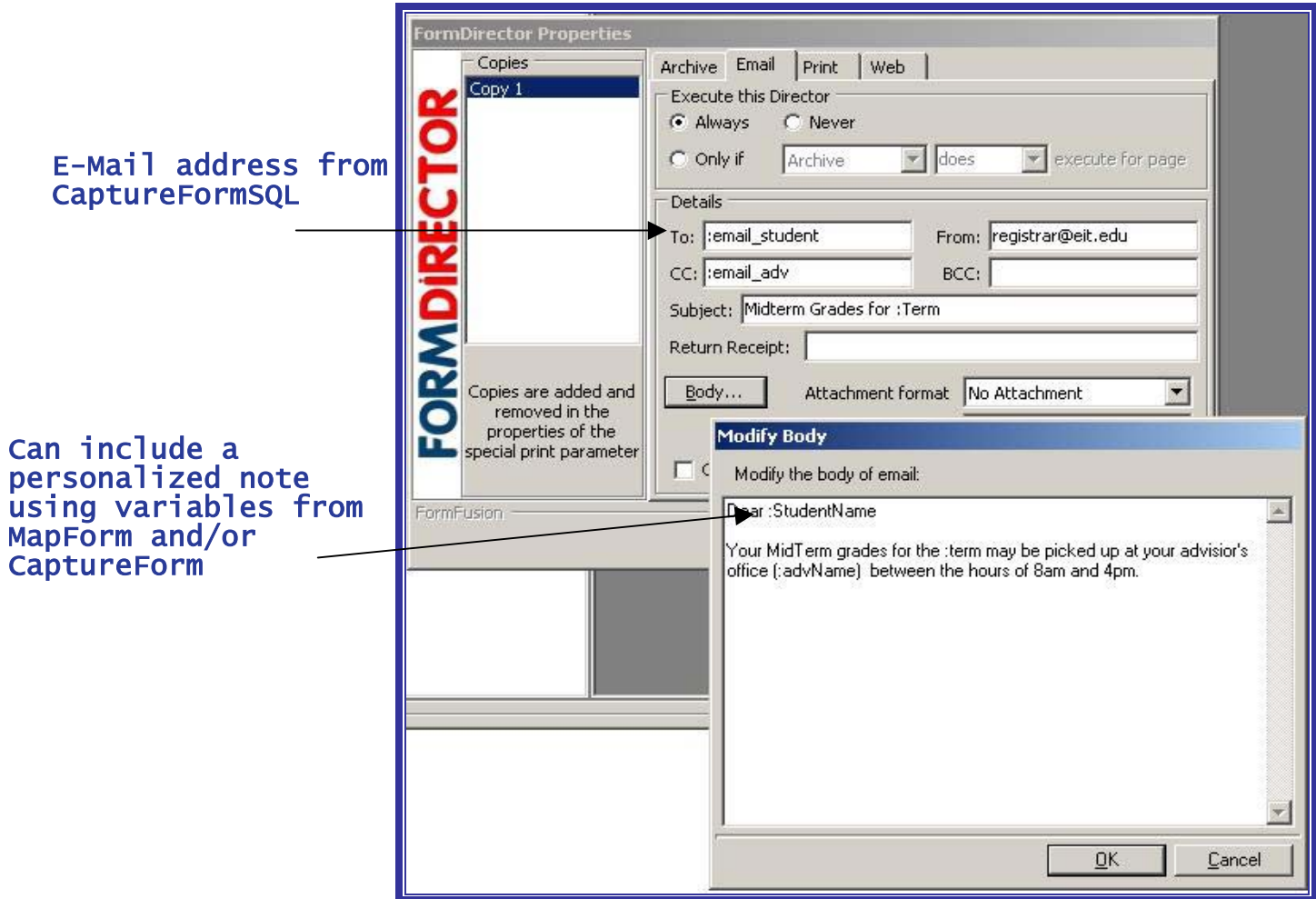


Fig. 6 – Sample FormDirector screen for e-mail

FormDirector is the server-deployed portion of the FormFusion® solution that directs where your perfectly designed new form will go. You may choose to send your digital document to ANY of your networked printers easily. You might opt to send another copy via e-mail. You could store it to archive. You may prefer to send it to a specific location for integration with another product, or for shared viewing on an intranet/extranet/or shared drive space.

The current output options are; printer, email, archive, and shared drive space/WEB. Some third-party fax servers, such as RightFAX are supported as well. (Oftentimes, they require custom integration, so consult with us first).

- **Print Director:** This is included with the base FormFusion® package. You can override the SCT Banner® printer selection and create a custom print command using Print Director. Send output to any networked printer *easily*. Output documents to any PCL5

compatible laser printer. Designate special bins, and eliminate the need for loading pre-printed forms.

- **Email Director:** This option allows you to direct the output via email. You can determine the email address, subject, body and the type of attachment. The **FormDirector** module can directly convert the output to PDF as an attachment. This is used often to route POs, and to distribute reports to appropriate personnel. It is a tremendous timesaver. It completely eliminates postage, and the internal costs of distribution interoffice mail.
- **Archive Director:** The output can be stored in FormFusion® Archiver for later retrieval and printing. Output can be converted to PDF or PCL.
- **Fax Director:** If you have available a third-party Fax Server, Fax Director can call the server and pass to it the output from FormFusion® in several formats - PCL, ASCII or PDF. Please ask, as not all products are supported. The set-up for each is different.
- **Distribute/WEB Director:** You can specify a custom OS or Script command that will take the output of FormFusion® to a local directory or intranet. Because you can customize the output command, you have complete control over how to handle the documents.

There is logic built into **FormDirector** that allows you to create a workflow routine based upon successful completion of the various output options. An example of this would be to have FormFusion® direct the output to (1) always print a file copy, (2) email to an external source (vendor/student) (3) archive the run, and (4) and print if the email was not able to execute for some specified reason. (See Fig. 7).

Print if there is no e-mail address for this copy for this page!



Fig 7 – FormDirector provides workflow logic

Several powerful distribution options are available for your newly designed digital document. It can be directed to multiple locations, in differing formats and copies, according to your needs. Each copy coming from FormFusion® can have a separate set of **FormDirector** settings. For example, you have the ability to email the first copy of output but send the second copy to archive, and print the third.

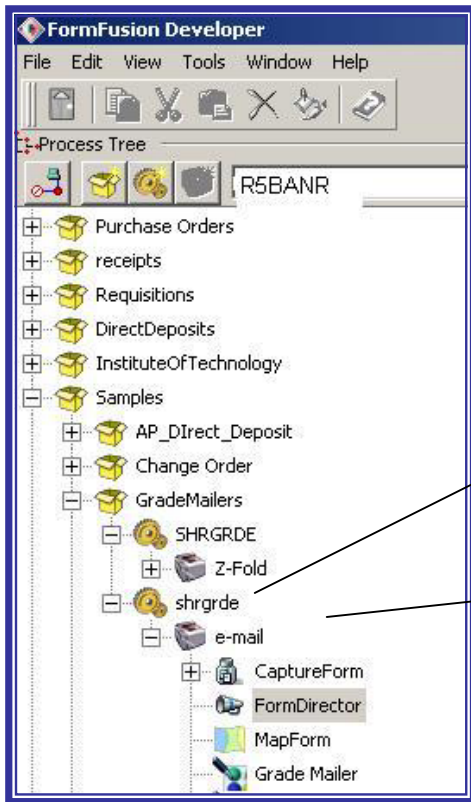
Not only can output be immediately distributed, but it can also be archived for quick review or reprint. Someone calls up with questions about their bills. You can quickly pull up the information and look at the same bill that they are seeing. If need be, you can quickly reprint the bill in question. The original formatted output can be stored as a PCL document or a PDF document.

Once the "intelligent routing" parameters have been set by a system administrator, the documents are distributed every time the process is run—invisibly to the end-user.

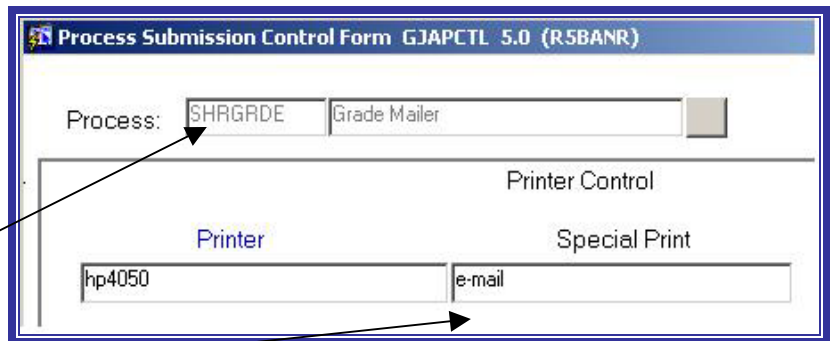
END USER PERSPECTIVE

So far, the form has been designed and distributions options have been selected. The only thing left is to actually execute the SCT Banner® process. At run-time, the end-user can specify which "digital template" to use with their SCT Banner® process by entering an associated acronym in the "special print parameter" field in the Job Submission Control Form (GJAPCTL).

SCT Banner® Job Submission and FormFusion®



The user enters the name of the SCT Banner® Process (SHRGRDE in this example)



The link to FormFusion® is made when the Special Print Command is entered (e-mail)

Fig. 8 - Showing relationship of FormFusion Developer and

FormFusion® can also be used with processes that are run in Sleep/Wake mode, such as TSRCBIL and TGRRCPT.

Once initiated, FormFusion® Suite processes the output file invisibly and routes it to the destination printer selected from Job Submission or to the specified output requested by the **FormDirector** module (printer, Email, WEB or Archive).

If the "special print parameter" field is left blank, FormFusion® Suite will not involve itself with the SCT Banner® process at all and the output will print as normal.

And the end-user does not need any training. All is transparent to the user requesting the output.

The Server

The server software executes invisibly to all users. It resides on the Banner host server and is initiated after a SCT Banner® process is run. It takes the raw output file generated by the report, adds graphical elements, remaps data, etc. depending on how the process was configured using the **Developer** Module.

During the installation of FormFusion®, a number of Oracle tables are created. These tables are used to store configuration information for the SCT Banner® processes being modified. The workstation software (**FormStamp**, **MapForm**, etc.) is used only as a design and configuration tool. After design changes are complete, the workstation updates these tables and exits.

The server portion of FormFusion® uses these same tables to process the document output. When a process is submitted from SCT Banner®, it will create a list file as normal. Before printing this list file, FormFusion® will evaluate the combination of the process name and the special print parameter entered (if any). If a match is found in the configuration tables, then FormFusion® will process the list file as defined by the **Developer**. If there have been no modifications made, then the list file will be printed as normal.

It is literally that simple. Because the program was designed for SCT Banner® from the ground up, it requires no additional routing of output files, separate print queues, or separate computer systems to process the print data.

FormFusion Suite BENEFITS

A well-planned output strategy results in numerous positive outcomes:

- SCT Banner® output looks professional, like you have always wanted
- Significant modifications are possible without touching SCT Banner® baseline code
- Instantaneous distribution of required information via e-mail, web, etc.
- Documents received in understandable form and format
- Reduced impact upon environment due to paperless delivery
- Reduced workload required for distribution and mailing
- Cost savings on printed forms and materials
- Data processed more efficiently, with lower data processing costs
- Enhanced communication through targeted messages/content

Working with Evisions!

We only work with SCT Banner® clients. That's all we do, all day, every day. In fact, most of us are former employees, consultants, and clients whose operations were based on SCT Banner®. We know what you're talking about. We know your needs. We can assist you in the most efficient ways.

Everything has been built with you in mind. As a result, you can expect:

- Useful and cost effective products that are easy to implement and use
- Minimal training needed and no internal experts needed
- No additional hardware is required
- Quick answers to your questions
- Web based technical data available for download at any time

We look forward to sharing the products and experience we've developed working with several hundred clients over the last decade.

Ask us for a live DEMO hosted over the WEB and a FREE software evaluation!

Call us – 888.533.5993 x234
Visit our website at <http://www.evisions.com>