

Memo to: FACsys Customers, Resellers & Distributors
From: Peter Mittler, VP Sales and Marketing, emFAST
RE: FACsys Outbound Document Rendering



Introduction and background

During the past 5 years, there have been numerous changes and various releases of **MS Office**, (97,98,2000, XP) with the attendant changes in file structure, along with changes in the rules regarding the use of Adobe Acrobat 'Reader' as a background rendering system. (Adobe now prevents programmatic calls to 'READER' by background systems, which results in customers having to deploy a fully functional copy of Acrobat 5.0 on their FACSys systems in order to render PDF documents). In addition, there have been new releases of Postscript file types, in particular from Level II to Level III and changes in HPCL (Hewlett Packard Control Language) that need to be managed.

There have also been rapid changes in **Operating Systems** and client desktop operating environments from Windows 95, 98, 2000, ME and XP. To compound the variety of environments even further there has been a shift from Exchange 5.5 on both NT and Windows 2000 and now Exchange 2000 with and without Active Directory deployment.

As well, in order to accommodate new features and functionality, FACSys has undergone changes through versions 4.01, 4.1, 4.5, 4.6, 4.7, SP1, SP2, SP3, SP4, AND releases of the Exchange connector including FFC1.51 SP1 and FFC2000.

To further complicate matters, some customers have deployed anti-virus software onto their FACSys servers and into their mail systems, which have impaired the flow-through and rendering of attached documents.

The result of all these changes is that in some environments, and with some combinations of OS and file types, the FACSys renderer was unable to recognize or convert the file attachment

to a TIF image, and the system reported an error 'image sub-system failed to render the document'. In some instances this could lead to a 'Render Hang' requiring either the restart of the services, a reboot, and/or the erasure of offending files from the FACSys queue folder.

Many customers find that if their environment stays unchanged, FACSys continues to operate for years with no problem. However, as new file types, operating systems and desktop environments are introduced, or if files are submitted from different versions of programs (where in some cases the file structure of even a TIF image does not follow the 'standards'), the documents will not render.

Optus Software adopted the INSO file conversion program in an attempt to overcome these vagaries in file types and structures. For the most part INSO can render an acceptable document, but nothing compares to the quality of the original program for the rendering of a document with 'WYSIWYF' (what you see is what you fax) accuracy. For example, while INSO can convert a PDF file, the result shrinks the image by 20% (a limitation imposed by a conversion system, not by FACSys).

When you consider four Operating Systems, five Client Desktop Environments, two exchange connectors and five FACSys releases (not including service packs) one can appreciate the mathematical enormity ($4 \times 5 \times 2 \times 5 = 200$) of trying to certify rendering compatibility in ALL of these combinations. Even if one variable is eliminated, specifically the standardization on FACSys release 4.7 SP4a) the permutations and combinations are still ($4 \times 5 \times 2 \times 1 = 40$). Now, compound this further by the variety of FONTS, language types, character accents and graphics formats and you can appreciate the scope of the combinations.

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The New Rendering System

emFAST has been working extensively with Optus engineering to test rendering compatibility in a variety of environments. This has been no small undertaking; not only have we attempted to maintain 'backward compatibility with older file types', but also have attempted to accommodate new features as well.

Research has shown that the majority of FACSys customers no longer use HPCL files to submit attachments to the rendering engine. Therefore, with the release of version 4.7 SP4a the HPCL rendering tool has been removed from FACSys in favor of a new Enterprise Fax Rendering System designed to accommodate more file types and produce better results using native application rendering. Any new user who purchases FACSys 4.7 SP4a will not receive the HPCL renderer. The HPCL rendering functionality will continue to be available as an add-on option for \$495.00 (and anyone using version 4.7 SP3 already has this rendering engine and will be entitled to upgrade to SP4aP (P = PLUS rendering engine) at no cost.

Client-Side Rendering

Users who submit jobs to the FACSys desktop printer, by 'print to fax' or 'e-

mail to fax', will continue to create a faxable image on their workstation. This process uses the native application on the desktop, in conjunction with the FACSys FAX Printer installed by the client software.

Server-Side Rendering

The remainder of this discussion refers only to file attachments, submitted through

- a mail gateway.
- or through the AFM/SDK (Active Fax Messaging Software Development Kit, sometimes also referred to as an API – Application Programming Interface).
- or as an attachment to the FACSys Desktop Client.

Any user who wants to submit **HPCL** (Hewlett-Packard Control Language) files to the FACSys system will need the add-on renderer. This will include any application program that creates an HPCL print image and submits it to the FACSys system as an attachment (eg. SAP, FileNET, and embedded codes).

Any user who wants to submit PS files of type I or II (with the exception of Legal and A4 sizes) MAY also use the built-in renderer.

HOTFIX 353-191

FACSys 4.7 SP4a with Hotfix353-191 contains the following logic flow and requires the replacement of two files:

x:\facsys\xfaxmgr.exe with v353
and
x:\winnt\system32\imglib32.dll with v191

1. If, in the "FACSys Admin program, properties, rendering tab", (See Figure I) no native applications are checked as being installed, then FACSys will use INSO to convert the document.
 - a. If 'application rendering' options are checked, FACSys will use the native application.
 - i. (Note, these applications must be installed while logged in as the FACSys service account and opened at least once to clear any dialog screens that may launch on initial use).
 - ii. The option 'if the Application fails, use the server's default rendering services' is CHECKED, FACSys will also attempt to render using INSO.
 - b. THEN, FACSys will:
2. Check the file content.
 - a. If the file is HPCL:

- i. If the renderer is present, the HPCL attachment will be converted to TIF.
- ii. If the renderer is not present, it will fail.
 1. Resolution: install the optional HPCL renderer.

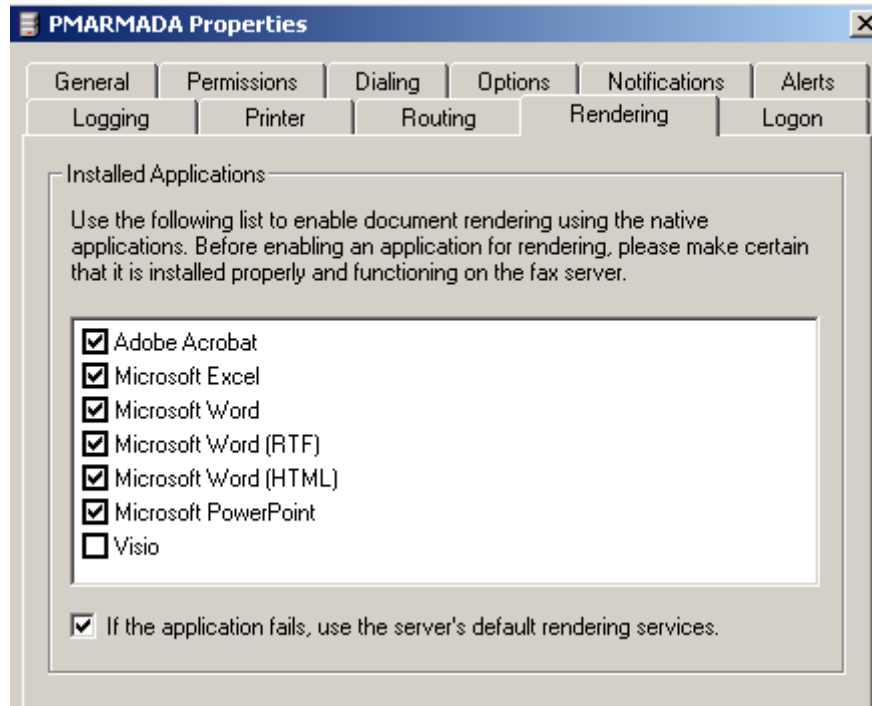


FIGURE I

- b. If the file is a Postscript File:
 - i. FACSys will first try the built-in renderer (SP4aP). If the built-in renderer is present, and the file content is compatible with the built-in renderer, it will be converted to a TIF image and be submitted to the queue.
 - ii. If that process fails, and if Acrobat 5.0 full product (not just Reader) is installed, FACSys will launch Adobe Distiller, convert the PS file to a PDF file, submit to Acrobat and convert to TIF. This is the default process. There are no limitations to this process, but it takes longer than the built-in renderer does to convert the PS file to TIF.
 - iii. If you have the renderer installed but don't want FACSys to even bother to try the renderer and want to FORCE the use application rendering, then set the TryApplication Key to 2 as shown below:

NEW TryApplication Key

```
HKLM System\CurrentControlSet\Services\FaxManager\System\TryApplication
TryApplication = 0 If renderer is installed use only the renderer for PS even
though the application is installed
TryApplication = 1 If renderer is installed then use it first. If that fails
then use the application. This is the default
2-- Always use the app even though renderer is present
```

- c. If the file is an MS Office-type file, then FACSys will launch the native application, convert to a TIF image, and submit to the queue.

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- i. Note that the behavior of MS Office attachments is different depending on what version of Office you have installed. There are known issues, for example, with PowerPoint attachments. MS Office 97 and XP behave one way, and Office 2000 behaves another way. To accommodate this, Optus Software has introduced a new registry key as follows:
- ii. Use the 'ShellFlags' DWORD key only if you have problems with Excel, PPT or Word.

NEW ShellFlags Key

HKEY_LOCAL_MACHINE\SOFTWARE\Optus\ImageLibrary
 Add a DWORD value named "ShellFlags"
 Add the following values for "ShellFlags" (Decimal)
 ShellFlags = 0 - Use the Default of Imglib
 ShellFlags = 1 - if Word has problems
 ShellFlags = 2 - Excel (3 = Word and Excel) : This would be needed in the case of Landscape Excel documents
 ShellFlags = 4 - PowerPoint. (6 = Excel + PPT) : This would be needed in the case of Office 2000.
 ShellFlags = 7 - All .

If you need to render any other file with an extension that is not known to FACSys (eg .WMF) Add decimal 8 to the ShellFlags. I.E. If the previous value is 2 then make it decimal 10 (0xA)

- iii. If you have difficulty with rendering RTF (Rich Text Format) documents (particularly those created by programs other than Microsoft Word), you may need to add a DWORD key as follows:

HKEY_LOCAL_MACHINE\SOFTWARE\Optus\ImageLibrary\WordRTF
 and set the value to 1.

New Functionality

- 1. FACSys can now render Landscape XLS files with ShellFlags set to 2 or 7.
- 2. There is a new feature to use the application rendering for any unknown file type like WMF etc.

Summary

Optus Software is committed to maintaining the functionality of FACSys to accommodate new file types and operating environments. **emFAST** is committed to distributing FACSys updates, and providing enhanced support options to customers whose systems are changing, and need technical assistance to plan and deploy FACSys into their changing environments.

Released by Optus Software Engineering and **emFAST** LLC

Coming in the future Issues emFAST INFORMER:

So now we have all these fax messages.... What else can you do with them?

Consider the possibilities ...

- Convert to PDF
- Archive them off the faxserver
- Store them in places like Ricoh e-cabinet
- User SER Brainware to create indexed document search engines.

emFAST EXTENDING the value of FACSys