



white paper

PDF Direct

What it is?

PDF Direct is a solution that enables to print PDF files directly to the printer, without using extra software or printer drivers.

While sending a PDF file to the printer, it is recognized as PDF, temporary stored on an FSA device, then converted into PostScript format and sent to the engine to be printed. An FSA device is needed to temporary store the PDF file and could be either RAM disk or hard disk.

How does it work?

The size of FSA device needed in the printer is proportional to the size of the PDF files, as the conversion doesn't need extra memory or FSA space. In order to find out if the memory in the printer is enough, you just need to check the size of PDF files you need to print; if you have a 5 Mb PDF file to print, the RAM disk must be 5 Mb. If your printer has an hard disk installed, the maximum size of PDF file will be equal to the free space on the hard disk. If an hard disk is not installed, PDF Direct needs a RAM disk in order to store the files. The RAM disk is automatically build up by the printer when more than 32 MB RAM are installed. The user has to be sure that the RAM disk configuration is set to AUTO; otherwise, at the power on, PDF Direct will print out an Error message saying „FSA Device not found“.

When the PDF Direct DIMM is installed, the user may send a PDF file directly to the printer using the parallel port, the network interface, the infrared port or a Chai Web application.

Using PDF file, the user sends a huge amount of data without loading the network; thanks to the compact size of PDF files, complex documents including images in color or black and white are easily sent to the printer, without affecting the transmission costs.

File compatibility

The application supports files of every PDF version [max 1.4]; the output is both mono and Color, in order to print on HP LaserJet 4100, 9000 and also on HP Color LaserJet 4550.

Font encoding

The product supports PostScript Type 1 and Type 2 fonts, by rasterizing and passing them to the engine. The TTF fonts are not directly recalled, but if the PDF file includes them, no particular problems are noticed since the product is able to convert them to bitmap. The product supports also double-byte fonts, as Arabic, Hebrew and Chinese; Japanese fonts are not supported at the moment. Neither PostScript Type 3 fonts are supported internally, but PDF Direct converts them into Bitmap.

On which printers

The product is available for every model of HP LaserJet 4100, HP LaserJet 9000 and HP Color LaserJet 4550.

Solution delivery

The product will be delivered on 4 MB FSA Flash Dimms. During the installation the product checks the printer configuration in order to setup the fastest way to convert PDF files.

At power-on, PDF Direct looks for an FSA device available in the printer. The hard disk device has the highest priority: if PDF Direct finds it, it will use it for temporary storage of PDF files. When the PDF file is stored, PDF Direct reads it, converts and prints it. The hard disk allows the user to print and manage large PDF files: the printers support up to a10 GB hard disk.

Applications

What can it be used for? In all account, where the PDF output became a standard. More and more companies use PDF to deliver documentation and data on the Intranet. Also legacy system as IBM mainframe or AS/400 can generate the PDF output via AFP; other document management software can easily generate the PDF for WEB publishing. The advantage of PDF printing is the big compression of files, comparing to the PostScript or PCL. As the request of all accounts is to have an easy data transfer, we send small files to the network, the printer explodes them locally in the RAM or in the hard disk, without using other PC software or data conversion. Another example of application we can achieve is printing via e-mail or WEB, using Chai capabilities; at the moment we have four examples on how using Chai application in conjunction with **PDF Direct**.

1. **J@mail basic** :this Chai applet basically assign an e-mail address to the printer. When the printer receives a message at its account, the e-mail is automatically printed and the sender receives a notification. Since now, J@mail has been printing the body message and the attachment as TXT, PCL or PostScript format; now it also supports PDF and the future graphic images.
2. **J@mail enhanced**: besides having the basic version features, J@mail enhanced have the capabilities to save all the received and printed e-mail messages on the printer hard disk. Via WEB browser the user can browse all e-mail messages, re-print, re-send or delete them. Also in this case the e-mail with PDF attachments will be automatically printed.
3. **WEB Mirroring**: this is our last Chai applet development that enables the printer to connect to the WEB Server via FTP. Once the User/Password/Authentication is done, the printer recognizes the folder where it is logged in, checks if new files are available and then downloads and prints them. The last action is sending an e-mail notification to the WEB Master and to the user, in order to inform that new PDF files have been downloaded and printed.
4. **Autoprint**: this Chai applet, developed by Stethos, is able to connect to a specific URL and automatically download and print the data to the printer. Also this example of WEB printing can easily benefit from **PDF Direct**, in order to give user the capabilities to publish on the WEB a standard and compact file as the PDF.

Market segment

We think **PDF Direct** can be easily integrated into the large account with lots of remote branches, where data transfer is an important issue. Furthermore, the possibility to print the PDF directly to Color LaserJet 4550 gives more chances to sell this product.

Supply

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