DC Tips

... for the user

Document Centre Macintosh Custom Driver Functionality, Including Xjector

Purpose

This document contains information to help you understand how the Document Centre Macintosh custom drivers (Xerox custom driver) function, in particular the Xjector file. This document applies to the Xerox custom drivers for Macintosh OS v 7.1 - 9.x. This document does not apply to Macintosh OS X.

How the Xerox Custom Driver Works

Initial Setup

The base driver of a Xerox custom driver is an Adobe PostScript driver. The Adobe driver uses plug-ins to enhance and/or expand its capabilities. Several types of plug-ins exist, each with different functions. When you use the Chooser to select a printer and PPD, a driver compiles the PPD and stores the information in the Preferences file. When you load a driver via the File > Print or File > Page Setup menu selections, it examines all of the valid plug-in files in the Printer Description folder and uses the appropriate ones.

Page Setup

The Xerox custom driver does not add functionality to the Page Setup dialog. The custom PPD handles the various paper sizes supported by the Document Centre and the size range for the Custom Paper size option.

Print Dialog

The Xerox custom driver adds the Xerox Features menu to the Print dialog box.

Print Output (communication with the printer)

The Xerox custom driver modifies the PostScript to include Xerox commands at the start of the Postscript file. These commands contain information about options such as fax and cover page, as well as standard print information such as paper selection (stock, transparency, color, etc.).

This document applies to these Xerox products:

x	DC 555/545/535 ST
x	DC 490/480/470/460 ST
x	DC 440/432/425/420 ST
x	DC 340/332 ST
x	DC 265/255/240 ST/LP
x	DC 230/220 ST/LP
	DCCS 50

The Print Process

The Xerox custom driver adds the Xerox features panel to the Print dialog of the Adobe PostScript driver. This panel resides in the plug-in, which the Xerox custom driver accesses through the PrintingLib file. To initiate a print job, you select the paper size and orientation from the Page Setup dialog box and the job options from the Print dialog. The portion of the printing process carried out by the Document Centre includes many steps, several of which are repeated for each page printed.

The actual print process proceeds as shown in the following simple example for every single page:

Open Document

Open Page <-|

Print Page |

Close Page --|

Close Document

The Macintosh print model allows you to insert PostScript code at each step of the print process. The following examples show code the Xerox custom driver adds. Keep in mind that each piece of code added at an insertion point resides in the plug-in and is accessed from the Xerox custom driver through the PrintingLib file.

Code	Comments
Open Document	Following this step of the print process, plug-in insertions can begin.
%%XRXbegin	This code is inserted following the Open Document step of the print process.
%%OID_ATT_START_SHEET OID_VAL_JOB_SHEET_FULL;	This code initiates a banner sheet.
%%XRXend	This code ends the Open Document portion of the print process.

Xjector Functionality and Error Messages

The following general background information about how the Xerox custom driver works, aids in understanding the following discussion of the Xjector plug-in.

The base driver of a Xerox custom driver is an Adobe PostScript driver. The Adobe driver uses plug-ins to enhance and/or expand its capabilities. Several types of plug-ins exist, each with different functions. For example, plug-ins can provide the ability to:

- Modify or extend the Print or Page Setup dialog boxes, or both. (Extended User Interface)

- Intercept standard Macintosh OS print procedures. (Print Time Patching - PTP)

- Modify general printing parameters and inject PostScript directly into the print job's Postscript stream. (Job Control)

- Redirect output to other destinations.

The Xerox custom drivers use the Xjector plug-in to enable capabilities similar to those described in the first three items above. For example, an Xjector plug-in extends the print options by offering the ability to turn off duplex and cover pages. Job control is realized for example, when an Xjector plug-in inserts Xerox DSC (Document Structuring

Conventions) lines to produce a fax job. The Xerox custom driver calls upon the Xjector plug-in to perform these tasks.

The word Xjector and the Document Centre model make up the plug-in name, that is, DC220/340-Xjector is the DC220-340 printer family plug-in.

PrintingLib Errors

PrintingLib is the library provided by Apple to access the printing process. When an application issues a print command, the PrintingLib provides support to make a series of calls to setup the printer, and other tasks. Both Adobe and Apple released a version of the PrintingLib file. The Adobe and Apple LaserWriter drivers query the PrintingLib currently installed for entry points (startJob, setup, etc), overriding the functions if replacements are provided by the plug-in. Adobe also added Adobe specific functions to the PrintingLib file which did not exist in the Apple version.

When Apple introduced Macintosh OS 8.5, it included the LaserWriter 8.6 print driver that used an updated PrintingLib file. When a workstation's Adobe drivers prior to 8.6 use the updated Apple PrintingLib file, incompatibilities cause errors.

When a driver prior to Adobe PS version 8.6 is used with a system containing an Apple PrintingLib file version 8.6 or higher, Xjector may generate an alert popup box that indicates an error occurred. The alert popup reports errors caused elsewhere in the process. Generally, the Xjector errors are caused by incompatibilities between Adobe's PS base driver (used by a Xerox custom driver) and the Apple PrintingLib file.

To eliminate the incompatibilities, Adobe produced a new base kit (Adobe PS 8.6) that used their own Printinglib called the Adobe Printing Library. Xerox custom drivers available on Xerox.com contain the new Adobe PrintingLib file.

Summary

The xerox custom driver adds the Xerox Features panel to the Print dialog of the Adobe PostScript driver. This panel resides in the plug-in and the driver accesses the plug-in through the PrintingLib file.

Xjector is the name of a plug-in. Each driver names the file DC<printer model>-Xjector; for example DC220/340-Xjector.

The PrintingLib is the interface file between the Macintosh OS and the driver selected in the Chooser.

Adobe Printing Library is the interface file between the core Adobe driver and the plug-ins.

Error messages that appear attributable to Xjector are usually caused by incompatibilities with the Apple PrintingLib file.

Resources

PageMaker and Quark also impact the printing process at the application level. The documents in the following list contain specific information for PageMaker and Quark users, as well as other details about the Document Centre custom Macintosh drivers.

- *Macintosh Printing and the Document Centre* - dc00cc29

- *Xerox DC 265/225/240 and 490/480/470/460 Macintosh Driver Information* - dc00cc0135

- *The Xerox DC 340/332/230/220 and 440/432/425/420 Macintosh Driver Information* - dc00cc0150

- *Xerox/Adobe Macintosh Driver Installation Issues* - dc03cc0313

Additional Information

Xerox's Document Centre Technical Support Operations welcomes feedback on all DC Tips documentation - send feedback via e-mail to: USA.DSSC.Doc.Feedback@mc.usa.xerox.com.

Other DC Tips are available at the following URL: http://www.xerox.com/DocumentCentreFamily/Tips.

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