Pagination Issues with Xerox Document Centre Windows Drivers

Purpose

This document explains why pagination issues occur when using Xerox Document Centre PostScript (PS) and PCL custom drivers and other manufacturers' drivers.

We explain the reasons why pagination differences occur when switching from one driver manufacturer to another (example: HP to Xerox or Xerox to HP). The issues regarding switching from one driver language to another are explored (example: PS to PCL or PCL to PS). The implications of using various applications with Xerox products are also explained.

Assumptions

- The Adobe PS driver as it pertains to the DCCS 50 is **not** covered in this document.

- When referring to a printer driver in this document, it is assumed that the user understands that a printer driver, which is loaded in the print manager for a specific product, is the active or default printer in the print manager. With this assumption in mind, a printer driver can be either PostScript or PCL language. When a user opens a document in any application (i.e. Microsoft Word or WordPerfect), the document will be rendered with the current "active" or "default" printer driver and the PDL language (PS or PCL) associated with that printer driver.

This document pertains to these Xerox products:

x	DC 460/470 ST
x	DC 420/432/440 ST
x	DC 332/340 ST
x	DC 240/255/265 ST/LP
x	DC 220/230 ST/LP
	DCCS 50

PostScript (PS) and Printer Control Language (PCL)

PS Definition

The PS language is an interpretive programming language with powerful graphics capabilities. A program using this language to produce output communicates a description of a document to a device (such as a printer). As the PS interpreter executes the commands to print characters, graphical shapes, and sampled images, it converts the high-level PS language description into raster data format for that specific device.

PS Printing Advantages

- Matches font styles with other users

- Compatible with several applications across environments

- Superior (compared to PCL) when rendering graphics

PS Printing Disadvantages

- Slow print speed

- Memory intensive

- Larger file size compared to PCL

PCL Definition

Hewlett-Packard created the PCL printer language to provide an efficient way for application programs to control a wide range of printer features across a number of different printing devices. PCL commands are compact escape sequence codes that are embedded in the data stream for the print jobs. PCL formatters and fonts are designed to quickly translate application output into device specific, raster print images.

PCL Printing Advantages

- Fast print speed

- Less memory intensive than PS

- Smaller file size compared to PS

PCL Printing Disadvantages

- Some graphics may not print as well with PCL as they do with PS.

  Note: Many of these differences can be resolved through driver or application settings. When using Document Centre PCL drivers, try selecting raster instead of vector mode.

PS and PCL Driver Rendering Differences

The following items might be contributors to pagination errors:

Margins

Default margins are modified from manufacturer to manufacturer to fit each device's rendering capabilities. The Document Centre defaults are as follows:

- 0.25 in for PCL

- 0.18 for PostScript

Documents without manual page breaks maintain pagination made by the adjustments to these new margins. Some drivers such as the DC 240/255/265 and DC 460/470 PS drivers have a selection in the driver to print edge-to-edge (margins standard or none). If this selection is used, this could cause or correct pagination errors.

Font Matrices

Many PCL formatted documents use PCL device fonts. These fonts are different from PS device fonts in size and spacing. With a PS driver loaded, the application substitutes all PCL fonts and the document looks completely different in layout and pagination due to the differences in PS/PCL font interpretation.

Image Rendering

Use PS for the optimal graphic rendering (illustrations and desktop publishing). Use PCL to print documents and spreadsheets. When rendering graphics, PCL is more compact compared to PS and reduces network traffic.

Changing from 300 dpi to 400 dpi or 600 dpi with PCL Printer Drivers

You might encounter problems when changing from 300 dpi to 400 dpi or 600 dpi with PCL printer drivers. Documents lay out differently, even with the same driver and printer. There are no known issues with PS drivers when switching from one dpi to another or with PCL drivers when switching between 600, 1200 or 1800 dpi.

Pagination Issues

Output problems occur across manufacturers and within manufacturers. Xerox PCL to PS drivers exhibit the same problems, as do HP and other vendors that supply PCL and PS drivers.

Possible Causes

Output problems might be caused by one of the following:

- **Language Change -** You change driver languages (PCL to PS or PS to PCL). An example is a customer who had been using the HP driver (typically PCL) attempting to open a document with a Xerox PS driver.

- **Manufacturer Change –** You save a document using one manufacturer's product and attempt to open it with another.

- **Saving Documents –** When saving documents, changing the driver language or manufacturer can cause pagination issues.

- **No Access to Advanced or Extended Features –** When you save a document with one driver language and open it with another, you may not have access to advanced or extended features. This applies to both HP and Xerox products.

- **Application in Use -** You are using an application known to have problems switching between printer drivers and manufacturers such as WordPerfect, Adobe Acrobat and PageMaker. **This list is not all-inclusive.**
  This is caused by the method by which some applications interpret the driver to produce output. Some applications are designed to work with only one manufacturer's printer. In these cases, there is no guarantee that the Xerox device will work correctly.

Possible Problems

Some of the output problems you might observe include the following:

- **Pagination** - Font rendering from PCL to PS does not match exactly and may cause text to appear larger. When this occurs, text lines shift and text moves to the following page.

- **Font Differences** – PS and PCL fonts were developed by different companies and may be inconsistent. If font sizes are different, these inconsistencies appear as pagination errors. HP fonts are not guaranteed to be the same as Xerox fonts.

- **Margins and Page Layout –** Depending on original margins, images may shift or be cut off.

- **Application Errors –** Depending on the application in use, PS errors might occur including missing data, strange characters printing in the middle of the job, and incorrectly formatted pages.

Solution Recommendations

Most other manufacturer drivers print correctly through Xerox devices. Use Xerox drivers in cases where original document formatting must be retained and reformatting the document does not work.

If there are still pagination problems, try one of the following solutions:

- Use the same printer driver that you saved the original document with. If this is not possible, use the same printer driver language to minimize inconsistencies.

- Change the font or margin settings in the current driver.

- Reformat the document manually.

Xerox Sales and Marketing Impact on Pagination Problems

Xerox Sales and Marketing awareness, understanding, and testing of specific customer requirements **before sales completion** minimizes pagination/layout problems.

When there are strict pagination and/or layout requirements, applications should be tested with Xerox Document Centre drivers to check for possible differences in print drivers and output.

An example is that legal markets typically require very strict pagination and layout for both new and previously created legal documents. Requirements should be clearly understood and tested before sales completion.

Additional Information

The Xerox Digital Solutions & Support Centre 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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