ORACLE®

Oracle® **Insurance**

Printcommander

User guide

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Introduction

ABOUT THIS GUIDE

This guide addresses the installation, configuration, and operation of the 64-bit version of Oracle Printcommander. These pages address the features you'll use to perform print processing for IBM AFP or Xerox Metacode high-speed printers, and Oracle Compound Documents (DCDs).

The *Printcommander User Guide* is one in a series of guides about Oracle products. While this guide tells you what you need to know to use Printcommander on a daily basis, you'll want to refer to the other guides in the series for information about

- **Configuration and print specifications** — the *Oracle Control Panel User Guide* tells you how to define aspects of Oracle Printer Definitions processing on your desktop workstation.

- **Oracle Common Objects** — the *Oracle Common Objects User Guide* tells you how to install and implement Oracle common object **DLL** and **W32** files for Windows environments.

- **Font requirements** — the *Fontcommander* installation and user guide for AFP/Metacode font conversion addresses the tasks associated with converting and maintaining fonts in the Printcommander font environment.

WHAT IS PRINTCOMMANDER?

Printcommander, an **Oracle** software product, is one of the component programs of *Docucreate Workstation* and functions as a *printer driver* that formats Microsoft Windows documents from your personal computer (PC) for virtually any type of enterprise-class laser printer, including IBM AFP and Xerox centralized (Metacode).

Printcommander works with Microsoft Windows word processing or document creation systems, such as Microsoft Word and Corel WordPerfect. Printcommander provides the interface (or bridge) between the world of PCs and high-speed production printers. Other Oracle products depend on Printcommander to translate PC output being sent to an enterprise printer.

PC | High-speed Printers

Xerox Metacode

PrintCommander

IBM AFP
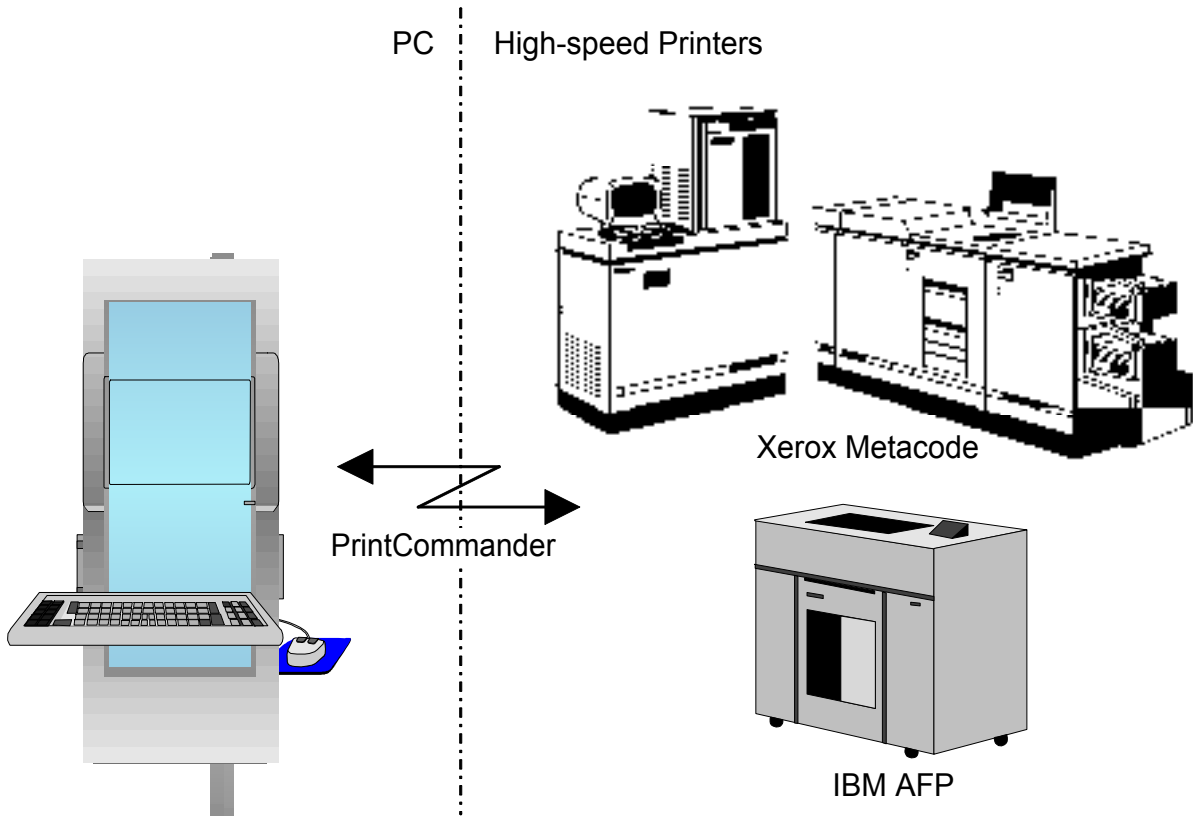
In addition to making sure your documents are properly translated, any documents you process through Printcommander can be used with **Documaker FP** and **Documaker Workstation** products. These two products complete the process of creating large, multiple-part forms that include both variable and fixed data elements. They contain the capabilities for you to assemble large documents and obtain variable data from outside sources. For more information on these programs, please refer to the documentation for each product.

Printcommander uses its own print processor, DFXPRINT, instead of the Windows WINPRINT print processor, in order to efficiently intercept the Windows Spool file to create DCD output.

Printcommander creates an internal data type called Oracle Compound Document (DCD) and translates the DCD file into a format that is compatible with any number of printer types, including IBM AFP, Xerox Metacode, and HP PCL.

System Requirements

HARDWARE REQUIREMENTS

These are the minimum hardware requirements to install and run Printcommander:

- 100%-compatible PC with a Pentium microprocessor (Pentium II processor or faster recommended)

- 32 megabytes (MB) of memory (64 MB recommended)

- A hard disk with 8 MB of free space

SOFTWARE REQUIREMENTS

Important   Printcommander is exclusively designed for Windows.

These are the minimum software requirements to install and run Printcommander:

- Office 2003 and other Windows XP compatible word processors may also function as desired with PrintCommander

- Control Panel 5.2

- Common Objects 11.3 (32-bit/ 64-bit version)

- Docutoolbox 5.0

- GHO (Graphics Handling Option) or GVG (Graphics Video Generation)

  You must have this firmware installed to print graphics generated by Printcommander on a Xerox Metacode printer.

- Scalable or equivalent fonts (e.g., Microsoft TrueType)

  You must obtain a scalable font for each device font in your font collection. For more information about scalable and device fonts, see Printcommander, Fonts, and Windows.

PRODUCT DEPENDENCIES

You must install the Common Objects and the Control Panel prior to installing Printcommander. The Common Objects are the building blocks for most every Oracle program. The Control Panel is essentially the central hub for many Oracle products and, among other things, defines settings specific to your printing environment.

Printcommander looks for and requires printer definitions (PrintDefs) for each target printer. The proper PrintDefs will be available in the Control Panel if you've already installed Documerge 1.x, Documaker FP, or Documaker Workstation. If you currently use Printcommander 1.x, or haven't installed any Oracle software, these PrintDef files won't be in place and you will need to build them. For more information about creating PrintDef files, please see the *Oracle Control Panel* user guide.

Installation

INSTALLING PRINTCOMMANDER

Printcommander provides support for Metacode, Advanced Function Presentation, and Oracle Compound Document print datastreams in a Windows operating environment.

CAUTION!	Printcommander is highly dependent on two other Oracle products; namely, Common Objects and Control Panel. Therefore, you must install the Oracle products in the following order:

1. Common Objects
2. Control Panel
3. Printcommander

Printcommander requires the presence of the Common Objects. These common DLLs provide for common functions among the Oracle family of products, including tasks such as file Input/Output and generating the various output print datastreams.

Docucreate Workstation™

Version : 6
Operating System: Microsoft Windows
Release: 1

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Printcommander also depends on the Control Panel to provide relevant information about the types of printer(s) you're using. You define and configure any number of printers in the Control Panel. Printcommander then queries the Control Panel and displays a list of the available target printers. For more information about the relationship between Printcommander, the Common Objects, and the Control Panel, see Product Dependencies.

Printcommander application is available for download at the Oracle

Software Delivery Cloud web site. The process includes:

• Logging in and agreeing to the terms and restrictions

• Searching for the applications you want to download

• Downloading those applications

Go to the Oracle Software Delivery Cloud web site to download the application:

https://edelivery.oracle.com

To Install Printcommander

IMPORTANT!	•	You must have Administrator rights to your workstation in order to install Printcommander.
	•	We strongly recommend that you run the installer from your local hard drive.

1. Log into your system as an Administrator.

2. From the directory into which you downloaded the media pack, unzip the media pack. Click on the setup.exe located in Printcommanders' Disk1 directory.

   The installation routine displays a dialog box indicating the InstallShield Wizard's progress, followed by the **Welcome** dialog box.
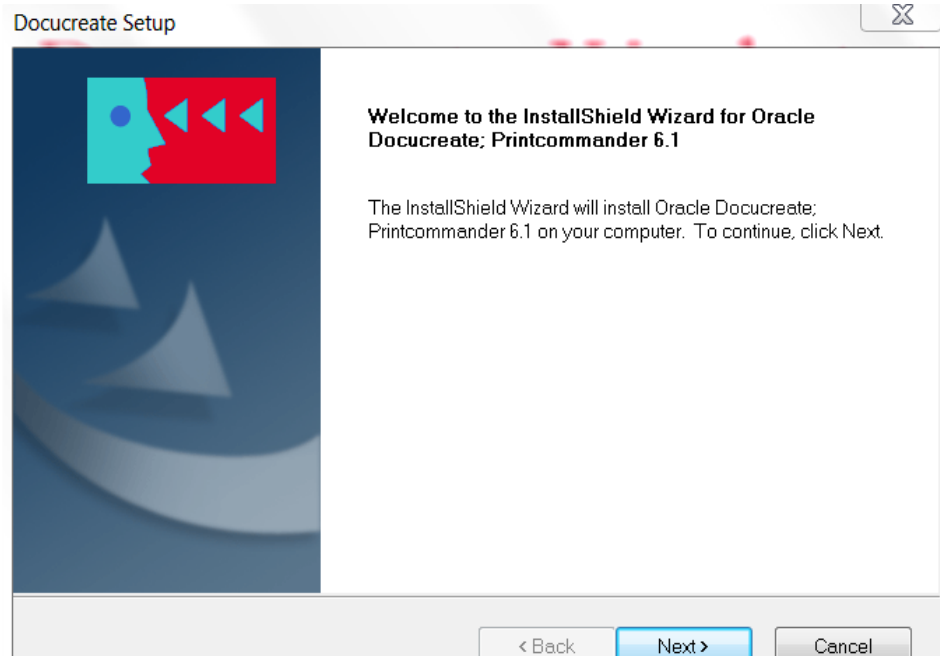
3. Click on **Next** to continue with the installation or **Cancel** to quit the program.

The routine displays the **Choose Destination Location** dialog box, prompting you for the folder name/directory path into which you want to install the program.
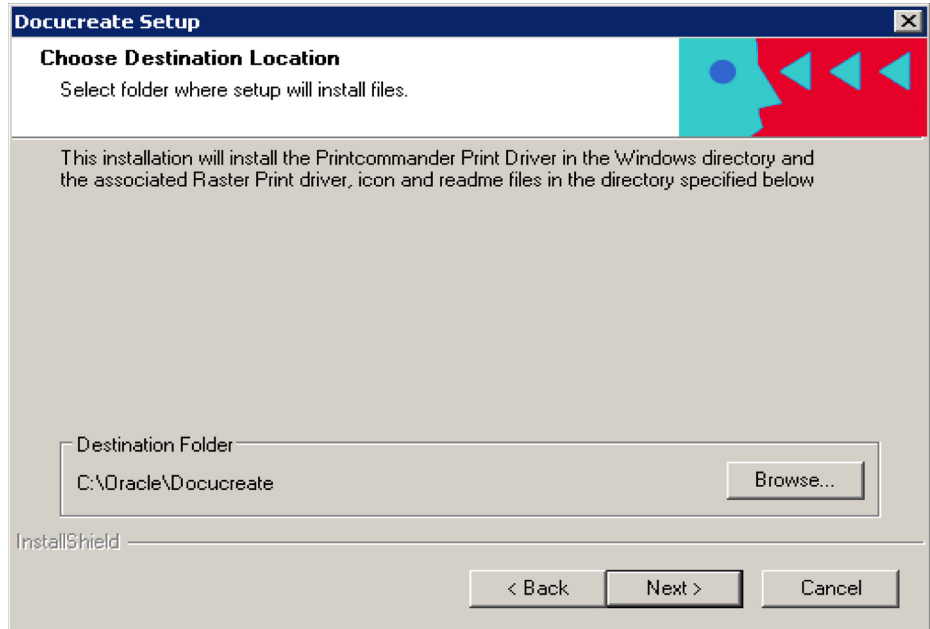
4. Perform one of the following procedures:

To	Perform this action
Accept the default path the installation routine proposes	Choose **Next**.
Enter another path for the installation	Type the path, or click on **Browse...** and select a new **path**; then choose **Next.**

A dialog box indicating the setup program's progress displays until all the files have been copied to your PC.

When the installation is 100% complete, the program displays the **DocuCreate Setup is Complete** dialog box.
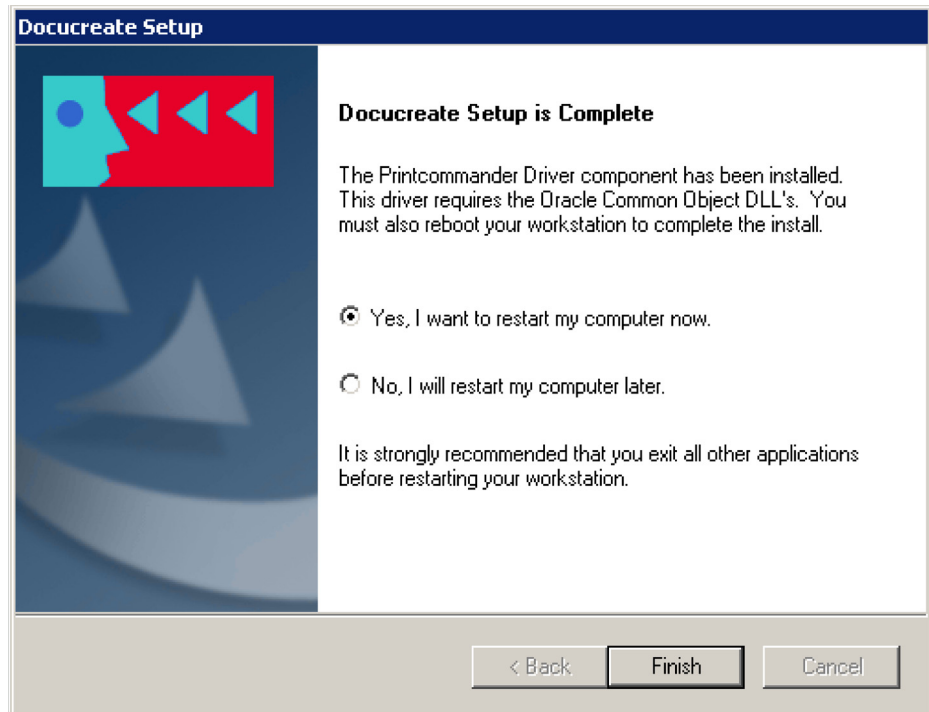
CAUTION!   After finishing the packaged installation procedure, you must restart your computer prior to installing and configuring the required printer driver for Printcommander. These steps begin on Completing the Printcommander Installation.

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5. Select the **Yes** radio button to reboot your computer and then click **Finish.**

6. After your computer has rebooted, loook for the **netmove.exe** icon in the system tray:

If the **netmove.exe** icon is present then the intial Printcommander installation is complete. You must now install and configure the DocuCreate Virtual Raster printer as described on page 21.

If the **netmove.exe** icon is NOT present:

a. Manually start **netmove.exe** by double-clicking on **netmove.exe** from Windows Explorer in the directory in which Printcommander was installed.

a. Reboot the computer again to complete the installation process.

b. Go to page 21 to install and configure the DocuCreate Virtual Raster printer.

Completing the Printcommander Installation

To complete Printcommander installation, you must install and configure the DocuCreate Virtual Raster printer.

To Install the Printcommander Printer Driver for Windows XP/Server 2003

1. Make sure that you have restarted your computer after installing Printcommander.

IMPORTANT! You must have Administrator rights to your workstation in order to install Printcommander.

---

2. Log in as an Administrator.

3. From the **Start** menu, select **Control Panel** and then **Printers and Faxes**. The **Printers and Faxes** window displays.

Note Depending on your Windows Operating System, it may show Devices and Printers instead of Printers and Faxes.

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4. In the Printers and Faxes window, choose **Add a printer**.

   The **Choose a local or network printer** dialog displays.
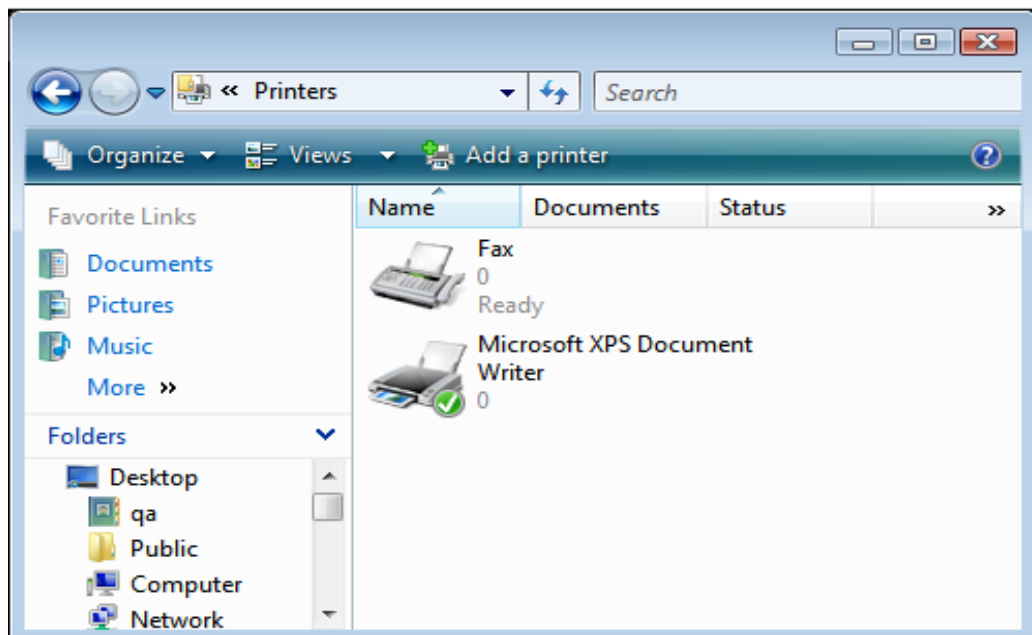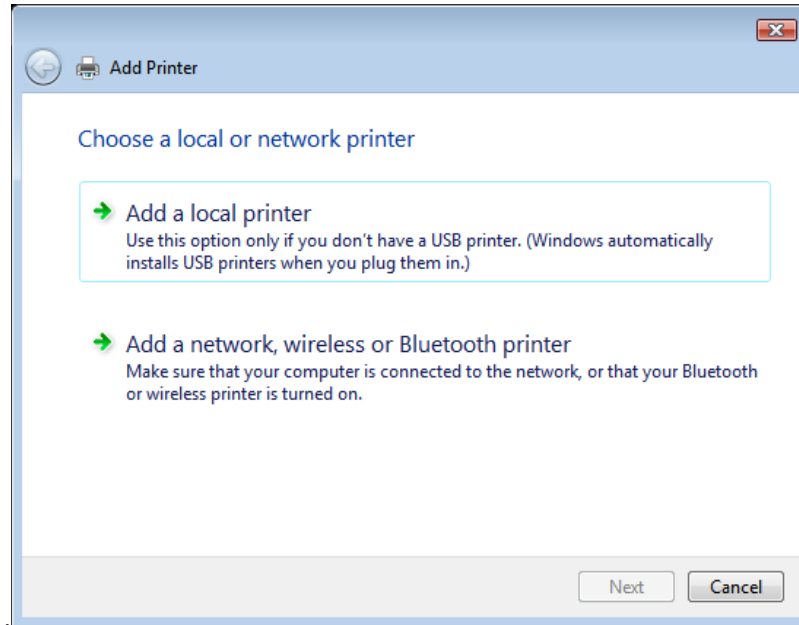
5. Choose **Add a local printer** and then choose **Next**. The **Choose a printer port** dialog displays.
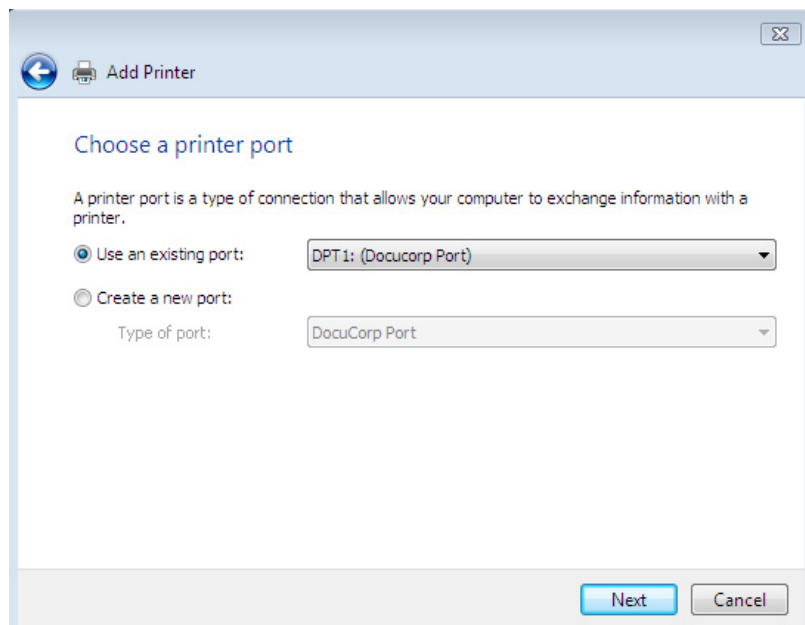
6. Select **DPT1:** from the **Use an existing port** drop-down list, and then choose **Next**.

The **Install the printer driver** dialog displays, which lets you select the appropriate printer software.
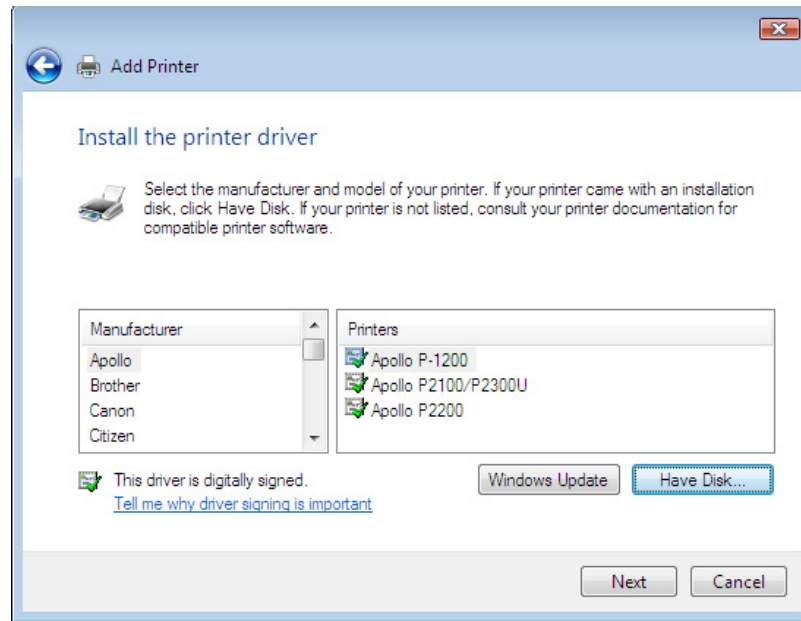
Note   Although this driver is not digitally signed, it has been developed specifically for Windows XP/Server 2003.

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7. Select the **DocuCreate Virtual Raster Printer 6** printer driver, and then choose **Have Disk**.

   The **Install from Disk** dialog displays.
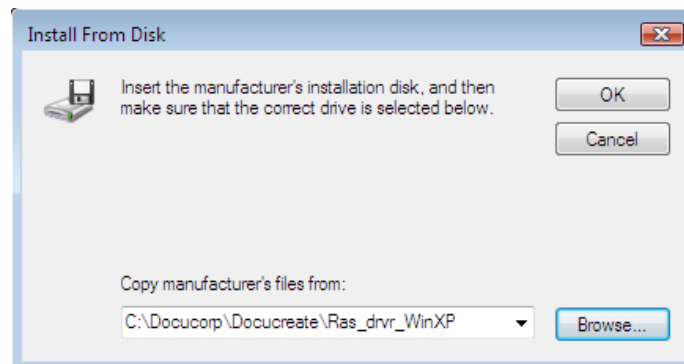
8. In the **Copy manufacturers files from** text box, type in or browse for the path and file name for the Printcommander driver which by default installed in **C:\DocuCorp\DocuCreate\Ras_drvr\WinXP,** or the path that was specified in **step 3** of the initial *Installing Printcommander* on page 17.

After you press **OK**, the **Install the Printer Driver** dialog redisplays.
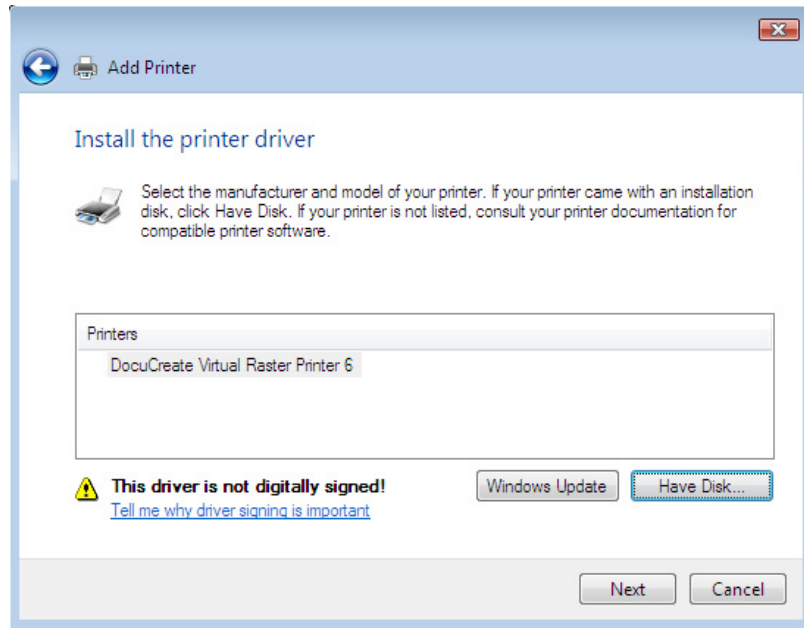
9. Select the **DocuCreate Virtual Raster Printer 6**, and then select **Next**.

If you are prompted to keep an existing driver, keep it.

The **Type a printer name** dialog displays.
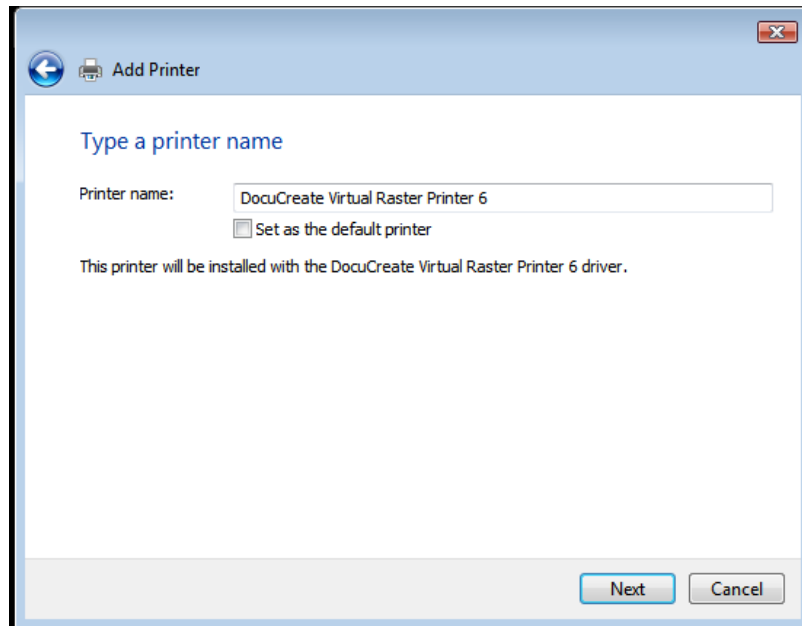
- The name of the DocuCreate printer driver displays in the **Printer name** text box. *Don't change the name as it causes problems within the operating system.*

- Verify that the DocuCreate printer is NOT designated as the default printer.

Note   Do not designate the DocuCreate printer as your default printer until you have completed the configuration steps on page 25.

10. Choose **Next and** the following confirmation dialog displays.

CAUTION!   Do not print a test page — the system isn't completely setup and will fail.
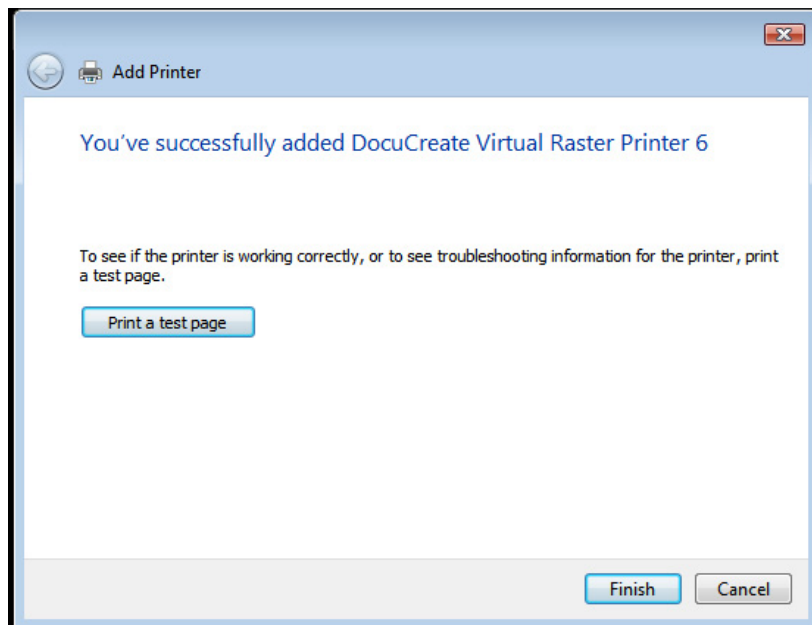
11. Select **Finish** to complete the installation.

Now you need to configure Printcommander for the Windows environment.

Refer to *To Configure the Printcommander Printer Driver for Windows XP/Server 2003* on page 25 for configuration instructions.

To Configure the Printcommander Printer Driver for Windows XP/ Server 2003

1. From the **Start** menu, select **Control Panel** and then **Printers and Faxes**.

   The **Printers and Faxes** window displays.

2. In the Printers and Faxes window, select the printer name that you specified in step 9 in *To Install the Printcommander Printer Driver for Windows XP/Server 2003* on page 21; right-click your mouse, and then choose **Properties**.

The **DocuCreate Virtual Raster Printer Properties** dialog displays.
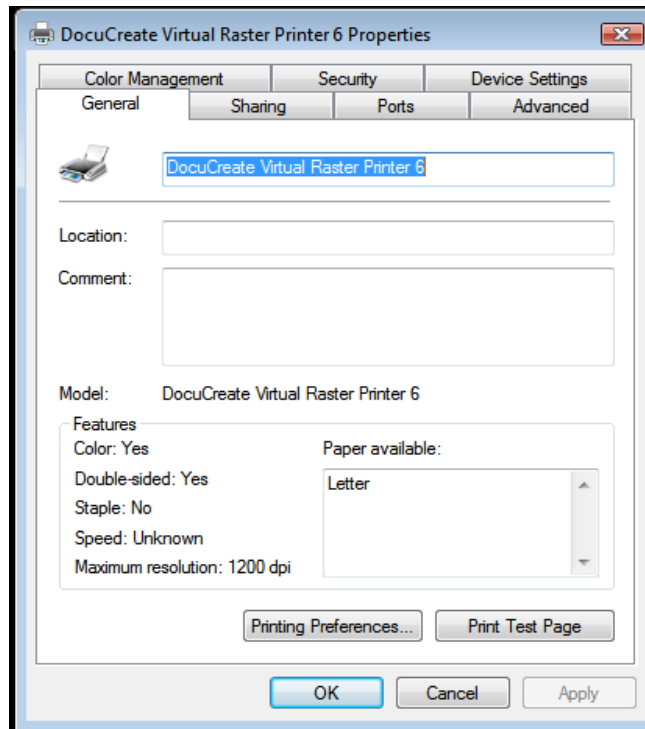
3. Choose the **Advanced** tab, and then choose **Print Processor**.

The **Print Processor** dialog displays.
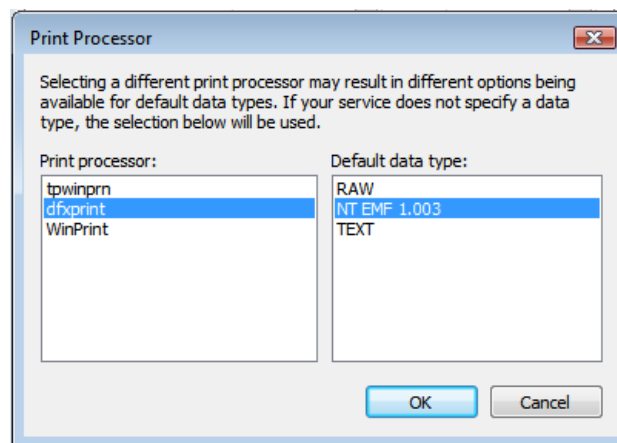
4. In the **Print processor** list box, select **dfxprint**; in the **Default data type** list box, select **NT EMF 1.003**, and then choose **OK**.

dfxprint is the name of the Oracle print processor, whereas **WinPrint** is the name of the Windows print processor.

NT EMF 1.003 indicates that Printcommander is to receive data in the format it expects (i.e., Enhanced MetaFile).

The Advanced tab redisplays.

5. On the Advanced tab page, select the **Start printing after last page is spooled option button and select OK.**

Note   It is now safe to designate the DocuCreate printer as your default printer if you so choose.

6. Log off of your system as the Administrator.

The configuration process is complete and the Printcommander printer driver is now ready for printing.

WARNING!   On Windows Server 2003, Printcommander is not designed to create output using a console login with an administrator account.

As an alternative, you should create a user account, then perform any administrator-level tasks by running them "as administrator" from your user account.

Using Printcommander

OPERATING DOCUCREATE OUTPUT CONTROL

Printcommander actually consists of two components, NetMove and Docucreate Output Control. NetMove, discussed in the Setup section, is installed with a default "action" that produces a Oracle Compound Document (DCD) file. In order for you to start producing output files, you only need to choose a few Docucreate Output Control settings.

CAUTION!	Before Printcommander will operate correctly, you must ensure that the proper PrintDef exists in Control Panel. For more information about PrintDefs, see Product Dependencies.

To Operate Docucreate Output Control

Click the **Docucreate Output Control** icon from the System Tray area of the Task Bar and Printcommander displays the **Docucreate Output Control** dialog box.
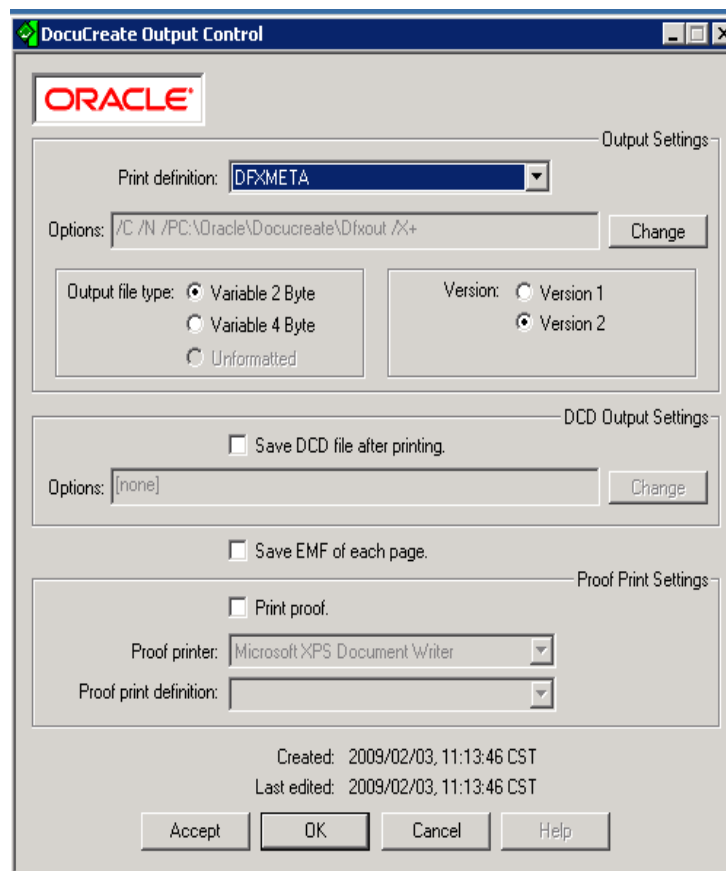
Because the Docucreate Output Control dialog box contains several group boxes of specifications, this guide provides a separate topic for each group.

If you need to specify	Go to
General output settings for your printer	Specifying General Output Settings
DCD-specific output settings	Specifying DCD Output Settings
Settings for proof-printing your file	Specifying Proof-Print Settings
Acceptance of the changes	To Close or Save the Output Control Settings

Specifying General Output Settings

The **Output Settings** group box contains general settings pertaining to creating an output file for your specific printer (e.g., Oracle Compound Document (DCD), IBM AFP, or Xerox Metacode).

To Specify the Print Definition

The Print definition drop-down list box displays the available printer definitions from the Control Panel. For more information about creating Printer Definitions, see Product Dependencies.

• In the **Print definition** drop-down list box, select the printer definition that corresponds to the correct target printer.

To Specify the Output Settings Options

Depending on which printer definition you choose, the Output Control dialog displays a default set of options as listed in the **Options** text box. You may change these options, if necessary.

1. Click **Change.** Printcommander displays the **Output File Specification** dialog box.
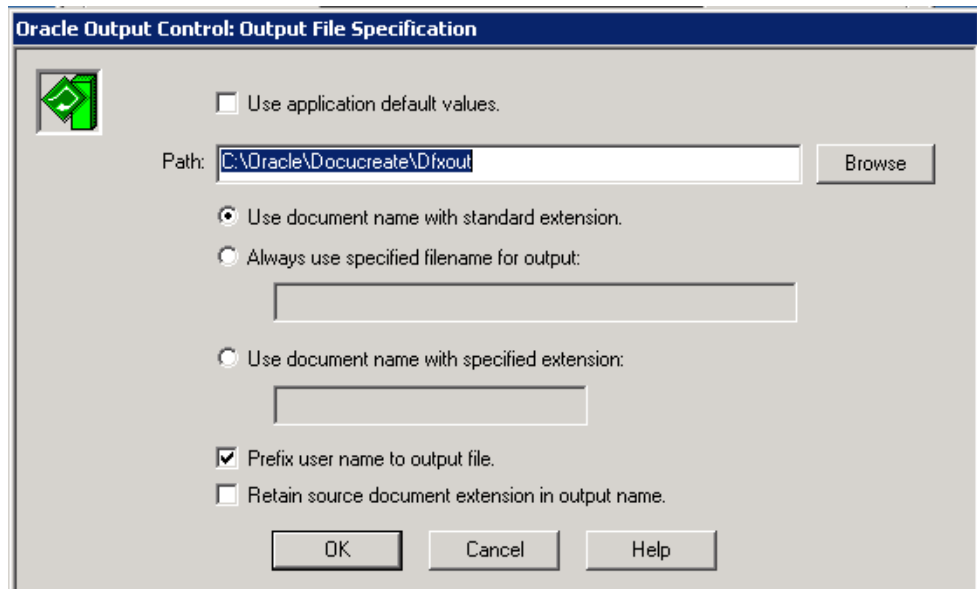
2. Enable the **Use application default values** check box if you would like Printcommander to use the built-in defaults for file handling (i.e., Place the file in the directory chosen as the default directory, use the default file name, and include the standard filename extension).

This setting disables all other options and the resulting Options text box of the previous dialog displays *[default]*.

CAUTION!	Placing print files in a target spool directory not located on your local disk drive may tend to slow the printing process.

3. If you want to store your print file(s) in a different directory path than the default, enter the target storage directory in the **Path** text box.

-or-

Click on the **Browse** button, select the target storage directory, and click **OK**.

4. Do one of the following:

If you want to	Do this
Use the default file name with the standard filename extension, depending on the selected printer definition (e.g., .MET, .AFP)	Click the **Use document name with standard extension** option button (recommended). **Note:** Windows limits the number of characters written to the spool file header to 76 Unicode characters, with the last 'character' of the name being the NULL character (which signifies the end-of-string). Word documents are prefixed in the spool header with "**Microsoft Word -** ", which takes up 17 places. The rest of the name, including the extension, must fit within the next 57 places because, if it doesn't, the next-to-last character is a "horizontal ellipsis" (e.g., **...**). When a file name is truncated, Output Control puts "**microsoft.word.**" at the front of the name so you know where the truncated file originated. Since Output Control doesn't know what was the extension, the file name you see is what is reported from the spooler.
Always use the same file name and filename extension for your output file	1. Click the **Always use specified filename for output** option button. 2. Enter the proper filename and the filename extension (e.g., *filename.extension*).
Use the default file name with a specified filename extension.	1. Click the **Use document name with specified extension** option button. 2. Enter the proper filename extension.

3. Enable the **Prefix user name to output file** check box if you want to add your user name to the front of the output filename (e.g., *username.filename.extension*).

Tip	All of the settings you specify from the Output Control dialog boxes are stored in the ACT, or Actions, file (*.act). Therefore, this file contains the settings, written by the Output Control dialog boxes, that specify user preferences and other instructions. In a related area, you can create an action that specifies the /ACT flag, which instructs the output executable to consult the ACT file for output instructions. See To Specify the Output Parameters for more information about the /ACT parameter.

4. Enable the **Retain source document extension in output name** check box if you want to retain the original filename extension within the output filename (e.g., *filename.original_extension.extension*).

To Specify the Output File Type (AFP and Metacode Only)

If you're producing an output file for IBM AFP or Xerox Metacode printers, you can specify certain formats for the resulting file.

- Do one of the following:

If you want to	Do this
Route the output to an EDL	Click the **Variable 2 Byte** option button.
Route the output to the mainframe or a printer	Click the **Variable 4 Byte** option button.
(**AFP only**) Route the output to a PC- or Unix-attached AFP printer that uses the OS/2 or RS/6000 Print Services Facility (PSF/2 or PSF/6000).	Click the **Unformatted** option button.

IMPORTANT!	You must perform a binary file transfer to make the output file available to the mainframe printer. For more information, see Installing & Using Communications Utilities.

To Select the Docucreate Output Control Version

- In the Version group box, select the radio button that corresponds to your version of Docucreate and the Common Objects:

If you have this version of the Common Objects	Do this
Version 10.2.x or earlier	Click the **Version 1** option button.
Version 11.0.x or later	Click the **Version 2** option button.

For more information about Docucreate and the Common Objects, see Multiple Versions of Docucorp Common Objects.

To Close or Save the Output Control Settings

- Do one of the following:

To	Do this
Apply the Output Control settings you've provided without closing the dialog box	Click **Accept**.
Apply the specifications you've provided and return to the Printer Setup window	Click **OK**.
Return to the Printer Setup window without applying the specifications you've provided	Click **Cancel**.

Specifying DCD Output Settings

The **DCD Output Settings** group box contains settings specifically pertaining to saving a copy of the DCD output file. Printcommander produces a DCD file along with the output file for your specified printer. You are free to choose whether to keep it for additional processing, such as placing the output in a Oracle library (EDL) or storing the output in a Oracle archive.

To Save the DCD File

• Enable the **Save DCD file after printing** check box if you want to save a copy of the DCD file.

To Specify the DCD Output Settings Options

The Output Control dialog displays a default set of options as listed in the **Options** text box. You may change these options, if necessary.

1. Click **Change** and Printcommander displays the **DCD-Output File Specification** dialog box.
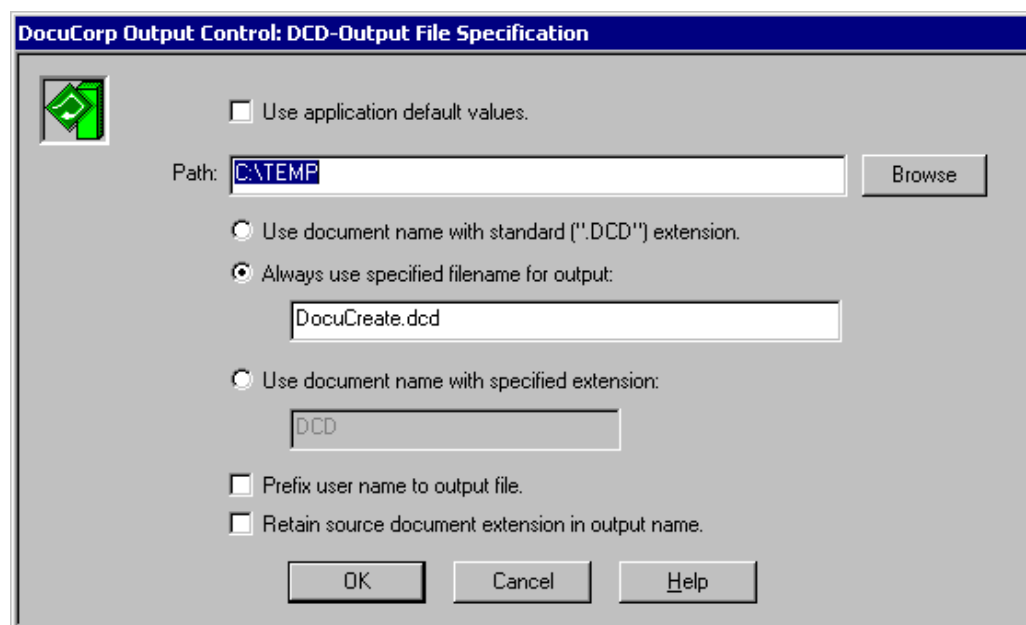
2. Enable the **Use application default values** check box if you would like Printcommander to use the built-in defaults for file handling (i.e., Place the file in the directory chosen as the default directory, use the default file name, and include the standard filename extension).

   This setting disables all other options and the resulting Options text box of the previous dialog displays *[default]*.

3. If you want to store your print file(s) in a different directory path than the default, enter the target storage directory in the **Path** text box.

   -or-

Click on the **Browse** button, select the target storage directory, and click **OK**.

4. Do one of the following:

If you want to	Do this
Use the default file name with the standard filename extension (e.g., .DCD)	Click the **Use document name with standard extension** option button.
Always use the same file name and filename extension for your output file	1. Click the **Always use specified filename for output** option button. 2. Enter the proper filename and the filename extension (e.g., *filename.extension*).
Use the default file name with a specified filename extension.	3. Click the **Use document name with specified extension** option button. 4. Enter the proper filename extension.

5. Enable the **Prefix user name to output file** check box if you want to add your user name to the front of the output filename (e.g., *username.filename.extension*).

6. Enable the **Retain source document extension in output name** check box if you want to retain the original filename extension within the output filename (e.g., *filename.original_extension.extension*).

To Save EMF Images

•   Enable the **Save EMF of each page** check box if you want to save EMF images of each page in addition to the DCD file.

    This option generates an EMF file for each page of the document. The files are written to the specified output directory as defined in the Output Settings Options.

Specifying Proof-Print Settings

The **Proof Print Settings** group box contains specifications for printing a proof copy of your output print file.

To Enable Proof Printing

•   Enable the **Print Proof** dialog box to enable proof printing.

To Select the Proof Printer

You can print a proof copy of your file to any printer you've installed under Windows. Printcommander searches your Windows environment and lists all of your available printers.

•   Select the target printer from the **Proof Printer** drop-down list box.

To Select the Proof Printer Definition

•   Select the print definition of the target proof printer from the **Proof print definition** drop-down list box.

You must establish a "Windows Printer" Printer Definition (PrintDef) in the Control Panel, in which you select a Windows Print Driver, to proof print a document.

Appendix A

Printcommander, Fonts, and Windows

INTRODUCTION

This appendix is designed to aid you in your transition from using Printcommander under Windows 9x to using Printcommander under Win32. The two operating systems are vastly different in the way in which they treat printer drivers and allocate fonts.

With Printcommander under Windows 9x, for example, the operating system ceded the responsibility of selecting printer resources to the printer driver (Printcommander 1.x and 2.x). Under Win32, however, the operating system completely controls the loading and recognition of fonts. This limits Printcommander in that it can only use the fonts and font data known to the operating system. This difference is illustrated and discussed in the following topics.

Checklist of Considerations When Implementing Docucreate

You must be aware of a very important issue when implementing Docucreate: the fonts you'll use and their requirements on the Windows platforms. If you currently operate Printcommander on platforms other than Win32; and plan on upgrading to one of these platforms, we highly recommended that you review this section.

1. Win32 requires TrueType fonts (*.TTF). This means that, for each device font you use (e.g., IBM AFP or Xerox Metacode), you must have an equivalent TrueType font available both on the operating system and to the application generating the AFP or Metacode print stream (see Printcommander and Operating Systems).

   Therefore, you must obtain TrueType fonts with the same internal attributes as the device font (e.g., AFP or Metacode). Having *similar-looking* characters is insufficient; the character width of the device font must exactly match the width of the TrueType font (see Device Versus Outline Fonts).

WARNING! When TrueType font files are copied onto UNIX/AIX/Linux systems from any other platforms, the resulting copies must have their permissions set to allow all access.

You can set the permissions by changing into the directory containing the font files, then invoking "**chmod 666 *.ttf**", repeating with "**chmod 666 *.TTF**". These two variations target the two main capitalizations carried from Windows or DOS machines over to UNIX-based systems, but checking the directory listing [with "ls -ls"] is the only way to verify that all font files have been set appropriately.

Because capitalization is treated as significant on UNIX-based platforms (i.e., **arial.ttf** and **Arial.TTF** could be duplicate, separate files), you should take care not to duplicate fonts by having more than one copy of a font file on the UNIX platform, differentiated solely by changes in filename capitalization.

---

2. Once you've obtained the required TrueType fonts, generate Printer Font Metric (PFM) files for all of the device fonts (e.g., those from which you generated the TrueType fonts).

   You should use Fontcommander for all your font conversion needs. Fontcommander contains the following conversion utilities:

   • Metacode — **DOCFCM**

   • AFP — **DOCFCA**

   For more information, see Metacode Device Font Conversion, AFP Device Font Conversion, and the *Fontcommander 1.2 Windows* documentation.

3. After you've generated PFMs for all of the device fonts, you should use the Control Panel to create a font matching table. Using the Font Matching Table Editor, you can match a given TrueType font to a PFM generated by either DOCFCM or DOCFCA. In addition, you'll specify the point size and the style (e.g., normal, bold, bold italic, or italic). For more information, see Font Matching Tables for AFP and Metacode Fonts.

4. The final step is to update the Printer Definitions object in the Control Panel. The Font Matching Table and PFM Directory options are located on either the Docuflex Setup or Setup Options tab, depending on your version of the Control Panel:

   • In the **Font Table** text box, reference the Font Matching Table you created in Step 3.

   • In the **PFM Directory** text box, point to the directory containing the PFMs you generated in Step 2.

   • Make sure the **Generate PFMs** check box is disabled.

   For more information, see the *Oracle Control Panel* documentation.

Other Considerations

1. If you're using Tagcommander, you need to update all of your tags — ensuring that the specified font is updated to reference the appropriate PFM.

2. If you're producing Metacode print streams and you take advantage of a Common Font list, you also need to update it.

• If you have the Common Font Utility, type the name of the font into the Chosen Font dialog box and either append or insert it into the font list.

or

• The Common Font List for metacode is specified in the font section using Names=<cnt> and Name1= thru Name<cnt>= INI keys. The Names= key must match the maximum number of "Name<cnt>" keys in the list.

Sample of Common Font INI entries:

```
[XMC Font Section]
Names=5
```

```
Name1=HV106E
Name2=FORMSX
Name3=HV108E
Name4=HV110E
Name5=HV112E
```

The font section name needs to be in the [Common Fonts] section.

The list of Common Font sections is specified using List=<cnt> and List1= thru List<cnt> INI keys.

The Lists= key must match the maximum number of " List<cnt>" keys in the list.

Sample of Common Font Lists:

```
[Common Fonts]
Lists=2
List1=DFXA03
List2=XMC Font Section
```

3. Make sure you've followed all the installation steps (see Installing Printcommander). If so, you're now ready to begin generating output. Start with a simple test case and progressively increase the pace:

    a. New documents

    - Create a simple fixed text document

    - Create a simple document with fixed text *and* tags

    b. Existing documents (those requiring periodic maintenance/updates)

    - Before printing, make sure the fixed text references the correct fonts. If the fixed text references fonts that aren't referenced in either the font matching table or the Common Font list, an error is issued.

    - Revisit each tag to update it. Select (double-click) each tag and update the font information from within Tagcommander. If you're in doubt as to whether a tag has been updated, increase the magnification view within your word processing application. If you see a small dot in the upper left-hand corner, you've updated the tag.

4. Compare and proof the output from the printer. You should, at minimum:

    a. Compare the file sizes of the generated AFP or Metacode files versus those generated in a prior release.

    If the newly-created AFP or Metacode files are extremely large, the font attributes contained in the TrueType fonts and PFMs don't match accordingly. Even though the output is acceptable, you could experience problems later in the process, including, but not limited to, the following:

    - increased overhead at the printer, resulting in reduced throughput (i.e., not printing at rated speed)

    - the printer cycles up and down

    - increased storage capacity

    - increased file transfer time

b. Make sure the output is as expected.

Another indication that your TrueType fonts and PFMs don't match is that the newly-generated AFP or Metacode output contains overprinting and incorrect character spacing. Compare the attributes of the original AFP or Metacode font with those of the supplied TrueType font (e.g. remember the initial requirement that the internal attributes of the TrueType font must match those of the AFP or Metacode fonts). The font vendor should be able to provide this information.

PRINTCOMMANDER AND OPERATING SYSTEMS

True WYSIWYG fidelity is achievable by taking advantage of the Win32 Graphical Display Interface (GDI) capabilities using TrueType or scalable fonts. It is now possible to maintain document fidelity (fonts, line breaks, page breaks) from Windows display to print for all supported print datastreams.

With these obvious benefits in mind, changes to the Printcommander driver process were implemented. Among those changes is the implementation of a Font Matching table by which you can specify a device font to be used on output that matches a Windows (scalable) font chosen within the application. This provides a much more accurate method of controlling which device- (printer-) specific fonts are used. The method also affords flexibility in overriding a font choice; however, overriding one device font with a different device font that doesn't have a scalable companion may cause undesirable character spacing.

Printcommander on Win32

The following diagram illustrates the flow of font information as controlled by the Win32 GDI. Notice that the Win32 GDI fetches the font information.
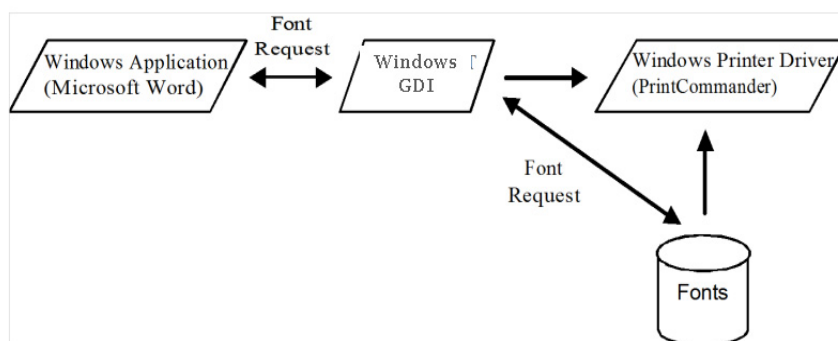
In this environment, Printcommander is no longer responsible for obtaining any font information, nor can it control the fonts available to the application. The Win32 GDI has total control over that aspect of the process, which promotes device-independent drivers.

CHANGES FOR PRINTCOMMANDER

Support for the older technology is maintained through the use of the original printer font metric files, if so desired. That technology obviously doesn't have the advantages, nor the definitive reliability, of the use of a static font cross-reference table and industry standard scalable fonts; nor does it allow for the likely transition into the future of document processing using these standards. It is recommended that you use the newer tools and font standards as early as possible.

Oracle provides Font Matching Tables and the accompanying printer font metric (PFM) files for a subset of the IBM Expanded Core Fonts and the Xerox Standard Font Library (A03) fonts. Docucreate uses these tables to effectively match scalable (outline) fonts with device fonts in the most efficient manner.

CAUTION	These resources (PFMs) have been derived from *unaltered* device fonts. If you're using altered device fonts, reconvert the respective device fonts using DOCFCM or DOCFCA and replace the provided PFMs.

Font Matching Tables for AFP and Metacode Fonts

Following are examples of Font Matching Tables. As you can see, they contain all of the primary information about fonts. The typeface name, as specified in a Windows application, is cross-referenced with names of matching device (printer-specific) font names. Also included are the point size, style, and orientation information. All of these items combine to identify a unique output font name that will exactly match the font chosen in the Windows application.

Tip	For some TrueType fonts, you may be required to select Bold as an internal attribute in the Font Matching Table Editor. This situation can cause confusion with the user, because they aren't required to select the bold attribute in a Windows application to make the font print in boldface. If the user selects an attribute for a TrueType font that doesn't match a font reference in the Font Matching Table, a message is issued when printing.

Xerox Metacode Font Matching Table Example

```
;-----------------------------------------------------------------
;-----------------------------------------------------------------
;
;     Many of the fonts below are defined by referencing the Xerox
;     A03 Type 1 Font Reference Collection document.
;
;     Many of the apparent point sizes do not match (i.e. UN108B == 7pt).
;     Beware of the inconsistencies.
;
;     When using this font table, the attributes of Underline and Strikethrough
;     when used in a Windows Composition tool will require a device font
;     capable of printing those attributes.  They will not be fabricated by
;     DocuCreate Workstation.
;
;     EDIT THIS TABLE WITH EXTREME CAUTION: Column positioning is
;     critical.  Do not use an editor that inserts tab characters.
;
;     Courier New is the default for DocuMaker FP error sheets and should be
;     assigned to a fixed pitch font.
;
;-----------------------------------------------------------------
;-----------------------------------------------------------------
[Xerox Fonts]
;  FaceName
;  |                             Style (1=Normal, 2=Bold 3=Italic,
4=BoldItalic)
;  |                             |
;  |                             | Point Size (04-72)
;  |                             | |
;  |                             | |   Port     Land     Inv Port Inv Land
;  |                             | | |         |         |        |
;  v                             v v v         v         v        v
```

```
Courier New                            1 10 UN110E
Courier New                            1 12 UN110E
FFMT01                                 1 09              FFMT01
FFMT02                                 1 09              FFMT02
FFMT03                                 1 07              FFMT03
FFMT04                                 1 07              FFMT04
FFMT10                                 1 06 FFMT10
FFMT11                                 1 06 FFMT11
L00TPA                                 1 12              L00TPA
L00TPB                                 1 11              LOOTPB
L00TPC                                 1 12              L00TPC
L0112A                                 1 09              L0112A
L0112B                                 1 09              L0112B
L0112C                                 1 09              L0112C
L01B0A                                 1 09              L01B0A
L01B0B                                 1 09              L01B0B
L01ITA                                 1 09              L01ITA
L01ITB                                 1 09              L01ITB
L0212A                                 1 09              L0212A
L02BOA                                 1 09              L02BOA
L02ITA                                 1 07              L02ITA
L0312A                                 1 07              L0312A
L03BOA                                 1 07              L03BOA
L03ITA                                 1 07              L03ITA
L0412A                                 1 07              L0412A
L04BOA                                 1 07              L04BOA
L04ITA                                 1 07              L04ITA
L0512A                                 1 12              L0512A
L0512B                                 1 12              L0512B
L0512C                                 1 12              L0512C
L05ITA                                 1 12              L05ITA
L05OAA                                 1 11              L05OAA
L05OBA                                 1 11              L05OBA
L05SCA                                 1 11              L05SCA
L05TAA                                 1 12              L05TAA
L05TAB                                 1 12              L05TAB
L05TAC                                 1 12              L05TAC
L05TBA                                 1 12              L05TBA
L05TBB                                 1 12              L05TBB
L05TBC                                 1 12              L05TBC
L05TYA                                 1 11              L05TYA
L0912A                                 1 07              L0912A
L09BOA                                 1 07              L09BOA
L09ITA                                 1 06              L09ITA
P00TPA                                 1 12 P00TPA
P00TPB                                 1 11 P00TPB
P00TPC                                 1 12 P00TPC
P0612A                                 1 09 P0612A
P0612B                                 1 09 P0612B
P0612C                                 1 09 P0612C
P06BOA                                 1 09 P06BOA
P06BOB                                 1 09 P06BOB
P06ITA                                 1 09 P06ITA
P06ITB                                 1 09 P06ITB
P07ITA                                 1 11 P07ITA
P07SCA                                 1 11 P07SCA
P07TCA                                 1 12 P07TCA
P07TCB                                 1 12 P07TCB
P07TCC                                 1 12 P07TCC
P07TDA                                 1 12 P07TDA
P07TDB                                 1 11 P07TDB
```

```
P07TDC                              1 12 P07TDC
P07TYA                              1 11 P07TYA
P0812A                              1 12 P0812A
P0812B                              1 12 P0812B
P0812C                              1 12 P0812C
P08ITA                              1 12 P08ITA
P08OAA                              1 11 P08OAA
P08OBA                              1 11 P08OBA
P08SCA                              1 11 P08SCA
P08TAA                              1 12 P08TAA
P08TAB                              1 12 P08TAB
P08TAC                              1 12 P08TAC
P08TBA                              1 12 P08TBA
P08TBB                              1 12 P08TBB
P08TBC                              1 12 P08TBC
P08TYA                              1 11 P08TYA
P1012A                              1 06 P1012A
P1012B                              1 06 P1012B
P1112A                              1 06 P1112A
PR107A                              1 07 PR107B    PR107A    PR107C
PR107B                              1 07 PR107B    PR107A    PR107C
PR107C                              1 07 PR107B    PR107A    PR107C
PR107D                              1 07 PR107E    PR107D    PR107F
PR107E                              1 07 PR107E    PR107D    PR107F
PR107F                              1 07 PR107E    PR107D    PR107F
PR110A                              1 10 PR11OB    PR110A    PR110C
PR110B                              1 10 PR11OB    PR110A    PR110C
PR110C                              1 10 PR11OB    PR110A    PR110C
PR110D                              1 10 PR110E    PR110D    PR110F
PR110E                              1 10 PR110E    PR110D    PR110F
PR110F                              1 10 PR110E    PR110D    PR110F
PR111A                              1 11 PR111B    PR111A    PR111C
PR111B                              1 11 PR111B    PR111A    PR111C
PR111C                              1 11 PR111B    PR111A    PR111C
PR111D                              1 11 PR111E    PR111D    PR111F
PR111E                              1 11 PR111E    PR111D    PR111F
PR111F                              1 11 PR111E    PR111D    PR111F
PR114A                              1 12 PR114B    PR114A    PR114C
PR114B                              1 12 PR114B    PR114A    PR114C
PR114C                              1 12 PR114B    PR114A    PR114C
PR118A                              1 16 PR118B    PR118A    PR118C
PR118B                              1 16 PR118B    PR118A    PR118C
PR118C                              1 16 PR118B    PR118A    PR118C
PR124A                              1 21 PR124B    PR124A    PR124C
PR124B                              1 21 PR124B    PR124A    PR124C
PR124C                              1 21 PR124B    PR124A    PR124C
PR211A                              1 11 PR211B    PR211A    PR211C
PR211B                              1 11 PR211B    PR211A    PR211C
PR211C                              1 11 PR211B    PR211A    PR211C
PR211D                              1 11 PR211E    PR211D    PR211F
PR211E                              1 11 PR211E    PR211D    PR211F
PR211F                              1 11 PR211E    PR211D    PR211F
PR214A                              1 13 PR214B    PR214A    PR214C
PR214B                              1 13 PR214B    PR214A    PR214C
PR214C                              1 13 PR214B    PR214A    PR214C
PR218A                              1 16 PR218B    PR218A    PR218C
PR218B                              1 16 PR218B    PR218A    PR218C
PR218C                              1 16 PR218B    PR218A    PR218C
PR224A                              1 23 PR224B    PR224A    PR224C
PR224B                              1 23 PR224B    PR224A    PR224C
PR224C                              1 23 PR224B    PR224A    PR224C
UN104A                              1 04 UN104B    UN104A    UN104C
UN104B                              1 04 UN104B    UN104A    UN104C
```

```
UN104C                          1 04 UN104B   UN104A   UN104C
UN104D                          1 04 UN104E   UN104D   UN104F
UN104E                          1 04 UN104E   UN104D   UN104F
UN104F                          1 04 UN104E   UN104D   UN104F
UN105A                          1 05 UN105B   UN105A   UN105C
UN105B                          1 05 UN105B   UN105A   UN105C
UN105C                          1 05 UN105B   UN105A   UN105C
UN105D                          1 05 UN105E   UN105D   UN105F
UN105E                          1 05 UN105E   UN105D   UN105F
UN105F                          1 05 UN105E   UN105D   UN105F
UN106A                          1 06 UN106B   UN106A   UN106C
UN106B                          1 06 UN106B   UN106A   UN106C
UN106C                          1 06 UN106B   UN106A   UN106C
UN106D                          1 06 UN106E   UN106D   UN106F
UN106E                          1 06 UN106E   UN106D   UN106F
UN106F                          1 06 UN106E   UN106D   UN106F
UN107A                          1 06 UN107B   UN107A   UN107C
UN107B                          1 06 UN107B   UN107A   UN107C
UN107C                          1 06 UN107B   UN107A   UN107C
UN107D                          1 07 UN107E   UN107D   UN107F
UN107E                          1 07 UN107E   UN107D   UN107F
UN107F                          1 07 UN107E   UN107D   UN107F
UN108A                          1 07 UN108B   UN108A   UN108C
UN108B                          1 07 UN108B   UN108A   UN108C
UN108C                          1 07 UN108B   UN108A   UN108C
UN108D                          1 08 UN108E   UN108D   UN108F
UN108E                          1 08 UN108E   UN108D   UN108F
UN108F                          1 08 UN108E   UN108D   UN108F
UN110A                          1 09 UN110B   UN110A   UN110C
UN110B                          1 09 UN110B   UN110A   UN110C
UN110C                          1 09 UN110B   UN110A   UN110C
UN110D                          1 10 UN110E   UN110D   UN110F
UN110E                          1 10 UN110E   UN110D   UN110F
UN110F                          1 10 UN110E   UN110D   UN110F
UN111A                          1 10 UN111B   UN111A   UN111C
UN111B                          1 10 UN111B   UN111A   UN111C
UN111C                          1 10 UN111B   UN111A   UN111C
UN111D                          1 10 UN111E   UN111D   UN111F
UN111E                          1 10 UN111E   UN111D   UN111F
UN111F                          1 10 UN111E   UN111D   UN111F
UN114A                          1 12 UN114B   UN114A   UN114C
UN114B                          1 12 UN114B   UN114A   UN114C
UN114C                          1 12 UN114B   UN114A   UN114C
UN118A                          1 16 UN118B   UN118A   UN118C
UN118B                          1 16 UN118B   UN118A   UN118C
UN118C                          1 16 UN118B   UN118A   UN118C
UN124A                          1 22 UN124B   UN124A   UN124C
UN124B                          1 22 UN124B   UN124A   UN124C
UN124C                          1 22 UN124B   UN124A   UN124C
UN208A                          1 08 UN208B   UN208A   UN208C
UN208B                          1 08 UN208B   UN208A   UN208C
UN208C                          1 08 UN208B   UN208A   UN208C
UN208D                          1 08 UN208E   UN208D   UN208F
UN208E                          1 08 UN208E   UN208D   UN208F
UN208F                          1 08 UN208E   UN208D   UN208F
UN210A                          1 10 UN210B   UN210A   UN210C
UN210B                          1 10 UN210B   UN210A   UN210C
UN210C                          1 10 UN210B   UN210A   UN210C
UN210D                          1 10 UN210E   UN210D   UN210F
UN210E                          1 10 UN210E   UN210D   UN210F
UN210F                          1 10 UN210E   UN210D   UN210F
UN211A                          1 11 UN211B   UN211A   UN211C
```

```
UN211B                                      1 11 UN211B    UN211A    UN211C
UN211C                                      1 11 UN211B    UN211A    UN211C
UN211D                                      1 11 UN211E    UN211D    UN211F
UN211E                                      1 11 UN211E    UN211D    UN211F
UN211F                                      1 11 UN211E    UN211D    UN211F
UN214A                                      1 13 UN214B    UN214A    UN214C
UN214B                                      1 13 UN214B    UN214A    UN214C
UN214C                                      1 13 UN214B    UN214A    UN214C
UN218A                                      1 16 UN218B    UN218A    UN218C
UN218B                                      1 16 UN218B    UN218A    UN218C
UN218C                                      1 16 UN218B    UN218A    UN218C
UN224A                                      1 20 UN224B    UN224A    UN224C
UN224B                                      1 20 UN224B    UN224A    UN224C
UN224C                                      1 20 UN224B    UN224A    UN224C
UN307A                                      1 07 UN307B    UN307A    UN307C
UN307B                                      1 07 UN307B    UN307A    UN307C
UN307C                                      1 07 UN307B    UN307A    UN307C
UN307D                                      1 07 UN307E    UN307D    UN307F
UN307E                                      1 07 UN307E    UN307D    UN307F
UN307F                                      1 07 UN307E    UN307D    UN307F
UN308A                                      1 08 UN308B    UN308A    UN308C
UN308B                                      1 08 UN308B    UN308A    UN308C
UN308C                                      1 08 UN308B    UN308A    UN308C
UN308D                                      1 08 UN308E    UN308D    UN308F
UN308E                                      1 08 UN308E    UN308D    UN308F
UN308F                                      1 08 UN308E    UN308D    UN308F
UN310A                                      1 10 UN310B    UN310A    UN310C
UN310B                                      1 10 UN310B    UN310A    UN310C
UN310C                                      1 10 UN310B    UN310A    UN310C
UN310D                                      1 10 UN310E    UN310D    UN310F
UN310E                                      1 10 UN310E    UN310D    UN310F
UN310F                                      1 10 UN310E    UN310D    UN310F
UN311A                                      1 10 UN311B    UN311A    UN311C
UN311B                                      1 10 UN311B    UN311A    UN311C
UN311C                                      1 10 UN311B    UN311A    UN311C
UN311D                                      1 11 UN311E    UN311D    UN311F
UN311E                                      1 11 UN311E    UN311D    UN311F
UN311F                                      1 11 UN311E    UN311D    UN311F
UN411A                                      1 10 UN411B    UN411A    UN411C
UN411B                                      1 10 UN411B    UN411A    UN411C
UN411C                                      1 10 UN411B    UN411A    UN411C
UN411D                                      1 11 UN411E    UN411D    UN411F
UN411E                                      1 11 UN411E    UN411D    UN411F
UN411F                                      1 11 UN411E    UN411D    UN411F
UN510A                                      1 11 UN510B    UN510A    UN510C
UN510B                                      1 11 UN510B    UN510A    UN510C
UN510C                                      1 11 UN510B    UN510A    UN510C
UN510D                                      1 11 UN510E    UN510D    UN510F
UN510E                                      1 11 UN510E    UN510D    UN510F
UN510F                                      1 11 UN510E    UN510D    UN510F
UN511A                                      1 10 UN511B    UN511A    UN511C
UN511B                                      1 10 UN511B    UN511A    UN511C
UN511C                                      1 10 UN511B    UN511A    UN511C
UN511D                                      1 11 UN511E    UN511D    UN511F
UN511E                                      1 11 UN511E    UN511D    UN511F
UN511F                                      1 11 UN511E    UN511D    UN511F
UN611A                                      1 10 UN611B    UN611A    UN611C
UN611B                                      1 10 UN611B    UN611A    UN611C
UN611C                                      1 10 UN611B    UN611A    UN611C
UN611D                                      1 11 UN611E    UN611D    UN611F
UN611E                                      1 11 UN611E    UN611D    UN611F
UN611F                                      1 11 UN611E    UN611D    UN611F
```

```
;
Times New Roman                         1 06 TN106E    TN106D
Times New Roman                         1 10 TN110E    TN110D
Times New Roman                         1 15 TN116E    TN116D
Times New Roman                         1 24 TN124E    TN124D
;
Arial MT                                1 06 A001AP    A001AL    A001AI    A001AJ
Arial MT                                2 06 A003AP    A003AL    A003AI    A003AJ
Arial MT                                3 06 A002AP    A002AL    A002AI    A002AJ
Arial MT                                4 06 A004AP    A004AL    A004AI    A004AJ
Arial MT                                1 07 A001BP    A001BL    A001BI    A001BJ
Arial MT                                2 07 A003BP    A003BL    A003BI    A003BJ
Arial MT                                3 07 A002BP    A002BL    A002BI    A002BJ
Arial MT                                4 07 A004BP    A004BL    A004BI    A004BJ
Arial MT                                1 08 A001CP    A001CL    A001CI    A001CJ
Arial MT                                2 08 A003CP    A003CL    A003CI    A003CJ
Arial MT                                3 08 A002CP    A002CL    A002CI    A002CJ
Arial MT                                4 08 A004CP    A004CL    A004CI    A004CJ
Arial MT                                1 09 A001DP    A001DL    A001DI    A001DJ
Arial MT                                2 09 A003DP    A003DL    A003DI    A003DJ
Arial MT                                3 09 A002DP    A002DL    A002DI    A002DJ
Arial MT                                4 09 A004DP    A004DL    A004DI    A004DJ
Arial MT                                1 10 A001EP    A001EL    A001EI    A001EJ
Arial MT                                2 10 A003EP    A003EL    A003EI    A003EJ
Arial MT                                3 10 A002EP    A002EL    A002EI    A002EJ
Arial MT                                4 10 A004EP    A004EL    A004EI    A004EJ
Arial MT                                1 11 A001FP    A001FL    A001FI    A001FJ
Arial MT                                2 11 A003FP    A003FL    A003FI    A003FJ
Arial MT                                3 11 A002FP    A002FL    A002FI    A002FJ
Arial MT                                4 11 A004FP    A004FL    A004FI    A004FJ
Arial MT                                1 12 A001GP    A001GL    A001GI    A001GJ
Arial MT                                2 12 A003GP    A003GL    A003GI    A003GJ
Arial MT                                3 12 A002GP    A002GL    A002GI    A002GJ
Arial MT                                4 12 A004GP    A004GL    A004GI    A004GJ
Arial MT                                1 14 A001HP    A001HL    A001HI    A001HJ
Arial MT                                2 14 A003HP    A003HL    A003HI    A003HJ
Arial MT                                3 14 A002HP    A002HL    A002HI    A002HJ
Arial MT                                4 14 A004HP    A004HL    A004HI    A004HJ
Arial MT                                1 18 A001IP    A001IL    A001II    A001IJ
Arial MT                                2 18 A003IP    A003IL    A003II    A003IJ
Arial MT                                3 18 A002IP    A002IL    A002II    A002IJ
Arial MT                                4 18 A004IP    A004IL    A004II    A004IJ
Arial MT                                1 24 A001JP    A001JL    A001JI    A001JJ
Arial MT                                2 24 A003JP    A003JL    A003JI    A003JJ
Arial MT                                3 24 A002JP    A002JL    A002JI    A002JJ
Arial MT                                4 24 A004JP    A004JL    A004JI    A004JJ
```

IBM AFP Font Matching Table Example

```
[AFP Fonts]
; FaceName
; |
; |                               Style (1=Normal, 2=Bold 3=Italic, 4=BoldItalic)
; |                               |
; |                               | Point Size (04-72)                     Charset-CodePage
; |                               | |                                      |
; |                               | |    Port      Land      Inv Port Inv Land |
; |                               | |    |         |         |        |        |
; v                               v v    v         v         v        v        v
Courier                          1 08 X140D8      X240D8     X340D8   X440D8   C0420080-T1v10500
Courier                          1 10 X140D0      X240D0     X340D0   X440D0   C0420000-T1v10500
Courier                          1 12 X140DB      X240DB     X340DB   X440DB   C04200B0-T1v10500
Courier                          1 14 X140DD      X240DD     X340DD   X440DD   C04200D0-T1v10500
Courier                          1 20 X140DJ      X240DJ     X340DJ   X440DJ   C04200J0-T1v10500
Courier                          2 08 X140F8      X240F8     X340F8   X440F8   C0440080-T1v10500
Courier                          2 10 X140F0      X240F0     X340F0   X440F0   C0440000-T1v10500
Courier                          2 12 X140FB      X240FB     X340FB   X440FB   C04400B0-T1v10500
Courier                          2 14 X140FD      X240FD     X340FD   X440FD   C04400D0-T1v10500
Courier                          2 20 X140FJ      X240FJ     X340FJ   X440FJ   C04400J0-T1v10500
Courier                          3 08 X140E8      X240E8     X340E8   X440E8   C0430080-T1v10500
Courier                          3 10 X140E0      X240E0     X340E0   X440E0   C0430000-T1v10500
Courier                          3 12 X140EB      X240EB     X340EB   X440EB   C04300B0-T1v10500
Courier                          3 14 X140ED      X240ED     X340ED   X440ED   C04300D0-T1v10500
Courier                          3 20 X140EJ      X240EJ     X340EJ   X440EJ   C04300J0-T1v10500
Courier                          4 08 X14108      X24108     X34108   X44108   C0450080-T1v10500
Courier                          4 10 X14100      X24100     X34100   X44100   C0450000-T1v10500
Courier                          4 12 X1410B      X2410B     X3410B   X4410B   C04500B0-T1v10500
Courier                          4 14 X1410D      X2410D     X3410D   X4410D   C04500D0-T1v10500
Courier                          4 20 X1410J      X2410J     X3410J   X4410J   C04500J0-T1v10500
GothicText                       1 08 X160D8      X260D8     X360D8   X460D8   C0620080-T1v10500
GothicText                       1 10 X160D0      X260D0     X360D0   X460D0   C0620000-T1v10500
GothicText                       1 12 X160DB      X260DB     X360DB   X460DB   C06200B0-T1v10500
GothicText                       1 14 X160DD      X260DD     X360DD   X460DD   C06200D0-T1v10500
GothicText                       1 20 X160DJ      X260DJ     X360DJ   X460DJ   C06200J0-T1v10500
Helvetica                        1 08 X1H0D8      X2H0D8     X3H0D8   X4H0D8   C0H20080-T1v10500
Helvetica                        1 10 X1H0D0      X2H0D0     X3H0D0   X4H0D0   C0H20000-T1v10500
Helvetica                        1 12 X1H0DB      X2H0DB     X3H0DB   X4H0DB   C0H200B0-T1v10500
Helvetica                        1 14 X1H0DD      X2H0DD     X3H0DD   X4H0DD   C0H200D0-T1v10500
Helvetica                        1 16 X1H0DF      X2H0DF     X3H0DF   X4H0DF   C0H200F0-T1v10500
Helvetica                        1 18 X1H0DH      X2H0DH     X3H0DH   X4H0DH   C0H200H0-T1v10500
Helvetica                        1 20 X1H0DJ      X2H0DJ     X3H0DJ   X4H0DJ   C0H200J0-T1v10500
Helvetica                        1 24 X1H0DN      X2H0DN     X3H0DN   X4H0DN   C0H200N0-T1v10500
Helvetica                        1 30 X1H0DT      X2H0DT     X3H0DT   X4H0DT   C0H200T0-T1v10500
Helvetica                        1 36 X1H0DZ      X2H0DZ     X3H0DZ   X4H0DZ   C0H200Z0-T1v10500
Helvetica                        2 08 X1H0F8      X2H0F8     X3H0F8   X4H0F8   C0H40080-T1v10500
Helvetica                        2 10 X1H0F0      X2H0F0     X3H0F0   X4H0F0   C0H40000-T1v10500
Helvetica                        2 12 X1H0FB      X2H0FB     X3H0FB   X4H0FB   C0H400B0-T1v10500
Helvetica                        2 14 X1H0FD      X2H0FD     X3H0FD   X4H0FD   C0H400D0-T1v10500
Helvetica                        2 16 X1H0FF      X2H0FF     X3H0FF   X4H0FF   C0H400F0-T1v10500
Helvetica                        2 18 X1H0FH      X2H0FH     X3H0FH   X4H0FH   C0H400H0-T1v10500
Helvetica                        2 20 X1H0FJ      X2H0FJ     X3H0FJ   X4H0FJ   C0H400J0-T1v10500
Helvetica                        2 24 X1H0FN      X2H0FN     X3H0FN   X4H0FN   C0H400N0-T1v10500
Helvetica                        2 30 X1H0FT      X2H0FT     X3H0FT   X4H0FT   C0H400T0-T1v10500
Helvetica                        2 36 X1H0FZ      X2H0FZ     X3H0FZ   X4H0FZ   C0H400Z0-T1v10500
Helvetica                        3 08 X1H0E8      X2H0E8     X3H0E8   X4H0E8   C0H30080-T1v10500
Helvetica                        3 10 X1H0E0      X2H0E0     X3H0E0   X4H0E0   C0H30000-T1v10500
Helvetica                        3 12 X1H0EB      X2H0EB     X3H0EB   X4H0EB   C0H300B0-T1v10500
Helvetica                        3 14 X1H0ED      X2H0ED     X3H0ED   X4H0ED   C0H300D0-T1v10500
Helvetica                        3 16 X1H0EF      X2H0EF     X3H0EF   X4H0EF   C0H300F0-T1v10500
Helvetica                        3 18 X1H0EH      X2H0EH     X3H0EH   X4H0EH   C0H300H0-T1v10500
Helvetica                        3 20 X1H0EJ      X2H0EJ     X3H0EJ   X4H0EJ   C0H300J0-T1v10500
Helvetica                        3 24 X1H0EN      X2H0EN     X3H0EN   X4H0EN   C0H300N0-T1v10500
Helvetica                        3 30 X1H0ET      X2H0ET     X3H0ET   X4H0ET   C0H300T0-T1v10500
Helvetica                        3 36 X1H0EZ      X2H0EZ     X3H0EZ   X4H0EZ   C0H300Z0-T1v10500
Helvetica                        4 10 X1H100      X2H100     X3H100   X4H100   C0H50000-T1v10500
Helvetica                        4 08 X1H108      X2H108     X3H108   X4H108   C0H50080-T1v10500
Helvetica                        4 12 X1H10B      X2H10B     X3H10B   X4H10B   C0H500B0-T1v10500
Helvetica                        4 14 X1H10D      X2H10D     X3H10D   X4H10D   C0H500D0-T1v10500
Helvetica                        4 16 X1H10F      X2H10F     X3H10F   X4H10F   C0H500F0-T1v10500
Helvetica                        4 18 X1H10H      X2H10H     X3H10H   X4H10H   C0H500H0-T1v10500
Helvetica                        4 20 X1H10J      X2H10J     X3H10J   X4H10J   C0H500J0-T1v10500
Helvetica                        4 24 X1H10N      X2H10N     X3H10N   X4H10N   C0H500N0-T1v10500
Helvetica                        4 30 X1H10T      X2H10T     X3H10T   X4H10T   C0H500T0-T1v10500
Helvetica                        4 36 X1H10Z      X2H10Z     X3H10Z   X4H10Z   C0H500Z0-T1v10500
```

```
TimesNewRoman                        1 08 X1N0D8    X2N0D8    X3N0D8    X4N0D8    C0N20080-T1v10500
TimesNewRoman                        1 10 X1N0D0    X2N0D0    X3N0D0    X4N0D0    C0N20000-T1v10500
TimesNewRoman                        1 12 X1N0DB    X2N0DB    X3N0DB    X4N0DB    C0N200B0-T1v10500
TimesNewRoman                        1 14 X1N0DD    X2N0DD    X3N0DD    X4N0DD    C0N200D0-T1v10500
TimesNewRoman                        1 16 X1N0DF    X2N0DF    X3N0DF    X4N0DF    C0N200F0-T1v10500
TimesNewRoman                        1 18 X1N0DH    X2N0DH    X3N0DH    X4N0DH    C0N200H0-T1v10500
TimesNewRoman                        1 20 X1N0DJ    X2N0DJ    X3N0DJ    X4N0DJ    C0N200J0-T1v10500
TimesNewRoman                        1 24 X1N0DN    X2N0DN    X3N0DN    X4N0DN    C0N200N0-T1v10500
TimesNewRoman                        1 30 X1N0DT    X2N0DT    X3N0DT    X4N0DT    C0N200T0-T1v10500
TimesNewRoman                        1 36 X1N0DZ    X2N0DZ    X3N0DZ    X4N0DZ    C0N200Z0-T1v10500
TimesNewRoman                        2 08 X1N0F8    X2N0F8    X3N0F8    X4N0F8    C0N40080-T1v10500
TimesNewRoman                        2 10 X1N0F0    X2N0F0    X3N0F0    X4N0F0    C0N40000-T1v10500
TimesNewRoman                        2 12 X1N0FB    X2N0FB    X3N0FB    X4N0FB    C0N400B0-T1v10500
TimesNewRoman                        2 14 X1N0FD    X2N0FD    X3N0FD    X4N0FD    C0N400D0-T1v10500
TimesNewRoman                        2 16 X1N0FF    X2N0FF    X3N0FF    X4N0FF    C0N400F0-T1v10500
TimesNewRoman                        2 18 X1N0FH    X2N0FH    X3N0FH    X4N0FH    C0N400H0-T1v10500
TimesNewRoman                        2 20 X1N0FJ    X2N0FJ    X3N0FJ    X4N0FJ    C0N400J0-T1v10500
TimesNewRoman                        2 24 X1N0FN    X2N0FN    X3N0FN    X4N0FN    C0N400N0-T1v10500
TimesNewRoman                        2 30 X1N0FT    X2N0FT    X3N0FT    X4N0FT    C0N400T0-T1v10500
TimesNewRoman                        2 36 X1N0FZ    X2N0FZ    X3N0FZ    X4N0FZ    C0N400Z0-T1v10500
TimesNewRoman                        3 08 X1N0E8    X2N0E8    X3N0E8    X4N0E8    C0N30080-T1v10500
TimesNewRoman                        3 10 X1N0E0    X2N0E0    X3N0E0    X4N0E0    C0N30000-T1v10500
TimesNewRoman                        3 12 X1N0EB    X2N0EB    X3N0EB    X4N0EB    C0N300B0-T1v10500
TimesNewRoman                        3 14 X1N0ED    X2N0ED    X3N0ED    X4N0ED    C0N300D0-T1v10500
TimesNewRoman                        3 16 X1N0EF    X2N0EF    X3N0EF    X4N0EF    C0N300F0-T1v10500
TimesNewRoman                        3 18 X1N0EH    X2N0EH    X3N0EH    X4N0EH    C0N300H0-T1v10500
TimesNewRoman                        3 20 X1N0EJ    X2N0EJ    X3N0EJ    X4N0EJ    C0N300J0-T1v10500
TimesNewRoman                        3 24 X1N0EN    X2N0EN    X3N0EN    X4N0EN    C0N300N0-T1v10500
TimesNewRoman                        3 30 X1N0ET    X2N0ET    X3N0ET    X4N0ET    C0N300T0-T1v10500
TimesNewRoman                        3 36 X1N0EZ    X2N0EZ    X3N0EZ    X4N0EZ    C0N300Z0-T1v10500
TimesNewRoman                        4 08 X1N108    X2N108    X3N108    X4N108    C0N50080-T1v10500
TimesNewRoman                        4 10 X1N100    X2N100    X3N100    X4N100    C0N50000-T1v10500
TimesNewRoman                        4 12 X1N10B    X2N10B    X3N10B    X4N10B    C0N500B0-T1v10500
TimesNewRoman                        4 14 X1N10D    X2N10D    X3N10D    X4N10D    C0N500D0-T1v10500
TimesNewRoman                        4 16 X1N10F    X2N10F    X3N10F    X4N10F    C0N500F0-T1v10500
TimesNewRoman                        4 18 X1N10H    X2N10H    X3N10H    X4N10H    C0N500H0-T1v10500
TimesNewRoman                        4 20 X1N10J    X2N10J    X3N10J    X4N10J    C0N500J0-T1v10500
TimesNewRoman                        4 24 X1N10N    X2N10N    X3N10N    X4N10N    C0N500N0-T1v10500
TimesNewRoman                        4 30 X1N10T    X2N10T    X3N10T    X4N10T    C0N500T0-T1v10500
TimesNewRoman                        4 36 X1N10Z    X2N10Z    X3N10Z    X4N10Z    C0N500Z0-T1v10500
```

ABOUT FONTS

In general, a *font* is a collection of characters all having the same typeface, style, weight, width, and point size. In particular, this definition varies by font vendor.

In addition to the shapes of each character, a font includes information about how the characters should be spaced vertically and horizontally within a block of text, character mapping details (governing the variety of characters included in the font and the keystrokes needed to access them), and much more. The font also includes manufacturer's details, such as copyrights, names and licensing permissions.

Why Should I Use a Font?

The relative processing times for a document converted into unformatted text and font calls versus the same document converted into a graphic image are vastly different. The numbers reflect a widely-known electronic publishing fact: creating graphics is a computationally-intensive and lengthy process. To minimize processing times, all the font resources your Windows applications use should be available to your printer.

Fonts Illustrated

The following diagram illustrates the complexity introduced where the exacting nature of printing characters, in relation to their cell widths and heights, is concerned.
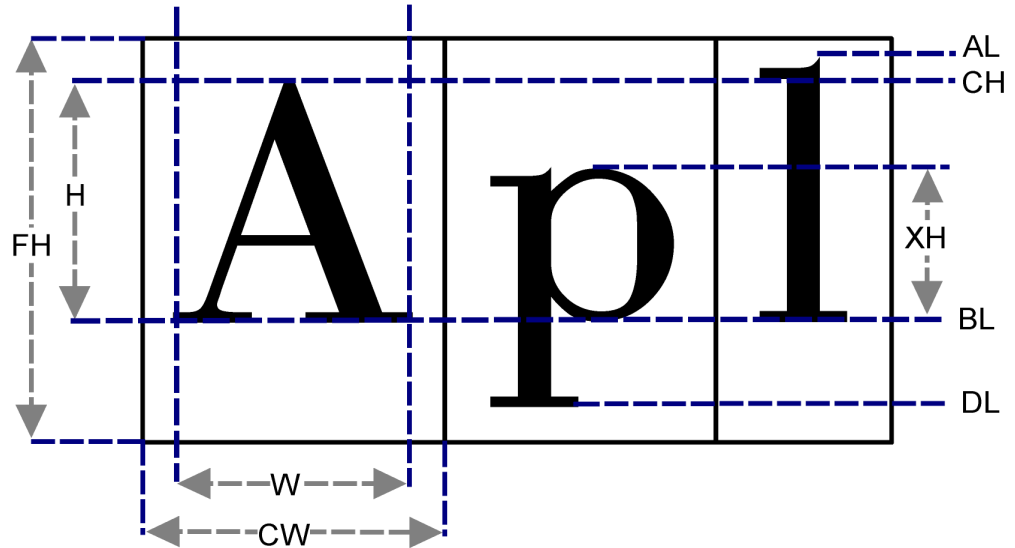
As you can see, the Cell Width (**CW**) adds extra white space to the actual Width (**W**) of the character. The Font Height (**FH**) adds extra white space to the Height (**H**) of the character, taking into account the lowest descender line (**DL**) and the highest ascender line (**AL**).

Please refer to Xerox's Web site (**www.font.net**) for more information about fonts and their characteristics.

DEVICE VERSUS OUTLINE FONTS

When speaking about fonts, you should know that there are two types: device and outline. Device fonts are at various times described as printer or bitmap(ped) fonts. Outline fonts, on the other hand, are described as vector or scalable fonts.

What Is a Device Font?

A device font is analogous to a bitmap, or rasterized image. Each individual device font file represents all printable characters in one typeface, one point size, one style, and one weight (e.g., Helvetica, 10 pt., Italic, Bold). You must use a different font file if you want to change any one of those characteristics.

Regarding Xerox Metacode device fonts, for example, any character printed in Helvetica, 10 pt., Italic, Bold, Portrait represents a single font file. Even if all you want to do is change to a 12-point font (with every other setting the same), a different font file is required.

Please refer to *Xerox Laser Printing Systems, Standard Font Library, Font User Guide* (Publication #600P86174-A) for more information about Xerox fonts.

What Is an Outline Font?

An outline font is a scalable font, meaning any character within a given typeface can be adjusted to any point size, style, weight, and orientation. Each scalable font, therefore, includes all font weights, point sizes, and orientations for a given typeface (e.g., Times New Roman).

Two common types of scalable fonts are Microsoft's TrueType and Adobe's Type 1.

Refer to the Microsoft Web site for more information about TrueType fonts (**www.microsoft.com/truetype**). Refer to the Adobe Web site for more information about Type 1 (PostScript) fonts. Go to **http://www.adobe.com/products/postscript/pdfs/psprintprime.pdf** and view the Adobe Printing Primer pdf.

Types of IBM AFP Fonts

The IBM Expanded Core Fonts (formerly referred to as Core Interchange Fonts) are available in the following formats:

- 240-pel device fonts are fonts for printing on 240-pel page printers, such as the IBM 3825 Page Printer, and the IBM 3900 Advanced Function Printer.

- 300-pel device fonts are fonts for printing on 300-pel printers, such as the IBM 3116 Page Printer.

- AFP outline fonts are fonts for printing on IBM printers that use the Advanced Function Common Control Unit (AFCCU), such as the IBM 3130 Advanced Function Printer, the IBM 3160 Advanced Function Printer, and the IBM 3900 Duplex and Wide Advanced Function Printers.

- Type 1 (outline) fonts are fonts for use as input to Type Transformer, an OS/2 program included in AFP Font Collection for AIX, OS/400, and OS/2, that creates AFP font resources for use on IBM's Advanced Function printers.

For more information about AFP fonts, see IBM's *AFP Font Collection for Workstations* at **http://www-912.ibm.com/s_dir/slkbase.NSF/0/da372ebcbdeee52686256c6e0070d2da?OpenDocument.**

Types of Xerox Metacode Fonts

The Xerox A03 font collection comprises two font groups:

- One group resides on the Xerox printer, and consists of rasterized images of each character for a specific typeface, specific point size, specific style, specific weight, and specific orientation.

- An identical group resides on the workstation, and while these fonts are scalable to different point sizes, this isn't recommended by Xerox.

For more information about Metacode fonts, see the Introduction to the *A03.PDF* document that is distributed with the Xerox A03 font collection.

Printcommander Uses Scalable Outline Fonts

Win32 font processing requires outline or scalable (TrueType) fonts. Therefore, to use Printcommander, you must obtain a TrueType font for each device font you use.

Most of the Metacode or AFP font vendors can provide or create TrueType fonts.

CHANGING THE FONTS USED IN FORMS

Composed forms that are currently used by Oracle products can continue to be used in their unaltered states. However, should a form require a modification, the following quick and easy steps will be necessary in order to ensure compatibility with newer document presentation technology.

If you use Tagcommander in conjunction with Printcommander, you should be sure to complete the following task:

• If the form contains BPSD tags, simply visit each BPSD tag, update the font name with the scalable font name, and save the updates.

    If you already use scalable fonts as per Oracle recommendation, the following procedure won't be necessary.

If you need to update existing forms that have been composed in MS Word:

• You can simply update paragraph styles with the new scalable font name and that change will automatically update any text that uses that style.

• In the event that you didn't use paragraph styles when you created the document, simply re-select the individual font within the document by highlighting the text and choosing the new scalable font name for that text.

PRINTCOMMANDER RECOMMENDATIONS FOR XEROX METACODE

Each Xerox Metacode device font is specific in point size, style, and orientation. It is important to have the different point sizes and styles available when creating the document in a Windows application for visual confirmation of how the document will look. It is not absolutely necessary to have all orientations available. The orientation of a page is typically established through a Page Setup dialog. For these reasons, and to eliminate some complexity in the list of available fonts, you may only want to install the portrait orientation of each scalable font.

Through the use of the Font Matching table, it is possible for Docucreate to select the correct font for different orientations even though the portrait version is selected in the Windows application.

| CAUTION | Read the license agreement with your font vendor. Unless otherwise specified, you must purchase fonts for each PC and print device. |

Installed Components

As described earlier in this appendix, a Font Matching Table concept has been integrated into the modules responsible for generating Metacode output. This version of the software comes complete with the necessary setup to use the Xerox Standard Font Library fonts (A03 fonts), provided the Xerox TrueType equivalents of the A03 fonts have been installed on the Win32 workstation that runs Printcommander.

This version of Printcommander contains:

- A set of printer font metric (PFM) files that match the A03 fonts

- A modifiable Font Matching Table that cross-references the A03 TrueType Typeface names in Windows with the Xerox A03 device font name installed on a Metacode printer

- A Printer Definition (PrintDef) designed to use the font matching table and reference the supplied A03 PFM files

- A Microsoft Word document that uses a sample of the A03 fonts and functions as a test print page

Verifying the Printcommander Installation for Xerox Metacode

After you install Printcommander, be sure to follow the instructions on establishing the Docucreate Output Control parameters. The Output Control parameters allow you to verify that Printcommander is correctly installed and fully operational.

To Verify the Printcommander Installation

1. Click the **Docucreate Output Control** icon in the System Tray.

2. In the Output Settings **Print Definition** drop-down list box, choose **DFXMETA**.

3. In the Output Settings **Options** text box, verify the target location of the output file.

4. For the Output Settings **Output file type**, click the **Variable 4 byte** option button.

5. Use the Control Panel (delivered with Docucreate Workstation) to modify the DFXMETA PrintDef. The only modification necessary is on the Advanced Options tab, but this may require assistance from the MIS staff or inhouse Xerox Printer specialist. The settings in the Advanced Options tab must match the corresponding settings in the JDL/JDE that is used on the Xerox Metacode printer in order to successfully print the resulting Metacode generated by Printcommander.

6. Open the **Test_A03.doc** in Microsoft Word. That document can be found in the location where Printcommander was installed. Print the document by choosing the Docucreate Virtual Raster Printer. The properties of the Docucreate Virtual Raster Printer should reflect a Portrait orientation, No Duplex printing, and 300 dots per inch resolution.

7. Send the resulting Metacode file to your Xerox Printer.

AFP DEVICE FONT CONVERSION

DOCFCA, the AFP device font conversion utility lets you create Printer Font Metric files (.PFM) and Hewlett-Packard Printer Control Language (HP PCL) files from IBM AFP printer fonts. To add new fonts to your Win32 printing environment, you must use the utility to create PFMs for the fonts.

For details about using Win32 to convert AFP device fonts to scalable font PFMs, see the *Fontcommander* user guide.

METACODE DEVICE FONT CONVERSION

DOCFCM, the Metacode device font conversion utility lets you create Printer Font Metric files (PFMs) based on your current Xerox Metacode device fonts. To add new fonts to your Win32 printing environment, you must use the utility to create PFMs for the fonts.

For details about using Win32 to convert Metacode device fonts to scalable font PFMs, see the *Fontcommander* user guide.

Technical Specifications

TECHNICAL OVERVIEW

Printcommander is a collection of programs working together to take your document from the PC client and translate into a format recognized by high-speed production printers or Oracle document distribution archival software. Printcommander comprises the following programs:

- DFXOUT or DC2OUT

- NetMove

- DC2OCTRL

The following technical flowchart illustrates the complete architecture of Printcommander. The solid line divides the Windows XP system-level operations and the Application/User-level processes.
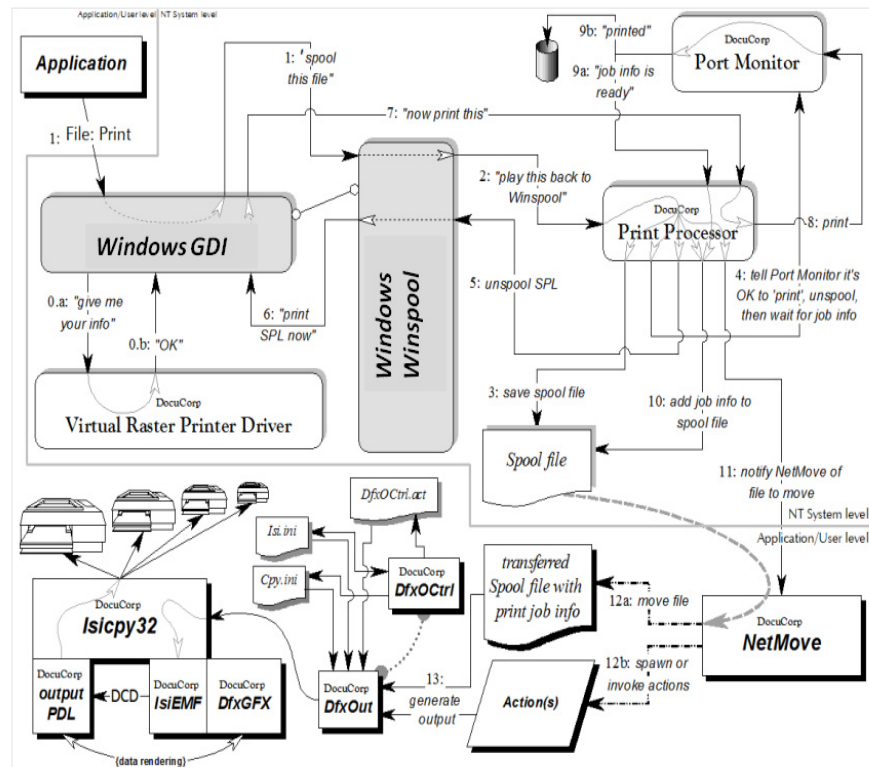
SETTING UP TECHNICAL/ADMINISTRATIVE PARAMETERS

After you've installed the Printcommander component of Docucreate Workstation, you may still need to set some parameters within the NetMove program before you can successfully create print files. NetMove resides as a Startup task in the System Tray area of the Windows Task Bar.

To Set Up NetMove

• Press **CTRL+SHIFT** and click the **Docucreate Output Control** icon in the System Tray.

The **NetMove Status** dialog box is displayed.

Because the NetMove Status dialog contains several specifications, this guide provides a separate topic for each parameter.

To	See
View the NetMove program version number	To View the NetMove Version Number
View the User name	To View the User Name
View the User ID	To View the User ID
Set the current virtual drive	To Set the Current Virtual Drive
View the path to the target directory	To View the Path to the Target Directory
View the name of the last file transferred	To View the Name of the Last File Transferred
View the total number of actions	To View the Total Number of Actions
Display a window with the name of the transferred file on each move	To Display the Names of Transferred Files
Delete the transferred file after all actions are completed	To Delete Files After Action Completion
Establish User-specified and Local Machine actions	Defining Action Specifications
Save your changes to the Status dialog	To Save and Close the NetMove Status Dialog

To View the NetMove Version Number

• The **NetMove.exe, Version No.** text box contains the current version of the NetMove program.

To View the User Name

• The **User name** text box displays the name of the person currently logged in on this workstation.

To View the User ID

• The **User ID** text box displays the identification string of the person currently logged in on this workstation.

To Set the Current Virtual Drive

1. If the **NetMove Status** dialog box isn't displayed, see To Set Up NetMove.

2. Double-click the **Current virtual drive** text box.

    NetMove displays the **Drive Letter** dialog box.
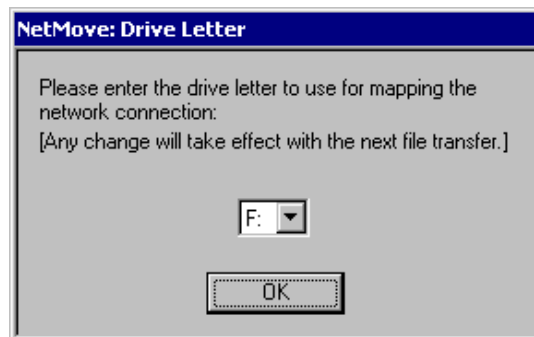
NetMove displays the next available drive letter designation; however, you can choose any available letter.

3. In the drive letter drop-down list box, select the virtual drive letter to which you want to assign the network connection.

4. Click **OK**.

NetMove returns you to the **NetMove Status** dialog box.

If you want to save the NetMove settings, see To Save and Close the NetMove Status Dialog.

To View the Path to the Target Directory

1. If the **NetMove Status** dialog box isn't displayed, see To Set Up NetMove.

2. Double-click the **(UNC) Path to target directory** text box.

NetMove displays the **Target Path** dialog box.
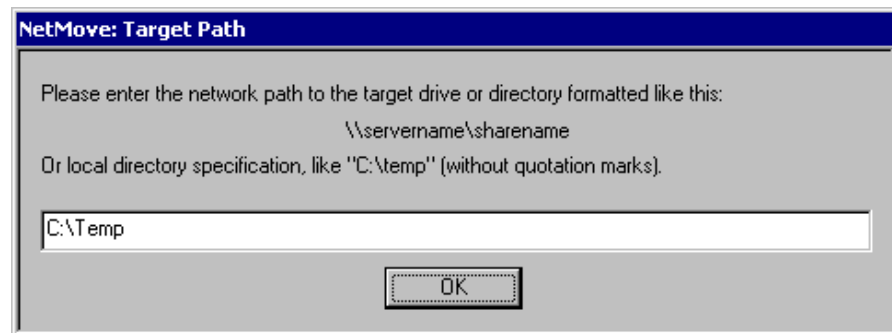
3. If you chose the Oracle default spool directory when you installed Printcommander for the first time, the **Target Path** text box displays the path of the spool directory (e.g., **c:\Oracle\docucreate\dfxout**). Skip to Step 5..

4. If you're reinstalling Printcommander or upgrading from a previous installation, the **Target Path** text box displays the share name chosen during Step 4 of *To Install the Printcommander Printer Driver for Windows XP/Server 2003* on page 21.

The share name consists of the current computer name followed by the shared print spool folder name (e.g., **\\computername\dfxout**). Because you informed Windows of the folder's status as a shared folder, the operating system can track the folder by its share name; therefore, you don't need to enter the entire data path. For more information about designating a path as a shared folder, see To Create a Shared Folder.

5. Click **OK**.

NetMove returns you to the **NetMove Status** dialog box.

If you want to save the NetMove settings, see To Save and Close the NetMove Status Dialog.

To Create a Shared Folder

1. Use Windows Explorer to locate the folder you want to share.

This shared folder contains all the printer spool files; therefore, it must be "shared" so that all necessary processes have access to it.

2. Right-click on the folder and select **Properties**.

3. Select the **Sharing** tab.

4. **Choose the Shared As:** option button and assign it a share name (or alias).

5. Type the current computer name, followed by this share name, into the **Target Path** text box.

To View the Name of the Last File Transferred

• The **Name of last file transferred** text box contains the name of the last file that NetMove transferred from the Target Path to the printer.

To View the Total Number of Actions

• The **Total number of actions** text box contains the number of actions you've created, either as "user-specified" or "local machine".

To Display the Names of Transferred Files

• Enable the **Show window with name of transferred file on each move** check box to display the name of each file after it's moved to the printer.

If you want to save the NetMove settings, see To Save and Close the NetMove Status Dialog.

To Delete Files After Action Completion

• Enable the **Delete transferred file after actions are complete** check box to delete each spool file after all actions assigned to it are completed.

If you want to save the NetMove settings, see To Save and Close the NetMove Status Dialog.

To Save and Close the NetMove Status Dialog

• Click **OK** to save the NetMove settings.

NetMove closes and returns you to the Windows Desktop.

DEFINING ACTION SPECIFICATIONS

NetMove offers two kinds of actions, "User-specified" actions and "Local machine" actions. User-specified actions are unique to the person currently logged-in on the workstation; Local-machine actions apply to anyone who logs in on that workstation.

"Action" is the term given to the technical setup information that Printcommander uses. Actions are flexible to allow other processes to act upon the Spool file that Docucreate manipulates when generating output printstreams.

Tip	Typically, the "default" installed action, in conjunction with the correct Printer Definition (PrintDef), is sufficient to produce any supported printstream (e.g., DCD, AFP, Metacode).

Actions can run an .EXE (executable) in a new process, or load a Dynamic Link Library (DLL) and call a specified entry point (function). When spawning an executable, the list of parameters specified in the Action Specification are passed to that executable, to which the full path of the already-moved spool file is added as the last parameter. When invoking a function within a DLL, only one parameter is passed to it: the full path of that spool file, passed as a pointer to a Unicode, NULL-terminated string.

Each Action is controlled by a string in the Windows XP Registry. This string must conform to specific format rules; if it fails to adhere to these rules, NetMove does not try to load the Action. Instead, NetMove relegates that string into a lower Registry key called 'BadActions' where it can be edited and from which it can be moved back into the appropriate Actions section.

A numeric string identifies the Action's version. This string is the first field in the Action. By default, User Actions are automatically created with the most recent number, 102. Actions numbered '103' are part of the Docucreate Output Control installed instruction set and shouldn't be edited or deleted.

Because NetMove offers two kinds of actions, this guide provides a separate topic for each type of action. The method you use to create both types of actions is identical; however, the scope of the actions differs slightly. "User-specified" actions are specific to a particular user, while "Local machine" actions are available to any user who is logged on to that workstation

.

To Establish	See
User-specified Actions	Establishing User-specified Actions
Local machine Actions	Establishing Local Machine Actions

Establishing User-specified Actions

1. If the **NetMove Status** dialog box isn't displayed, see To Set Up NetMove.

2. Double-click the **User specified actions** text box.

   NetMove displays the **Action Specification** dialog box.
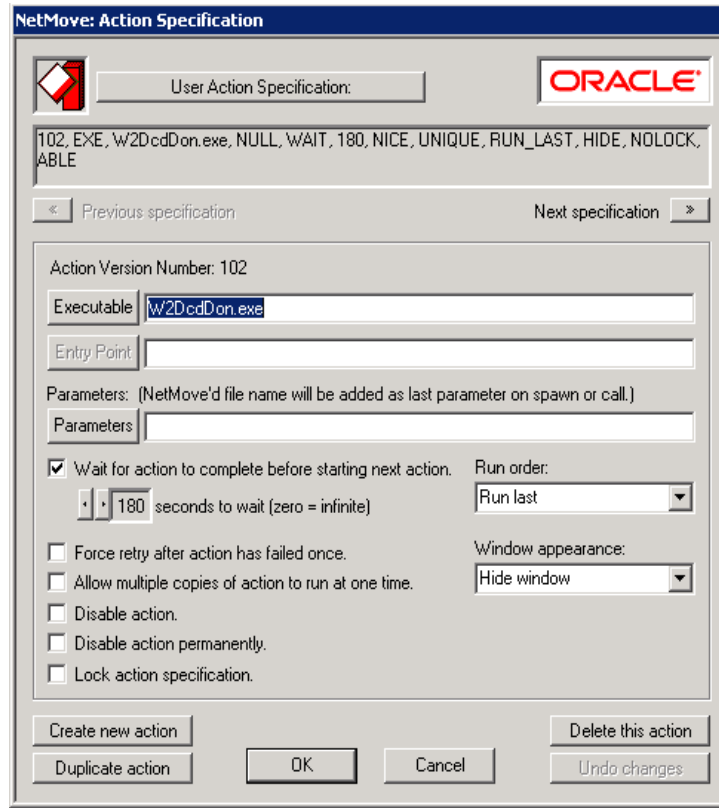
The main text box displays the current output action. DFXOUT or DC2OUT is the main program called by NetMove, and performs all of the processing pertaining to Printcommander. For more information about output actions, see To Specify the Output Parameters.

You can cycle through the list of actions by clicking on **Previous specification** and **Next specification**, respectively. For more information about the individual output parameters, see the appropriate reference in the following table.

CAUTION	Only advanced users should modify these actions. The installed actions and parameters are complete and sufficient for producing DCD, AFP, and Metacode printstreams.

Because the **Action Specification** dialog contains several specifications, this guide provides a separate topic for each specification.

To	See
Specify the program to use	To Specify a Program
Specify the Data Link Library (DLL) and its entry point (function)	To Specify a DLL and Entry Point
(**Documaker**) Specify the DLL and entry point for producing FAP output	To Specify a DLL and Entry Point for Generating FAP Output (Documaker Users)
Specify the optional output parameters (command line switches) of the selected EXE	To Specify the Output Parameters
Wait for an action to complete before starting the next action	To Wait for an Action to Complete
Specify the number of seconds to wait before starting the next action	To Specify the Number of Seconds to Wait
Force a retry after an action has failed once	To Force a Retry After Initial Failure
Allow multiple copies of an action to run at once	To Allow Multiple Copies to Run
Temporarily disable an action	To Disable an Action Temporarily
Permanently disable an action	To Disable an Action Permanently
Lock an action specification	To Lock an Action
Specify a non-modifiable, system action	To Specify an Action as a System Action
Specify the Run order	To Specify the Run Order of Actions
Specify the window appearance	To Specify the Window Appearance
Create a new action	To Create a New Action
Duplicate an action	To Duplicate an Action
Delete this action	To Delete This Action
Undo any changes	To Undo Changes
Save your changes to the Action Specification dialog	To Save and Close the Action Specification Dialog

To Specify a Program

1. Click **Executable** and navigate to the location of the program file.

Tip   Typically, you should select Dfxout.exe or Dc2out as the executable program in all cases. Printcommander installs this file into the same directory as the Windows XP program files (e.g., C:\Windows\Dfxout.exe).

---

2. Select an executable program (.EXE).

   Your choice results in an EXE flag and a file name in the main text box (e.g., 102, **EXE**, **C:\windows\dfxout.exe**, NULL, WAIT, 150, NICE, UNIQUE, RUN_LAST, MIN, LOCK, ABLE.

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Specify a DLL and Entry Point

CAUTION | This procedure is only for advanced users. By selecting a DLL and entry point, you will be, in effect, writing your own custom programming code. Consult your Information Systems department before continuing.

1. Click **Create New Action**, then uncheck the **Lock Action Specification** option.

2. Click **Executable** and NetMove displays the **Choose executable for NetMove action:** dialog box.

3. In the **Files of type:** drop-down list box, select **Dynamic-link Library (*.dll)**.

4. Navigate to the desired location, select a .dll file, and then click **Open**.

   Your choice results in a DLL flag and a file name in the main text box (e.g., 102, **DLL**, **C:\prog\analyz.dll**, RunAnalysis, WAIT, 0, NICE, UNIQUE, RUN_FIRST, MIN, LOCKED, ABLE).

5. Click **Entry Point**.

6. Type the name of the entry point for the DLL action (e.g., MyDLLFunction). The DLL must have a _stdcall (or WINAPI) entry point and must be 'C' callable.

   Your choice results in a function name or NULL flag in the main text box (e.g. 102, DLL, C:\prog\analyz.dll, **RunAnalysis**, WAIT, 0, NICE, UNIQUE, RUN_FIRST, MIN, LOCKED, ABLE).

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Specify a DLL and Entry Point for Generating FAP Output (Documaker Users)

CAUTION	This procedure is only for advanced users. By selecting a DLL and entry point, you will be, in effect, writing your own custom programming code. Consult your Information Systems department before continuing.

1. Click **Create New Action**, then uncheck the **Lock Action Specification** option.

2. Click **Executable** and NetMove displays the **Choose executable for NetMove action:** dialog box.

3. In the **Files of type:** drop-down list box, select **Dynamic-link Library (*.dll)**.

4. Navigate to the directory where you installed Documaker rp version 10.1 (e.g., **c:\fap\dll**).

5. Select the DCDW32.DLL file in that directory, then click **OK**.

6. Click **Entry Point**.

   The **Select Exported Entry Point** window displays and shows a list of functions visible from the DCDW32.DLL file.

7. Select the function **DCDDCDToFAPNM**.

8. In the **Run order:** drop-down list box, choose **Run Last**.

9. Click **OK** and you're returned to the NetMove Status window.

   a. Click **OK** and you're returned to the Windows desktop.

   b. Click the **NetMove** icon (without holding down CTRL and SHIFT).

   The DocuCreate Output Control window displays.

   a. From the **Print definition:** drop-down list box, select **DCD**.

   b. In the DCD Output Settings group box, click **Change**.

   The Output File Specification dialog box displays.

   a. In the **Path:** text box, type the data path where you want to create your FAP.

Note	This folder needs to be designated as "Shared".

   b. Enable the final option, **Retain source document extension in output name**.

   c. Click **OK** and you're returned to the Windows desktop.

To Specify the Output Parameters

The following parameters are specific to the output executable. All others apply to the NetMove program.

The Docucreate software is delivered with an ACT, or Actions, file that is installed along with Printcommander. The **/ACT** parameter accesses the ACT file and you shouldn't change this setting. The delivered ACT file contains the necessary settings for producing DCD, AFP, and Metacode printstreams.

- Listed below are brief descriptions of the ACT file parameters that you may see displayed in the Docucreate Output Control dialog box. You can only modify them by updating the Docucreate Output Control or the Action Specification dialog for user-defined Output Control actions.

Parameter	Explanation
/O or /o	This parameter specifies the file name to assign to the output file.
	The following statements help to clarify the consequences of using all, part, or none of the parameter.
	• If you specify the complete parameter, the output executable always uses this name (e.g., **/Odfxout.prn**).
	• If you enter the parameter without any settings, the output executable uses the default Oracle file naming pattern without any changes (e.g., **/O**docname.regular extension).
	• If you omit the parameter altogether, the output executable uses the Oracle default file naming pattern with changes (see the **/X** parameter discussed later).
	The /O and /P parameters work together to specify the location (path) and file name of the output file. You can use the /O parameter to establish both the path and file name of the output file in the form "Installation Directory" + "Dfxout" folder + "Dfxout.prn" (e.g., **/Oc:\windows\dfxout\dfxout.prn**).
/D or /d	This parameter specifies the location of the Common Objects (a prerequisite to installing Printcommander).
	The following statements help to clarify the consequences of using all, part, or none of the parameter.
	• If you specify the complete parameter, the output executable only searches this directory for the Common Objects (e.g., **/Dc:\oracle\comobjs**).
	• If you omit the parameter altogether, the output executable searches the Oracle ISI.INI file for the location of the Common Objects.
/P or /p	This parameter specifies the location (path) of the output file.
	The following statements help to clarify the consequences of using all, part, or none of the parameter.
	• If you specify the complete parameter, the output executable always uses this path as the place to store the output files (e.g., **/Pc:\temp**).
	• If you enter the parameter without any settings, the output executable uses the default Oracle path (e.g., **/P**).)
/W or /w	This parameter specifies the working directory where the output executable performs all of its processing.
	The following statements help to clarify the consequences of using all, part, or none of the parameter.
	• If you specify the complete parameter, the output executable uses this path as the working directory (e.g., **/Wc:\windows**).
	• If you enter the parameter without any settings, the output executable ignores the parameter.
/C or /c	This parameter changes the file type of the output file (e.g., makes it different from the input file type). When you use this flag, the change is restored to its previous setting the next time you log in: it's only valid for one use.
	The following statements help to clarify the consequences of using all, part, or none of the parameter.
	• If you specify the complete parameter, the output executable changes the output file type for one log-in session. The valid options are HDC, PCL, MET, DCD, AFP, or FAP (e.g., **/Cpcl**).
	• If you enter the parameter without any settings, the output executable ignores the parameter.

Parameter	Explanation
/X or /x	This parameter specifies the three-letter file name extension of the output file (e.g., filename.*xxx*)
	The following statements help to clarify the consequences of using all, part, or none of the parameter.
	• If you specify the complete parameter, the output executable always appends this extension to the output files (e.g., **/Xhdc**).
	• If you enter the parameter without any settings, the output executable strips away the file name extension (e.g., **/X**).
	• If you omit the parameter altogether, the output executable uses the default Oracle value for output file types (e.g., **MET**, **AFP**, **DCD**).
	After you specify this parameter, the Action Specification dialog box displays either **X–** (no file name extension at all) or **X+** (standard extension for output file type).

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Wait for an Action to Complete

• Enable the **Wait for action to complete before starting next action** check box to inform NetMove about whether to wait for one action to finish before initiating a new action.

Tip	If you don't make NetMove wait, it can process actions as fast as you computer allows; however, if you choose to have NetMove wait, you must also specify the number of seconds to wait before initiating the next action. See To Specify the Number of Seconds to Wait.
	If you're using a DLL action and you assign the NOWAIT flag, the entry point is started as a new, additional thread.

Your choice results in a WAIT or NOWAIT flag in the main text box (e.g., 102, EXE, C:\windows\dfxout.exe, NULL, **WAIT**, 150, NICE, UNIQUE, RUN_LAST, MIN, LOCK, ABLE).

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Specify the Number of Seconds to Wait

CAUTION	Anti-virus software which is set to analyze both in-coming and out-going files will tend to slow the printing process if a value other than zero is entered. Actions that previously executed in time may not complete if the anti-virus software intervenes.

• Use the left- and right-arrow key icons to specify the number of **seconds to wait** before proceeding with the next action (e.g., **0** means "wait until the current action is completed", while **180** means to wait three minutes).

Your choice results in a flag indicating the number of seconds in the main text

Tip	The wait option is a safety feature. If you choose not to wait and the preceding action doesn't finish, the entire process will halt. If you're unsure whether an action will finish, select to wait a certain amount of time, then continue the process even if an action is in error.

box (e.g., 102, EXE, C:\windows\dfxout.exe, NULL, WAIT, **150**, NICE, UNIQUE, RUN_LAST, MIN, LOCK, ABLE).

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Force a Retry After Initial Failure

• Enable the **Force retry after action has failed once** check box to force the retry of an action that has previously failed.

Tip If an action is in error, NetMove marks it as a "bad action". To get NetMove to initiate it again after you make the necessary corrections, you can force NetMove to retry the action.

Your choice results in a FORCE or NICE flag in the main text box (e.g., 102, EXE, C:\windows\dfxout.exe, NULL, WAIT, 150, **NICE**, UNIQUE, RUN_LAST, MIN, LOCK, ABLE).

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Allow Multiple Copies to Run

• Enable the **Allow multiple copies of action to run at one time** check box to indicate whether multiple instances of this executable can run simultaneously.

Your choice results in a UNIQUE or MULTI flag in the main text box (e.g., 102, EXE, C:\windows\dfxout.exe, NULL, WAIT, 150, NICE, **UNIQUE**, RUN_LAST, MIN, LOCK, ABLE).

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Disable an Action Temporarily

• Enable the **Disable action** check box to temporarily disable this action. NetMove reinstates the action the next time you log in.

Docucreate Output Control displays an appropriate message near the top of the dialog box.

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Disable an Action Permanently

• Enable the **Disable action permanently** check box to permanently, over multiple log-in sessions, disable this action.

Your choice results in a DISABLED or ABLE flag in the main text box (e.g., 102, EXE, C:\windows\dfxout.exe, NULL, WAIT, 150, NICE, UNIQUE, RUN_LAST, MIN, LOCK, **ABLE**).

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Lock an Action

- Enable the **Lock action specification** check box to allow editing of an action specification within NetMove.

  Your choice results in a LOCKED or NOLOCK flag in the main text box (e.g., 102, EXE, C:\windows\dfxout.exe, NULL, WAIT, 150, NICE, UNIQUE, RUN_LAST, MIN, **LOCKED**, ABLE).

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Specify an Action as a System Action

- If you want to specify an action as a non-modifiable, system action, add the string **NTSYS** to the parameter list when you create a new action.

To Specify the Run Order of Actions

1. Press **TAB** to reach the **Run order** drop-down list box.

2. Use the mouse or arrow keys to select the order in which to invoke this action.

To	Select
Invoke this action first within its group	Run first—results in a RUN_FIRST flag
Invoke this action before any others	Run first of all actions—results in a RUN_FIRST_ABS flag ("Local Machine" actions marked as such will be run before any other actions, including any "User" actions.)
Invoke this action last within its group	Run last—results in a RUN_LAST flag
Invoke this action at any time	Don't Care—results in a RUN_ANY flag (Actions marked as such are run after 'first' actions and before the 'last' actions.)

Your choice results in the appropriate flag in the main text box (e.g., 102, EXE, C:\windows\dfxout.exe, NULL, WAIT, 150, NICE, UNIQUE, **RUN_LAST**, MIN, LOCK, ABLE).

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Specify the Window Appearance

1. Press **TAB** to reach the **Window appearance** drop-down list box.

2. Use the mouse or arrow keys to control the display of the base window associated with an EXE action.

To	Select
Show as a normal, 'restored' window	**Restore Window**—results in a NORMAL flag
Hide the window when executing	**Hide Window**—results in a HIDE flag
Maximize the window	**Maximize Window**—results in a MAX flag
Minimize the window	**Minimize Window**—results in a MIN flag

Your choice results in the appropriate flag in the main text box (e.g., 102, EXE, C:\windows\dfxout.exe, NULL, WAIT, 150, NICE, UNIQUE, RUN_LAST, **MIN**, LOCK, ABLE).

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Create a New Action

• Click on **Create new action** to clear the dialog of all settings and begin creating a new action.

For a complete listing of action characteristics, see Defining Action Specifications.

To Duplicate an Action

• Click on **Duplicate action** to make a copy of this action.

You can use the duplicate function when you want to make another action that is very similar to this one, but you only need to change a few settings.

For a complete listing of action characteristics, see To Save and Close the Action Specification Dialog.

To Delete This Action

• Click on **Delete this action** to remove this action from the list of saved actions.

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Undo Changes

• Click on **Undo changes** to reverse any settings you've modified.

If you want to save the Action Specification settings, see To Save and Close the Action Specification Dialog.

To Save and Close the Action Specification Dialog

1. Click **OK** to save the Action Specification settings; otherwise, click **Cancel**.

2. NetMove returns you to the **Status** dialog box.

If you want to save the NetMove settings, see To Save and Close the NetMove Status Dialog.

Establishing Local Machine Actions

1. If the **NetMove Status** dialog box isn't displayed, see To Set Up NetMove.

2. Double-click on the **Local machine actions** text box.

NetMove displays the **Action Specification** dialog box.
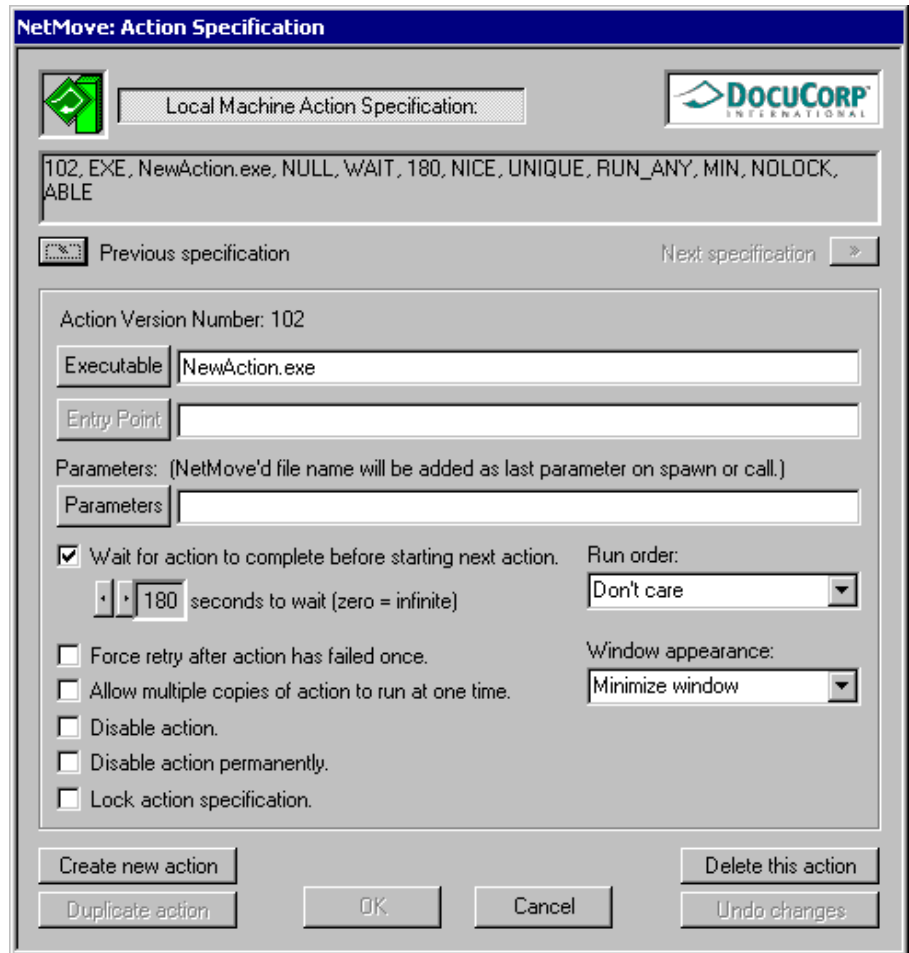
The main text box displays the current output action. DFXOUT or DC2OUT is the main program called by NetMove, and performs all of the processing pertaining to Printcommander. For more information about the output executable, see To Specify the Output Parameters.

You can cycle through the list of actions by clicking on **Previous specification** and **Next specification**, respectively. For more information about the individual output parameters, see the appropriate reference in the following table.

Because the **Action Specification** dialog contains several specifications, this guide provides a separate topic for each specification.

To	See
Specify the program to use	To Specify a Program
Specify the entry point (function) of the DLL (**DLL only**)	To Specify a DLL and Entry Point
Specify the optional program parameters (command line switches) of the selected EXE or DLL	To Specify the Output Parameters
Wait for an action to complete before starting the next action	To Wait for an Action to Complete
Specify the number of seconds to wait before starting the next action	To Specify the Number of Seconds to Wait

To	See
Force a retry after an action has failed once	To Force a Retry After Initial Failure
Allow multiple copies of an action to run at once	To Allow Multiple Copies to Run
Temporarily disable an action	To Disable an Action Temporarily
Permanently disable an action	To Disable an Action Permanently
Lock an action specification	To Lock an Action
Specify a non-modifiable, system action	To Specify an Action as a System Action
Specify the Run order	To Specify the Run Order of Actions
Specify the window appearance	To Specify the Window Appearance
Create a new action	To Create a New Action
Duplicate an action	To Duplicate an Action
Delete this action	To Delete This Action
Undo any changes	To Undo Changes
Save your changes to the Action Specification dialog	To Save and Close the Action Specification Dialog

WINDOWS REGISTRY ENTRIES

Various application settings are stored in the Windows Registry file. Printcommander takes advantage of the file to enhance the flexibility of the program and increase its scope.

Output File Location

The location of the last generated output file is now stored in a registry entry (e.g., **HKEY_CURRENT_USER\Software\DocuCorp International\PrnData**). An example of the registry keys follows:

```
LastOutput=C:\TEMP\test.dcd
LastOutput_DT=20001231120000Z
LastDCDOut=
LastDCDOut_DT=
LastPRNOut=
LastPRNOut_DT=
```

The "_DT" designations are for date and time in Universal Time Coordinates:

YYYYMMDDhhmmssZ

where:

- **YYYY** — Year

- **MM** — Month

- **DD** — Day

- **hh** — hour

- **mm** — minute

- **ss** — second

- **Z** — constant for military time compatibility

Multiple Versions of Common Objects

Oracle offers two versions of the Common Objects, the building blocks of all Oracle applications:

- Version 1 is necessary for such applications as Docuflex 10.2.x, all releases of Documaker fp, Control Panel, Printcommander for Windows 98, Rulecommander, Tagcommander 1.x, and Documaker ws.

- Version 2 applies to applications such as Docuflex 11.x, Transall 11.x, and Tagcommander's Docuflex Tag Manager.

In order to determine which version of the Common Objects has been installed, the individual applications execute a series of verification procedures:

- When **NetMove** is started, it checks the PATH for a file called **isicpy32.exe**.

  - If **isicpy32.exe** exists on the PATH, **NetMove** assumes Version 1 has been installed.

  - It then makes sure that this registry key exists:
    "HKEY_LOCAL_MACHINE\SOFTWARE\DocuCorp International\NetMove\
    Version1".

  - It then checks to see which value
    "HKEY_CURRENT_USER\SOFTWARE\DocuCorp International\NetMove\
    CurrentVersion" contains, if any.

    - A value of **1** means Version 1 has been selected.

    - Any other value, or the lack of a value, means Version 2 is in effect.

- When **DC2Octrl** is started, it checks for the "Version1" key.

  - If that key doesn't exist, Version 2 is selected and can't be changed.

  - If it does exist, **DC2Octrl** uses the "CurrentVersion" value to initialize the radio buttons.

- If you change the current version selection in the **DC2OCtrl** dialog and **Accept** or **OK** the changes:

  - **DC2OCtrl** resets the "CurrentVersion" value in the registry

  - Sends a "WM_VERSIONCHANGED" message to **NetMove's** window procedure, the advantage being that **NetMove** doesn't have to re-read the registry

- When a print job is sent through **NetMove**, it checks its internal setting:

  - If it has been told to use Version 2, it replaces calls to **dfxout.exe** with ones to **dc2out.exe**.

- **Dc2out.exe** spawns itself as many times as necessary to have **dc2cpy32.exe** generate the file types required from the settings in the **DC2OCtrl** dialog.

- Calls to **dfxout.exe** cause the same sequence of events, but invokes the Version 1 executable, **isicpy32.exe**.

Appendix A

Installing & Using Communications Utilities

TRANSFERRING A PRINT FILE FOR PRINTING ON A MAINFRAME PRINTER

Once you've created a Metacode or AFP print file, you will typically need to transfer the file to the mainframe system to which your Metacode or AFP printer is attached. Once it has been transferred, you can use DFXVBFIX, the Oracle file reblocking utility to prepare the file for printing.

Previous to using the reblocking utilities, you must have installed and tested them. For details, see Why You Need DFXVBPUT and DFXVBFIX

Xerox Metacode Printers

Follow these steps to print in a channel-attached printing environment (where the printer and the mainframe computer are attached):

1. Use your PC-to-mainframe communication software to make a binary file transfer (with no translation, carriage control, or line feed) of the Printcommander output file from your PC to a mainframe dataset that has the following specifications:

   - `RECFM=FB`

   - `LRECL=80`

   - `BLKSIZE=3200`

2. Immediately after this uploading process, the print file is in a format unsuitable for printing. You must reblock the file using Oracle MVS Communication Utilities' DFXVBFIX program.

3. When the file has been reblocked, route the file to your printer in accordance with the host methods defined at your site.

Barr Print370 Card or Solimar. If your printer is connected via LAN-based printer-attachment software, such as Barr or Solimar, the spooling process automatically converts the Printcommander file into a format suitable for printing on your Metacode printer.

IBM AFP Printers

Follow these steps to print in an AFP printing environment:

1. Use your PC-to-mainframe communication software to make a binary file transfer (with no translation, carriage control, or line feed) of the Printcommander output file from your PC to a mainframe dataset that has the following specifications:

    - `RECFM=FB`

    - `LRECL=80`

    - `BLKSIZE=3200`

2. Immediately after this uploading process, the print file is in a format unsuitable for printing. You must reblock the file using Oracle MVS Communication Utilities' DFXVBFIX program.

3. When the file has been reblocked, route the file to your printer in accordance with the host methods defined at your site.

WHY YOU NEED DFXVBPUT AND DFXVBFIX

Acquire and install the DFXVBPUT and DFXVBFIX utilities if your enterprise needs PC-to-mainframe communications and record-reblocking utilities to transfer document files to be printed by host-attached IBM AFP or Xerox Metacode high-speed printers. You can also use the utilities to transfer and reformat font resources intended for host-attached printers.

The application of reblocking utilities can be necessary before loading forms and other types of host system resources for use by Printcommander. The application of a reblocking utility can also be necessary for resources transferred from Printcommander to your host system.
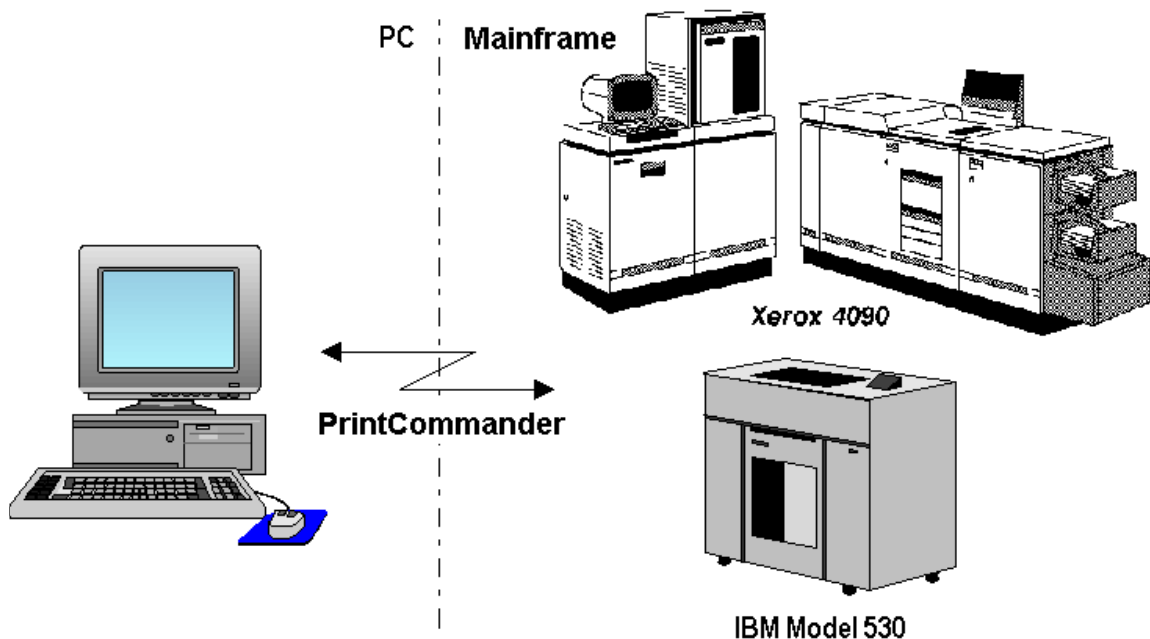
Printcommander and Printer Resources that Require Reblocking

The following table provides a listing of the types of resources used in Printcommander processing, and the utility program required (if any) to prepare each type for transfer between a mainframe host system and microcomputer-based Printcommander.

File Type	Before Downloading from Host	After Uploading from PC
AFP print streams	DFXVBPUT	DFXVBFIX
Metacode print streams	DFXVBPUT	DFXVBFIX
Metacode device fonts, FRMs and IMGs	----------------	----------------
AFP device fonts, page segments and overlays	DFXVBPUT	DFXVBFIX

CAUTION!   Do not specify ASCII/EBCDIC conversion for any transfers.

INSTALLING THE COMMUNICATIONS UTILITIES

To install the Communications utilities, you must unload the datasets from the distribution tape to your mainframe.

MVS Installation

The distribution tape contains these datasets:

File No.	Description	Tape File Format	Purpose
1	TAPEREAD JCL	IEBGENER	Unloads files from the Product Distribution tape
2	SAMPLE JCL LIBRARY	IEBCOPY	Sample JCL to run DFXVBFIX & DFXVBPUT
3	PROGRAM LIBRARY	IEBCOPY	Product load library
4	XEROX METACODE FORMS PDS	IEBCOPY	Sample Metacode file for installation verification
5	IBM AFP FORMS PDS	IEBCOPY	Sample AFP file for installation verification

The following sample IEBGENER JCL shows you how to unload the JCL from the first file on the distribution tape. This example isn't on the tape read. To use it, you need to create or copy it from existing JCL.

```
//BOOTSTRP JOB (COPY JOB CARD HERE)
//*
//STEP01     EXEC PGM=IEBGENER
//SYSUT1     DD DSN=TAPE.ISI.REBLOCK.UTILS.LOAD.JCL,
//              DISP=OLD,UNIT=TAPE,LABEL=(1,NL),VOL=SER=ISI001,
//              DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120)
//SYSUT2     DD DSN=ISI.REBLOCK.UTILS.JCL(TAPEREAD),
//              DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120),
//              DISP=(NEW,CATLG,DELETE),UNIT=SYSDA,
//              SPACE=(TRK,(15,15,5))
//SYSPRINT  DD SYSOUT=*
//SYSOUT    DD SYSOUT=*
//SYSIN     DD DUMMY
//*
//
```

The following JCL is part of the Communications Utilities distribution tape. You can use it to unload the remaining files from the tape.

```
//TAPEREAD JOB (COPY JOB CARD HERE)
//*
//* *******************************************************************
//* **           DOCUCORP UTILITIES INSTALLATION JCL
**
//* **                                                              **
//* **   THIS JCL WILL UNLOAD THE REMAINING FILES FROM THE          **
//* **   PRODUCT TAPE. THE TAPE CONTAINS 5 FILES, HOWEVER THIS JCL  **
//* **   WILL UNLOAD FILES 2 THOUGH 5 INTO OS PDS'S.                **
//* **   TAPE CONTENTS                                              **
//* **   =========================================                  **
//* **   NO.  FILE:                    FORMAT:                      **
//* **   1.   TAPEREAD JCL             IEBGENER                     **
//* **   2.   SAMPLE JCL FILE          IEBCOPY UNLOADED             **
//* **   3.   PROGRAM LIBRARY          IEBCOPY UNLOADED             **
//* **   4.   XEROX METACODE FORMS PDS IEBCOPY UNLOADED             **
//* **   5.   IBM AFP FORMS PDS        IEBCOPY UNLOADED             **
//* **                                                              **
//* **   THE TAPE IS A 9-TRACK, 6250 BPI NON-LABELLED TAPE.         **
//* **   THE DCB DOES NOT HAVE TO BE SPECIFIED FOR THE INPUT FILES. **
//* **       THE DCB SPECIFIED FOR THE OUTPUT FILES ARE THE SAME    **
//* **       AS THE FILES USED TO CREATE THIS TAPE.                 **
//* **       SOME DASD MANAGEMENT SYSTEMS REQUIRE THE DCB TO BE     **
//* **       CODED BECAUSE THEIR IEBCOPY WILL NOT RETRIEVE THE DCB  **
//* **       FROM THE INPUT TAPE.                                   **
//* **                                                              **
//* **   THE OUTPUT DISK FILE SPACE IS BASED ON 3380 DASD.          **
//* **                                                              **
//* **       DOCUCORP INTERNATIONAL                                 **
//* **       HOTLINE:  (214) 891-6696                               **
//* *******************************************************************
//*
//IEBCOPY EXEC PGM=IEBCOPY,REGION=1048K
//SYSPRINT DD SYSOUT=*
//SYSUDUMP DD DUMMY
//SYSUT3   DD UNIT=SYSDA,SPACE=(TRK,(30,2),)
//SYSUT4   DD UNIT=SYSDA,SPACE=(TRK,(30,2),)
//INJCL    DD DSN=TAPE.ISI.REBLOCK.UTILS.JCL,
//            UNIT=TAPE,
//            DISP=(OLD,PASS),
//            LABEL=(2,NL,,,EXPDT=98000),
//            VOL=SER=ISI001
```

```
//INLOAD    DD DSN=TAPE.ISI.REBLOCK.UTILS.LOADLIB,
//             UNIT=AFF=INJCL,
//             DISP=(OLD,PASS),
//             LABEL=(3,NL,,,EXPDT=98000),
//             VOL=(,RETAIN,SER=ISI001)
//INMETA    DD DSN=TAPE.ISI.REBLOCK.UTILS.METACODE,
//             UNIT=AFF=INJCL,
//             DISP=(OLD,PASS),
//             LABEL=(4,NL,,,EXPDT=98000),
//             VOL=(,RETAIN,SER=ISI001)
//INAFP     DD DSN=TAPE.ISI.REBLOCK.UTILS.AFP,
//             UNIT=AFF=INJCL,
//             DISP=(OLD,PASS),
//             LABEL=(5,NL,,,EXPDT=98000),
//             VOL=(,RETAIN,SER=ISI001)
//* ***
//OUTJCL    DD DSN=ISI.REBLOCK.UTILS.JCL,
//             DISP=SHR
//*OUTJCL    DD DSN=ISI.REBLOCK.UTILS.JCL,
//*             DISP=(NEW,CATLG),
//*             DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120),
//*             UNIT=SYSDA,
//*             SPACE=(TRK,(15,15,5))
//OUTLOAD   DD DSN=ISI.REBLOCK.UTILS.LOADLIB,
//             DISP=(NEW,CATLG),
//             DCB=(RECFM=U,BLKSIZE=6144),
//             UNIT=SYSDA,
//             SPACE=(TRK,(15,15,5))
//OUTMETA   DD DSN=ISI.REBLOCK.UTILS.METACODE,
//             DISP=(NEW,CATLG),
//             DCB=(RECFM=FB,LRECL=80,BLKSIZE=6160),
//             UNIT=SYSDA,
//             SPACE=(TRK,(15,15,5))
//OUTAFP    DD DSN=ISI.REBLOCK.UTILS.AFP,
//             DISP=(NEW,CATLG),
//             DCB=(RECFM=FB,LRECL=80,BLKSIZE=6160),
//             UNIT=SYSDA,
//             SPACE=(TRK,(15,15,5))
//* ***
//SYSIN     DD *
 COPY OUTDD=OUTJCL,INDD=INJCL
 COPY OUTDD=OUTLOAD,INDD=INLOAD
 COPY OUTDD=OUTMETA,INDD=INMETA
 COPY OUTDD=OUTAFP,INDD=INAFP
/*
//
```

Verify the MVS Installation

For Metacode printing environments, the Communications Utilities distribution tape includes a sample file for use in verifying the mainframe portion of your installation. This file is **ISI.REBLOCK.UTILS.METACODE** and it uses standard Xerox Univers fonts.

These are the verification steps:

1. Reblock the sample file using the reblocking utility DFXVBFIX. An example of the JCL to execute DFXVBFIX is shown below.

2. Ensure a match between the sample document and your printing environment. The sample document uses these settings:

   - Calls for a JDL named **DPLJDL** (for a complete listing, see).

   - Calls for a JDE named **ONLINE**.

   - A DJDE defined by **IDEN PREFIX='$$XEROX', SKIP=8, OFFSET=0.**

   - An RSTACK defined by **RSTACK TEST=REPORT END.**

The following JCL is part of the Communications Utilities distribution tape (it's in **ISI.REBLOCK.UTILS.JCL**). The JCL executes the reblocking program, DFXVBFIX.

```
//DFXVBFIX JOB (COPY JOB CARD HERE)
//*
//JOBLIB    DD DSN=isi.reblock.utils.loadlib,DISP=SHR
//*
//*******************************************************
//*
//*  INPUT  - INPUT DATASET NEEDING REBLOCKING
//*  OUTPUT - CORRECTED DATASET
//*  SYSOUT - MESSAGE FILE
//*
//*******************************************************
//*
//DFXVBFIX  EXEC PGM=DFXVBFIX
//*
//INPUT    DD  DSN=dfxvbfix.input,DISP=SHR
//OUTPUT   DD  DSN=dfxvbfix.output,
//             DISP=(NEW,CATLG,DELETE),
//             UNIT=sysda,VOL=SER=volser,
//             SPACE=(TRK,(15,15,0)),
//             DCB=(RECFM=VBM,LRECL=155,BLKSIZE=3000)    <= METACODE
//*           DCB=(RECFM=VBM,LRECL=8205,BLKSIZE=8209)   <= AFP
//SYSOUT   DD  SYSOUT=*,DCB=(RECFM=VB,LRECL=133,BLKSIZE=1330)
//
```

To ensure a match, either edit the reblocked file so that these settings match those in your JDL/JDE or create a JDL/JDE that matches the sample document's settings. For more information, see .

3. Route the reblocked file to the printer. Be sure to indicate that the file contains carriage controls.

VSE Installation

The distribution tape contains these datasets:

File No.	File Name	Purpose
1-3	LIBR backup of Printcommander Loadlib. The Loadlib contains the following programs:	
	DFXFLDF.PHASE	Processes FILEDEF command
	DFXVBFIX.PHASE	Main DFXVBFIX routine
	DFXVBPUT.PHASE	Main DFXVBPUT routine
	ISICALL1.PHASE	Dynamic call module
	ISIFLAST.PHASE	Finds last non-blank character
	ISIPARSE.PHASE	Parses control cards
	ISISEQIO.PHASE	Sequential Input/Output process
4	TAPEREAD.VSEJCL	JCL to restore LOADLIB
5	DFXVBFIX.VSEJCL	Sample DOS/VSE DFXVBFIX JCL
6	DFXVBPUT.VSEJCL	Sample DOS/VSE DFXVBPUT JCL
7-8		*Reserved for future use*
9	DECMETA.VBFIXIN	Sample Metacode needing reblocking
10	DECAFP.VBFIXIN	Sample AFP needing reblocking
11-13		*Reserved for future use*
14	PRTCMSLDEXEC	Used to unload VM/CMS files

Loading the Files to VM/CMS

You should follow these steps to load the necessary files to your system:

1. Define a CMS account for Oracle Utilities — five (5) cylinders should be sufficient.

2. Attach a tape drive to the Oracle Utilities account as 181 and mount the DOS/ VSE distribution tape.

3. Type **TAPE FSF 14** and press **ENTER** on the CMS command line.

4. Type **TAPE LOAD** and press **ENTER** on the CMS command line.

5. Type **PRTCMSLD** and press **ENTER** on the CMS command line.

The included EXEC loads several files to the CMS account's A-disk.

Loading the Files to a Non-CMS System

If you're loading the files 4 through 14 to a non-CMS system, you must load each file individually to your text editing system (all files are fixed block).

Restoring the DFXVBFIX LOADLIB Sub library

The following JCL is located in File Number Four (4) on the distribution tape (TAPEREADVSEJCL for CMS sites). It's used to restore the Loadlib on the distribution tape.

The distribution tape contents are formatted as a LIBR backup. To install, you must restore from tape using JCL based on the following:

```
* $$ JOB (Add POWER JOB card.)
// JOB (Add JOB card.)
/*  *********************************************************************
/*  **   THIS JCL FILE CREATES THE ISI REBLOCK UTILS LOADLIB LIBR    **
/*  **   SUBLIBRARY, USING THE IBM LIBR UTILITY.                     **
/*  **                                                               **
/*  **   REMEMBER TO CHANGE ANY DATA THAT IS IN LOWERCASE IN         **
/*  **   ANY OF THE FOLLOWING JCL STATEMENTS:                        **
/*  **        // ASSGN ...                                           **
/*  **        // DLBL ...                                            **
/*  **        // EXTENT ...                                          **
/*  **                                                               **
/*  **        DOCUCORP INTERNATIONAL                                 **
/*  **        HOTLINE:  (214) 891-6696                               **
/*  *********************************************************************
/*
// ASSGN SYS006,tape               ISI REBLOCK UTILS INSTALLATION TAPE
// MTC REW,SYS006                  REWIND THE TAPE.
/*
// DLBL PRTC10,'isi.reblock.utils.library',99/365
// EXTENT ,volser,,,beginning-track,15
/*
// EXEC PGM=LIBR
 DEFINE  LIB=PRTC10
 DEFINE  SUBLIB=PRTC10.LOADLIB   REUSE=AUTOMATIC    REPLACE=NO
 RESTORE SUBLIB=(    -
           PRTC10.LOADLIB:PRTC10.LOADLIB    -
            _                           -
           TAPE=SYS006   ID=PRTC10   REPLACE=YES   LIST=YES
/*
// MTC REW,SYS006
*   RESTORE IS COMPLETE
/&
* $$ EOJ
```

Verify the VSE Installation

For Metacode printing environments, the Communications Utilities distribution tape includes a sample file for use in verifying the mainframe portion of your installation. This file is **DECMETA.VBFIXIN** and it uses standard Xerox Univers fonts.

These are the verification steps:

1. Reblock the sample file using the reblocking utility DFXVBFIX (see below).

2. Ensure a match between the sample document and your printing environment. The sample document uses these settings:

    - Calls for a JDL named **DPLJDL** (for a complete listing, see).

    - Calls for a JDE named **ONLINE**.

    - A DJDE defined by **IDEN PREFIX='$$XEROX', SKIP=8, OFFSET=0.**

    - An RSTACK defined by **RSTACK TEST=REPORT END.**

    To ensure a match, either edit the reblocked file so that these settings match those in your JDL/JDE or create a JDL/JDE that matches the sample document's settings. For more information, see .

3. Route the reblocked file to the printer. Be sure to indicate the file contains carriage controls.

The following JCL is located in File Number Five (5) on the distribution tape (DFXVBFIXVSEJCL for CMS sites). It executes the reblocking program, DFXVBFIX. See Why You Need DFXVBPUT and DFXVBFIX.

```
* $$ JOB (Add POWER JOB card.)
// JOB (Add JOB card.)
/************************************************************
/*
/*     ---  DFXVBFIX DOS/VSE JCL EXAMPLE  ---
/*
/*  INPUT  - INPUT DATASET NEEDING REBLOCKING
/*  OUTPUT - CORRECTED DATASET
/*  SYS005 - MESSAGE FILE
/*
/************************************************************
// DLBL PRTC10,'isi.reblock.utils.library'
// EXTENT ,volid
/*
// LIBDEF PHASE,SEARCH=(PRTC10.LOADLIB)
/*
/* DEFINING INPUT
/*
// ASSGN SYSnnn,DISK,VOL=volnnn,SHR
// DLBL INPUT,'uploaded.input.file',0
// EXTENT ,SYSnnn
/*
/* DEFINING OUTPUT DESTINATION
/*
// ASSGN SYSnnn,DISK,VOL=volnnn,SHR
// DLBL OUTPUT,'fixed.output.file',0
// EXTENT SYSnnn,volnnn,1,0,ttttt,nn
/*
// ASSGN SYS005,SYSLST      PROGRAM MESSAGES
/*
// EXEC DFXVBFIX,SIZE=(DFXVBFIX,100K)
-
FILEDEF NAME=INPUT     SYSNUM=nnn LRECL=80 BLKSIZE=6160 RECFM=F
FILEDEF NAME=OUTPUT    SYSNUM=nnn TYPE=META
- FILEDEF NAME=OUTPUT SYSNUM=nnn TYPE=AFP
-
/*
/&
* $$ EOJ
```

VM Installation

The Printcommander Communications Utilities Product Distribution tape contains these datasets:

File No.	File Name File Type	Purpose
1	DFXVBFIX EXEC	Executable to run the DFXVBFIX program
2	DFXVBFIX MODULE	The reblocking program to format a FB file for uploading
3	DFXVBPUT EXEC	Executable to run the DFXVBPUT program
4	DFXVBPUT MODULE	The program to format a VB file for downloading
5	ISICALL1 TEXT	Dynamic Call module
6	ISIFLAST TEXT	Find last non-blank character
7	ISISEQIO TEXT	Sequential Input/Output process
8	DECMETA VBFIXIN	Sample Metacode test file for installation verification
9	DECAFP VBFIXIN	Sample AFP test file for installation verification

The files were placed on the tape with TAPE DUMP and may be unloaded using:

```
TAPE LOAD * * fm
```

Verify the VM Installation

For Metacode printing environments, the Communications Utilities distribution tape includes a sample file for use in verifying the mainframe portion of your installation. This file is **DECMETA VBFIXIN** and it uses standard Xerox Univers fonts.

These are the verification steps:

1. Reblock the sample file using the reblocking utility DFXVBFIX (see below).

2. Ensure a match between the sample document and your printing environment. The sample document uses these settings:

    • Calls for a JDL named **DPLJDL** (for a complete listing, see).

    • Calls for a JDE named **ONLINE**.

    • A DJDE defined by **IDEN PREFIX='$$XEROX', SKIP=8, OFFSET=0.**

    • An RSTACK defined by **RSTACK TEST=REPORT END.**

To ensure a match, either edit the reblocked file so that these settings match those in your JDL/JDE or create a JDL/JDE that matches the sample document's settings. For more information, see .

3. Route the reblocked file (**DECMETA OUTPUT**) to the printer. Be sure to indicate the file contains carriage controls.

The following EXEC is part of the Communications Utilities distribution tape. It invokes the reblocking program, DFXVBFIX.

```
/**************************************************/
/* THIS EXEC IS FOR EXECUTION OF DFXVBFIX UNDER VM. */
/* THE CORRECTED FILE WILL HAVE THE SAME FILENAME   */
/* BUT THE FILETYPE WILL BE "OUTPUT". MESSAGES WILL */
/* BE WRITTEN TO FILE "DFXVBFIX SYSOUT".            */
/**************************************************/
PARSE ARG FN FM FT '(' NFT
if (NFT = '') then
   NFT = FT
'FI INPUT  DISK'  FN FM FT
'FI OUTPUT DISK'  FN    'OUTPUT' NFT '(LRECL 32756 RECFM V BLKSIZE 32760'
'FI SYSOUT DISK DFXVBFIX SYSOUT' NFT '(LRECL 133 RECFM V'
address 'COMMAND' 'DFXVBFIX'
exit(rc)
```

Execution syntax is

DFXVBFIX filename filetype filemode

where the file specification identifies the input Metacode file. The output filename is the same as the input name but the filetype is OUTPUT. The output filemode is the same as the input filemode. If you don't have write access to the disk denoted by the output filemode, DFXVBFIX will abend.

DPLJDL.JSL

JSL EXAMPLE

```
DPLJDL:JDL;                                                           000010
/**/                                                                  000020
/*****************************************************/               000030
/*       JDLs AND JDEs                            */                  000040
/*       VFUs AND PDEs                            */                  000050
/*                                                */                  000060
/*****************************************************/               000070
VFU001:VFU ASSIGN(1,1),TOF=1,BOF=66;                                  000080
PDFLT:PDE      BEGIN=(1,.5),PMODE=LANDSCAPE,FONTS=(L0112B,9);         000090
      ACCT    USER=NONE;                                              000100
PDFLT1:PDE     BEGIN=(0,0),PMODE=PORTRAIT,FONTS=UN111E;               000105
RPG:     TABLE   CONSTANT=(X'FFFF20FFFF');                            000110
RST:     TABLE   CONSTANT=(E'REPORT END');                            000120
RAX:     TABLE   CONSTANT=(X'1111111111111111');                      000130
ROF:     TABLE   CONSTANT=(X'1212121212121212');                      000140
         ACCT    USER=NONE;                                           000150
/*****************************************************/               000160
/*          ONLINE JDE                            */                  000170
/*  THIS JDE WILL BE CALLED BY THE DJDES AT THE TOP    */             000180
/*  OF THE METACODE DATASTREAM.  DO NOT START THIS JOB */             000190
/*  AT THE OPERATOR'S CONSOLE,  START STRTON,DPLJDL.   */             000200
/*****************************************************/               000210
ONLINE:JDE;                                                           000220
VOLUME HOST=IBMONL,LABEL=NONE,CODE=NONE;                              000230
IDEN PREFIX='$$XEROX', SKIP=8, OFFSET=0;                              000240
RPGONL:   CRITERIA   CONSTANT=(1,5,EQ,RPG);                           000250
RSTONL:   CRITERIA   CONSTANT=(0,10,EQ,RST);                          000260
RAXONL:   CRITERIA   CONSTANT=(0,8,EQ,RAX);                           000270
ROFONL:   CRITERIA   CONSTANT=(0,8,EQ,ROF);                           000280
          RSTACK     TEST=RSTONL,DELIMITER=YES;                       000290
          RAUX       TEST=RAXONL;                                     000300
          ROFFSET    TEST=ROFONL;                                     000310
          RPAGE      TEST=(RPGONL),SIDE=(NUFRONT,NOFFSET),WHEN=BOTTOM; 000320
          LINE       DATA=(0,150),VFU=VFU001,FCB=IGNORE,UCSB=IGNORE;  000330
          OUTPUT     FORMAT=PDFLT1,COPIES=1,DUPLEX=YES,GRAPHICS=YES;  000340
MESSAGE  ITEXT='EXECUTING UNDER ===>  JDL=DPLJDL,JDE=ONLINE';         000350
/*****************************************************/               000360
/*            OFFLIN JDE                          */                  000370
/*  THIS JDE WILL BE CALLED BY THE DJDES AT THE TOP    */             000380
/*  OF THE METACODE DATASTREAM.  DO NOT START THIS JOB */             000390
/*  AT THE OPERATOR'S CONSOLE,  START STRTOF,DPLJDL.   */             000400
/*****************************************************/               000410
```

```
OFFLIN:JDE;                                                        000420
VOLUME HOST=IBMOS,LABEL=NONE,CODE=NONE;                            000430
IDEN PREFIX='$$XEROX', SKIP=9, OFFSET=1;                           000440
RPGOFF:   CRITERIA   CONSTANT=(2,5,EQ,RPG);                        000450
RSTOFF:   CRITERIA   CONSTANT=(1,10,EQ,RST);                       000460
RAXOFF:   CRITERIA   CONSTANT=(1,8,EQ,RAX);                        000470
ROFOFF:   CRITERIA   CONSTANT=(1,8,EQ,ROF);                        000480
          RSTACK   TEST=RSTOFF,DELIMITER=YES;                      000490
          RAUX    TEST=RAXOFF;                                     000500
          ROFFSET TEST=ROFOFF;                                     000510
          RPAGE    TEST=(RPGOFF),SIDE=(NUFRONT,NOFFSET),WHEN=BOTTOM; 000520
BLOCK   LENGTH=3000,LTHFLD=2,OFFSET=0,PREAMBLE=4;                  000530
RECORD  LENGTH=155,STRUCTURE=VB,LTHFLD=2,OFFSET=0,PREAMBLE=4;      000540
LINE   PCCTYPE=IBM1403,                                            000550
      DATA=(1,150),VFU=VFU001,PCC=(0,NOTRAN);                      000560
OUTPUT  FORMAT=PDFLT1,COPIES=1,DUPLEX=YES,GRAPHICS=YES;            000570
MESSAGE   ITEXT='EXECUTING UNDER ===>  JDL=DPLJDL,JDE=OFFLIN';     000580
/*******************************************************/          000590
/*             OFF871 JDE                           */             000600
/*   THIS JDE WILL BE CALLED BY THE DJDES AT THE TOP    */         000610
/*   OF THE METACODE DATASTREAM.  DO NOT START THIS JOB */         000620
/*   IN THE HIP.CMD FILE, START STR871,DPLJDL.          */         000630
/*******************************************************/          000640
```

Appendix A

AFP Output Demo

OVERVIEW

This demonstration is included with Docucreate Workstation to illustrate the steps to produce and print an AFP printstream using Printcommander NT, the Docucreate Virtual Raster Printer driver, Microsoft Word, and all necessary program components.

WARNING!	This procedure assumes the successful installation of the Common Objects, the Control Panel, and Printcommander NT. For the installation procedure, see Installing Printcommander.

PREREQUISITES

As a prerequisite to completing the demo, you must have installed the following:

• The four font families contained in the sample Microsoft Word document *AFPFontDemo.DOC*, including Gothic, Courier, Helvetica, and TimesNewRoman.

 For information about ordering fonts, see IBM's *AFP Font Collection for Workstations* at **http://www-912.ibm.com/s_dir/slkbase.NSF/0/ da372ebcbdeee52686256c6e0070d2da?OpenDocument.**

 For more information, see Software Requirements.

DOCUCREATE AFP DEMONSTRATION

To insure the outcome of the demo, Oracle provides a sample Microsoft Word document containing text formatted with various point sizes of four IBM core-interchange font families, a font matching table, and the printer font metric files (PFMs). A successful completion of the demo requires the following steps:

To	Do this:
Set up the AFP Printer Definition in Oracle Control Panel	Setting Up the AFP Printer Definition
Print the document using the Virtual Raster Printer driver	Printing the Document
(**Optional**) Customize the demo for your environment	Customizing the Demo

SETTING UP THE AFP PRINTER DEFINITION

The AFP Printer Definition is stored and maintained in the Control Panel. The first part of the AFP demonstration requires you to adjust some of the printer definition settings.

To Set Up the AFP Printer Definition

1. Launch the Control Panel (e.g., **Start/Programs/Docutoolbox/Oracle**).

   The main Control Panel window displays.

2. Double-click **Printer Definitions**.

   The Printer Definitions applet displays.

3. Double-click **DFXAFP**.

   The DFXAFP Printer Definition dialog box displays.

4. In the Duplex Printing group box, select **None**.

5. Click **Tray Definition Setup...**.

   The Tray Definitions dialog box displays.

6. Click **Add**.

7. Type **AFPTRAY**, and then click **Ok**.

   The Tray Listing dialog box displays.

8. Click **Add**.

9. Type **DEFAULT**, and then click **Ok**.

   The Tray dialog box displays.

   a. In the Paper List drop-down list box, select **Letter (8.5 x 11 in)**.

   b. Click **Ok** and the Control Panel returns you to the Tray Listing dialog.

   c. Click **Ok** and the Control Panel returns you to the Tray Definitions dialog.

   d. Click **Ok** and the Control Panel returns you to the DFXAFP Printer Definition dialog.

   e. In the Paper Size and Source group box, use the drop-down arrow to select **AFPTRAY**.

   f. Click **Ok** and the Control Panel returns you to the Printer Definitions window.

   g. Close the Printer Definitions window and click **Yes** in response to the prompt about saving any and all changes.

PRINTING THE DOCUMENT

You'll print the document using Microsoft Word and the Docucreate Virtual Raster Printer driver. The document is pre-composed and delivered as one the program components.

To Print the Document

1. Launch Microsoft Word (e.g., **Start/Programs/Microsoft Office/Microsoft Word**).

2. Use **File/Open...** to display the Open dialog box.

3. Select **AFPFontDemo.DOC** and click **Open**.

4. Use **File/Print...** to display the Print dialog box.

5. In the Printer group box, use the drop-down arrow to select **Docucreate Virtual Raster Printer 4**.

6. Click **Ok**.

   Docucreate Output Control creates the AFP print stream (e.g., **c:\oracle\docucreate\dfxout\afpfontdemo.afp**).

7. Print AFPFontDemo.AFP by your preferred method of printing.

CUSTOMIZING THE DEMO

These optional steps in the demo involve adding a font and modifying the font substitution table. This table instructs the printer definition in substituting device fonts resident on the printer for screen fonts resident in Windows.

To Create New PFMs from AFP Device Fonts

1. In the Windows Explorer, use *File/New/Folder* to create a directory to contain the AFP fonts (e.g., **c:\font\afp_dir**).

2. Copy all three parts of the AFP device fonts to the newly-created directory.

3. Copy the **isi.ini** file and then rename the copy (e.g., **isi.ini.backup**).

4. Delete the **isi.ini** file.

5. Launch the AFP font conversion utility by double-clicking the executable (e.g. **c:\oracle\fontcmdr\docfca.exe**).

6. Copy the PFMs from **c:\font\afp_dir** to the PFM directory specified in your AFP Printer Definition in Control Panel.

7. Copy the **isi.ini.backup** file and then rename the copy back to **isi.ini**.

To Update the Font Matching Table

• For a discussion about updating the font matching table, see the *Control Panel User Guide.*

Appendix A

Word2DCD API

OVERVIEW

The Word2DCD API provides an automated method of converting any Microsoft Word document to the Oracle Compound Document (DCD) format. The Word2DCD API comprises two components: **Word2DCD.dll** and **W2DcdDon.exe**.

This API is called via the following syntax:

```
Word2DCD( szWordFNam, szDcdFNam, bTrace )
```

In broad terms, the API:

1. opens Microsoft Word

2. loads the Word document

3. tells Word to print to the default printer which, in this case, must be the Printcommander XP printer driver

4. Word2DCD then sets an event and waits for the event

5. when spooling is complete, Printcommander calls W2DcdDon.exe to set the event

6. Word2DCD then closes the event and returns to the caller with one of two statuses: zero (0) for success or non-zero for failure

SYSTEM REQUIREMENTS

These are the minimum software requirements to install and run the Word2DCD API:

*   Microsoft Windows XP Workstation

    -or-

    Microsoft Windows 2003 Server

*   Microsoft Office 2003 (Word 11 SP2)

*   Common Objects 11.1

*   Oracle Docucreate Workstation (i.e., Printcommander XP) *Printcommander must be designated as the default printer*

    *   Word2DCD API (installed with Printcommander)

    *   Must have a C:\TEMP folder that is writable by the caller

INSTALLING THE WORD2DCD API

The installation and setup of the API are minimal and follow standard Windows procedures.
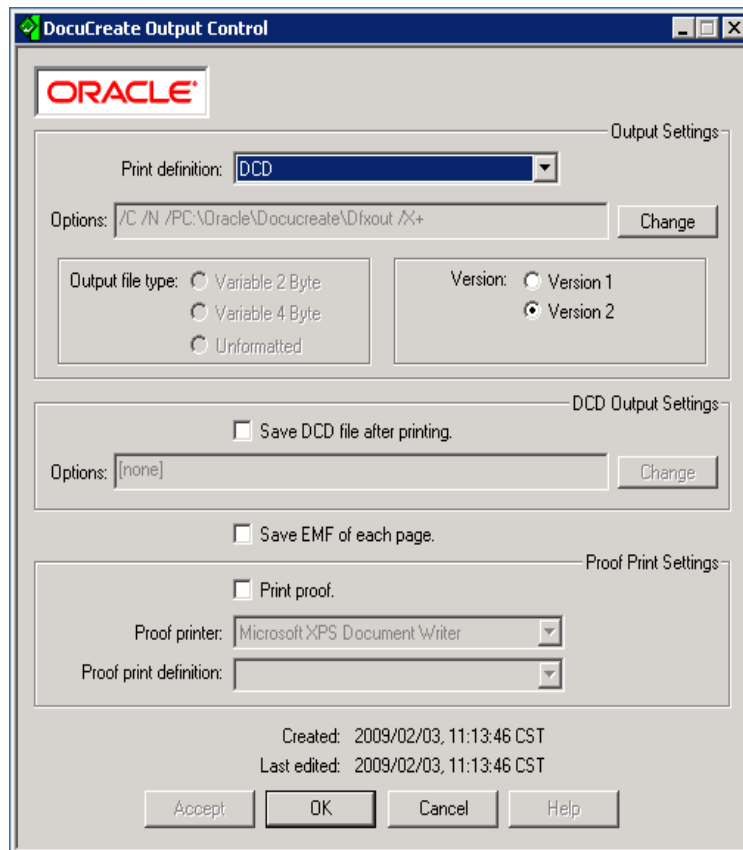
To Install the Word2DCD API

• Follow the procedure for installing Docucreate Workstation (see To Install Printcommander).

The Word2DCD API is installed as a part of Printcommander.

To Configure NetMove

1. Click the NetMove icon in the System Tray to invoke Docucreate Output Control.

2. From the Print definition drop-down list box, select **DCD**.

3. In the Options text box, click **Change** to edit the Output File Specification.
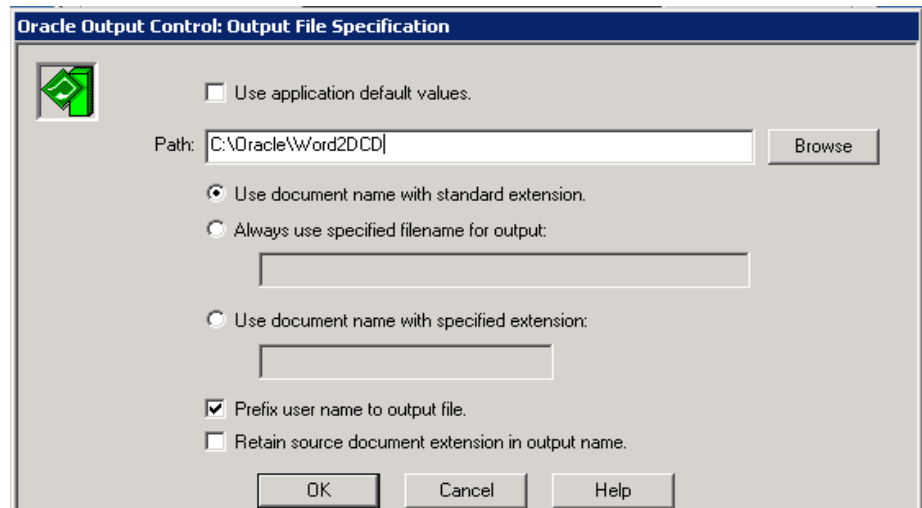
4. In the Path text box, type the correct path or click **Browse** to navigate to the correct folder.

To Designate the Default System Printer

• In the Printers & Faxes folder of the Windows Control Panel, select the Printcommander printer driver (**Oracle Virtual Raster Printer 5C**) and make it the default system printer.

CALLING FORMAT

You can call the Word2DCD API from a variety of sources, including C/C++ and Visual Basic. Below are sample steps and code for calling.

To Call Word2DCD from C/C++

1. Use LoadLibrary for DLL (Word2DCD.DLL)

2. Use GetProcAddr for the entry point (Word2DCD)

3. Call the entry point with the following three arguments using the "__stdcall" calling sequence:

```
Word2DCD( szWordFNam, szDcdFNam, bTrace )
```

where:

szWordPNam	the fully-qualified pathname to the Word document. This argument is defined as a single-byte character string.
szDcdPNam	the fully-qualified pathname to the output DCD file. This argument is defined as a single-byte character string.
bTrace	a Boolean flag to enable/disable trace output. This argument is defined as a four-byte integer.

To Call Word2DCD from Microsoft Visual Basic 6 (with no tracing)

The following sample code calls the Word2DCD API:

```
Private Declare Function WordApi Lib "word2DCD.dll"_
Alias "Word2DCD" (ByVal szWordFileName As String,_
ByVal szDcdFileName As String, ByVal bTrace As Boolean) As Integer
Dim Result As Long
   :
   :
   :
Result = WordApi( InFile, OutFile, False )
   :
   :
   :
```

WORD2DCD API RETURN CODES

The Word2DCD API returns one of two codes upon completion, where:

0	Successful conversion and file move
1	Failure

LOGGING AND TRACING FILES

If enabled via the bTrace argument, the Word2DCD API writes all error, log, and tracing files to the C:\TEMP folder. This path is hard-coded and can't be changed. The folder must exist and the calling program must have "write" rights.

err.txt	the Error file is only written when an error or warning is issued.
log.txt	the Log file includes one line each time the API is called.
trc.txt	the Trace file is only written if tracing is enabled.

TROUBLESHOOTING

In case of unpredictable or unexpected behavior, please consult the following checklist. Make sure that:

Setup:

- Printcommander NT is installed and working

- action W2DcdDon.exe is installed

- the default system printer is set to **Oracle Virtual Raster Printer 5C**

- W2DcdDon.exe is installed in .\system32

- Word2DCD.dll is installed in .\system32

- all of this is tested with WordApiTest.exe

- the Registry Key [HKEY_CURRENT_USER\Software\DocuCorp International\NetMove\Actions] is set to the following:

- • Action01

- • "102, EXE, C:\\WINDOWS\\SYSTEM32\\W2DcdDon.exe , NULL, WAIT, 180, NICE, UNIQUE, RUN_LAST, HIDE, NOLOCK, ABLE"

- • the green NetMove icon is active in the System Tray

- • the Netmove.exe process is running in the Processes tab of the Windows Task Manager

Output Area:

- • when you click NetMove icon, the Print definition is set to DCD and the Options list box contains the correct path.

Microsoft Word:

- • you can print a test document and generate DCD in the DCD output area

- • you obtain and can run the WordApiTest.exe

DOCUMANAGE WORKFLOW DAEMON SETUP

You can find the general setup steps for the Documanage Workflow Daemon on page 171 of the *Documanage Administrator's Guide* (Documanage 6.4 SR2).

OVERVIEW

The **dwfdoctodcd** rule is called by the Documanage Workflow Daemon when a Microsoft Word document needs to be converted to a DCD file during a Documanage Workflow Task.

When a Workflow Project is advanced to a Task setup with the **dwfdoctodcd** rule,

- • the project is "checked out" to keep other users from accessing the project, and

- • the project is scanned for documents 1) with the ".DOC" file extension and 2) that don't belong to a rendition set.

The documents that match this criteria are then exported to the local disk and passed to the Word2DCD API. Upon successful conversion, the DCD is imported into the same Project and placed in a rendition set as the source Word document. After all documents have been converted, the Project is then advanced to the next Workflow Task.

Note	Make sure that Printcommander is set up to convert to DCD (see To Configure NetMove).

CONFIGURING THE RULE

You'll find the dmg_daemon.ini file in the WFDaemon folder of the Documanage installation. This configuration file is not needed for proper operation of the dwfdoctodcd rule: use it only to override the default behavior or to enable logging.

The following example depicts the default dmg_daemon.ini file:

```
[Rule:dwfdoctodcd]
;change library to the name of the DLL if something other
;than the default is needed
;library=word2dcd.dll

;change function to the name of the function in the
;library if something other than the default is required
;function=Word2DCD

;traceWord2DCD set to 1 will turn on tracing in the
;word2dcd library
;traceWord2DCD=0

;the reload option will unload the word2dcd library after
;each workflow project is processed if set to 1
;reload=0

;default logging
;LogFile specifies the rule's log file name.  Use a full
;path if you want the log to be in a different directory, then the
current working directoy
;LogFile=dwfdoctodcd.log

;LogLevel supports four settings.
;0 = no logging at all
;1 = minimal logging, all errors
;2 = errors, and warnings
;3 = trace level, errors, warning, and information
;LogLevel=1
```

USING THE RULE

To use the dwfdoctodcd rule,

- the Instructions: field of a Documanage Workflow Task must be set to "dwfdoctodcd.dll"

- the Team Members for the Task must include a Group to which the Workflow Daemon belongs.

In this example, the Workflow Daemon is set up to be a member of the Daemon Group.
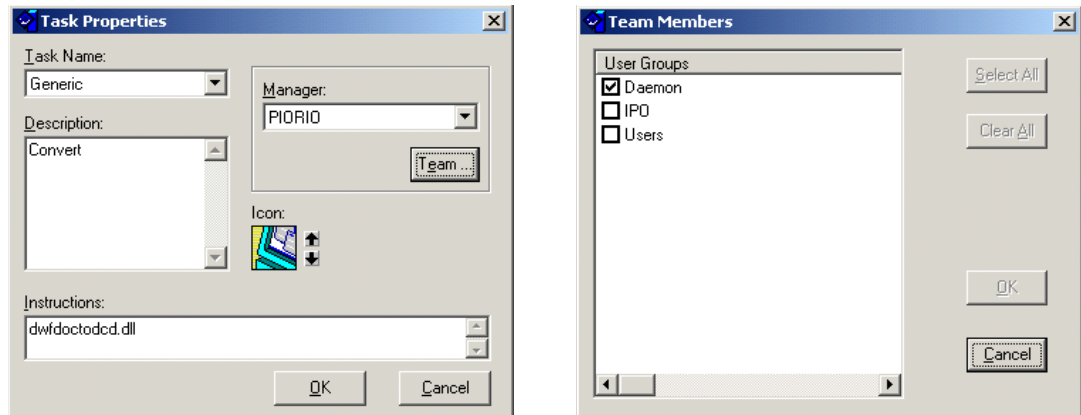
Note   You must edit the Workflow Task Properties prior to releasing the Workflow.

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