Xerox 700 Digital Color Press with Integrated Fiery® Color Server

Variable Data Printing

CONTENTS

INTRODUCTION

This document provides information about variable data printing (VDP) and describes the variable data printing features supported by the Xerox 700 Digital Color Press with Integrated Fiery Color Server, including:

- Compatible variable data printing languages such as FreeForm and FreeForm 2

Terminology and conventions

This document uses the following terminology and conventions.

Term or convention	Refers to
Aero	Integrated Fiery Color Server (in illustrations and examples)
Digital press	Xerox 700 Digital Color Press
Integrated Fiery Color Server	Xerox 700 Digital Color Press with Integrated Fiery Color Server
Mac OS	Apple Mac OS X
Titles in *italics*	Other documents in this set
Windows	Microsoft Windows 2000, Windows XP, Windows Server 2003, Windows Vista
	Topics for which additional information is available by starting Help in the software
	Tips and information
	Important information
	Important information about issues that can result in physical harm to you or others

About this document

The document covers the following topics:

- Basic concepts of variable data printing

- Supported Integrated Fiery Color Server features and compatible variable data printing languages

- Instructions for printing variable documents with FreeForm and FreeForm 2

NOTE: For detailed information about printing variable data jobs using third-party variable data printing applications, see the documentation that accompanies the application.

For example scenarios of popular variable data printing workflows, see *Workflow Examples*.

OVERVIEW

This chapter describes variable printing technology and discusses the supported components that allow you to create variable data print jobs.

For specific variable data printing scenarios and workflows, see *Workflow Examples*.

Overview of variable data printing

Variable data printing is typically used for personalized mailings, such as direct-mail advertising. It involves combining a set of master elements that are common across copies of a document (reusable data) with a set of variable elements that change from copy to copy. When you use variable data printing, you create personalized communications with elements that have special appeal to your targeted audience.

An example of variable data printing is a brochure that greets customers by name and may include other personal information about the customer obtained from a marketing database. Background elements, illustrations, and text blocks that do not change across copies of the brochure are master elements. The customer's name and other customer-specific information are variable elements.

In its simplest form, you can use variable data printing as a basic mail merge. However, you can also dynamically assemble images, charts, text, and other objects to create attractive, highly customized documents.

Variable data printing uses digital printing technology that customizes communication by linking databases that contain the content for printed documents to a print device, such as the digital press. The customized communication includes rules that specify the selection of content from the database and the placement of that content in the document.

The following two variable data printing technologies describe how reusable data is specified within a variable data printing language.

Page-based technology describes static, reusable data (the master element) in terms of entire pages. Each page element is called a master page. Page-based languages are more suitable for simple, predictable layouts. FreeForm is a page-based language. For more information about FreeForm, see "Printing variable data documents" on page 11.

Element-based technology describes static, reusable data in terms of elements or objects. Element-based technology allows you to use many separate objects within a page as static elements or variable elements individually.

Element-based variable data jobs use reusable objects for the variable elements in the job, such as images. Because these elements are frequently accessed, they are stored on the Integrated Fiery Color Server and cached as a group.

Variable data job components

A typical variable data print job includes the following major components:

- Content

  Content includes the text, images, or photographs placed in different areas of your document. You can create static or variable content using a variety of applications, such as Adobe Photoshop or Microsoft Word.

- Database

  A database is a table containing all the changeable or variable elements in a printed document, such as text, graphics, and photographs. You can use a database created in popular desktop programs, such as Microsoft Excel or FileMaker Pro.

  The data must be organized into records and fields (categories) for each record. For example, in a database about people, a person is a record and the information about that person, such as name, address, and phone number, is a field.

- Business rules

  Business rules, created in a variable data printing application, specify what variable content to use and where to place it within your document. According to these predefined rules, which are described by "if" and "then" statements, the variable data application uses particular elements from databases to create personalized pages and documents that contain different text and images for a specific audience. For example, you can set up a rule to print specific content for a specific age range.

- Layout

  Layout encompasses the design or page layout of your document in any desktop publishing or word processing application. The layout must accommodate space for variable text and images.

- Variable data print applications
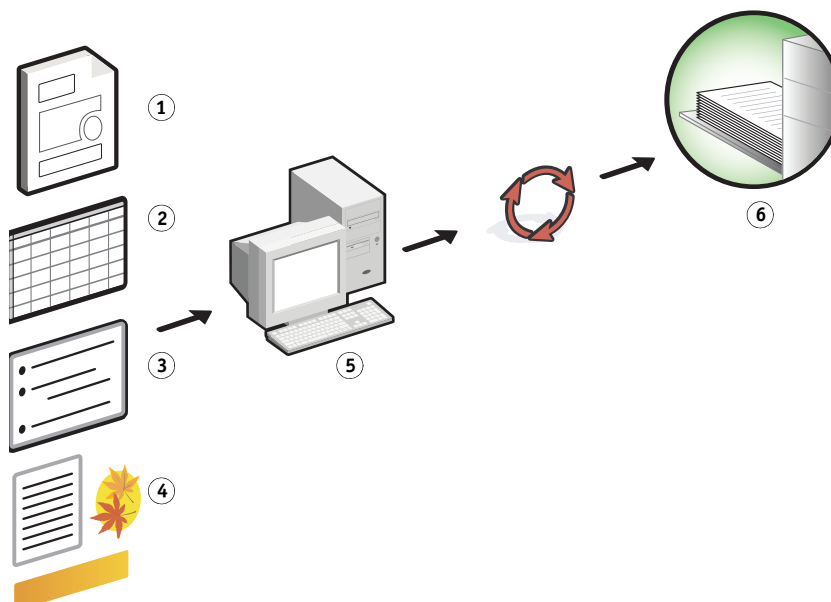
  Variable data print applications combine master elements and variable information and prepare the document for printing. For FreeForm, you do not need a dedicated variable data print application.

- Print device

  The print device is the output device that turns digital files into hardcopy documents. This can be any printer, copier, or digital press that supports variable data printing.

The following diagram shows the variable data printing components.

1   Layout
2   Database
3   Business rules
4   Content
5   Variable data application
6   Print device

Integrated Fiery Color Server variable data printing

The Integrated Fiery Color Server combines variable data printing languages, third-party variable data printing applications, and Integrated Fiery Color Server core features to integrate into many existing workflows. For more information about variable data printing workflows, see *Workflow Examples*.

Compatible variable data printing languages

The Integrated Fiery Color Server is compatible with the following variable data printing languages:

• FreeForm and FreeForm 2

FreeForm and FreeForm 2 are used with variable data solutions. FreeForm technology reusable data is RIPped only once, enabling the digital press to run faster.

FreeForm supports the creation of master elements and variable data from any desktop application or computer platform. Within the application, the master page is assigned a number from 1 to 100. FreeForm options are found in the driver and job management tools. For more information about FreeForm, see "Printing variable data documents" on page 11.

FreeForm 2 expands FreeForm technology by allowing you to determine page conditions and rules for printing a job containing multiple master pages. It also allows you to define the boundaries of each record in the data stream. This means defining a start and end for each record. Unlike FreeForm, FreeForm 2 requires a variable data printing application (for example, PrintShop Mail) that specifically supports FreeForm 2. For more information about FreeForm 2, see "Printing variable data documents" on page 11.

Integrated Fiery Color Server core features for variable data printing

By integrating variable data support into the Integrated Fiery Color Server's core features, such as Mixed Media, you can create custom layouts and apply different media and finishing options to your variable data jobs.

Mixed media with variable data printing

You can apply Mixed Media settings to all variable data printing jobs. When using Mixed Media settings, the Integrated Fiery Color Server recognizes each variable data record as a separate job. Mixed Media settings are applied to all records of the variable data job.

For an example of a variable data Mixed Media workflow, see *Workflow Examples*. For more information about setting Mixed Media for a job, see *Utilities*.

PRINTING VARIABLE DATA DOCUMENTS

With FreeForm technology, you can use print options to define master documents and assign them to variable data jobs sent to the Integrated Fiery Color Server.

This chapter explains how to do the following:

- Print documents with FreeForm.

- Create a master and variable document.

- Print documents with FreeForm 2 using a third-party variable data application.

Printing variable data documents using FreeForm

You can use FreeForm to print variable data documents. This section provides an overview of FreeForm and describes how to create and combine master and variable elements. Guidelines and tips are discussed at the end of the section.

How FreeForm works

FreeForm variable data printing sends the master-element data for the job to the Integrated Fiery Color Server and rasterizes it separately from the variable-element data. The master-element data is stored on the Integrated Fiery Color Server in rasterized form as a FreeForm master, and can be used as often as required with multiple sets of variable-element data. Because the FreeForm master job is preRIPped and stored on the Integrated Fiery Color Server, the only RIP time required for variable data print jobs is the time necessary to RIP the variable-element data.

You can use FreeForm masters for any fixed-element data you might combine with different data from day to day. For example, you can store a letterhead template as a FreeForm master and use it repeatedly as the background for different letter content (the variable-element data).

FreeForm allows you to create the master and variable documents using any application. You can create the two documents using different applications or computer platforms. To create the master document, use a page layout or graphics application. To create the variable document, use a word processing application that has a mail merge feature, a page layout application that supports scripting, or a database application.

You control FreeForm functions with the Create Master and Use Master print options. Set these options in the printer driver when you send a job, or instruct the operator to set them with job overrides from Command WorkStation. After the master document is RIPped, it appears on the Command WorkStation FreeForm tab. You can also use Command WorkStation to monitor and manage all the FreeForm masters stored on the Integrated Fiery Color Server.

For more information, see Command WorkStation Help.

Creating the master document

Before you can use FreeForm, you must create a master document and a variable document. This includes creating the layout for the combined document, as well as individual elements. In a page layout or graphics application, arrange the master elements (text and graphics that do not change) on one or more pages, leaving space for the variable elements.

Master document

1   Space for variable elements

2   Unchanging master elements

After you finalize the design of the master document, print it to the Integrated Fiery Color Server and specify that a FreeForm master be created from the job (see page 16).
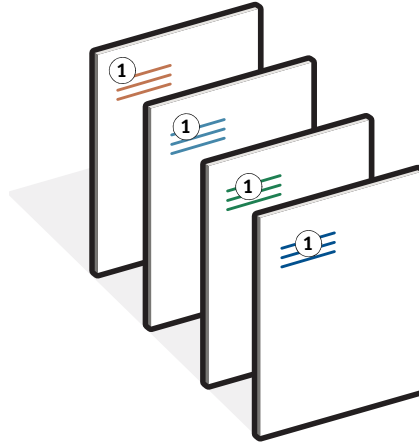
Creating the variable document

You can create the variable document with a word processing application that provides a mail merge function, a database application, or a page layout application that supports scripting. In all cases, information is taken from a list or database and merged into an existing document that is designed to accept the information. Each application has different controls for this function. For detailed instructions, see the documentation that accompanies the application. Before you add variable elements to the master document, format them to conform to the layout of the master document. To do this, create a document with the correct formatting, and then add the variable information in the appropriate places.

NOTE: You must create a variable document with the same page count as the master document. For example, if a master document has a record length of four pages, all the variable documents must have a record length of four pages. Add empty pages to the last record of the variable document, if necessary.

Variable document

1   Variable element

After you create a variable document, print it to the Integrated Fiery Color Server and specify that it be combined with the corresponding FreeForm master (see).

Combining the FreeForm master with the variable document

When you print a variable document to the Integrated Fiery Color Server, specify the FreeForm master created from your master document with the Use Master print option. The Integrated Fiery Color Server combines the raster data of the variable document with the previously RIPped FreeForm master, creating a new raster data file.
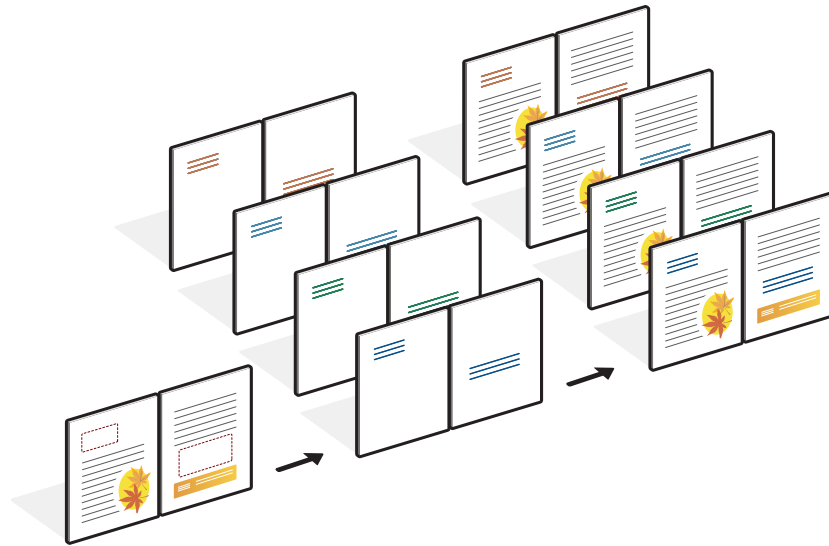
Combined document

A master document can include more than one page. When you print a variable document and specify a FreeForm master that contains multiple pages, the variable pages are combined with the master pages in a cyclical fashion. The following example illustrates how a variable document combines with a two-page master document.

Pages 1 and 2 of the variable document are combined with Pages 1 and 2, respectively, of the master document. The cycle of master pages then starts over, and Pages 3 and 4 of the variable document are combined, respectively, with Pages 1 and 2, again, of the master document. This pattern continues for each subsequent set of pages in the variable document.

Combined document

Guidelines

This section provides some suggestions to help you print variable data jobs correctly.

• Ask your administrator or operator about how FreeForm master numbers are assigned at your site.

• Do not send your variable printing jobs to the Direct connection through Command WorkStation.

  If you send a variable data job to the Direct connection, the job does not process.

• Use the Notes and Instructions fields to communicate instructions about your job to the operator.

• Give your jobs unique and descriptive names.

  You and the operator must be able to easily identify your jobs if there are many jobs in the queues, the FreeForm master numbers are reassigned, or you must refer to another job in the Notes or Instructions fields.

- Consider the restrictions on Print Options when using FreeForm.

  For more information about these restrictions, see *Print Options*.

- The following settings for the master document and variable document must match:

  Duplex
  Color Mode
  Secure Print
  Orientation
  Document Size
  Stapler Mode
  Punch Position

- The following setting for the variable document override the corresponding settings in the master document:

  Media Type

For more information, see *Print Options.*

TO PRINT VARIABLE DATA DOCUMENTS USING FREEFORM

1 Create a master document.

The following example illustrates one page of a master document for a tri-fold brochure created with a page layout application.

2 Print the master document to the Integrated Fiery Color Server with the Create Master print option set to one of the FreeForm Master numbers (1 through 100).

You can also set the Create Master option to None and instruct the operator to use overrides from Command WorkStation to create a FreeForm master from this job.

For more information, see Command WorkStation Help.

To print your FreeForm master to ensure that it is correct before you merge it with variable data, enable the Print Master feature after the file is sent to the Integrated Fiery Color Server (see *Print Options*).

3 Create the variable document.

You can create the variable document using a different file, a different application, or a different computer platform than you used to create the master document, but some print options must be the same (for details, see page 15).

The following example illustrates one page of the variable document for the tri-fold brochure. The data in this document can be as simple as a name and address, or as complex as multiple, graphics and photographic elements.

Dear Luis,

Thank you for expressing interest in Garden Tea Rooms.

Our records indicate that you will be staying at the Saint Francis Hotel December 12th–15th, 2004. Based on your request, we have included a coupon for a serving of Tea and Scones below, along with a map of the closest Tea Room to your hotel.

We hope you enjoy your stay in the Bay Area.

Cheers!

Luis Echevarria
16 Gray Road
Andover, MA 01810

This coupon entitles you, Luis Eschevarria, to one complimentary serving of scones at:

THE KING GEORGE
334 Mason Street at Geary

Offer expires 12/31/04.

Mr. Echevarria,

the information

you requested is

enclosed!

4 Print the variable document to the Integrated Fiery Color Server with the Use Master print option set to the appropriate FreeForm master number.

The FreeForm master number can be one you set when you send the master document or one assigned by the operator.

To preview the master page, click Preview Master from the printer driver to generate a low resolution image of the master page.

FreeForm master numbers can be overridden from Command WorkStation. Consult the operator to make sure that the FreeForm master number you specify is the correct one for the FreeForm master you want to use.

To check the job before it prints, instruct the operator to Process and Hold the job so you can preview it from Command WorkStation.

The following example illustrates the FreeForm master and variable document combined. The variable data is overlaid on the master document.

Previewing master documents in the Windows printer driver

After a master document is created, you can preview it from the Windows printer driver. This feature allows you to conveniently select your master document when you print using FreeForm.

TO PREVIEW MASTER DOCUMENTS IN THE WINDOWS PRINTER DRIVER

1 Choose Print in your application.

2 Select the Integrated Fiery Color Server as your printer and click Properties.

3 Click the Fiery Printing tab.

4 Click the VDP icon.

5 Click Update to retrieve the list of FreeForm master names from the Integrated Fiery Color Server.

The FreeForm master numbers and names appear in the Create Master and Use Master options.

NOTE: You must enable Two-Way Communication to retrieve the list of FreeForm master names. To enable this feature, see *Printing from Windows* and *Printing from Mac OS*.

6 Select the master document that you want to preview from the Use Master option, and then click Preview Master.

The FreeForm Master Preview window appears.

7 Click Close.

Printing variable data documents with FreeForm 2

FreeForm 2 extends the functionality of FreeForm. FreeForm 2 requires a third-party variable data printing application that supports FreeForm 2, such as PrintShop Mail. Using the third-party printing application and FreeForm, you can create multiple page masters, allowing more personalization and customization to your documents. You can still use another master created in any application, and then use a third-party application that supports FreeForm 2, such as PrintShop Mail, to combine the design and database information.

FreeForm 2 and the third-party variable data printing application allow you to specify page conditions that determine rules for individual master pages. These rules, described by "if" and "then" statements in each master page, allow you to skip or print pages within a master file. For more information about creating page conditions, see the documentation that accompanies your third-party variable data printing application.

FreeForm 2 also provides the option to delete a specified FreeForm master from the Integrated Fiery Color Server hard disk after its corresponding variable data job has been successfully RIPped and printed. You can set this feature in a third-party application that supports the clearing of FreeForm masters. For more information about deleting FreeForm masters, see the documentation that came with the third-party printing application.

TO PRINT A VARIABLE DATA JOB USING FREEFORM 2

1 **Open the variable document in the third-party variable data printing application that supports FreeForm 2, such as PrintShop Mail.**

2 **Select FreeForm 2 when you send the variable document.**

For more information about creating a variable data job or printing variable data jobs, see the documentation that accompanies your third-party application.

3 **Print the document.**

INDEX