Infoprint Designer for iSeries

Getting Started

Version 1 15

G544-5773-03

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Note

Before using this information and the product it supports, be sure to read the general information in “Notices” on page 87.

Fourth Edition (November 2003)

This edition applies to IBM Infoprint Designer for iSeries, Version 1 Release 1 Modification 0 and to all subsequent releases and modifications until otherwise indicated in new editions or technical newsletters. Be sure to use the correct edition for the level of the product.

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Contents

Figures

Tables

About Infoprint Designer for iSeries: Getting Started (G544-5773)

This publication provides information about using Infoprint® Designer for iSeries™ Version 1 Release 1 (licensed program number 5733–ID1), hereafter referred to as Infoprint Designer. In order to get some of the functions described in this manual, you must install these PTFs:

- SF67761
- SF67762
- SF67763
- SF67764

To determine whether you have these PTFs installed, from the Infoprint Designer window, open the **Help** menu and select **About...**. The version shown will be 1.15 if you have these PTFs installed.

This publication helps you prepare to use IBM® Infoprint Designer for iSeries. It includes installation instructions, and describes features of this product and includes examples of how to use the product.

Who should read this publication

The information in this publication is directed at people who need to understand how to use Infoprint Designer.

Conventions and terminology used in this publication

The term iSeries refers to the server previously called AS/400®. The term OS/400® refers to the operating system of the iSeries.

Understanding syntax notation

These rules apply to coding illustrations throughout this publication:

- Variable data is printed in italics. Enter specific data to replace the characters in italics. For example, for *ImageType* you could enter IM1. Italics also identify the names of publications.
- Bold highlighting identifies commands, keywords, files, directories, and other items whose names are predefined by the system, or items that must be entered as is, such as **-ink**.
- Monospacing, for example, `gif2afp` identifies examples of specific data values, examples of text similar to what you might see displayed, examples of portions of program code similar to what you might write as a programmer, messages from the system, or information you should actually type.
- OS/400 commands are printed in all upper case letters. They must be entered exactly as they appear.

Prerequisite and related information

The Printing Systems iSeries Products Web page contains information about this product. Refer to this Web page:

`http://www.ibm.com/printers/R5PSC.NSF/Web/as400overview`

Refer to the README file for the latest information about your version of Infoprint Designer. The README file is stored on your iSeries in this location:

`\\system\QIBM\ProdData\AFPDesigner\read_language code.txt`

Use the iSeries Information Center as your starting point for looking up iSeries technical information.

You can access the Information Center From this Web site:

`http://www.ibm.com/servers/eserver/iseries/infocenter`

The iSeries Information Center contains advisors and important topics such as Java™, TCP/IP, Web serving, secured networks, logical partitions, clustering, CL commands, and system application programming interfaces (APIs). It also includes links to related IBM Redbooks™ and Internet links to other IBM Web sites such as the IBM home page.

With every new hardware order, you receive the *iSeries Setup and Operations CD-ROM*, SK3T-4098-02. This CD-ROM contains IBM @server iSeries Access for Windows® and the EZ-Setup wizard. iSeries Access Family offers a powerful set of client and server capabilities for connecting PCs to iSeries servers. The EZ-Setup wizard automates many of the iSeries setup tasks.

For other related information, see the “Bibliography” on page 99.

iSeries Navigator

IBM iSeries Navigator is a powerful graphical interface for managing your iSeries servers. iSeries Navigator functionality includes system navigation, configuration, planning capabilities, and online help to guide you through your tasks. iSeries Navigator makes operation and administration of the server easier and more productive and is the only user interface to the new, advanced features of the OS/400 operating system. It also includes Management Central for managing multiple servers from a central system.

You can find more information about iSeries Navigator in the iSeries Information Center and at this Web site:

`http://www.ibm.com/eserver/iseries/navigator/`

Summary of changes

Summary of changes for Infoprint Designer for iSeries: Getting Started, G544-5773-03.

This publication contains additions and changes to information that was previously presented in *Infoprint Designer for iSeries: Getting Started*, G544-5773-02. The technical additions are marked with a change bar (|) in the left margin. In order to get some of the functions described in this manual, you must install these PTFs:

- SF67761
- SF67762
- SF67763
- SF67764

To determine whether you have these PTFs installed, from the Infoprint Designer window, open the **Help** menu and select **About...**. The version shown will be 1.15 if you have these PTFs installed.

These changes have been made throughout the book:

- References to AS/400 have been changed to iSeries.
- References to Client Access and Client Access Express have been changed to iSeries Access.

This information is new or updated:

- The information in “About this publication” has been moved to “About Infoprint Designer for iSeries: Getting Started (G544-5773)” on page xi.
- “Infoprint Designer shortcut keys” on page 16 has been added.
- “Saving your work” on page 26 has been updated.
- “Creating a project based on a similar project” on page 26 has been added.
- “Uploading your overlay to the iSeries” on page 26 has been updated.
- “Setting layout properties” on page 33 has been added.
- “Layout Editor windows” on page 35 has been added.
- “Producing some common layout formats with the Layout wizard” on page 40 has been added. It replaces the information in the section “Producing some common layout formats” and the chapter “Using Conditional Processing”
- “Migrating existing page definitions and form definitions” on page 64 has been moved to Chapter 8, “Understanding page definitions and form definitions.”
- A glossary has been added.

Chapter 1. Introducing IBM Infoprint Designer for iSeries

IBM Infoprint Designer for iSeries (hereafter referred to as Infoprint Designer) provides a fully-graphical document composition interface to the iSeries printing system. It supports the requirements of today's complex documents and reports, producing fully electronic pages with data, text, electronic forms, graphics, image, bar codes, and typographic fonts. You can use Infoprint Designer to design new output applications or to reengineer existing applications. Infoprint Designer consists of three integrated components:

- **Infoprint Overlay Editor** designs overlays (also called *electronic forms*).
- **Infoprint Image Editor** designs images to use in overlays or print applications.
- **Infoprint Layout Editor** puts all the design components together into the final document or report.

Infoprint Designer is a Windows-based system with tight integration to the iSeries. Print files to be redesigned can be downloaded directly into the Infoprint Layout Editor. The design functions are grouped together into projects. Each project contains all of the resources (images, overlays, page definitions, and form definitions) required for production. The entire interface is designed for a non-technical user. Once the design is complete, you upload the resources to the iSeries, where they are automatically created in the proper format. This lets you easily put the application into production.

What can I do with Infoprint Designer?

There are several ways that you can use Infoprint Designer:

- **Create overlays (electronic forms):** You can create overlays to use with your current output formatted by DDS or Advanced Print Utility (APU). This lets you migrate from pre-printed forms to electronic overlays. When you do this, DDS or APU can still format the production output. Use Infoprint Designer to create overlay projects that contain one or more overlays. You can use the Overlay Editor to create an overlay in any of these ways:
  - Draw the overlay with the Overlay Editor.
  - Trace over an existing scanned (TIFF) image of your pre-printed form.
  - Import an AFP™ overlay object from your iSeries.

  If you are primarily going to use Infoprint Designer to create overlays, focus on Chapter 4, "Starting an Overlay Project," on page 19.
- **Use powerful AFP page formatting:** You want to take advantage of AFP's powerful page formatting and you want to format your data onto your overlays graphically. Use Infoprint Designer to seamlessly download spooled files that you have retained from an application run. You can then display them in the Layout Editor for drag-and-drop placement on your overlays. If you are migrating from continuous pre-printed forms with each page identically embossed, you only need to do minimal reformatting to fine tune the layout. With Infoprint Designer's graphical design capability, Infoprint Designer makes application-independent formatting easier. You can also produce layout projects with or without overlays in the background. For more information, see Chapter 5, "Using the Layout Editor," on page 29.
- **Use variable page-to-page formatting:** You are comfortable with AFP and you want to use more variable page-to-page formatting, such as 'spot carbon' and 'multiple-up' applications. For more advanced output, you still use the Layout Editor, but you approach the output with a logical sequence of what goes where

and when. To make this task easier, the Layout Editor includes a design wizard that helps you plan your layout page by page.

To create complex applications, you need to better understand the well-architected structure of the AFP formatting objects called *page definitions* and *form definitions*. Page definitions and form definitions let you format your printing outside of the application code. This independence facilitates portability in your application development platform to move toward Java or XML.

For more information about page definitions and form definitions, see Chapter 8, “Understanding page definitions and form definitions,” on page 63. To follow an example of a complex print application, see “Producing some common layout formats with the Layout wizard” on page 40.

- **Touch up or convert images:** You can use Infoprint Designer’s Infoprint Image Editor component to touch up or convert images, such as logos and signatures, to use in your AFP output. Infoprint Image Editor lets you edit at the pel-level. Alternatively, you can edit your existing TIFF, JPEG, GIF, BMP, ICO, or PTR files and then convert them to AFP page segments. For information about using the Infoprint Image Editor, see Chapter 7, “Using the Image Editor,” on page 59.

Understanding Infoprint Designer projects

Infoprint Designer uses the concept of a *project* to group all of the resources required to print the output of a single application. The project file contains references to the overlays, images, fonts, sample data, and layout files that you can create and send to your iSeries to print application output.

When you start Infoprint Designer, it creates a default project file named UNTITL.PRJ, which you must rename before uploading it to the iSeries.

When you have completed your design for the application output, you can upload the entire project to the iSeries. This puts all of the resources necessary to put the new design into production in iSeries libraries where they can be located at print time.

Understanding file names

In Infoprint Designer, you work with a number of files simultaneously: the project file, one or more overlay files, a layout file, and possibly page segment (AFP image) files. All of the files generated by Infoprint Designer, except the project file, are used on the iSeries. Because of this, follow the file naming rules listed in “File naming rules” on page 3 when naming anything other than the project file.

AFP resource files by mainframe convention (such as OS/300 or z/OS®) have resource-specific prefixes in their file names for the resource files on the host system. By default, Infoprint Designer *does not* append prefixes to file names. When you upload your work to the iSeries, Infoprint Designer can automatically prefix the names with these standard prefixes:

Resource type	Prefix
overlays	O1
page segments	S1
form definition	F1
page definition	P1

If you want these prefixes added to the file names, you can specify to use prefixes

for each resource type by opening the **Edit** menu and selecting **Preferences...**. The prefix options are on the **iSeries** page. You can only turn prefixing on or off when a project is not open in Infoprint Designer.

Note: When you turn on prefixing for a resource type, you can only use six characters in the file names for that resource type.

Page Printer Formatting Aid (PPFA) and Overlay Generation Language (OGL) keywords are not allowed as the file name of an overlay or layout file, including the keyword UNTITL, which is the name the project, overlay, and layout files are assigned by default if you start Infoprint Designer in its default state with a new project open. Infoprint Designer will display an error when it detects that you have used one of these keywords in a file name or object name.

When searching for a object to open or load, Infoprint Designer assumes these file extensions for each file type:

Table 1. Expected file extensions

Resource Type	File extension
Overlay source files	OGL
Overlay object files	OVL
Layout file	PFA
TIFF images	TIF
240-pel page segments	240
300-pel page segments	300
600-pel page segments	600
Project file	PRJ

File naming rules

When naming any file that will be used on the iSeries; that is, any file except the project file, follow these naming rules:

- The file name cannot exceed eight characters. If you are using prefixes for a type of resource, you can only specify the last six characters. For example, if you specify that Infoprint Designer should add the O1 prefix to overlays, you can only specify a 6-character overlay name.
- The first character must be one of these: 'A'-'Z', '$', '# ', '@'. It cannot be a number. If you are using prefixes for a type of resource, their names automatically start with a letter.
- All other characters must be in the following group: 'A'-'Z', '0'-'9', '$', '#', '@', '.', '_'.
- The name cannot contain spaces.

Understanding libraries and library profiles

Infoprint Designer uses the concept of libraries to let you define a series of directories on your PC where print resources are stored. When a resource is requested in a project, Infoprint Designer searches these directories in the order specified. Infoprint Designer needs this search path because resources do not retain their PC directory location inside the overlay files or layout files. For example, if you add a page segment to an overlay, the overlay only stores its file name, not its PC directory location. When you load that overlay, Infoprint Designer must locate

the page segment with that name on your PC. To find it, Infoprint Designer searches the libraries you define in a file called the *library profile* (file extension LBP).

The library profile consists of an entry for each type of resource Infoprint Designer works with (fonts, page segments, TIFF images, and overlays). Each entry specifies one or more directories on the PC that Infoprint Designer searches when it needs to locate a resource of that type.

Two library profiles are created in the directory `\Designer\userisis` during the installation of Infoprint Designer:

- **DEFAULT.LBP** contains the paths to AFP outline fonts. Infoprint Designer uses this library profile by default.
- **RASTER.LBP** contains the paths to AFP raster (bitmap) fonts.

Both of these library profiles specify default paths as follows for the other resource types:

Table 2. Default paths for resource types

Type of resource file	Default directory (under C:\Designer, the default product installation directory)	Default PC filetype extension of AFP resource
240-pel overlays (object format)	\OVL240	OVL
300-pel overlays (object format)	\OVL300	OVL
600-pel overlays (object format)	\OVL600	OVL
Overlays (source format)	\OGL	OGL
240-pel page segments	\PSEG240	240
300-pel page segments	\PSEG300	300
600-pel page segments	\PSEG600	600
TIFF images	\TIFF	TIF

If you store resources in directories other than these, you need to append those directories to the default ones. However, the list of directories defined in the library profile for each resource type is limited to 1024 characters. To append directories to the defaults, from the **Defaults** menu, select **Libraries**. You can specify relative path names in the **Path** field. If you do, the directory you specify is appended to the Start in directory defined in your desktop's shortcut to Infoprint Designer. By default, this directory is `C:\Designer\userisis`.

Example:

Assume you installed Infoprint Designer in the directory `D:\Infoprint` with a Start in directory of `D:\Infoprint\userisis` defined in the shortcut.

If you specify `..\MyResources` on the **Libraries** dialog, Infoprint Designer searches in `D:\Infoprint\MyResources` for resources.

If you specify \MyResources on the **Libraries** dialog, Infoprint Designer searches in D:\Infoprint\userisis\MyResources for resources.

To specify which library profile the active project should use, do one of these:

- From the **File** menu, select **New project**.
- From the **Edit** menu, select **Change library profile...**.

Where to obtain support

Infoprint Designer for iSeries is a standard iSeries program product. Support, both usage ("how to") and defect reporting, is provided by IBM Software Support (Supportline). This publication provides basic installation steps and usage guidance. Much of this information is also available in the product's online help.

Classroom and on-site education is also available from IBM. iSeries Infoprint Designer University (course number K2516), a 2–day classroom course, is available at selected locations. Check the IBM Training Solutions listings on the Web at http://www-3.ibm.com/services/learning/index.html or contact your IBM marketing representative. IBM can also provide jumpstart training. This is a combination of education and implementation and is done at your location. With jumpstart services, you customize the education to your requirements and normally use one of your first applications as the "case study" for the training.

Online help is also available in the product. To access the online help use one of these methods:

- Select the Help menu on the Infoprint Designer window.
- Press F1 from any dialog or window.
- Select Help from any dialog.

Refer to the README file for the latest information about your version of Infoprint Designer. The README file is stored on your iSeries in this location:

system\QIBM\ProdData\AFPDesigner\read_*language code*.txt

Chapter 2. Installing Infoprint Designer

Infoprint Designer requires a two-part installation process. First, the licensed program must be installed on the iSeries server. Then, the workstation user can install the program from the iSeries server to their PC (client).

When you install Infoprint Designer, eight sample projects containing overlays and layouts are automatically installed. You can open any of the sample projects and experiment with them using the procedures described in this book. Appendix A, "Infoprint Designer sample projects," on page 79 contains a table that describes the sample projects. *IBM @server iSeries Printing VI: Delivering the output of e-business* provides detailed descriptions of how each of the sample projects was created.

Verifying prerequisites

Before installing Infoprint Designer, you should verify that you have satisfied these hardware and software requirements:

Client Hardware

Intel™ Pentium® II, Intel Pentium III, or compatible hardware with a minimum of 333 MHz. Depending on the display, an appropriate graphics accelerator card that with a minimum of 8 MB of RAM.

Operating System

For the Infoprint Designer **client**, one of these Windows operating systems:

- Windows 95 OSR 2.0 or higher with a minimum of 32 MB of RAM

  Note: A supported version of Windows (Windows 98 or higher) is recommended.
- Windows 98 with a minimum of 32 MB of RAM
- Windows NT® Version 4.0 SP40 or higher with a minimum of 64 MB of RAM
- Windows 2000 with a minimum of 128 MB of RAM
- Windows XP Professional with a minimum of 128 MB of RAM

For the iSeries **Server**, OS/400 Version 4 Release 5 or higher.

Software

- Print Services Facility™ (PSF) for OS/400 is required if you are going to print your Infoprint Designer output on an AFP printer. If you are going to print your Infoprint Designer output on a PCL printer, you do not need PSF.

  Notes:

  1. Printing output formatted with form definitions and page definitions created by Infoprint Designer on a PCL printer is not supported on OS/400 V4R5.
  2. On V5R1, PCL printing of Infoprint Designer layouts requires installation of PTF SI02688.
  3. On versions higher than V5R1, PCL printing of Infoprint Designer layouts does not require any PTFs.
  4. On all versions of OS/400, overlays created by Infoprint Designer can be printed on PCL printers.

- AFP Font Collection for Workstations and OS/400 (program number 5648–B45). These fonts are supplied with new licenses or version/release upgrades of PSF/400 beginning with OS/400 V4R5.

  If you are using Latin 1 fonts, ensure that you have installed the CF4LA1 (raster) and CO4LA1 (outline) font libraries from the AFP Font Collection. For more information, see `http://www.printers.ibm.com/R5PSC.NSF/web/rdfont01`.
- iSeries Access, including the Toolkit and iSeries Navigator, with an iSeries connection defined (by iSeries Navigator) on the PC on which you will run Infoprint Designer.

  Note: iSeries Access Service Pack 3 (PTF SI02795) is required if you want to display the output formatted with Infoprint Designer layout objects in the AFP Viewer on OS/400 V5R1.

Preparing to install Infoprint Designer

Complete these steps before you install Infoprint Designer:

1. Make sure that iSeries Access is installed on the PC where you will be installing Infoprint Designer. iSeries Access must have a connection defined to the iSeries system on which Infoprint Designer is licensed.
2. Map a drive to your iSeries server:
   a. Open Windows Explorer.
   b. From the **Tools** menu , select **Map Network Drive...**.
   c. Specify the drive letter for **Drive:**. In the **Path:** field, specify the system name and path. in the format `\\systemname\directorypath`. For example, `\\testsys\QIBM`.

      Note: NetServer must be running on your iSeries in order to map a drive. If you cannot map a drive, see “Problems mapping a drive with Windows Explorer on your iSeries” on page 76.
3. Have your IBM license key available.
4. Make sure your ID has the proper authority. Infoprint Designer has the authorities for the user ID used to connect Infoprint Designer to the iSeries. In order to download sample data from spooled files on the licensed iSeries server, that user ID must either be the owner of the file or have *SPLCTL authority.

About the Infoprint Designer license

Infoprint Designer is licensed to an iSeries system, and only one connected PC can use Infoprint Designer at any one time. If the link between the PC and iSeries goes down, you are warned that the link is down. Infoprint Designer then saves the current file and closes the session. When you close an Infoprint Designer session, another connected PC can use Infoprint Designer.

A special offering is available to permit multiple workstations to use the Infoprint Designer license on one iSeries system. This offering is available as a Programming Request for Price Quotation (PRPQ) 8A8100.

Installing Infoprint Designer on your iSeries

To install Infoprint Designer on your iSeries, follow these steps:

1. Insert the Infoprint Designer CD-ROM into the server’s CD-ROM drive.

2. On the iSeries command line, enter this command, where *123456 123456 123456* is your 18-digit license key:

   ```
   ADDLICKEY PRDID (5733ID1) LICTRM(V4R5M0) FEATURE(5050)
             LICKEY(123456 123456 123456) USGLMT(*NOMAX)
   ```

3. To install on an **English** iSeries, enter: `RSTLICPGM LICPGM(5733ID1) DEV(your-cdrom-drive-name)`.
4. To install on a **non-English** iSeries, where 2924 is not the primary language, enter: `RSTLICPGM LICPGM(5733ID1) DEV(your-cdrom-drive-name) LANG = 2924`
5. (Optional) Install the IPDATA sample application library that is included with Infoprint Designer. Enter these commands:

   ```
   CPYFRMSTMF FROMSTMF('/QIBM/ProdData/AFPDesigner/IPDATA.savf')
              TOMBR('/QSYS.LIB/mylib.LIB/IPDATA.file')

   RSTLIB SAVLIB(IPDATA) DEV(*SAVF) SAVF(mylib/IPDATA)
   ```

   The IPDATA sample application library will help you learn about Infoprint Designer's interaction with the iSeries. It contains the spooled files used in the sample projects installed on your PC by default. In order to use the AFP resources created by Infoprint Designer, changes must be made to your printer file. The IPDATA library includes a CL program that automates these changes. For information about using the IPDATA sample application library, see Appendix C, "Using the IPDATA Sample Application," on page 85.

Installing Infoprint Designer on your PC

Follow these steps to install Infoprint Designer on your workstation:

1. Using Windows Explorer, navigate to the `\QIBM\ProdData\AFPDesigner\Install` directory on the drive you mapped in 2 of "Preparing to install Infoprint Designer" on page 8.
2. Double-click **ibminst.exe**, and the Infoprint Designer installation program starts.
3. Select a directory as the target directory for the Infoprint Designer installation or accept the default of `C:\Designer`. The amount of space required for the installation depends on what AFP fonts you choose to install. If you install all Latin1 fonts (outline, 240-pel raster, and 300-pel raster), 145 MB is required for the installation.
4. When you encounter the product selection screen, ensure that these components are selected:
   - Infoprint Designer
   - Image Editor
   - Font Code Pages
   - At least one type of fonts (outline, 300-pel rasters, or 240-pel rasters)
5. When the installation program completes, a window is displayed with shortcuts to the Infoprint Designer iSeries program and to the Infoprint Image Editor program. Copy each of these shortcut icons to the desktop.

   Note: On Windows 2000, you might need to refresh this window to view the icons.

If you will use Infoprint Designer as a server application with several clients accessing one program, you might want to further customize your Infoprint Designer installation. You can customize the installation so that each user has different default values for settings such as iSeries user ID and library.

Note: This customization is only required if the Infoprint Designer code resides only on the iSeries. For example, in a “thin client” or Windows application server installation, where the end user’s workstation does not have its own copy of the program installed.

To accomplish this, follow these steps:

1. Make the equivalent of a `\userisis` directory for each user on your Windows server. Create a uniquely named directory for each user under the Infoprint Designer root directory, typically `C:\Designer`. For example, `C:\Designer\user1`.
2. Copy the contents of the `userisis` directory into each user’s directory.
3. On each user’s PC, change the properties of the shortcut created for Infoprint Designer. Specify the user’s `'userisis'` directory (`user1` in our example) as the Start in directory.
4. If the users also need separate access to the Infoprint Image Editor, repeat steps 1 and 2 for the Image Editor.

Updating the Infoprint Designer programs

Follow these steps to update Infoprint Designer with a program temporary fix (PTF):

1. Install the PTF on your iSeries system using the `LODPTF` and `APYPTF` commands for each available PTF.
2. Using Windows Explorer, navigate to the `\QIBM\ProdData\AFPDesigner\Install` directory on the drive you mapped in 2 in "Preparing to install Infoprint Designer" on page 8.
3. Double-click `ibminst.exe` to start the Infoprint Designer installation program.
4. On the fourth dialog in the installation program, select **Update existing Designer product** and proceed with the installation.

   Note: Updating Infoprint Designer does not overwrite work stored in the Infoprint Designer directories.
5. To restore your default preferences after the installation completes, follow these steps:
   a. Use Windows Explorer to browse the backup directory you specified in the installation process. The default directory is `userisis.bak`.
   b. Copy the contents of that directory to the `C:\Designer\userisis` directory (or the directory in which you installed Infoprint Designer), replacing the files with the same name that the installation program just wrote.

Uninstalling Infoprint Designer and Image Editor from your PC

To uninstall Infoprint Designer and Image Editor from you PC, delete the Windows directory where you installed them, for example, `C:\Designer`.

Chapter 3. Starting Infoprint Designer

To start using Infoprint Designer, follow these steps:

1. Start the program by doing one of these:

   - Double-click the product icon on your desktop: 
   - From the Windows **Start** menu, select **Programs** then **IBM Infoprint Designer**.

2. If you do not have an active connection to the first iSeries in your iSeries Access connection list, the **Connect to iSeries** dialog opens.

   - Select the iSeries host that is licensed for use with Infoprint Designer and enter your user ID and password on that system. If you select **Save User ID and Password**, Infoprint Designer saves these values.

     Note: If you select **Save User ID and Password** and your iSeries password changes, the program will start in demo mode. To change the password that Infoprint Designer uses to log you on to the iSeries, follow the instructions in “Program starts in demo mode” on page 75.

   - If you click **Cancel** or cannot connect to the iSeries, Infoprint Designer displays a message and starts in demo mode. In demo mode, you cannot save your work or open overlay and layout files that Infoprint Designer created. If this happens in error, close the program and start it again when you can connect with the licensed iSeries system.

     Note: The FTP server must be started on your iSeries system before you can start Infoprint Designer.

3. Specify the name of an iSeries library where you will send your completed work. This library is also used for temporary storage when spooled files are downloaded.

   To specify this library, follow these steps:

   a. From the **Edit** menu, select **Preferences...**.

   b. Select the **iSeries** page.

   c. Select a library from the list of available libraries on the iSeries system you are using.

4. Specify the resolution of the AFP printer you will use to print the iSeries application output. Overlays, page segments (AFP images), and raster fonts are resolution-dependent. Also, the overlay or layout’s resolution determines which fonts are available for you to select.

   Outline fonts and TIFF images are resolution-independent. For example, when you use a TIFF image in an overlay, it is scaled to match the overlay’s resolution. The default resolution is 300 dpi.

   To specify the AFP printer resolution you want overlays created with, follow these steps:

   a. From the **Edit** menu, select **Preferences...**.

   b. Select the **General** page.

   c. Select the resolution in the **Host printer resolution** field.

   Note: When you make proof prints on a PC-attached printer, the screen representation of the overlay is converted to the printer’s resolution.

5. (Optional) Set the units of measurement to use for the overlays and layouts you create with Infoprint Designer. When you create the overlay or layout parts, such as lines, you can specify a length and other measurement characteristics. You can also make a ruler in the specified unit. The default is inches. To change the default setting, follow these steps:
   a. From the **Edit** menu, select **Preferences...**.
   b. Select the **Units and grid** page.
   c. In the **Default units** field, select millimeters or pels.

   You can always use different units for specific elements. For example, you can use inches as the default units but specify the placement of a box on an overlay in pels for greater precision.

Getting to Know the Infoprint Designer Window

When you start Infoprint Designer, a window like the one shown in Figure 1 appears.

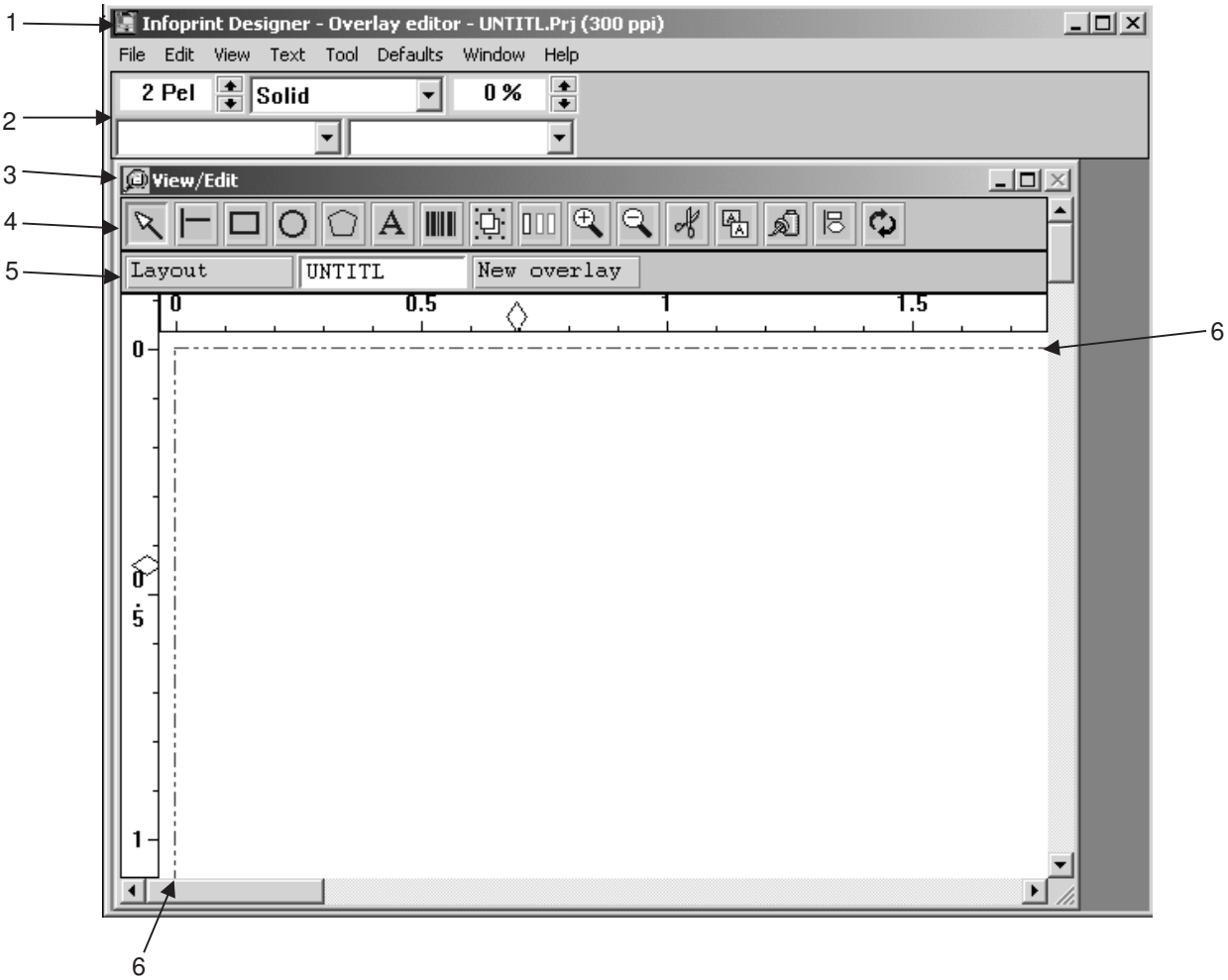

Figure 1. Infoprint Designer window

The Infoprint Designer window has these parts, labeled in the diagram above:

1. The title bar shows the design mode (Overlay editor or Layout editor), the name of the active file, and the current print resolution.

2. The **Settings area** can also be considered a toolbar. If you change the settings in this area of the toolbar, you set default values for objects before you create them. If you change the settings when an object is selected, you change the values for only that object. If you enter values into these fields, press **Enter** for the new values to take effect. On the left side of the toolbar, Infoprint Designer shows current settings for line thickness, type, shading, and font. You can change those settings in that area. On the right side of the toolbar, Infoprint Designer displays positioning information. Depending on your actions, it might show the pointer's location on the **View/Edit** window or the coordinates of a selected object.
3. The subwindow labeled **View/Edit** is your work space for designing the appearance of your application output.
4. The **Action toolbar** on the **View/Edit** window contains icons for frequently used functions. These functions can also be accessed from the **Tool** menu. The contents of the Action toolbar change depending on what mode you are in.
5. The **Mode toolbar** on the **View/Edit** window contains buttons that let you switch between overlay and layout design mode. The contents of the mode toolbar stay the same across design modes. A white background on the mode's button indicates the active mode. In Figure 1 on page 14, `UNTITL` is the active overlay.
6. The broken red line in the **View/Edit** window in overlay design mode corresponds to the size of the overlay you are working on. In layout design mode, the broken red line indicates the boundaries of the *logical page*. This is where data is formatted before it is placed on the physical page.

Toolbars

The contents of the toolbar on the View/Edit window change, depending on the mode in which you are working. Figure 2 shows the action toolbar when you are in overlay design mode.
Figure 3 on page 16 shows the action toolbar when you are in layout mode.

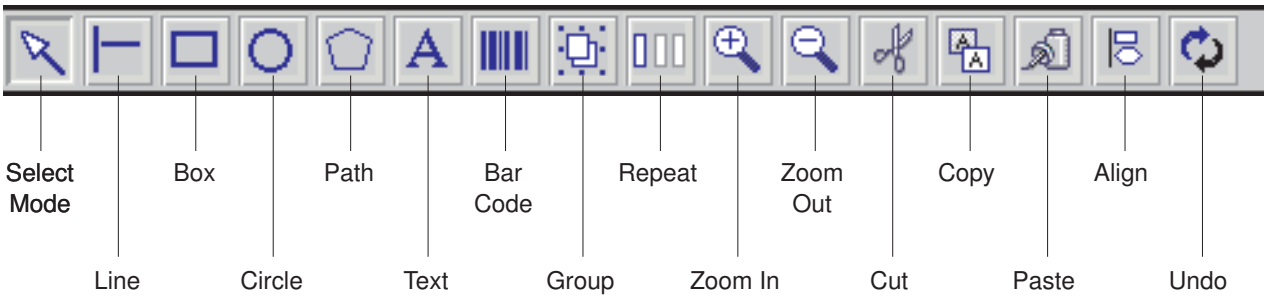

Figure 2. Action toolbar in overlay mode

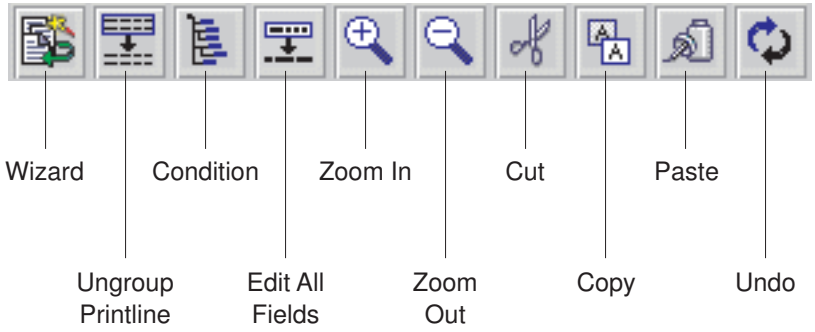

Figure 3. Action toolbar in layout mode

Infoprint Designer shortcut keys

You can access many Infoprint Designer menus and functions through keystroke combinations instead of using the mouse. These are the shortcuts included with Infoprint Designer:

menu or function	keystroke combination
File menu	ALT+F
New Project	CTRL+N
Open Project	CTRL+O
Save Project	CTRL+S
Exit	F3
Edit menu	ALT+E
Undo	CTRL+Z
Redo	CTRL+Y
Cut	CTRL+X
Copy	CTRL+C
Paste	CTRL+V
Delete	DEL
Object properties	CTRL+E
View menu	ALT+V
Zoom 1 : 2	ALT+Z
Zoom *n* : 1	ALT+*n*, *n* = 1-9
Zoom 10 : 1	ALT+0
Grid	CTRL+G
Tool menu in Overlay Design mode	ALT+T
Select	ESC
Line	CTRL+R
Path	CTRL+P
Box	CTRL+B
Circle	CTRL+L

menu or function	keystroke combination
Text	CTRL+T
Tool menu in Overlay Design mode	
Move selected object	CTRL+appropriate arrow
Copy selected object and position at drop point	CTRL+Left mouse click and drag
Tool menu in Layout Design mode	
Move selected field	CTRL+appropriate arrow
Move printline of selected field	SHIFT+appropriate arrow
Adjust line spacing of all fields in a repeated printline	CTRL+Left mouse click and drag on any field except the first field

Chapter 4. Starting an Overlay Project

When you start Infoprint Designer, it automatically opens in overlay design mode. You can begin creating an overlay right away or you can start by naming the project and the overlay. To start by naming the project, open the **File** menu and select **New project..**. If you always want to start Infoprint Designer this way, open the **Edit** menu and select **Preferences**. On the **View** page, deselect **Start with default project**. If you do this, you cannot start creating an overlay until you name the project.

You are now ready to begin creating the overlay elements: lines, boxes, circles, text, bar codes, and paths (polylines). If you have a scanner and a pre-printed form that you are converting to an electronic overlay, see “Designing overlays to replace preprinted forms.” If you have AFP overlays created with another application, see “Migrating existing overlays.”

Designing overlays to replace preprinted forms

For optimal results, follow these steps to create an overlay to replace a preprinted form:

1. Scan one side of the form to create a TIFF image file. Set up your scanning program with these options:
   - TIFF format
   - Bi-level (black and white)
   - Resolution to match that of your target printer (probably 300 dpi, but possibly 240 or 600 dpi)
   - Scan the image at actual size (1:1)
2. Start Infoprint Designer.
3. From the **File** menu, select **Get Template...**. The **Get Template** dialog opens.
4. Browse to the file containing the scanned form and select it. A read-only version of the form is displayed in the **View/Edit** window.
5. Trace over the existing elements (boxes, lines, or text) to create an AFP overlay that matches your current pre-printed form. You can also enhance the existing form by adding new elements.

Migrating existing overlays

If you have an overlay in AFP object format on your PC, you can import it into Infoprint Designer for editing. To open the overlay, select **New overlay** in the Mode toolbar. You are asked to save the overlay again, this time into Infoprint Designer’s overlay source format.

Be aware of these when importing overlay objects:

- Text objects in the overlay are not defined as text blocks, but as groups of words, possibly only single words. This is unavoidable because of the way the text is stored in the AFP format of the overlay.
- The orientation information in the overlay might not be preserved. For example, a landscape overlay might import as portrait. If this happens, see the information in “Landscape overlay rotates to portrait when starting Layout Editor” on page 77.
- If the overlay was created using the AFP Windows driver, the text might be lost. If this happens, create the text objects again. The text is not lost if the driver uses a font character set - code page pair that is built into one of the fonts supplied with or defined to Infoprint Designer.

- If you created the overlay using the AFP Windows driver with **Print Text as Graphics** specified, the overlay is scaled to 240 dpi when it is imported into Infoprint Designer. This might change the overlay's size.
- If the overlay was created using AFP Utilities (AFPU), font references are not resolved correctly unless the AFPU source names AFP coded fonts. If you receive errors about missing fonts when you open such an overlay, there are two possible solutions:
  – Re-create the text objects in Infoprint Designer.
  – Change your AFPU source to reference coded fonts and re-compile the overlay.

  Note: Sometimes the font errors reported when opening an AFPU-created overlay prevent Infoprint Designer from displaying lines and boxes on the overlay.

Creating overlay objects

There are two ways to select the drawing tool you want to use:

- Use the icons on the **Action** toolbar on the **View/Edit** window. The toolbar is shown in Figure 2 on page 15.
- Use options in the **Tool** menu.

Select a tool and then position your pointer inside the **View/Edit** window. Follow the steps below to create each object.

To create a **line**:

1. Select the line tool.
2. Click where you want the line to start and drag to where you want the line to end.
3. Draw another line or click on the line you just drew to edit it.

To create a **box**:

1. Select the box tool.
2. Click where you want one corner of the box to be and drag to where you want the opposite corner of the box to be.
3. Draw another box or click on the border of the box you just drew to edit it.

To create a **circle**:

1. Select the circle tool.
2. Click where you want the center of the circle to be and drag outward until the circle is the desired size.
3. Draw another circle or click on the border of the circle you just drew to edit it.

To create a **path (polyline)**:

1. Select the path tool.
2. Click where you want the first point in the path to be, then click where you want each additional point to be.
3. To end the path, right-click anywhere in the **View/Edit** window, press **ESC**, or select the **Select** mode icon from the **Action** toolbar.
4. To connect the first point in the path with the last point, select the path and then right-click. The **Path attributes** dialog opens.
5. On the **Connection** page, select **Close path**.

To create **formatted text**:

1. Select the text tool.
2. Draw a box to indicate the area within which the text is formatted. This area is the guide for centering, word wrapping, and justification.
3. If you have not set a default font, the **Select Font** dialog appears. Use this dialog to specify the attributes of the AFP font you want to use.
4. If you set a default font, but want to use a different font for the text you are creating, select the Select font icon in the Infoprint Designer toolbar in the Settings area:  . The Settings area changes when you add text with a default font selected.

To create **unformatted text**:

1. Select the text tool.
2. Click where you want the baseline of the text to be.
3. If you have not set a default font, the **Select Font** dialog appears. Use this dialog to specify the attributes of the AFP font you want to use.
4. If you set a default font, but want to use a different font for the text you are creating, select the Select font icon from the Infoprint Designer toolbar in the Settings area:  . The Settings area changes when you add text with a default font selected.

A bar code definition is a template for a bar code. You use these templates to create bar codes in your document. To create a **bar code definition**:

1. Select the bar code tool. If you do not have any bar code definitions, the **Bar code type definition** dialog opens. If you do have a bar code definition, the **Bar code field properties** dialog opens. To create a new bar code definition, select **New**.
2. To create a bar code object, enter a name for the bar code definition and select the type of encoding you want to use. Optionally specify the other options, such as bar code size and color, and font for HRI. Select **OK**.
3. The **Bar code field properties** dialog opens. Select the **String** page and enter the string you want printed as a bar code. Select **OK**.
4. The bar code is shown in the **View/Edit** window.

To create a **bar code** based on an existing bar code definition:

1. Select the bar code tool. The **Bar code field properties** dialog opens. Select the **String** page and enter the string you want printed as a bar code. Select **OK**.
2. The bar code is shown in the **View/Edit** window.

Editing overlay objects

Follow these steps to move, resize, or change the attributes of an overlay object.

1. Make sure the Overlay Editor is in select mode. There are two ways to specify select mode:
   - In the **Action** toolbar, select the **Select mode** icon.
   - From the **Tool** menu, select **Select**.
2. Click on a colored pel in the object (not inside the white space of a closed object such as a box or circle). A thin blue bounding box indicates that the

object is selected. If you click on a point that is shared by more than one object, a menu opens that lists the objects you can select from. Use that menu to select the object.

3. Edit the object in one of these ways:
   - To move the object, select it and drag it to the desired location.
   - To resize the object, select one of the *handles* (squares on the border) of the blue box and drag until the object is the correct size.
   - To edit the attributes of the object, right-click the object. Alternatively, from the **Edit** menu, select **Object properties** to display a dialog containing all of the selected object's properties.
   - To edit the contents of a text object, select it and then position the cursor where you want to change text. To change the font before inserting text, select the font icon in the toolbar to display the **Select Font** dialog.
   - To change the font of existing text, select the text and then select the Select font icon from the **Infoprint Designer** toolbar in the Settings area: 

Working with multiple objects

To select more than one overlay object, in the **View/Edit** window follow one of the below procedures.

With multiple objects selected, if you press **Shift** or **Ctrl** and right-click, a menu opens that lets you edit their common attributes. The menu lists the common attributes that you can edit, such as LINE for the attributes of the line thickness and style.

Select multiple objects individually

1. Press and hold **Shift** or **Ctrl**.
2. Select all the objects you want selected, one at a time.

Select multiple objects simultaneously

Select objects simultaneously by drawing a rectangle enclosing all objects (boxes, texts, paths, and so forth) to be selected, as follows:

1. Move the pointer to the desired position at one corner of the enclosing rectangle.
2. Click and hold the right mouse button.
3. The pointer changes into a double headed arrow cursor.
4. Drag the arrow cursor to the desired position on the opposite corner of the enclosing rectangle.
5. Release the mouse button.
6. All objects within the rectangle are selected.

Using design assistants: groups and repeat

A common requirement when designing forms is to keep several objects grouped, so that you can easily work with all of the objects at once. **To group objects together follow these steps:**

1. Select multiple overlay objects using one of the methods described in "Working with multiple objects." Images, bar codes, and other groups are not allowed in a group.
2. Group the selected objects using one of these methods:

- Select the **Group** icon on the **Action** toolbar.
- From the **Edit** menu, select **Group...**

3. You can then move or edit the group or place a copy of the group elsewhere on the overlay.

A group is treated as an overlay in Infoprint Designer. **To make changes to the group, follow these steps:**

1. Right-click the group in the **View/Edit** window and select **Edit group**.
2. The contents of the **View/Edit** window change to only show the group as if it were a separate overlay. You can now make any changes to the group that you can make to an overlay. You can create new objects, move existing objects, or edit existing objects. The changes you make are applied to all instances of the group you have placed on the overlay.
3. When you are finished editing the group, select the **Group** icon (now labeled Close group) on the **Action** toolbar.

To change a group of objects into separate objects, follow these steps:

1. Select the group in the **View/Edit** window.
2. Select the **Group** icon (now labeled Ungroup) from the **Action** toolbar.

   Important: You cannot undo the ungroup action.

Forms such as invoices often contain table-like presentations of order details. To create a section of an overlay containing multiple connected boxes where the detail information will be placed, use Infoprint Designer's Repeat function. **To use the Repeat function, follow these steps:**

1. Create one object (for example, a box) and set all of its attributes the way you want all of the objects to look.
2. Select the object you just created and specify Repeat in one of these ways:
   - Select the **Repeat** icon from the **Action** toolbar.
   - From the **Edit** menu, select **Repeat...**.
3. The object's **Properties** dialog opens. Select the Repeat page and choose one of these options:

   Repeat automatically
   Duplicates the object either horizontally or vertically the number of times that you specify. When you select **OK** on the properties dialog, the object copies are added to the overlay.

   To change the spacing between copies, select any copy (not the original object) and drag it. Alternatively, select any member of the repeat group and enter a spacing value in the **S** parameter in the Settings area of the Infoprint Designer window. Press **Enter** to apply the changed spacing value.

   Repeat manually
   Lets you place copies of the object anywhere on the overlay. When you select **Place** on the properties dialog, the pointer changes to the object you are repeating. Click anywhere on the overlay to place a copy. To get out of the mode of placing copies, press **Esc** or right-click.

Notes:

1. After you create a repeat group, any attribute changes you make to any object in the group are applied to all members of the group.

2. To delete the copies of the original object, right-click any of the member objects and select the **Repeat** page of the properties dialog. Select **No repeats exist**. The copies are removed from the overlay; the original object remains.
3. There is no function to ungroup the repeated objects without deleting them.

Adding an image to an overlay

If the image you want to include in your overlay is in TIFF or AFP page segment format, follow these steps:

1. From the **File** menu, select **Get image...**. The **Get image** dialog opens.
2. On the **Get image** dialog, select the image you want to add and select **Open**.
3. If the image you select is in TIFF format, Infoprint Designer converts the TIFF image to an AFP page segment. A dialog opens that requires you to name the page segment file and specify where to store it.
4. After naming the page segment file, a dialog opens that requires you to specify the image type to use.
5. The page segment is displayed in the top left corner of the overlay. Select the page segment and drag it to the position where you want it.

The page segment file is the one that is uploaded to the iSeries when you upload the whole project to the iSeries.

Note: If you have images in JPEG, GIF, or BMP formats, you can use the Infoprint Image Editor to convert them to AFP page segments. For more information, see Chapter 7, “Using the Image Editor,” on page 59.

If the image you select in step 2 is in a directory that is not defined in your library profile as a path for page segments, a warning message is displayed. Do one of these:

- Copy the page segment to a directory named in the library profile for page segments. This is the default option.
- Add the path to the library profile. The list of directories defined in the library profile for each resource type is limited to 1024 characters. Therefore, you might not be able to do this, depending on the length of the page segment entry in the library profile.

If you open an overlay that includes a page segment, but the page segment is not found in any of the directories in the library profile, an error message displays. The missing page segment is shown in the **View/Edit** window as a red dashed-line box with the words **Not found** in it. To display the page segment on the overlay, do one of these:

- Copy the page segment to a directory named in the library profile for page segments. This is the default option.
- Add the path to the library profile. The list of directories defined in the library profile for each resource type is limited to 1024 characters. Therefore, you might not be able to do this, depending on the length of the page segment entry in the library profile.

Select the red box, then select **Refresh** to display the page segment. For information about library profiles, see “Understanding libraries and library profiles” on page 3.

Tips and hints for the Overlay Editor

This section contains useful tips and hints when using the **Overlay Editor**. You will also find the information in “Infoprint Designer shortcut keys” on page 16 useful.

Use the grid

You can create very accurate overlays with the assistance of the grid feature. Open the **Edit** menu and select **Preferences...**. Select the **Units and Grid** page to specify the grid dimensions and characteristics.

To display the grid, from the **View** menu, select **Grid**. To enable *grid snapping*, from the **View** menu, select **Snap to Grid**. When grid snapping is on, your overlay or page elements are automatically aligned to the grid. For example, if you draw a box beginning at 0.48 inches across the page and grid snapping is on with a grid at 0.5 inch increments, the box is left-aligned at 0.5 inches. We recommend that you keep grid snapping on and only switch it off occasionally for fine adjustment of individual objects.

Use the right mouse button

Use the right mouse button frequently. For example, if you right-click in the **View/Edit** window with no objects selected, you can do these:

- zoom in or out
- fit your view to the page width or height
- refresh the data

If you have an object selected and right-click, you open the properties dialog for that object type. This lets you edit the object’s attributes. In the **Overlay Editor**, drawing a rectangle with the right mouse button selects all of the objects inside the rectangle.

Use the Ctrl key

The **Ctrl** key can often be used in combination with the mouse or arrow keys to perform additional functions that are not otherwise available. In the **Overlay Editor**, try these combinations:

- With an object selected, press **Ctrl** in combination with one of the arrow keys to move the object one unit in the direction of the arrow key.
- With an object selected, press **Ctrl** and hold the left mouse button down to copy the object. Blue lines appear that show you where the copy will be placed.

Use the Esc key

If you have trouble deselecting an object in the **View/Edit** window or exiting a text or drawing mode, select the **View/Edit** window and press **Esc**. You might need to press **Esc** more than once to achieve the desired result.

Proof-printing your overlay

You can proof print your overlay on any parallel- or network-attached printer that has been defined on your computer. The printer does not have to support AFP printing. Infoprint Designer uses the printer driver you already installed to create a PCL or PostScript version of the overlay. To send a proof print job, from the **File** menu, select **Print** and then select your printer. In some cases, the printable position of the PCL or PostScript printer might cause errors in printing. If needed, open the **Defaults** menu and select **Print position** to adjust the print margins, so that the overlay prints without errors.

The proof print function for PC printers prints the complete contents of the **View/Edit** window. If multiple overlays or an overlay plus layout data are shown in the **View/Edit** window, they are printed as part of the proof print. To prevent this, from the **Window** menu, deselect **Merge windows**. When **Merge windows** is disabled, only the active overlay or layout is printed.

Saving your work

When you want to save your overlay, select **Save project** from the **File** menu. By default, the overlay has the same name (but a different extension) as the name of the project file. You can enter a new name for either the project file or the overlay file.

Notes:

1. Infoprint Designer automatically saves your work every 2 minutes by default. To change the automatic save interval or to disable the automatic save function, from the **Edit** menu, select **Preferences**. Select the **General** page and change any values you want.
2. The overlay source files that you create with Infoprint Designer cannot be used with other programs.

Creating a project based on a similar project

If you want to use an overlay from one project as a basis for an overlay in a new project, follow these steps:

1. Open the project you want to use as a starting point for the new project.
2. From the **File** menu, select **Save project as**.
3. In the **Project name** field, specify the new project name.
4. In the **Overlay file(s)** list, select the overlay you want to modify for the new project and select **Save as**.
5. On the **Select overlay file** dialog, specify the name of the new overlay and select **Save**.
6. Select **OK** on the **Save project as** dialog.

Uploading your overlay to the iSeries

When you are ready to try out your overlay on your iSeries, follow these steps:

1. (Optional) Add a comment that displays in the Text field of the iSeries's Work with objects screen. This helps you identify the overlay. To add a comment, follow these steps:
   a. From the **File** menu, select **Overlay setup**.
   b. Select the **Name** page and enter the comment in the **Comment** area.
2. From the **File** menu, select **Upload to iSeries...**. The **Upload** dialog opens.
3. On the **iSeries** page, change the destination library if you do not want to use the default library. The default library is set on the **Preferences** dialog, which you access from the **Edit** menu when you select **Preferences...**.

Note: Each time you upload an overlay to the iSeries, it replaces any file with the same name in the destination library.

Printing your overlay on the iSeries

Normally, overlays that you design with the Infoprint Designer are printed with application data that you format with the Layout Editor. However, if you want to print the overlay you uploaded to the iSeries without going through the layout process, there are several options. Those options include:

- Add the overlay to the existing printer file using either Override printer file (OVRPRTF) or Change printer file (CHGPRTF) iSeries commands as follows:

  *xxx***PRTF** FILE(*printer_file_name*) FRONTOVL(*library*/*front_overlay_name offset_down offset_across*) BACKOVL(*library*/*back_overlay_name offset_down offset_across type_of_overlay*) DEVTYPE(*AFPDS)

  Note: The **OVRPRTF** command temporarily changes the printer file (only for one job); and the **CHGPRTF** command permanently changes the printer file for all future jobs.
- If you have AFP Utilities (AFPU) for iSeries (5722-AF1) installed, the “Work with Overlays” function lets you print an overlay proof.

  Note: Because the AFPU print function uses the form definition named in the printer’s device description, the overlay might be shifted on the printed page.
- Use the DDS OVERLAY keyword to place an overlay on the page.
- Print application products such as APU, Page Printer Formatting Aid (PPFA), AFP Toolbox, and many others let you select and print overlays within a print job.

Using multiple overlays in a project

You might want to use more than one overlay for a project. For example, you might have one overlay that contains the company logo and is always at the top of your company’s forms. But different overlays are used in the “body” of the different forms depending on the form’s content. You can define the overlay with the logo once and then include it in several projects and then define unique overlays in separate projects.

To add an overlay to an existing project, select the **New overlay** icon from the **Mode** toolbar. Infoprint Designer displays the **Open** dialog. You can select an existing overlay or name a new one to create. When you select **OK** on the **Open** dialog, the overlay you select becomes the active overlay in Infoprint Designer and is automatically added to the project. To return to another overlay in the project, select its name from the **Mode** toolbar.

Chapter 5. Using the Layout Editor

The Layout Editor is the tool within Infoprint Designer that you use to map application data from an iSeries spooled file to the printed page. Infoprint Designer can work with either unformatted or formatted data. Unformatted data is sometimes known as a “flat file” or SCS data. Formatted data might have some or all of the data placement already determined, for example a customer name and address at top left, an invoice total at bottom right. In either case, you can use Infoprint Designer to create a layout project that lets you redesign the page layout without changing the original application.

To begin working with the Layout Editor, do one of these:

- On the **Mode** toolbar in the **View/Edit** window, select **Layout**.
- From the **Window** menu, select **Layout**.

To begin mapping data without an overlay in the background, follow these steps:

1. From the **File** menu select **New project...**.
2. In the **New project** dialog, select **Layout Definition**.

When you start the Layout Editor, you select your sample data. For information about selecting sample data, see “Selecting sample data from the iSeries” or “Selecting sample data from the PC” on page 31.

Selecting sample data from the iSeries

Follow these steps to select sample data from the iSeries:

1. Specify that the spooled file stays on the output queue after printing. Using the iSeries command interface, you can accomplish this in two ways:
   - Before the application has run, enter: `OVRPRTF FILE(`*`filename`*`) SAVE(*YES)`.
   - After the application has run and the spooled file is on the output queue:
     a. Use either `WRKSPLF` or `WRKOUTQ` to display a list of spooled files.
     b. Specify Option 2, Change by the spooled file to display the Change Spooled File Attributes screen.
     c. Change the Save parameter to `*YES` and press Enter.
2. When you select **iSeries** as the source of your data file, Infoprint Designer displays the **Select an output queue** dialog, as shown in Figure 4 on page 30.

Figure 4. Select an output queue dialog

3. Enter the name of the output queue containing your sample data spooled file or select it from the list. Select **OK**.
4. The **Select spooled file** dialog displays, as shown in Figure 5 on page 31. This dialog lists all of the SCS and line data spooled files on the output queue that are available for use with Infoprint Designer. Select the one you want to use to create this layout.

   Optionally, you can specify the number of pages of a spooled file to download to the PC. IBM does not guarantee that you will receive exactly the number of pages you specify, but at least that number of pages are retrieved (and possibly up to ten pages more). If you choose to download less than the complete file, select enough pages to ensure that you have at least one page of data for each type of page layout you want to create for this application.

   For example, if you are creating the layout for an invoice application where most customers have only one page of output, but others have two or more pages and you want all pages after the first to be formatted differently than the one-page statements, make sure the data you download includes at least one example of a multiple-page statement.

   Note: Only spooled files created with a Printer device type of *SCS or *LINE are eligible to be brought into Infoprint Designer for mapping. The Printer device type attribute is set in the printer file.

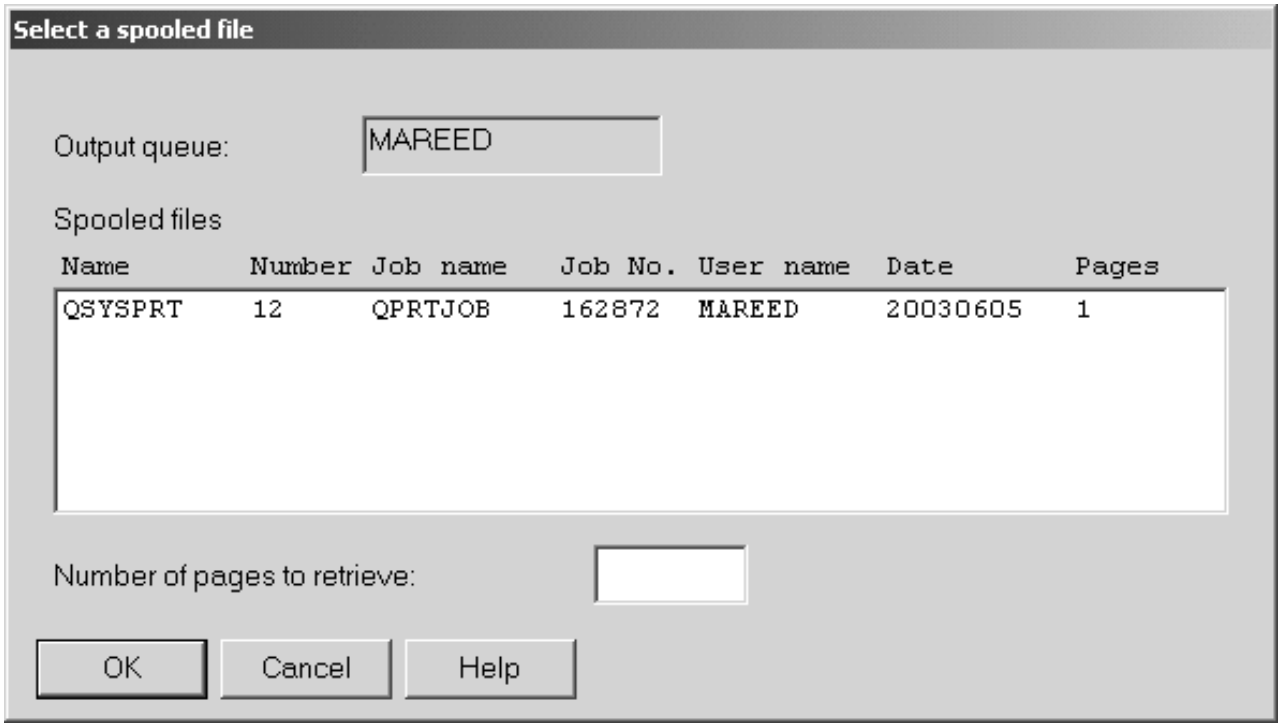

Figure 5. Selection of a spooled file containing sample data

5. Name the file on the PC where the downloaded spooled file should be stored. This file name is stored in the project file so that whenever you work with this layout project, the iSeries data is read from the PC instead of downloading it again.
6. When you supply a name for the PC data file, the download begins. Continue to "Setting layout properties" on page 33.

Selecting sample data from the PC

If you select the PC as the source of your sample data file, follow these steps:

1. Infoprint Designer displays the **Get sample data** dialog. Browse to the file you want to use or specify its name and select **Open**.
2. The **Line data options** dialog opens, as shown in Figure 6 on page 33. Make any changes as necessary and select **OK**.

   A PC data file that did not originate on an iSeries does not contain information about how many records form a page, nor what code page it was created with. However, Infoprint Designer retains the spooled file attributes when it downloads a file (they are stored in a file with the same name as the PC file and an extension of .INF). Thus, if you selected a PC file that was previously downloaded from your iSeries, the default values on the **Line data options** dialog are taken from the spooled file attributes of the iSeries file. In this situation, you should leave all or most values as they are. You might want to change some of the values, as described below.

   Code page

   The code page should match the code page Windows is using on your PC. Typically this is 437 (MS-DOS Latin 1 US) or 850 (MS-DOS Latin 1 Multilingual). If you are not sure which code page your PC is using, enter `chcp` at a DOS prompt to display the active code page. When

referring to Windows documentation, the terms *code page* and *character set* mean the same thing. This is not true with the IBM AFP architecture.

Record format

Select variable record format with spooled files downloaded from the iSeries, even though the iSeries is a fixed record format system. Also select variable record format with spooled files from IBM mainframe systems such as zOS. If you are extracting data from a spreadsheet file, you might select fixed record format with a delimiter such as tabs or commas.

Channel type

In this context, *channel type* refers to line spacing and page skip controls that might or might not be in the data file. A more usual term is carriage control or First Character Forms Control (FCFC).

ANSI A line space occurs before printing the line. Common ANSI FCFC characters include a space (write, then perform one line space), + (no space), 0 (two spaces), - (three spaces) and a 1 (write after skipping to a new page). The latter is also known as a “Channel 1”. ANSI line spacing control is the most common channel type on the iSeries platform. If your spooled file originated on the iSeries, this is the most likely choice for your data file.

Machine

The data is printed, then any line or page skip controls are performed after the data line.

No channel

No spacing or skip controls are present in the file. If this is the case, you have a true “flat file” of data and you must specify the page length carefully to ensure correct page breaks in the layout.

Page length and width

If you are opening a PC file that was not downloaded from your iSeries, use page length to specify how many records of data should appear in each page of printed output. For page width, enter the length of the longest record in the file.

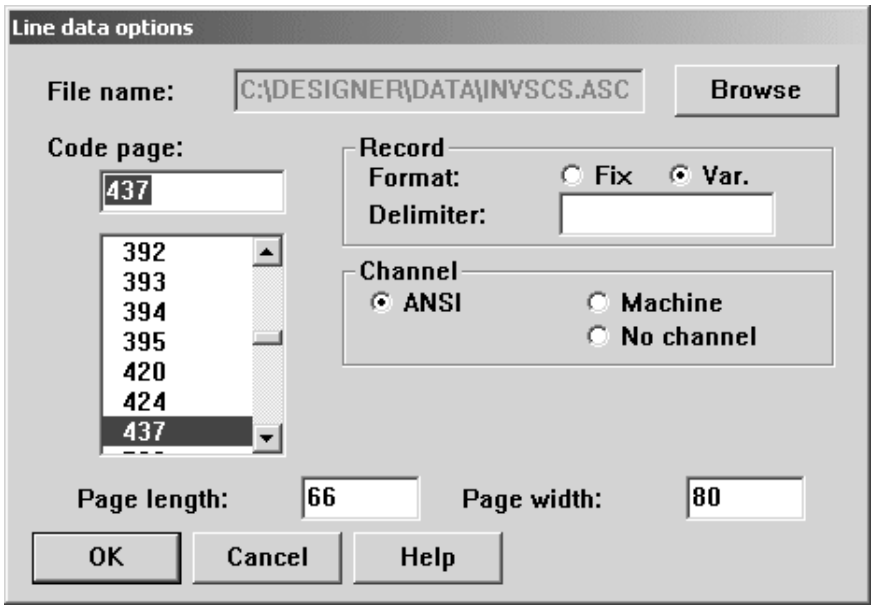

Figure 6. Line data options dialog

Setting layout properties

After you have selected the sample data to use for your project, the **Layout properties** dialog is displayed, as shown in Figure 7 on page 34.

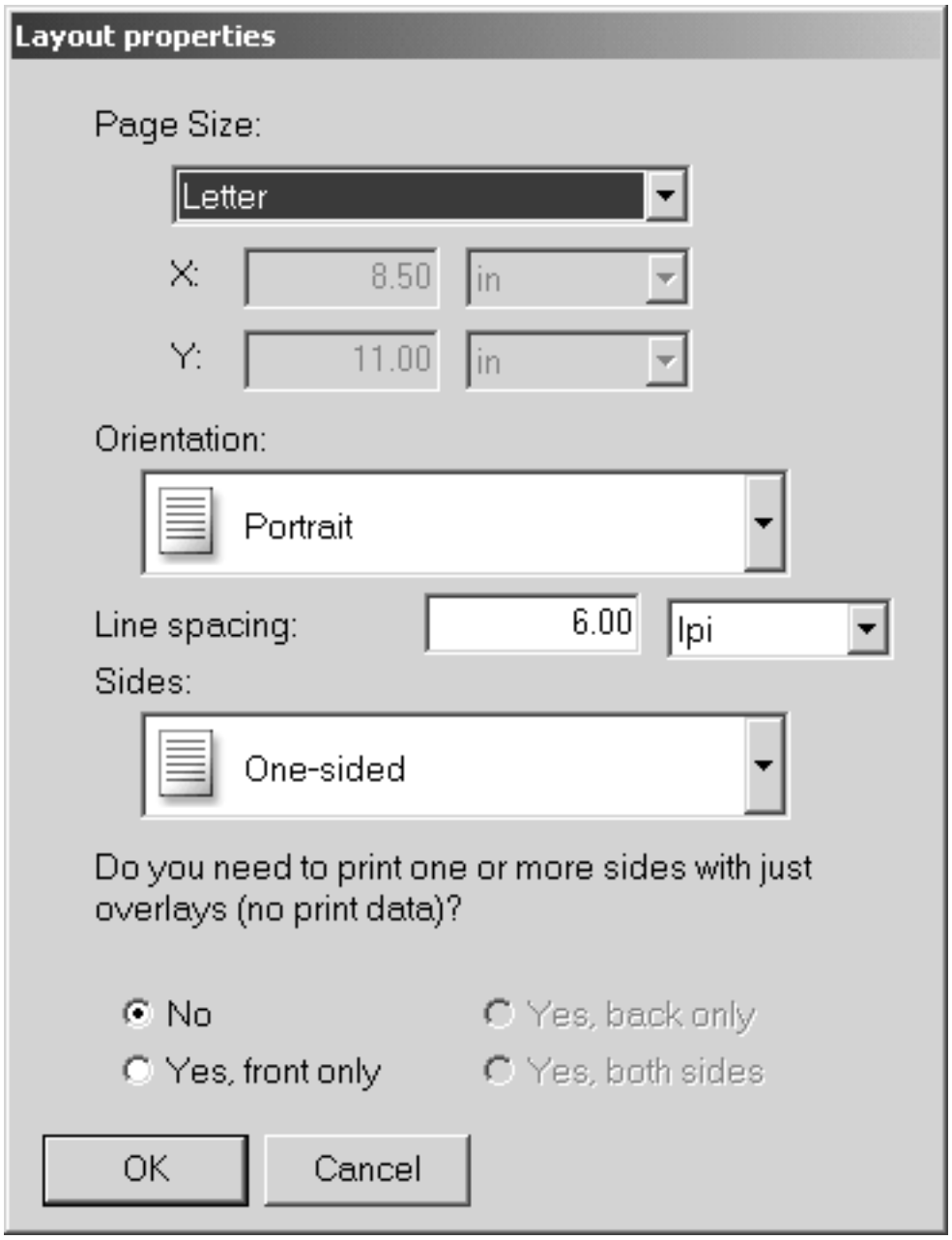

Figure 7. Layout properties dialog

On this dialog, you specify the basic properties of the layout, such as the size of the paper you will print the project on, the orientation (landscape or portrait), how many sides to print on (simplex or duplex), and whether this project requires the “constant back” function of AFP. This function is for when you want to print an overlay but no data on the back side of a duplex page. For example, this function could be used when you have a terms and conditions overlay that does not get merged with data from the spooled file at print time. Click OK.

Infoprint Designer uses your input on this dialog to set up the layout properties for the first page of data.

After you get your sample data, you might want to specify the default font to use for mapping data. To do this, from the **Defaults** menu, select **Fonts**.

If your application also requires non-default settings for properties, such as what bin to feed the paper from or the offset of the first line of data from the edge of the page, you can change these settings. To specify non-default settings, from the **Edit** menu, select **Page properties** and **Print properties** as appropriate.

Layout Editor windows

After you have specified the basic layout properties, the **Data** window becomes the active window. If you already have an overlay open, it moves to the background in the **View/Edit** window. If the **Data** window does not open automatically, from the **Window** menu select **Data**.

To display the **Data** and **View/Edit** windows side by side, from the **Window** menu, select **Tile**.

The **View/Edit** window shows a different action toolbar when Infoprint Designer is in Layout Editor mode. The title of the **View/Edit** window also changes to show the name of the layout file you are working on, as well as the names of the AFP objects inside the layout file. These changes are circled in Figure 8.

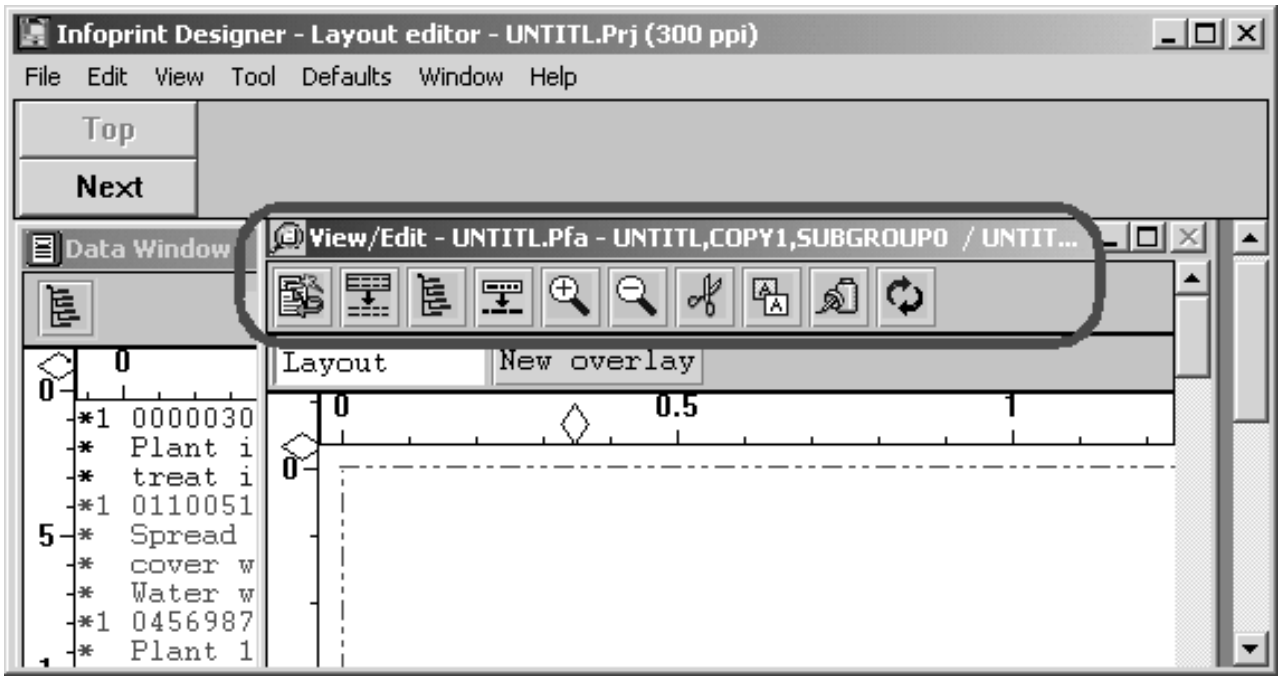

Figure 8. Changes to the View/Edit window

The toolbar shown in the Infoprint Designer window is also slightly different in Layout mode. It contains a navigation section with **Top** and **Next** buttons that control which data page is shown in the **View/Edit** window using the mappings defined in the layout. These changes are circled in Figure 9 on page 36.

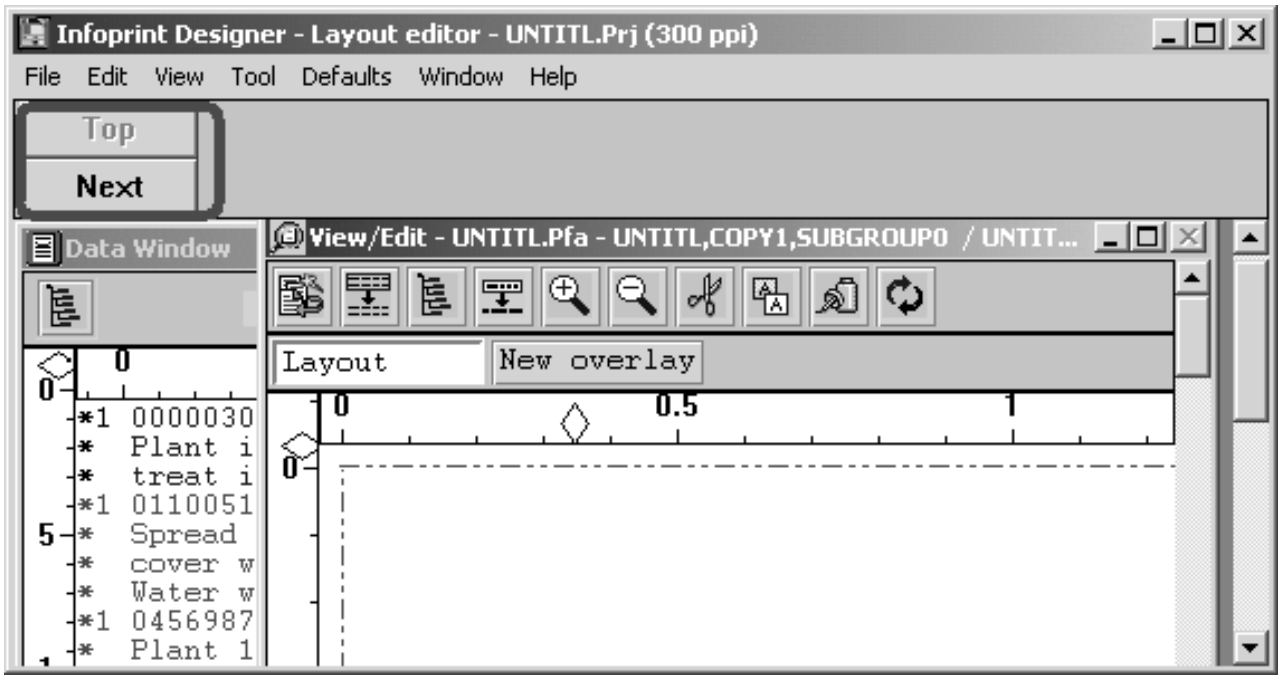

Figure 9. Changes to the Infoprint Designer window

The **Data** window contains its own toolbar that includes a button that lets you to customize the appearance of the data window. This button is circled in Figure 10 on page 37. If you select this function then under **Grid**, select **Rows**, Infoprint Designer adds lines to separate the records in the Data window.

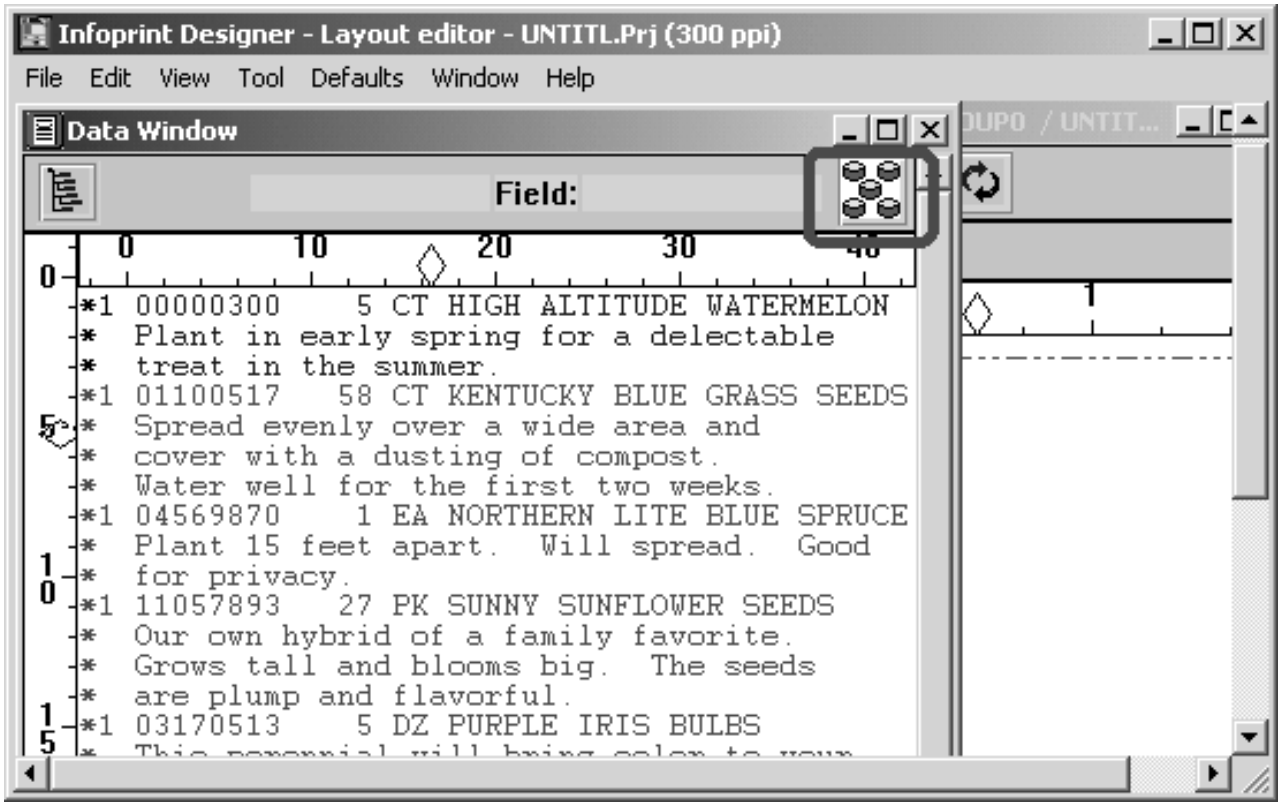

Figure 10. Options button on the Data window

After sample data file opens, the records in the Data window are either blue or red. The set of records shown in blue represent the first page of data; the first record shown in red represents the first record on the second output page. If this page break does not look right to you, you might have to change the page length for this data file. For instructions, see “Page breaks” on page 40. If the page break is looks correct, continue to “Mapping data to the layout.”

Mapping data to the layout

Follow these steps to map data to the layout:

1. In the **Data window**, select the field you want to map. If you want to map the entire record of data, select the entire record, treating it as if it were a field. To select a field, left-click at the beginning of the field or record (uppermost left edge of data to map), and drag the mouse across the data to map. Release the mouse button when all of your data is highlighted.

   It is a good idea to have the documentation for the application you are working on available. The data you see on the sample page you are looking at might not represent the full length of the fields. For example, in the Invoice example in the `basic.prj` sample supplied with Infoprint Designer, the original programmer’s DDS code (not included) showed that the field **NAME** starts at column 12 and is 25 characters long. You can verify that you have the correct start position and length of the field you are defining by watching the information displayed at the top of the **Data Window** as you select the field. If you do not have access to this information, test your new print application with as wide a variety of sample data as possible.
2. Right-click the selected field and drag it to the **View/Edit** window. Release the mouse button when it is positioned where you want the data to be.

3. To edit the mapping, select it with the left mouse button in the **View/Edit** window.
   - To move the mapping, drag it elsewhere.
   - To edit its attributes, from the **Edit** menu, select **Object properties**. Alternatively, you can right-click the mapping in the **View/Edit** window to display the **Field properties** dialog. From the **General** page, you can verify the position from the original input record and field length against your application documentation. Select any of the other pages to change the attributes of the field, such as font or orientation.

   In Figure 11, the **Data** window's toolbar shows that we have selected Record 12, Field 12 to 36.

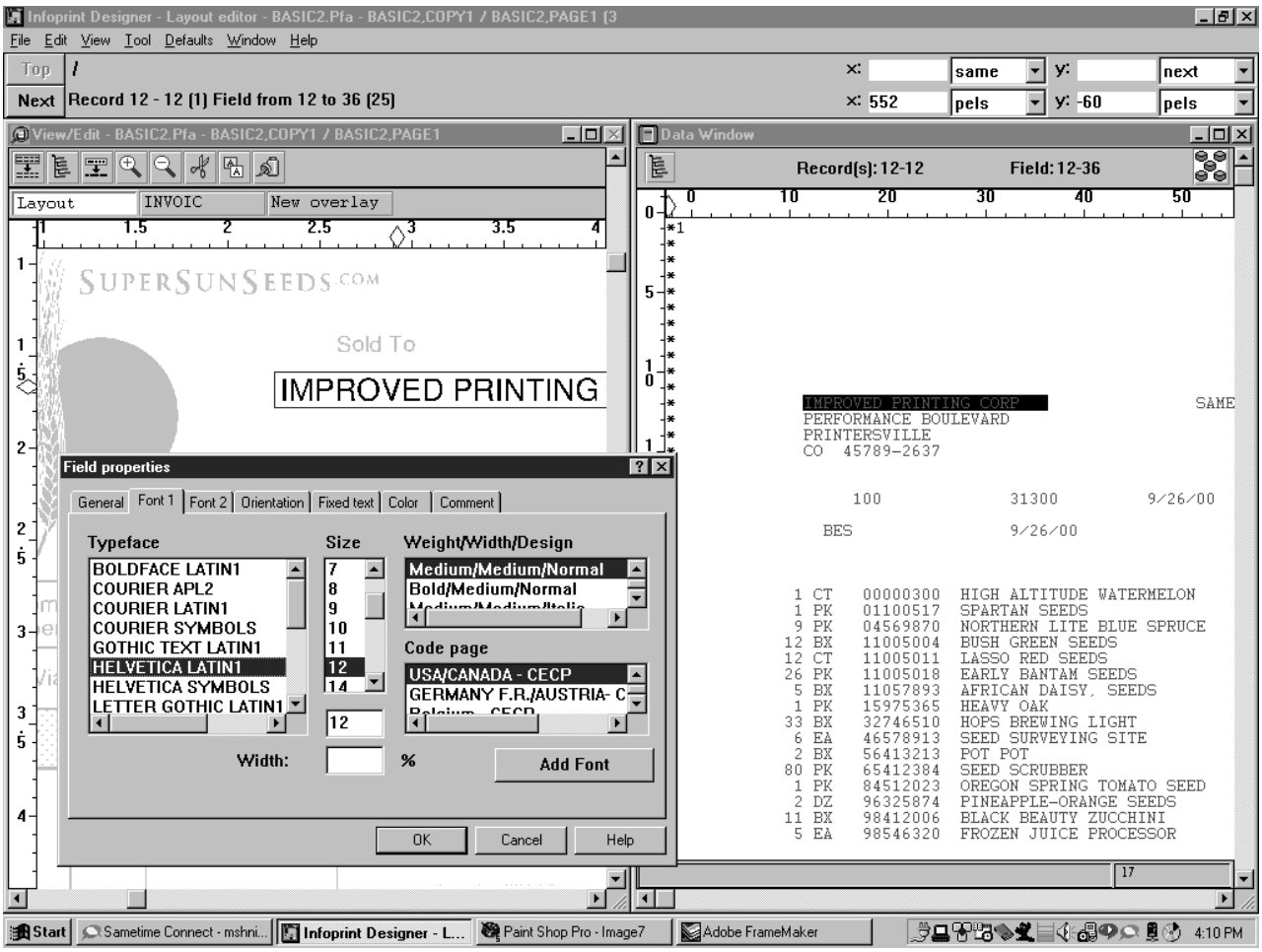

Figure 11. Mapping and modifying a field

4. Continue mapping data on the first page until all of the fields you want to see printed are displayed in the **View/Edit** window the way you want them to appear in your final output. Data in the spooled file that you do not map is not printed when you run the application on the iSeries.

   You might find it easier to do the mapping on a gross level first, just dragging and dropping the required fields over to their approximate destination in the **View/Edit** window. Then minimize the **Data Window** and enlarge the **View/Edit** window to fine tune the positions and make other changes to the field properties.

Mapping a column of fields

If a column of fields has similar attributes, you can define the field on multiple adjacent records and map them in one step. To do this, use the left mouse button to select across the first record in the group and then drag down until you have selected the appropriate number of records.

Important: When you are selecting the number of records to include in the group, be sure to consider what other pages of data in the spooled file might contain. Select the largest possible number of records that might occur in this group on any page in the file so that all pages are formatted correctly. You can adjust this value (the Repeat count) later, but it is easier to initially select the correct number of records.

Figure 12 shows the results of selecting and mapping a column of data across 25 records. The fields remain logically grouped so that any change you make to one field (such as a move, change of font, or change of orientation) is applied to all fields in the group.

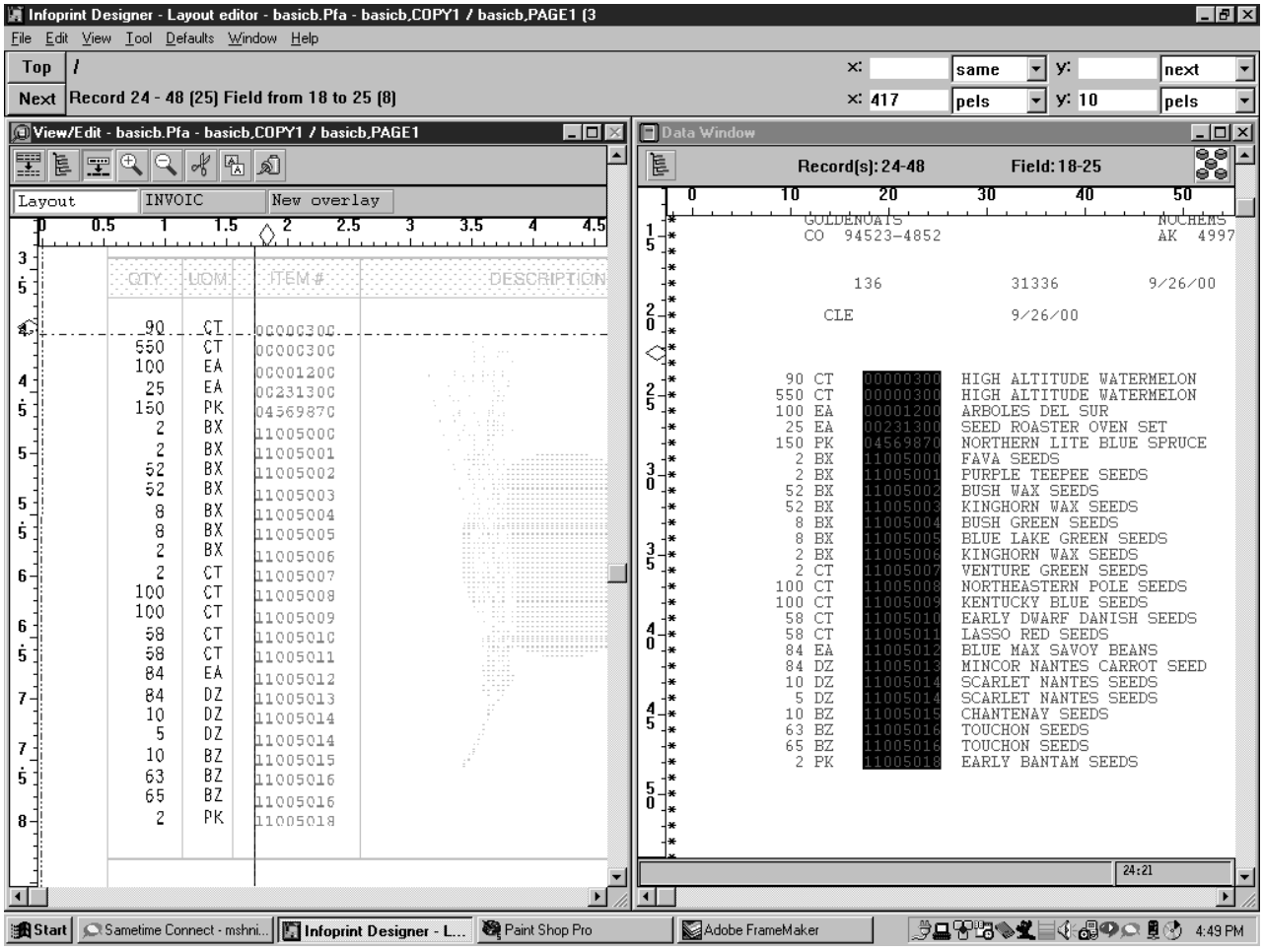

Figure 12. Mapping a column of fields

If you want to make changes to a group of fields, click the first element of the group, and then either drag it to a new position or right-click it to change other properties. To change the interline spacing of a group of fields, click any field in the group, other than the first, and drag it up or down until the column is spaced to your liking.

The settings area of the Infoprint Designer window shows slightly different information, depending on which field you select. If you select the first field in a group, you will see its absolute position on the page. If you select other fields in the group, you will see the position of the field relative to the first field as well as the interline spacing (**s**).

Tip: If you have multiple columns of data of the same set of records, you can adjust the line spacing of all the columns at one time. Click one of the fields in one of the columns and hold **Ctrl** while you adjust the line spacing. All the other columns that come from the same data records are adjusted accordingly. You have to manually ensure that the fields for the first record in the group are aligned.

You can use the **Group printline** (labeled Ungroup printline when a group is selected) icon on the **Action** toolbar to ungroup a set of fields. However, after you have ungrouped the fields, you cannot easily regroup them.

Page breaks

As you map data, you should stay within the records shown in blue in the **Data window**. The blue records have been defined to belong to a single page; if you map data from the red records following the blue records, you are changing the page break for all subsequent pages.

If the number of records shown in blue when you first retrieve the spooled file is fewer than you expect, map as many red records as you need to correct the page breaks. Alternatively, you can follow the below procedure. If the number of records initially shown in blue is more than you want to use, follow these steps:

1. From the **Edit** menu, select **Layout...**. The **Edit layout** dialog opens.
2. On the **Edit layout** dialog, select **Options**. The **Line data options** dialog opens.
3. On the **Line data options** dialog, adjust the **Page length** value to match the number of records you expect to map on every page of this layout.

To apply the mappings you have created to the second page of data in the spooled file, select **Next** from the toolbar or select **Data pages** in the **View** menu. The **View/Edit** window refreshes with the data from page 2 shown using the mappings you defined for page 1. You should page through enough of the data file using **Next** to verify that you mapped all of the data you need.

As you are mapping data and including overlays using the WYSIWYG functions of the Layout Editor, the program builds the AFP resources called *form definitions* and *page definitions*. These resources contain formatting instructions to map the input data to the printed page. You will need to specify the names of these resources when you print your application on the iSeries. For more information about form definitions and page definitions see Chapter 8, “Understanding page definitions and form definitions,” on page 63.

Producing some common layout formats with the Layout wizard

After you have mapped your first page of data, use the **Next** button on the Layout Editor toolbar to see how other pages will appear when formatted by your current layout. You might find that you need to format some pages in the spooled file differently. You might need to make minor adjustments, such as increasing the repeat count on a group of mappings because you see that one customer has 18, not 17, item records in their invoice, or you might need a different layout for some

pages in the spooled file. For example, if the application writes a PAST DUE record for customers who have not made prior payments, you might want to print that field in a large bold font to call their attention to it. Alternatively, you might want to produce a second copy of each invoice to use as a pick list in your warehouse, but you want to suppress the prices from that copy.

The Layout Editor provides a wizard that steps you through modifying your project to handle these types of common layouts:

- Print an identical copy of the page.
- Print a modified copy of the page with a different overlay or using paper from another printer bin. See “Changing overlays and suppressing data from a second copy” on page 43 for an example.
- Print a modified copy of the page with some data suppressed that prints on the first copy. See “Changing overlays and suppressing data from a second copy” on page 43 for an example.
- Use a different overlay on the back side of a duplexed sheet.
- Format the data differently based on a trigger in the data file.

This section describes how to use the Layout wizard and includes examples of two of these common layouts.

To use the Layout wizard, follow these steps:

1. Use the **Top** and **Next** buttons on the Layout Editor toolbar to display the page that occurs immediately before the page for which you want to define a new layout.

   For example, if you notice that some of the invoices in the file contain two or more pages for a single customer and you want pages 2 and above to look different than page 1, use the **Top** and **Next** buttons to scroll to the first case where a multi-page invoice exists in the sample data file and stop at page 1 of the multi-page invoice.
2. In the **View/Edit** window, zoom to a level where you can easily select fields of data that you have mapped.
3. Select the wizard tool from the **View/Edit** window action toolbar. The first page of the Layout wizard appears.

   Its contents are different depending on whether you have specified duplex in your layout. The simplex version contains a few more options, since you can’t make changes such as which bin to select paper from when you are changing sides of a duplex sheet, but you can if you are printing simplex output. Here is the simplex version of the first Layout wizard page:

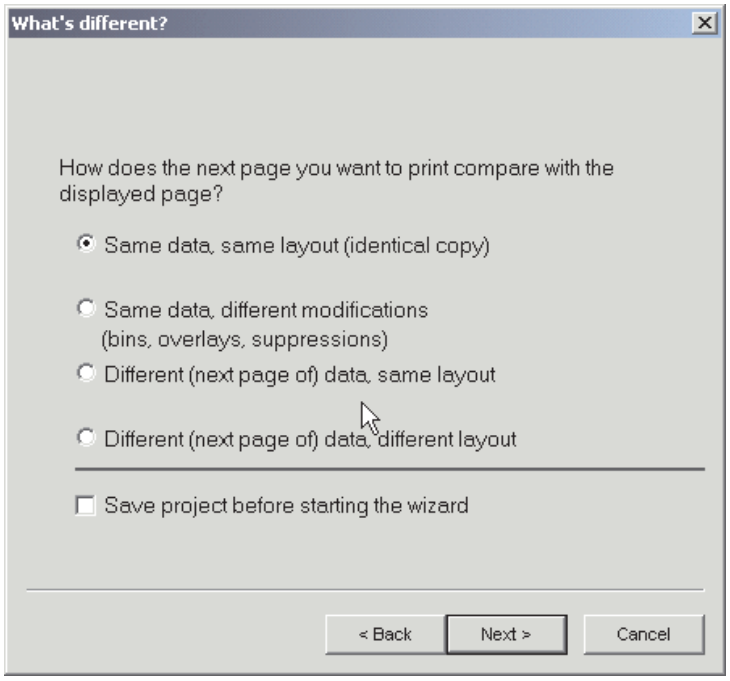

Figure 13. First page of Layout wizard for simplex project

If your project specifies duplex and the page displayed in the **View/Edit** window is the front side, this is the first page of the Layout wizard:

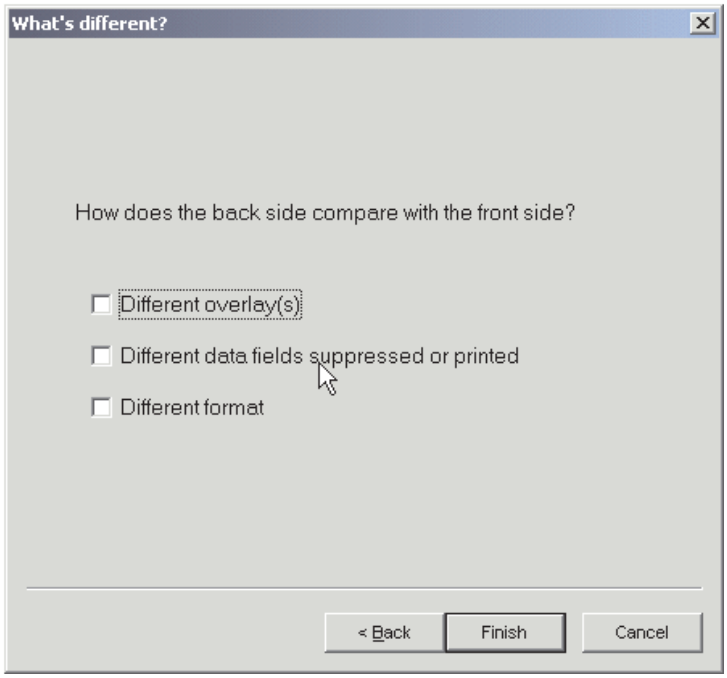

Figure 14. First page of Layout wizard for duplex project, page displayed is front

If your project specifies duplex and the page displayed in the **View/Edit** window is the back side, this is the first page of the Layout wizard:

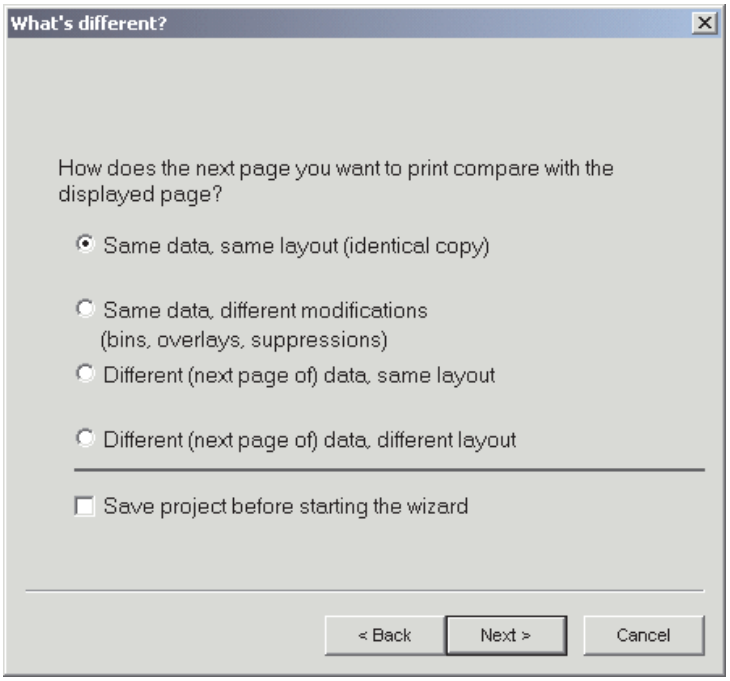

Figure 15. First page of Layout wizard for duplex project, page displayed is back

Notice that you get different choices in all three cases because the wizard only shows you what is possible to change in your layout based on what kind of page you are going to format: a simplex page, the back of a duplex page, or the front of a duplex page.

Changing overlays and suppressing data from a second copy

Let's take as an example the scenario where you are printing a simplex invoice and you want to print a second copy of each sheet, but want to suppress the prices on the second copy. This application currently prints on impact printers using multipart forms, but you want to re-engineer it to use plain paper on laser printers. Since the overlay you used for the first copy includes columns for the prices, you will use a different overlay on the second copy that does not show those columns. You can use the sample project supplied with Infoprint Designer as C:\Designer\PROJECT\basic.prj to follow this example.

Before starting this example, follow these steps:

1. Make a copy of the sample project C:\Designer\PROJECT\basic.prj and save it with a different name. We will use the name copies.prj.
2. Copy the file C:\Designer\PPFA\basic.pfa and rename it copies.pfa.
3. From the **File** menu, select **Open project** to open the copy (copies).
4. From the **Edit** menu, select **Layout** to change the name of the layout file. In the **Layout file** field, specify the same name you gave the copy of the project. For our example, we will name it copies.pfa.
5. From the **File** menu, select **Save project**.

To make a copy of the invoices that prints with a different overlay, follow these steps:

1. Assuming you have mapped the first copy the way you want it, when you start the Layout wizard, the dialog shown in Figure 13 on page 42 opens.
2. Select **Same data, different modifications (bins, overlays, suppressions)** because you want to suppress some data on the next page, as well as change the overlay. The **Start Another Copy** dialog displays, as shown below:

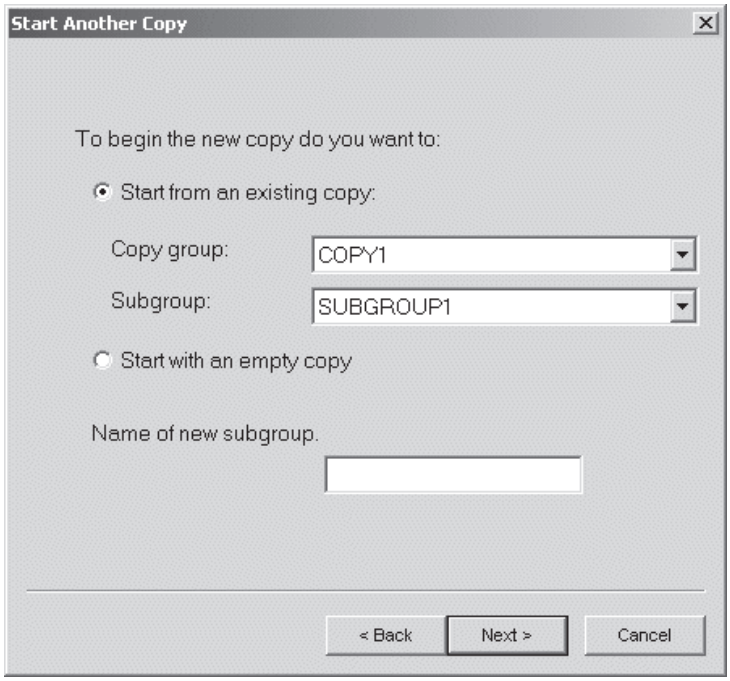

Figure 16. Start Another Copy dialog

3. The copy group is the part of the layout that defines the overlays and suppressions. There is one subgroup for each copy of the page of data that you print, so you need to create a second subgroup. For more information about copy groups and subgroups, see Chapter 8, “Understanding page definitions and form definitions,” on page 63.

   Because the number of changes you want to make is small, select **Start from an existing copy**. The copy group you already defined for the first copy is filled in by default. In the **Name of new subgroup** field, name the new subgroup to be used for copy 2. We will enter NOPRICE. Select **Next**.
4. The **Modified Copies** dialog appears:

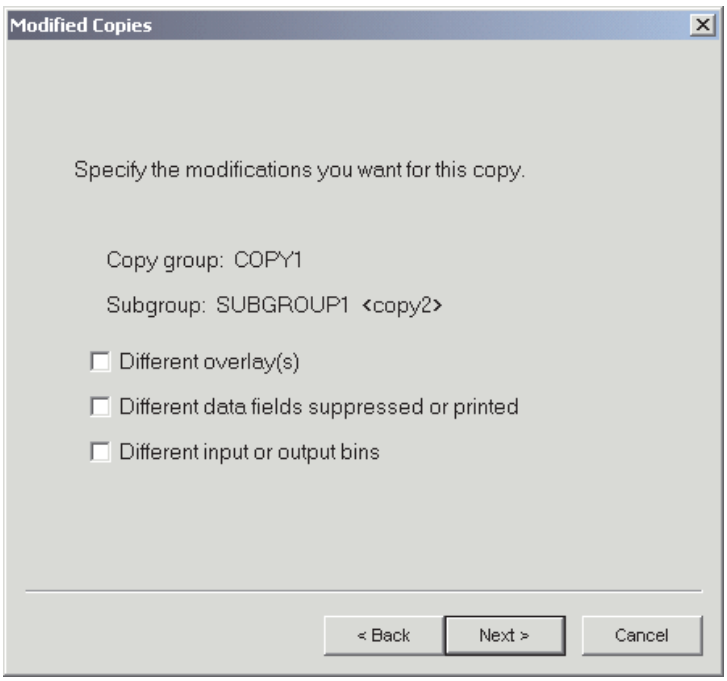

Figure 17. Modified Copies dialog

Select **Different overlay(s)** and **Different data fields suppressed or printed** and select **Next**.

5. The **Overlays** dialog opens:

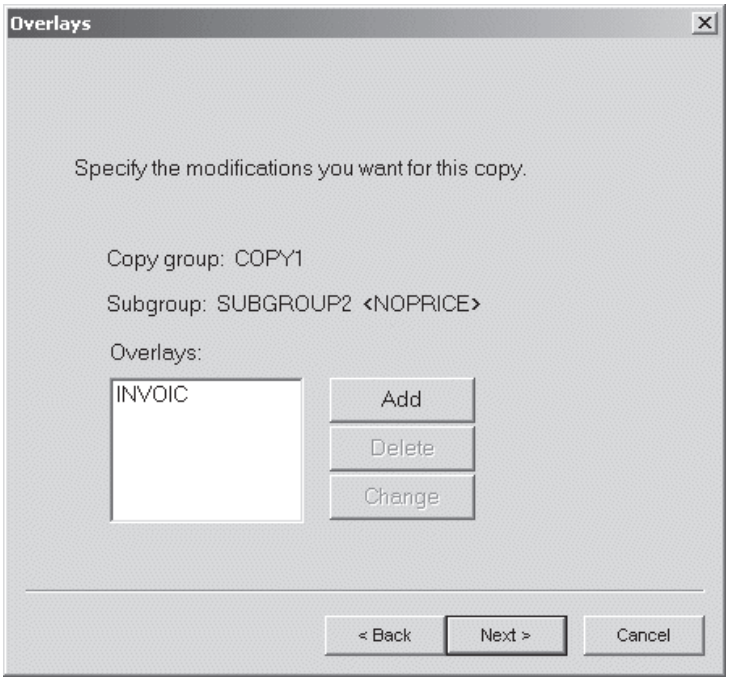

Figure 18. Overlays dialog

To replace the overlay you had on the first copy (INVOIC) with the overlay for the second copy (PACK), select INVOIC in the list and select **Change**. Browse to PACK.OGL and select **open**. PACK is now shown as the overlay for the

second copy. Select **Next**.

6. The Suppressions dialog opens:

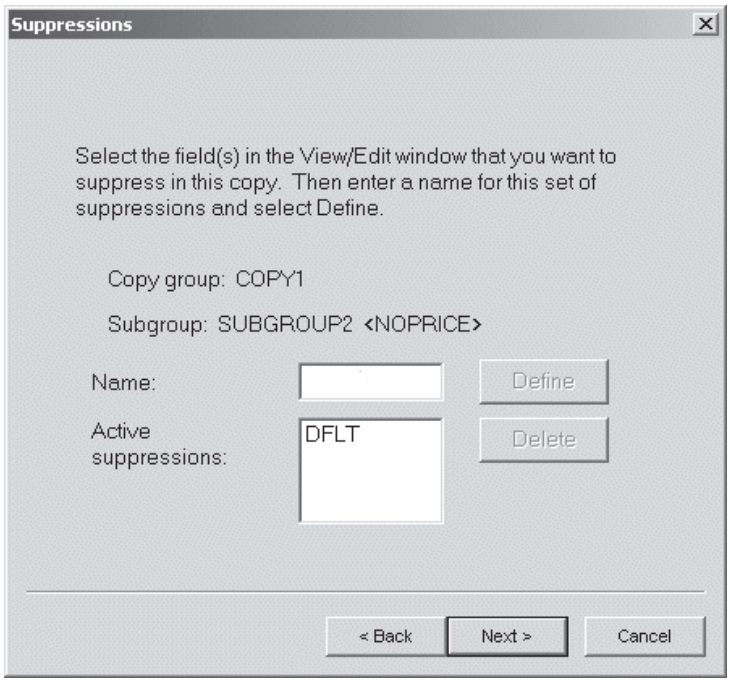

Figure 19. Suppressions dialog

Use your mouse in the **View/Edit** window to select any mapped fields that you do not want to appear on the second copy. Use the Shift or Control key with the left mouse button for multiple selection.

For this example, select the first field that is mapped in the Price column of the overlay and the first field mapped in the Extension column. When both of the fields you want to suppress are selected, select the **Name** field on the **Suppressions** dialog and enter the name for this suppression group (for example, PRICE). This is shown in Figure 20 on page 47.

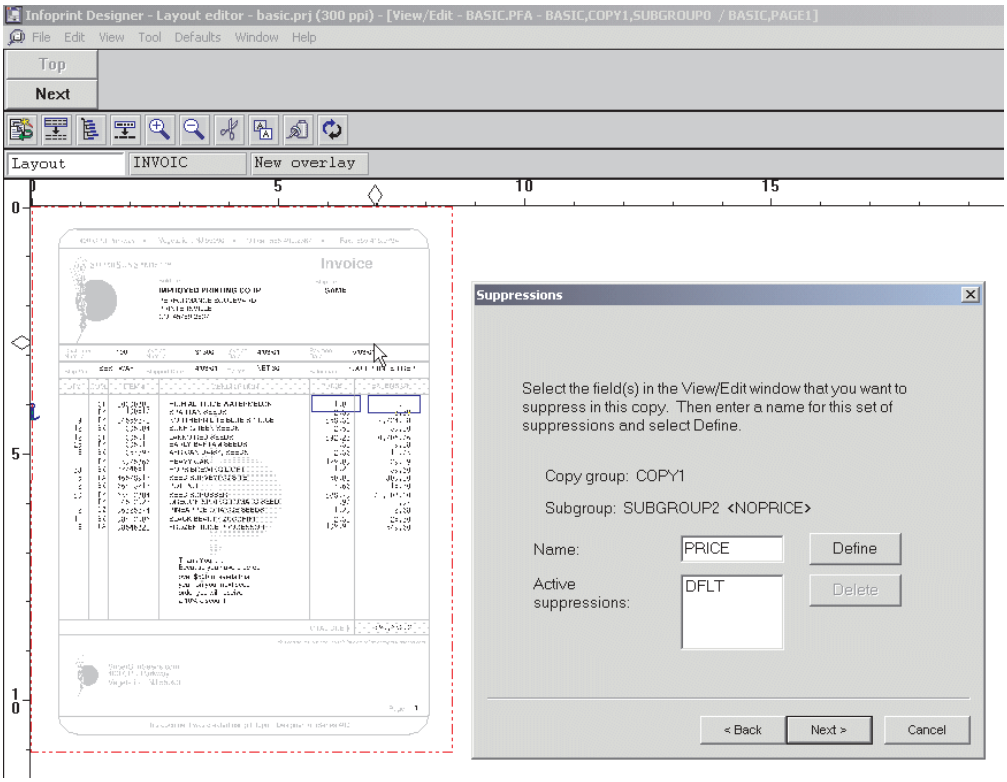

Figure 20. Selecting fields and naming the suppression group

Select **Define** and PRICE moves to the list of active suppressions. Select **Next**.

7. The next dialog asks if you want to make another modified copy. When you select **No** and then **Finish**, the second copy is shown. Figure 21 on page 48 illustrates this.

   Note: If you make any adjustments to the data placement on this copy, those changes will also be made on the first copy.

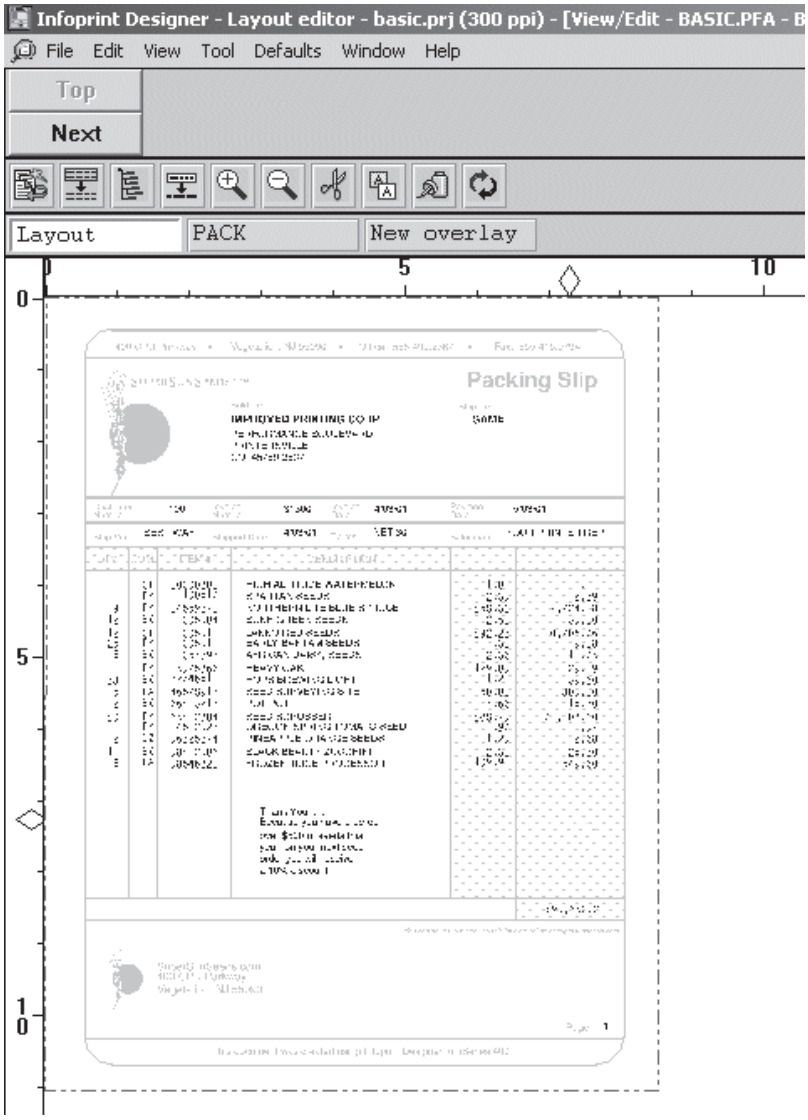

Figure 21. Second copy of the first invoice

8. Use the **Next** button on the Layout Editor toolbar to see copy 1 of page 2 of the data. When you click **Next** again, you will see copy 2 of page 2, and so on.

Changing the format based on a trigger in the data

One of the most powerful tools in AFP is the ability to change the output format based on the print data itself. This function is called *conditional processing*. When you use conditional processing, you test the contents of a field of data. When it changes or meets a condition (called the *trigger*), such as matching a constant value, you switch to a different overlay or new layout on a new side or sheet of the output. When setting up conditional processing, you need to understand all of the possible cases that could be found in the spooled file and make sure you know how each should be handled before using the wizard. In this section, we will modify one of the sample projects provided with Infoprint Designer to use conditional processing to produce different formatting for the individual pages of a multi-page invoice.

Before starting this example, follow these steps:

1. Make a copy of the sample project C:\Designer\PROJECT\basic.prj and save it with a different name. We will use the name wizard.prj.
2. Copy the file C:\Designer\PPFA\basic.pfa and rename it wizard.pfa.
3. From the **File** menu, select **Open project** to open the copy (wizard).
4. From the **Edit** menu, select **Layout** to change the name of the layout file. In the **Layout file** field, specify the same name as you gave the copy of the project. For our example, we will name it wizard.pfa.
5. From the **File** menu, select **Save project**.
6. Use the **Top** and **Next** buttons on the Layout Editor toolbar to scroll through the file.

The first page of the file is a 1-page invoice for the customer Improved Printing. The second page of the file is the first of three pages of an invoice for the customer Organic Garden Supplies. You can tell that the first of the three pages is not the final one because the word “Continued” appears in the “Total Due” field at the bottom of the rightmost column of items, as shown in Figure 22.

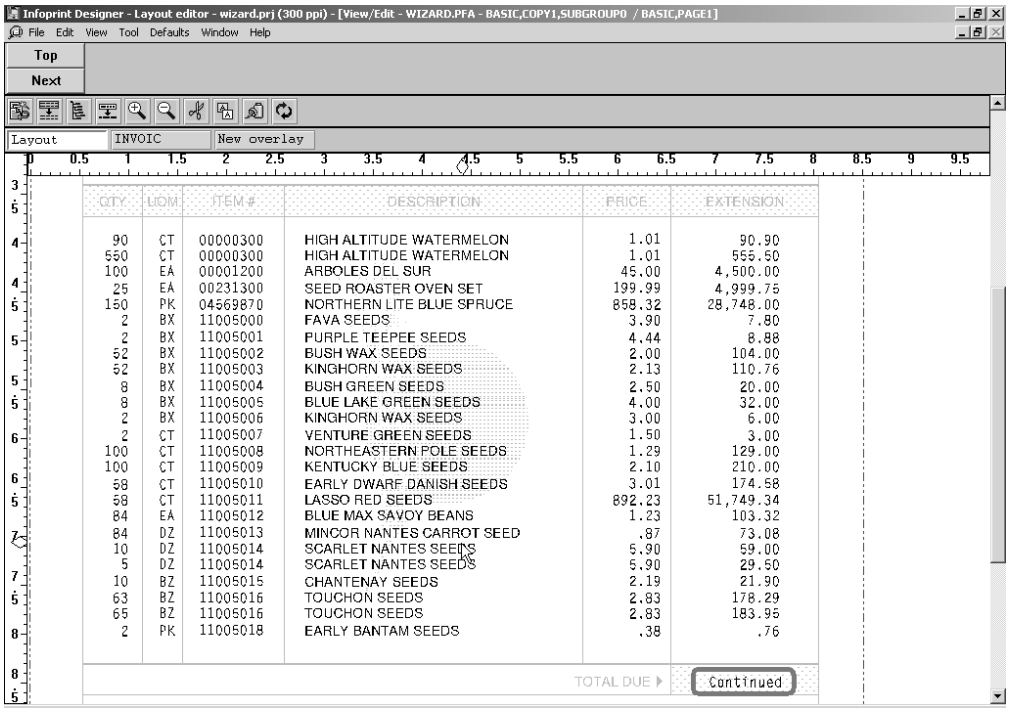

Figure 22. "Continued" in Total due field

We will use the string “Continued” as a trigger to set up conditional processing. We want to show the actual amount due in a large bold font and the string “Continued” in an italic font in the shaded box labeled TOTAL DUE on the overlay. To accomplish this using the Layout wizard, follow these steps:

1. With WIZARD.PRJ project open to the first page in the file, zoom the contents of the **View/Edit** window and use the right mouse button to select the total amount field, $90,652.21.
2. When the **Field properties** dialog opens, select the **Font 1** page. We want to show the total in a larger bold font. Specify these values:
   - For **Size**, select **12**.
   - For **Weight/Width/Design**, select **Bold/Medium/Normal**.
   - For **Code page**, select the first entry of **International #5**.

Press **OK** on the Field properties dialog.

3. The font changes are shown in the **Layout Editor** window.

Because we know that the second page in the spooled file is the first page in a multi-page invoice, we will use the Layout wizard to help us change the format for that page so that the Total field we just made bold on the first invoice will be italic when it says “Continued” instead of giving a numeric value.

4. From the first page (because we are going to change the next page), select the wizard tool from the **View/Edit** window action toolbar.
5. On the first dialog select **Different (next page of) data, different layout**, then select **Next**.
6. The **Define a Field** dialog is displayed. This lets you identify the trigger in the sample data file that is used to select the correct format for each page in the file. As instructed on the dialog, go to the **Data** window and select the field to test (this is the trigger field). In this case, there is an actual total instead of the word “Continued”. However, on the pages where the field will contain the string “Continued”, it is placed in the same location as the total amount due; columns 70 - 78 of record 51. To identify the trigger, follow these steps:
   a. Select columns 70 - 78 of record 51. This is from the $ to the 2, do not include anything else. The completed **Define a Field** page is shown in Figure 23. If you accidentally selected the whole total amount, the **Length** field shows 10 and you can type over that with a 9.
   b. Select the **Condition** field and name this condition CONTINUED.
   c. Select **Next**.

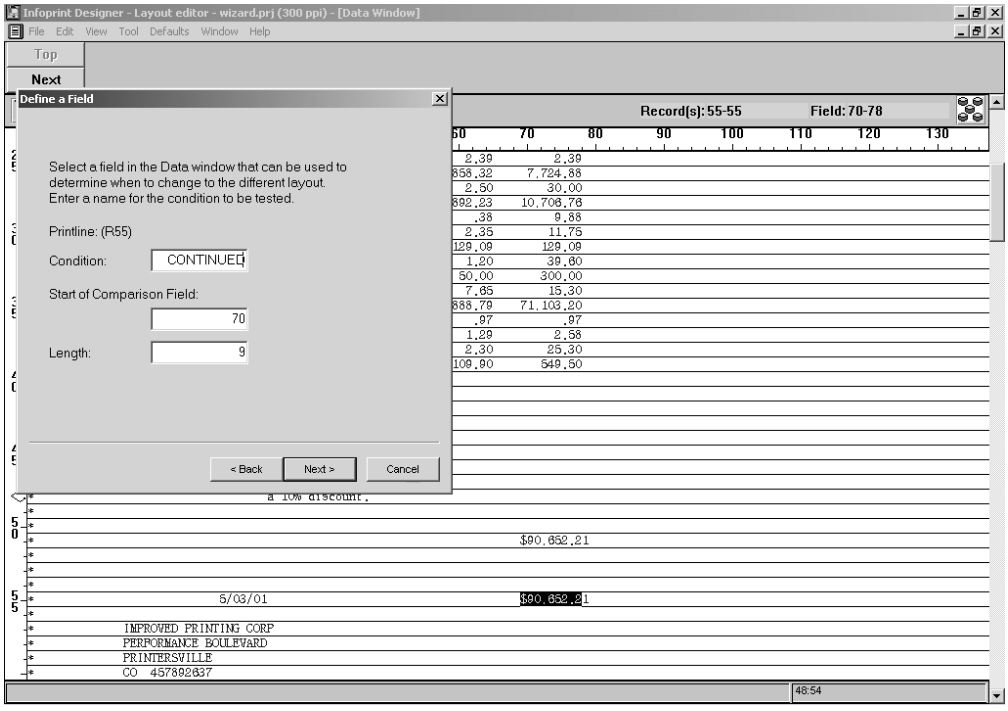

Figure 23. Completed Define a Field page

7. On the **Define a Test** page, select **EQ (=)** and enter **Continued** in the **Text** field. Select **Next**.

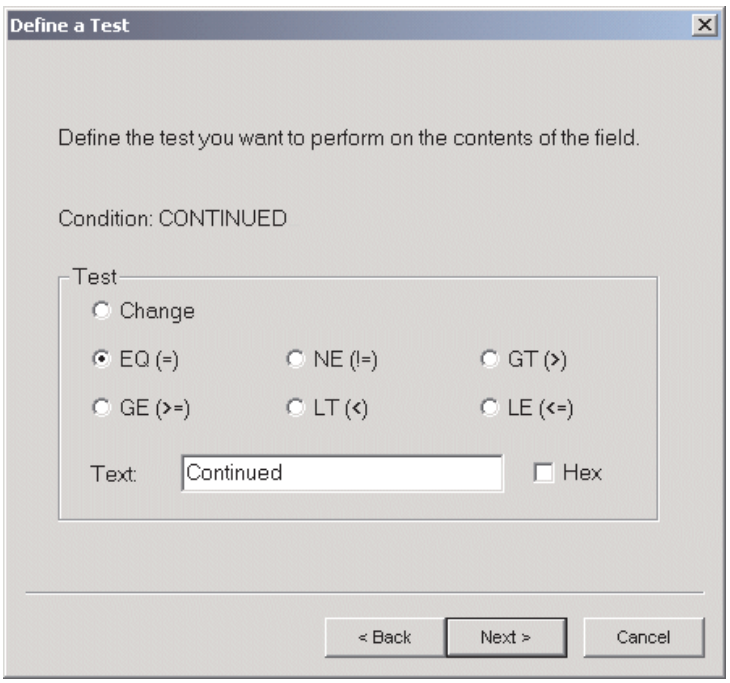

Figure 24. Completed Define a Test page

8. On the **Define an Action** dialog, select **Change layout** and then for **Page format** select **New**.

   A field appears for you to name the new page format you want to use. Enter **Contd**. Notice the options at the bottom of the dialog that let you specify when the action should take place. The default value, **Before SubPage**, means that Infoprint Designer performs the test on the contents of the field and if the test result is TRUE, it reprocesses the page with the changes indicated. You could, for example, use this function to skip to a new page after testing a field for a specific value. In our example, we want Designer to reprocess the page with the new page format, so we leave these options with the default values then select **Next**. The completed page is shown below:

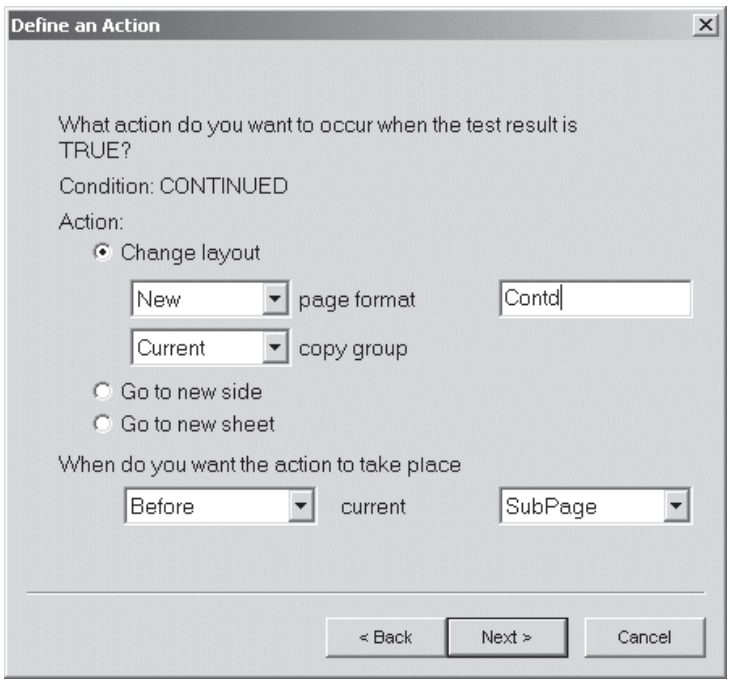

Figure 25. Completed Define an Action page

Note: You could also use this test to change the overlay that is used on the "Continued" page. Because overlays are named in a copy group, you would need to select New in the Copy group list and name a copy group to be created. For more information about which layout properties are in the page format and copy group, see Chapter 8, "Understanding page definitions and form definitions," on page 63.

9. Because you specified to create a new page format, the **Start a New Layout** dialog lets you create the new format as a copy of the old or to start with an empty format. When there are few changes being made, it is easiest to create the new format as a copy of the old. The only change we want to make is to the font in the Total field, so we select **Next** to start the format for the Continued page as a copy of the current format (named PAGE1).

You have finished specifying what should happen when the field contains the string "Continued" (we will change the font to italic later). Now you need to specify what happens by default, that is, when the field contains something else.

10. On the **What's Next** dialog, select **Define what happens by default** and select **Next**.

    Note: If you have different strings you want to test for in this field, you would instead select **Define a new test on this field** and then you could specify, for example, what should happen if the string was greater or less than a certain value.

11. If the string is not "Continued," we want to use our original page format, PAGE1, to format the data. So in the **Define an Action** dialog that appears, select **Change layout**. Select **Existing** page format and **PAGE1** as shown below, then select **Next**.

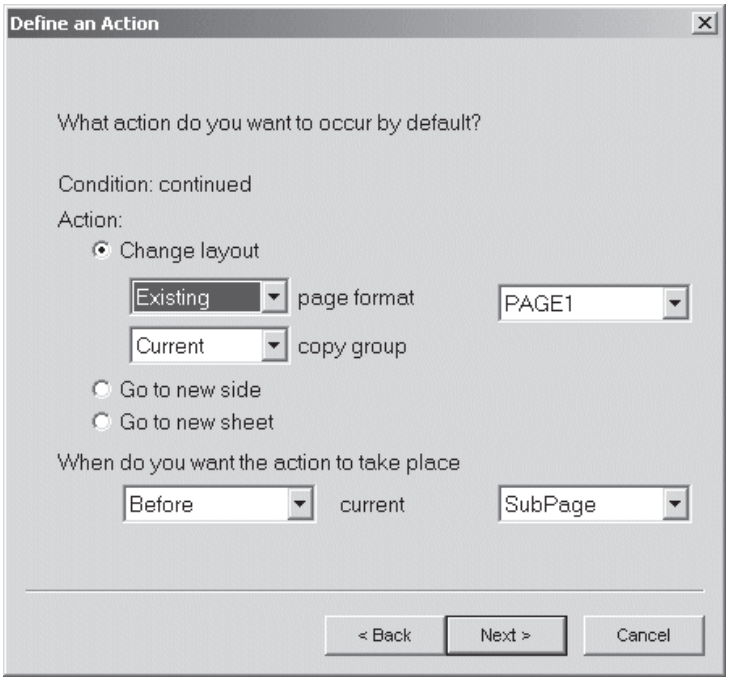

Figure 26. Specifying what to do when the field does not contain Continued

12. The **What's Next** dialog reappears. Notice that this time the middle choice is not available because you have already specified the default action for this condition. Select **Preview the results of this condition** so that you can check your work and select **Next**.
13. On the **Preview Results** dialog, select **Apply the condition to the next data page** and then **Finish**.

    On this dialog, you could also specify to apply the test to the page you are currently viewing or force Designer to take a path other than the one that the contents of the field would dictate. This helps you test your conditional processing when your sample data file does not contain all of the cases that you expect to find in the actual spooled file.
14. The second page of the spooled file shows in both the **Data** window (in blue) and in the **View/Edit** window. Notice that the title bar of the **View/Edit** window shows that the active page format is CONTD instead of PAGE1, as shown in Figure 27 on page 54. This indicates that you are now using the page format you specified to use when the field contains the string "Continued."

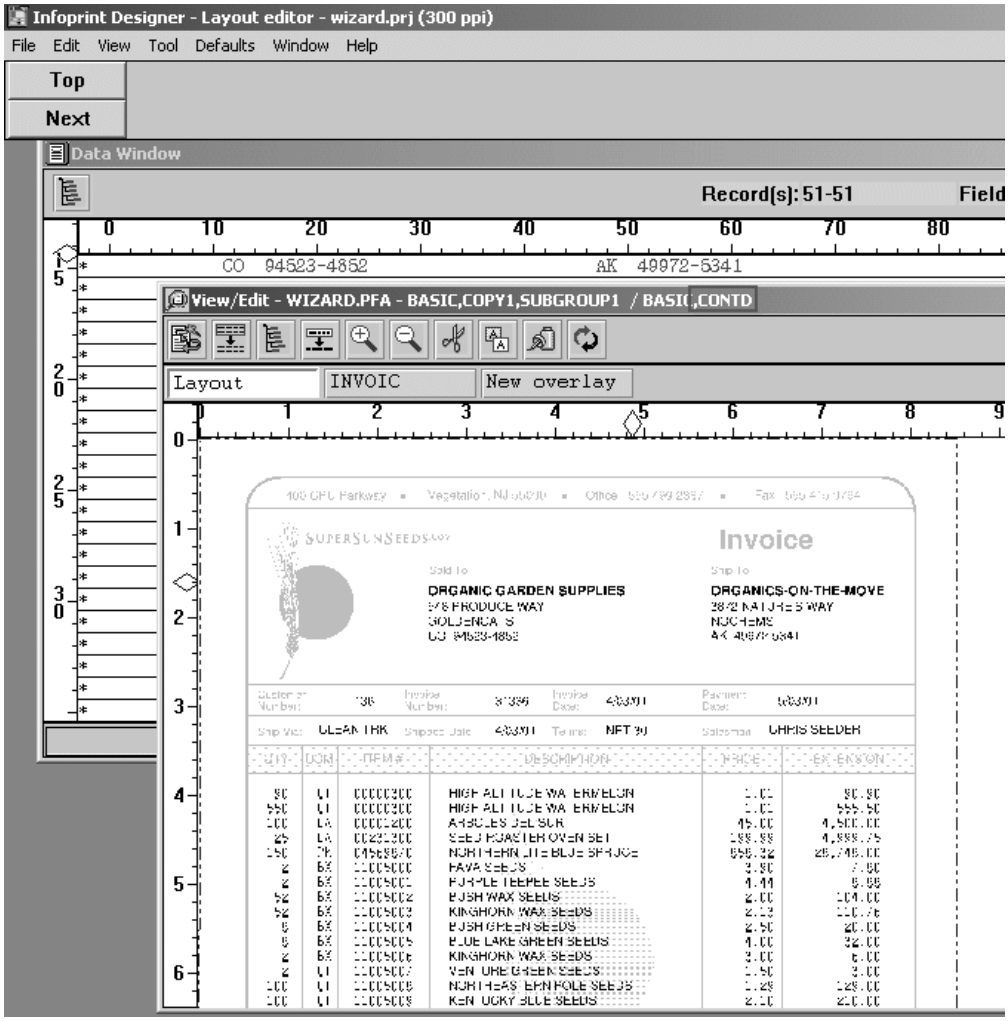

Figure 27. Previewing the results of the Wizard

To make the string “Continued” italic, select it in the **View/Edit** window and right-click. In the Field properties dialog, select the **Font 1** page. Because there is not an italic version of the Letter Gothic Latin1 typeface you were using, select the values below, then select **OK**:

- From the **Typeface** list, select **Helvetica Latin1**.
- In the **Weight/Width/Design** list, select **Medium/Medium/Italic**. This choice appears after you select **Helvetica Latin1**.
- In the **Code page** list, select the first **International #5**.

The “Continued” field on the page changes to italic.

15. Use the **Next** button on the **Layout Editor** toolbar to page through the sample data file and watch for the page formats to change between PAGE1 and CONTD. Save your project if you want to keep it for future reference.

Chapter 6. Using your AFP resources with your iSeries application

After you have designed the overlays and layout, it is time to compile them into AFP resource format (this is done automatically) and upload them to your iSeries system.

To upload your resources to the iSeries, follow these steps:

1. On the **File** menu, select **Upload to iSeries...**.
2. On the **Contents** page, specify what you want to upload.
   - Specify **Selected overlay or layout option** to upload the active overlay or layout. If the active window is the overlay editor, the overlay is uploaded. Fonts and page segments defined in the overlay might be uploaded, depending on settings on the **iSeries** page.

     If the active window is the layout editor, the page definition and form definition is uploaded.
   - Specify **Whole project** to upload the layout file (page definition and form definition) and all of the overlays defined in the project.

     Fonts and page segments defined in the overlay might be uploaded, depending on settings on the **iSeries** page.
3. On the **iSeries** page, select the iSeries library in which you want Infoprint Designer to place your resources.

   The **Send** area specifies whether fonts and page segments are uploaded. In this area, specify whether you want fonts and page segments to replace files with the same name when they are uploaded.

   In the **Prefix** area, select the prefixes you want Infoprint Designer to add to your file names. For more information about prefixes, see “Understanding file names” on page 2.
4. Your specified objects are compiled and placed in the specified library on the iSeries.

   The layout file produces two AFP resources on the iSeries; the page definition and the form definition. Each overlay produces an iSeries overlay object.

Note: Each time you upload an overlay to the iSeries, it replaces any file with the same name in the library. You can control whether a form definition and page definition on the iSeries with the same name are replaced.

To control whether the form definition and page definition are replaced, follow these steps:

1. From the **Window** menu, select **Form definition** or **Page definition**.
2. In the tree window that opens, right-click the form definition or page definition name. The **Form definition properties** or **Page definition properties** dialog opens.
3. On the **Name** page, for replace select **Yes** or **No**.
4. Select **OK**.

Once the resources are on your iSeries, you can use them with an application. If you use Infoprint Designer to create overlays and page segments without using the layout function, you can include them in your V4R5 or higher applications by using one of these:

- The FRONTOVL and BACKOVL keywords on the CRTPRTF, CHGPRTF, or OVRPRTF commands
- The OVERLAY and PAGSEG keywords in DDS.

If you created a layout with Infoprint Designer, you downloaded a sample spooled file from your iSeries. That spooled file is not sent to the iSeries when you upload a project. To use the new layout resources with that application, you must make some changes to the iSeries printer file that the application uses and then rerun the application.

As with all AFP resources, the iSeries must be able to find the new resources in an accessible library list. For testing, you can add any resource libraries to your own library list (EDTLIBL). For batch applications, add the libraries to the Device resource library list in the PSF configuration object or to the job's library list. Use the Create PSF Configuration (CRTPSFCFG) or Change PSF Configuration (CHGPSFCFG) command to specify the Device resource library list:

```
                    Change PSF Configuration (CHGPSFCFG)

Type choices, press Enter.

PSF configuration  . . . . . > TEST          Name
  Library  . . . . . .     *LIBL       Name, *LIBL, *CURLIB
User resource library list . . .   *JOBLIBL      *SAME, *JOBLIBL, *CURLIB...
Device resource library list . .   *DFT          Name, *SAME, *DFT
               + for more values
IPDS pass through  . . . . . .   *NO           *SAME, *NO, *YES
Activate release timer . . . . .   *NORDYF       *NORDYF, *IMMED...
Release timer  . . . . . .   *NOMAX        1-1440, *NOMAX, *SEC15...
Restart timer  . . . . . .   *IMMED        1-1440, *IMMED, *SAME
APPC and TCP/IP retry count  . .   15           1-99, *SAME, *NOMAX
Delay between APPC retries . . .   90           0-999, *SAME
Acknowledgment frequency . . . .   100          1-32767
Printer response timer . . . . .   *NOMAX        5-3600, *NOMAX, *SAME
Generate PDF output  . . . . . .   *NONE         *NONE, *SPLF, *STMF, *MAIL...
```

Figure 28. Change PSF Configuration screen

To use your new layout resources, with your application, follow these steps:

1. Determine what printer file your application uses. To do this, on the iSeries, use the WRKSPLF command to display a list of spooled files and select option 8, Attributes. A screen like this opens:

```
                          Work with Spooled File Attributes

Job  . . . . . :   QPRTJOB          File . . . . . :   INVSCS
  User . . . . . :     SIMON           Number . . . . . :     1
  Number . . . . . :     235527

Device type . . . . . :     PRINTER
Printer device type . . . . . :     *SCS
Device file . . . . . :   QSYSPRT
  Library . . . . . :       QSYS
User-specified data . . . . . :     SSS.COM
Accounting code . . . . . :     982806
Program that opened file  . . . . . :
  Library . . . . . :
Date file was opened  . . . . . :     03/26/01
Time file was last used . . . . . :     15:53:41
Date file was last used . . . . . :     03/26/01
System where file created . . . . . :     BLDAS45
User who created file . . . . . :     SIMON
                                                                  More...
Press Enter to continue.
```

Figure 29. Identifying the printer file that created the sample spooled file

The value shown for Device file is the name of the printer file that you need to modify. In Figure 29, the printer file is QSYSPRT in library QSYS. The "Q" prefix tells us this is an IBM-supplied printer file, and IBM does not recommend permanently changing this file because screen prints and other output might be affected. In this case, we will temporarily override the QSYSPRT printer file before the application program is rerun.

If you cannot change the printer file or you do not have access to the iSeries application program, you might be able to copy the printer file being used or to create a new one. Your new one must have the same name as the original printer file because the application refers to it by name, but if you store the modified printer file in a library higher up in the library list than the original printer file, the new printer file is found first and used for the job. If you do this, any job that uses the original printer file will now use the modified one instead.

2. Use either the Override with Printer File (OVRPRTF) or Change Printer File (CHGPRTF) command to change the printer file attributes. The OVRPRTF command is temporary and the CHGPRTF command is permanent. Run the OVRPRTF command immediately before you run the application program. You can enter the CHGPRTF command at any time. Make these changes to the printer file to use the Infoprint Designer resources with your application output:

Parameter	Value	Special Notes
Device type	*LINE	
Page definition	name of page definition	This is the same name as the layout.
Form definition	name of form definition	This is the same name as the layout.
Duplex	*FORMDF	Specify only if this functions is specified your Infoprint Designer layout.
Drawer	*FORMDF	Specify only if this functions is specified your Infoprint Designer layout.

Parameter	Value	Special Notes
Convert line data	*YES	Specify only if you are sending this output to a PCL printer with the Host Print Transform. This ensures that the resulting spooled file is converted to AFPDS. This function requires V5R1 of OS/400 and PTF SI02688 or V5R2 of OS/400.

The command syntax, with all of the optional parameters specified, follows:

```
xxxPRTF FILE(printer-file-name) DEVTYPE(*LINE)
        PAGDFN(library/page-definition-name)
        FORMDF(library/form-definition-name)
        DUPLEX(*FORMDF) DRAWER(*FORMDF) CVTLINDTA(*YES)
```

Chapter 7. Using the Image Editor

The Image Editor provides a comprehensive platform for the design and creation of image data for iSeries applications. With a typical image object, such as a logo, you need to scan the image from high-quality input (usually “camera-ready” artwork). Alternatively, the image can be imported in digital format, such as TIFF, BMP, JPEG, GIF, ICO, or PTR, if it is available. The Image Editor produces TIFF format images or AFP page segments as output.

Input images can be color or *bi-level* (that is, black and white) and should be scanned at the resolution of your target AFP printer (240 dpi, 300 dpi, or 600 dpi).

The Image Editor can be used for both touch-up and image enhancement. Touch-up is the process done with scanned images where extraneous dots left from the scanning process are eliminated and missing dots are filled. Touch-up ensures that the imperfections created during the scanning process are eliminated and that you end up with the sharpest, cleanest image for printing.

Starting the Infoprint Image Editor

There are two ways to start the Infoprint Image Editor:

- Double-click on the product icon that you put on your desktop:  .
- From the **Start** menu, select **Programs** and then IBM Infoprint Image Editor.

If you do not have an active connection to the first iSeries defined in your iSeries Access connection list, the **Connect to iSeries** dialog displays, where you select the iSeries host that is licensed for use with Infoprint Designer and enter your user ID and password on that system. If you want Infoprint Designer to save these values, select **Save User ID and Password**.

If you click **Cancel** on this dialog or are unable to get a connection with the licensed iSeries, Infoprint Designer displays a message that the program will start in demo mode, where you cannot save your work. If this happens in error, close the program and start it again when you can connect with the licensed iSeries system.

When you start Infoprint Image Editor, it automatically opens in new image (drawing) mode. The light green frame indicates the borders of the image. The resolution and image size for the new image are taken from program defaults of 240 dpi and 152 x 152 pels. You can change these default values by opening the **Defaults** menu and selecting **Size/resolution**. You can customize Image Editor’s startup in these ways:

- You can set up the Image Editor to open in drawing mode, but prompt you for the size and resolution values for the new image. To do this, open the **Defaults** menu and deselect **Use defaults for new images**.
- You can set up the Image Editor to require you to select **New** or **Open** to begin your work. To do this, in the **Defaults** menu, deselect **Start in new image mode**.

Working with the Infoprint Image Editor Window

Figure 30 on page 60 shows the Infoprint Image Editor window. The labeled areas are described in detail below.

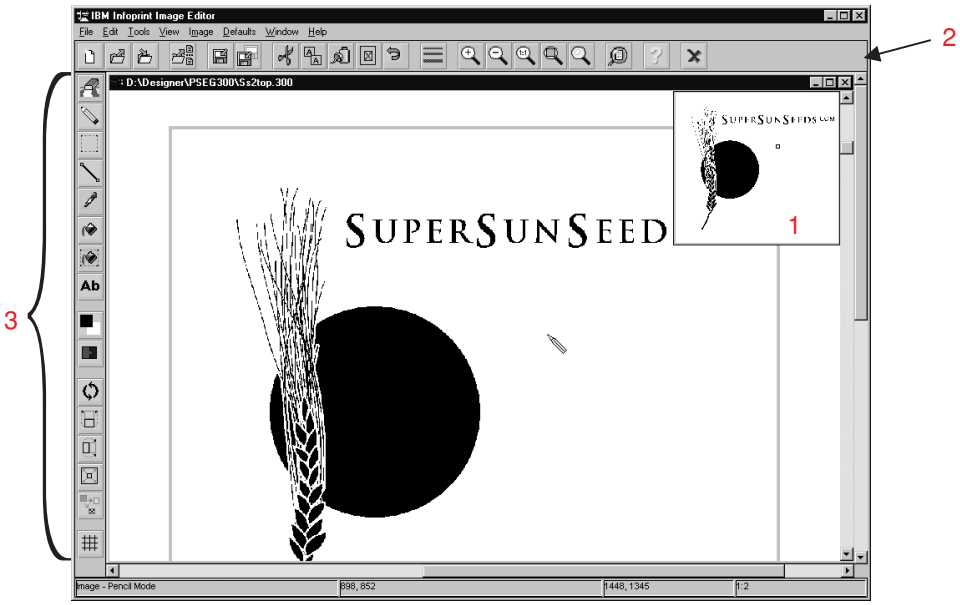

Figure 30. Infoprint Image Editor window

Parts of the Infoprint Image Editor Window:

1. **Navigation window:** This window shows the entire image. A small square shown in the Navigation window tracks the pointer as you move it inside the image. This is useful when you are zoomed in to a section of the image and also need to see where the zoomed section is in relation to the complete image. When you click in the Navigation window, the contents of the Image Editor window scroll to show the area that you clicked in the center of the Image Editor window.

   You cannot resize the Navigation window. But you can reposition it by grabbing an edge and dragging it. You can remove the Navigation window from the display by opening the **View** menu and deselecting **Navigation**.
2. **Editing toolbar:** Provides access to the most frequently used file, edit, and view functions.
3. **Drawing toolbar:** Provides access to the drawing and image editing tools.

Some functions on the toolbars, such as delete, cut, copy, and fill area, are not available unless you have selected an area of the image. To select an area, click the selection mode icon on the drawing toolbar:  . Press and hold the left mouse button down at the top left corner of the area you want to select and move the pointer to the bottom right corner of the area and release the mouse button. The selected area is shown surrounded by a thin frame.

To edit individual pels in the image, select the Pencil icon on the drawing toolbar. Position the pointer on the pel you want to edit. When you left-click, the pel is colored according to the primary color selected in the **Primary/Secondary Color Definition** dialog. When you right-click, the pel is colored according to the secondary color. In the case of black and white images, left-clicking colors pels black, and right-clicking turns black pels to white.

Hints and tips for the Infoprint Image Editor

Use these tips to help you draw new images or touching up existing ones:

- A zoom factor of at least 6:1 is useful, especially for touch up.
- To set the size of the pencil and the thickness of lines you draw, open the **Defaults** menu and select **Drawing size...**.
- To display a grid that shows each pel, open the **View** menu and select **Grid**.
- AFP page segments contain their rotation information inside the page segment. Therefore, if you want to print an image such as a logo in more than one orientation, you must create two different page segments, one at each orientation. Use the Image Editor's **Rotate** function to orient the image correctly and then save it as a page segment with a different name (such as LOGO90 for the version of the logo that is rotated 90 degrees from the standard logo).

Using your images with iSeries applications

After you have created TIFF images or AFP page segments, you can include them in overlays and layouts produced with Infoprint Designer. Infoprint Designer will convert your bilevel TIFF images to AFP page segments. In order to use color page segments, you must save them as an AFP page segments in Image Editor before using them with Infoprint Designer.

Using the **Upload to iSeries** function in Infoprint Designer, you can have all of the page segments defined in a project sent to the iSeries for use in the print application. For more information, see "Uploading your overlay to the iSeries" on page 26.

Chapter 8. Understanding page definitions and form definitions

Layout is the process of mapping application data from an iSeries spooled file to the printed page. In AFP, two resources are used to perform the layout function: a *page definition* and a *form definition*. These resources are used to format the output of application programs for high-quality printing without requiring application-dependent programming. This separation allows you more flexibility in changing your physical print requirements, such as duplex and paper tray selection, without affecting the formatting properties, such as fonts and orientation. When working with complex applications, it is important that you understand how page definitions and form definitions interact with the *logical page* and the *physical page*:

page definition
The AFP resource used to place data onto a logical page.

form definition
The AFP resource used to place the logical page on the physical page.

logical page
The formatted page of data that is positioned on one side of a physical sheet of paper. It can be thought of as an “imaginary” page.

physical page
The actual sheet of paper.

The layout file that you create using Infoprint Designer is converted to a form definition and page definition when you upload the layout to the iSeries. For simple layouts, you do not need to understand the finer points of the contents and structure of page definitions and form definitions, but more complex layouts require a deeper understanding of these resources. Use this chapter to learn more about page definitions and form definitions.

If you require an even greater level of understanding of page definitions and form definitions, refer to *Page Printer Formatting Aid: User’s Guide*.

Page definition and form definition functions

When you are migrating your iSeries application that produces SCS or line data to take advantage of the formatting capabilities provided with AFP, you need to create both a page definition and a form definition to be used when printing the job. The page definition is very application-specific; form definitions are often reusable by several applications. This section describes which AFP functions are performed by each of these two AFP resource types.

As was stated above, a page definition contains the instructions for formatting line data onto logical pages. Settings such as the size of the logical page, its orientation (portrait or landscape), and the position of the first line of data relative to the logical page origin, are defined in the page definition.

The page definition contains all of the specifications for mapping each record of a data file onto the logical page, including the font (possibly a bar code font), rotation, and interline spacing. The page definition can also be used to place a text string, an overlay, or a page segment relative to the position of a field of data. Controls in the page definition can be used to produce multiple-up output.

A form definition controls how a logical page of data is placed on the physical paper. The form definition contains specifications for print properties, such as duplexing, number of copies, input and output bins, finishing options such as staple and punch, and number of copies. The form definition also names all of the fixed-position overlays to be printed as well as whether to merge application data with those overlays or not. Controls in the form definition can be used to produce N-up output, where up to four logical pages of data can be printed on a single side of a sheet.

Page definitions and form definitions both contain controls that work together to let you suppress selected fields from printing on some copies of your output, but print the same fields on other copies.

Migrating existing page definitions and form definitions

If you have **page definitions** and **form definitions** in AFP object format, you cannot import these files into Infoprint Designer. However, if you have source files in Page Printer Formatting Aid (PPFA) format, you can use these layout files with Infoprint Designer.

To use PPFA source files, do one of these:

- To start a new project with a PPFA source file, follow these steps:
  1. From the **File** menu, select **New project...**.
  2. On the **New project** dialog, in the **Start with** field, select **Layout definition**. In the **Layout file** field, select or enter the name of the PPFA source file.

  You might want to save the changes you make using Infoprint Designer into a file with a different name because the `.PFA` files that Designer creates cannot be used with PPFA programs on iSeries or other operating systems.
- To use a PPFA source file after you have already started a project, from the **Edit** menu, select **Layout...** and select or enter the name of the PPFA source file in the **Layout file** field.

Restrictions when importing PPFA source files:

1. Infoprint Designer does not support some PPFA functions, such as media information in the form definition. If the PPFA source file you import into Infoprint Designer contains valid PPFA commands for unsupported functions, the PPFA commands are retained in the source file and are compiled into the page definitions and form definitions created when you upload your project to the iSeries.
2. Infoprint Designer does not support any functions accessed by including AFP structured fields in the input data. Records such as Invoke Data Map and Include Page Overlay are not processed by Infoprint Designer if they are encountered in the sample data file used for layout editing.

Page definition and form definition structure

The page definition and the form definition each has its own hierarchical structure. Each resource contains additional components that are introduced in this section.

Page definition structure

Each page definition contains one or more subsets, or *page formats*. Each page format contains the formatting instructions for a single logical page of data. Settings such as the size of the logical page, its orientation, and the position of the first line of data relative to the logical page origin are defined in the page definition but can

also be specified in the page format. You can change the values for these settings for the active page format by opening the **Edit** menu and selecting **Page properties...**.

If your application requires more than one type of page layout, you need to create more than one page format. To switch page formats, you must define fields in the application data that can be tested to determine which page format to use. For example, look in columns 50 through 58 of the 55th record for the word “Continued” to switch to a page format that formats the next logical page of data differently than the format used for the first page of output. This process of testing the data to determine what page format to use is called *conditional processing*. The Layout wizard can make this process easy for you, so you do not have to work directly with page formats. For a simple example of conditional processing, see “Producing some common layout formats with the Layout wizard” on page 40.

A page format contains one or more *subpages*. A subpage is a part of the logical page on which data might be placed. Subpages are used for conditional processing and for multiple-up printing. The subpage does not contain any formatting instructions; it serves as a divider in the page format to logically group data records.

A subpage contains one *printline* for each record in the input data file. The printline specifies all of the formatting instructions (such as position, font, and orientation) to be used for its corresponding data record. One printline might span multiple data records if the records contain carriage control characters that merge data from multiple records. Page segments and page overlays can be associated with a printline. Conditional processing instructions are associated with a specific printline.

Each printline contains instructions for its *fields*, which are the individual pieces of data, like a customer name or address, that you map onto the page.

With Infoprint Designer, you map fields of data from records in the data file. These mapping operations create fields on printlines in the page definition. When you select a field in the **View/Edit** window, a small blue anchor symbol appears, usually along the left edge of the window. This anchor symbol represents the printline to which the selected field belongs. You can right-click the anchor symbol to change the properties of all the fields defined on that printline.

When the page definition is processed at print time, the printlines are applied to data records in sequence unless a *channel code* is encountered on a data record. Channel codes can be placed in the first character position of a data record to indicate a formatting change. The most common example of a channel code is a “1” being used to indicate a skip to a new page.

Printlines can have channel codes associated with them, so that when a data record is encountered with a channel code, processing skips to the next printline that has that channel code associated with it. Use the **Printline properties** dialog to associate channel codes with printlines if your application data contains channel codes. To access the **Printline properties** dialog, right-click the appropriate field and the **Field properties** dialog opens. Select **Printline properties**.

When you start the Layout Editor, Infoprint Designer builds a page definition with a single page format and a single subpage. Infoprint Designer uses information it retrieves from the Page length attribute of the iSeries spooled file to determine how many printlines to create in the page format. If you use a PC file to create your layout, Infoprint Designer uses the **Page length** value you specified in the **Line data options** dialog when you loaded your sample data to determine the number of

printlines. This default page definition is named UNTITL and the default page format is named PAGE1. To see the structure of the page definition you create using the Layout Editor, from the **Window** menu, select **Page definition**. The **Page Definition** window that opens depicts the hierarchical structure of the page definition, as shown in Figure 31.

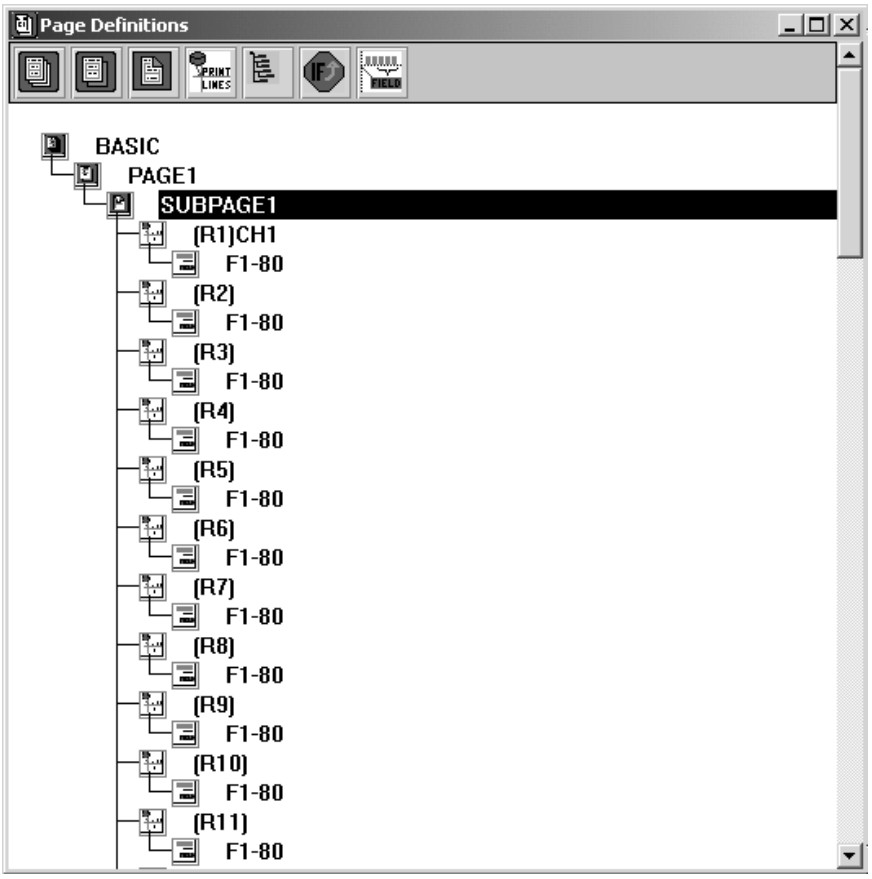

Figure 31. Page Definition tree structure for Basic sample

In the **Page Definition** window, the entries for R*nn* correspond to the individual records in the data file and the entries for F*nn* correspond to the fields you defined as you mapped data. You can drag objects from the toolbar in the **Page Definition** window to add new fields or record mappings to the page definition.

Form definition structure

Each form definition contains one or more *copy groups*. Each copy group contains the print instructions for a single physical sheet of output, including both the front and back sides of a duplexed sheet. Settings such as the placement of the logical page on the physical paper, duplexing, stapling, and printer input and output bins, are defined in the form definition but can also be specified in the copy group.

A copy group contains one or more *subgroups*. A subgroup is the set of print instructions for one side of a duplexed sheet of output. The subgroup specifies the number of copies of each page of data that are to be printed and any modifications to be made to each copy, such as different overlays or suppressed fields in one copy that are printed in another. The subgroup also defines any medium overlays to

be printed. Subgroups are commonly used for applications that are migrating from multi-part forms, where multiple copies of the same page of data are printed with modifications possible between copies.

To change the values for settings in the active copy group, open the **Edit** menu and select **Print properties...**. You might want to change copy groups within a layout if you want to print on different stock (colors, sizes) for some pages of the output of your application than for others. Changing copy groups is controlled by conditional processing specifications in the page definition.

When you start the Layout Editor, if you specified one-sided (simplex) printing on the **Layout properties** dialog when you created the layout, Infoprint Designer builds a form definition with a single copy group and a single subgroup. The subgroup contains a reference to any overlays you have defined in the project. This default form definition is named `UNTITL`, and the default copy group is named **COPY1**.

If you specified two-sided (duplex) printing on the **Layout properties** dialog, Infoprint Designer builds a form definition with a single copy group and two subgroups, one each for the front and back sides. The FRONT stubgroup contains references to any overlays you have defined in the project.

To see the structure of the form definition you create using the Layout Editor, from the **Window** menu, select **Form definition**. The **Form Definition** window that opens shows the hierarchical structure of the form definition. A simplex example is shown in Figure 32.

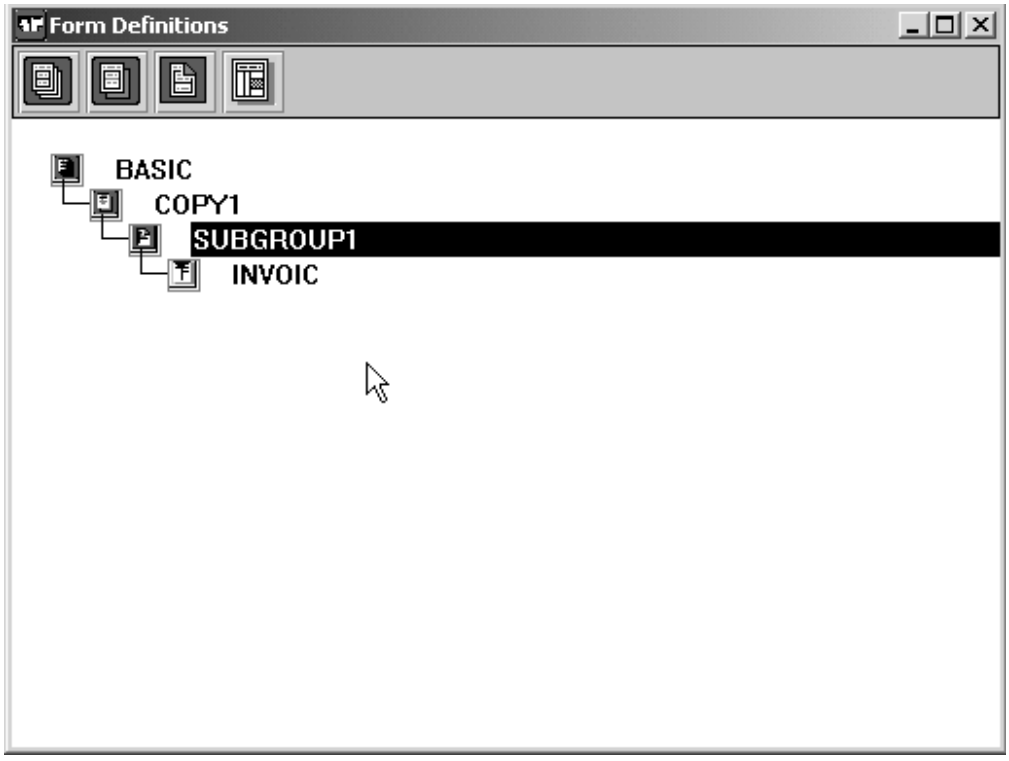

Figure 32. Form definition window

Working with the tree windows

You can work directly with the tree structure of the page definition or form definition by using the toolbars in the Page Definition and Form Definition windows. The toolbars contain icons for each of the component objects (for example, page format, subpage, and printline for page definition). You can add, delete, reorder, or copy each of these objects using the toolbar icons as described in this section.

Be careful when you are using these windows–changes you make to the page definition can change the page breaks for the entire layout. It is a good idea to use the **Top** and **Next** buttons on the toolbar to scroll through the data to ensure that the changes you make in the **Page Definition** window are appropriate for all of the pages in the print job.

Adding an object to the tree structure

Follow these steps to add an object to the form definition or page definition:

1. On the toolbar, select the icon representing the object you want to add.
2. Drag the icon to the appropriate position in the tree.
3. When the icon is positioned in a valid location, release the mouse button.

   Note: If you try to drop the icon in a position that is not valid, a red X appears on the icon.

Notes:

1. When adding a copy group or subgroup, IBM recommends that you copy the original objects (`COPY1` and `SUBGROUP1`) rather than add a new object. Copying the original objects ensures that the default suppressions defined when the layout project was started are used in the copy as well.
2. Be careful when adding print lines, as it can cause “off the page” errors if you add too many.

Deleting an object from the tree structure

Follow these steps to delete an object from the page definition or form definition:

1. Select the object you want to delete in the tree structure.
2. On your keyboard, press **Delete**.

Notes:

1. Objects defined inside the deleted object are also deleted.
2. When adding deleting print lines, be careful that you do not accidentally delete printlines that map data on the page.

Reordering objects in the tree structure

The order of objects in a page definition or form definition is relevant to how the printed output appears. Follow these steps to change the order of the objects in the tree structure:

1. Select the object you want to move in the tree structure.
2. Drag the object to its new location.
3. When the icon is positioned in a valid location, release the mouse button.

   Note: If you try to drop the icon in a position that is not valid, a red X appears on the icon.

Copying an object in the tree structure

You can use this copy function when you set up conditional processing to switch to a new page format and you need to specify the mappings and other properties of the new page format. In most cases, the new page format is only a slight variation of the old one, so you might want to define the new page format by editing a copy of the old page format. The same rationale applies to subgroups and copy groups in the form definition. To copy an object (and all of its associated lower-level objects), follow these steps:

1. Press and hold **Ctrl** while you select the object to be copied.
2. Holding **Ctrl** down, drag the object to the object at the same level in the tree structure after which you want to place the copy.
3. When the icon is positioned in a valid location, release the mouse button.

   Note: If you try to drop the icon in a position that is not valid, a red X appears on the icon.

Expanding and collapsing the tree structure

You can collapse lower-level objects in the tree structure by following these steps:

1. Select the object in the tree structure that you want to collapse.
2. Press the minus (**-**) key.
3. The lower-level objects under the selected object are hidden and a **+** is added to the right of the object in the tree structure to indicate that lower-level objects are collapsed underneath it.

You can expand the view of an object which has hidden lower-level objects by doing one of these:

- Double click the object in the tree structure.
- Select the object in the tree structure and press plus (+).
- To expand all levels of an object, select the object and press asterisk (*).

To expand all objects in the tree structure, press **Ctrl** + **Page Down**. To collapse all objects in the tree structure, press **Ctrl** + **Page Up**.

Chapter 9. Troubleshooting

Use the information in this chapter to troubleshoot problems that you might encounter using Infoprint Designer. Use this table to find the description of your error situation:

Symptoms	See
• Resources, such as page segments and overlays, are not found even when they are in the default Infoprint Designer directories. • A blank name is shown in the **Library** field on the **Libraries** dialog. • You receive messages like this: "`Error: OVFD7570E Library profile variable for 'overlay' not found in library!`".	"Library profile must exist" on page 72
You open an overlay, a layout, or a project and get messages that AFP resources are not found.	"Missing resources on the PC" on page 72
No fonts are shown in the **Select font** dialog.	"No fonts listed in Select font dialog" on page 73
• You get messages from PSF when printing on the iSeries that one or more fonts are not found. • You upload resources to the iSeries but cannot find them on the iSeries.	"Missing resources on the iSeries" on page 74
You receive an error stating that a record exceeds the page boundary.	"'Off the page' error when uploading a project to the iSeries" on page 74
An object extends outside the red overlay boundary.	"Object outside of overlay boundary when uploading an overlay to the iSeries" on page 75
A hard reboot of the PC occurs when mapping data.	"A hard reboot of the PC occurs when mapping data" on page 75
• Program starts in demo mode. • You cannot save your work.	"Program starts in demo mode" on page 75
The proof page on a PC printer looks different than the iSeries output.	"Proof page on PC printer looks different than iSeries output" on page 76
• You cannot map a drive to the iSeries through Windows Explorer. • You get the error message `Installation not possible`.	"Problems mapping a drive with Windows Explorer on your iSeries" on page 76
Hex data appears when pasting text into an overlay.	"Pasting text into an overlay yields hex data" on page 76
Landscape overlay rotates to portrait when you start the Layout Editor.	"Landscape overlay rotates to portrait when starting Layout Editor" on page 77
The PC copy of an iSeries spooled file does not format correctly in the **Data** window.	"The PC copy of an iSeries spooled file does not format correctly in the Data window" on page 77

Symptoms	See
You cannot print the output from your iSeries to a PCL printer.	“Problems printing to an iSeries-attached PCL printer” on page 77
No text displays when using an overlay created with the AFP Windows driver.	“Migrating existing overlays” on page 19
• Fonts on printed page appear different than on Designer screen • When printing from the iSeries, the job goes on HOLD. • Overlays or page segments are not being printed.	“Problems printing to an iSeries-attached IPDS printer” on page 77
When the file is printed on the iSeries, some data is printed twice	“Data prints twice from iSeries” on page 78
You get a “Licence not valid” error message.	““Licence not valid” error message” on page 78

Library profile must exist

As described in “Understanding libraries and library profiles” on page 3, Infoprint Designer stores all of the directories where it searches for resources in a library profile file with an extension of **LBP**. Infoprint Designer expects to find a library profile file (**DEFAULT.LBP** by default) in the `C:\DESIGNER\USERISIS` directory. If for some reason this file is moved or missing, you will have problems like these:

- No fonts shown in the **Select font** dialog
- Resources, such as page segments and overlays, are not found even when they are in the default Infoprint Designer directories
- Blank name shown in the **Library** field on the **Libraries** dialog
- Messages such as this: `Error: OVFD7570E Library profile variable for 'overlay' not found in library!`

To correct this problem, follow these steps:

1. From the **Edit** menu, select **Change Library...**.
2. Browse for the correct library profile file. This file is `DEFAULT.LBP` for outline fonts and `RASTER.LBP` for raster fonts.
3. If you cannot find an .LBP file on your PC, you must reinstall Infoprint Designer. The installation program builds a library profile suitable for the types of fonts you install. To reinstall Infoprint Designer, see “Installing Infoprint Designer on your PC” on page 9.

Missing resources on the PC

If you open an overlay, a layout, or a project and get messages that AFP resources are not found, check these:

- Ensure you have the correct library profile defined for this project. To see what library profile is being used, from the **File** menu, select **New project** and examine the contents of the **Library profile** field. If you are using outline fonts, this file should be `DEFAULT.LBP`. If you are using raster fonts, this file should be `RASTER.LBP`. If the library profile is incorrect, follow the steps in “Library profile must exist.”
- Select **Cancel** to close the dialog without starting a new project. Ensure that the settings you have for resource prefixes are correct. To check the settings, follow these steps:

1. Ensure that no projects are open.
2. From the **Edit** menu, select **Preferences...**.
3. Select the **iSeries** page.
4. The resource types selected in the **Prefix** area begin with the specified prefix.

   For example, if the **S1–Segments** is not selected for page segments in the **Prefix** area, Infoprint Designer looks for a page segments *without* an **S1** at the start of its file name. Page segments with the **S1** prefix in its filename are not found.
5. To change the prefix setting, select or deselect the appropriate box.

- Ensure that the correct path is specified for the missing resource type. From the **Defaults** menu, select **Libraries...**. Select the page for the type of object that was reported missing. Look at the directories in the **Library Path** area. If the directory where the resource resides is not listed, do one of these:
  - Move the resource:
    1. Copy the resource from the directory where it resides into one of the directories listed in the **Library Path** area.
    2. If the resource in error is a page segment, refresh the page segment. To refresh a page segment, right-click the red **Not Found** box in the **View/Edit** window. On the **Page segment properties** dialog, select **Refresh**.
    3. If the resource in error is not a page segment; save, close, and open the project to see if the error goes away.
  - Add the directory where the missing resource resides to the **Library Path** area, if possible. The entries in the library profile are limited to 1024 characters for each resource type. Therefore, you might not be able to add another directory:
    1. From the **Defaults** menu, select **Libraries...**.
    2. For **Path**, specify the directory where the missing resource resides.
    3. Select **Append**.
    4. Select **OK** on the **Libraries** dialog.
    5. If the resource in error is a page segment, refresh the page segment. To refresh a page segment, right-click the red **Not Found** box in the **View/Edit** window. On the **Page segment properties** dialog, select **Refresh**.
    6. If the resource in error is not a page segment, save, close, and open the project to see if the error goes away.

No fonts listed in Select font dialog

If you open the **Select font** dialog and there are no fonts listed, check these:

- See “Library profile must exist” on page 72.
- If you installed Infoprint Designer in a directory other than the default (**Designer**), check the length of the path name. The entries in the library profile are limited to 1024 characters for each resource type. Therefore, using a long path name (`\Program files\Infoprint Designer`, for example) can cause the font information to be lost with no message given. You must reinstall Infoprint Designer to solve this problem. To install Infoprint Designer, see “Installing Infoprint Designer on your PC” on page 9.
- If you recently updated the Infoprint Designer font catalog from the **Libraries** dialog, the catalog might have been corrupted. Follow these steps:
  1. From the **Defaults** menu, select **Libraries**.

2. Select the appropriate page, such as **Coded font**, and select **Build Cat.** to rerun the build catalog operation.

- If you are running Infoprint Designer from a shared server installation (on a thin client workstation), you might need to copy the font catalog information from the `\Userisis` directory to your own copy of that directory. See “Installing Infoprint Designer on your PC” on page 9 for instructions.

Missing resources on the iSeries

If you upload resources in an Infoprint Designer project, but cannot find the resources in the iSeries library where you expected them to be saved, look for messages in `\Designer\Userisis\AS400.LOG` on the PC.

If you get messages from PSF when printing on the iSeries that one or more fonts are not found, try one of these

- Ensure that you have installed the AFP Font Collection libraries listed in “Verifying prerequisites” on page 7.
- Have Infoprint Designer upload all of the fonts used in your project to the iSeries when your project is uploaded:
  1. From the **Edit** menu, select **Preferences...**.
  2. On the **Preferences** dialog, select the **iSeries** page. Select **Send fonts**.
- Be sure that the library where Infoprint Designer places the fonts is in the search path defined for PSF for OS/400.

'Off the page' error when uploading a project to the iSeries

If you receive an error stating that a record exceeds the page boundary, do one of these:

- See if the placement position for one or more printlines has moved from the left edge of the **View/Edit** window. To do this, follow these steps:
  1. Right-click a field and look for a small blue anchor symbol along the left edge of the **View/Edit** window. This anchor symbol shows the placement of the record mapping called the printline. If you accidentally dragged the anchor symbol while mapping data, the placement of all of the fields of data mapped on this printline was adjusted accordingly. This might cause data to fall outside the page boundary on some page in the spooled file, not necessarily the one you are viewing.
  2. Repeat step 1 with each of the mapped fields.
  3. If you find an anchor symbol that is not placed at the left edge of the page, select it and drag it as close to the left edge as you can.

     You might need to adjust the placement of the mappings from that record in the **View/Edit** window.
  4. From the **File** menu, select **Upload to iSeries...** to see if the error goes away.
- Check the number of printlines in the Page definition tree window. Sometimes an operation such as increasing the repeat count for a group of mapped records can cause printlines to be added to the page format. This makes blank printlines appear at the bottom of the page format, which causes data to be placed off the page. To check the number of printlines, follow these steps:
  1. From the **Window** menu, select **Page definition**.

2. Scroll down to the bottom of the current page format to find the last printline (shown as [R*nn*], where *nn* is the number of the printline). This number should match the number of records you expect to print on a page, normally 66.
3. If there are more printlines than you expect, select the bottom printline and then press **Delete**.
4. Repeat step 3 until the number of printlines you see in the page format matches the number of records per page in the spooled file.

   Warning: Watch the results in the View/Edit window to be sure that you do not delete printlines that map data on the page.
5. From the **File** menu, select **Upload to iSeries...** to see if the error goes away.

Object outside of overlay boundary when uploading an overlay to the iSeries

If an object extends outside the red overlay boundary, adjust its size to fit within the overlay. From the **View** menu, select **Fit in window** so that you can see all of the edges of the overlay. If you still do not see an object outside the overlay, follow these steps:

1. From the **View** menu, select **Fit in Window**.
2. Right-click and drag a rectangle enclosing as much of the overlay as you can. All of the objects in the overlay are shown with blue selection frames.
3. Look for empty blue selection boxes near the edges of the overlay. You might need to zoom in to see them.
4. Delete any empty objects near the edge of the overlay.

A hard reboot of the PC occurs when mapping data

If a hard reboot of the PC occurs when you are mapping a field in layout design mode, you might need to turn your video adapter accelerator down. To access your video adapter accelerator settings, follow these steps:

1. Right-click an open area of your desktop.
2. In the menu that displays, select **Properties**.
3. In the **Properties** dialog, select the **Settings** page.
4. If a video adapter accelerator is present, lower it a notch or two.

   Note: Not all video adapters have an accelerator that you can set.

Program starts in demo mode

If the connection between your workstation and the iSeries is interrupted while you are working (including an abnormal termination of Infoprint Designer), Infoprint Designer might start in demo mode when you restart the program. A message saying that the license is in use by your userid is displayed. Because of the way the iSeries session ended, the license you were using was not returned to its “not in use” state. In demo mode, you cannot save your work or open overlay and layout files that Infoprint Designer created.

In this case, wait approximately ten minutes before trying to start Infoprint Designer again. By then, the license that was in use expires and you can use the program in full-function mode again.

Another problem that can cause the program to start in demo mode involves permissions on a directory on the iSeries. The public authority to `\QIBM\ProdData\AFPDesigner\session` must be *RWX. This authority is set by the Infoprint Designer installation program and should not be changed.

If you saved your ID and password so that Infoprint Designer automatically logs you on, and your iSeries password changes, the program will start in demo mode. To change the password that Infoprint Designer uses to log you on to the iSeries, follow these steps:

1. With Infoprint Designer started in demo mode, open the **Edit** menu and select **Preferences...**.
2. On the **iSeries** page, specify your new password.
3. Select **OK**.

Proof page on PC printer looks different than iSeries output

The proof print process using your PC printer captures the contents of the **View/Edit** window and creates a bitmap at the resolution of your PC printer. This process is entirely different from the process used when printing with AFP resources created by Infoprint Designer on an iSeries AFP printer. Differences in printer resolution and data stream can cause the output of the two print operations to vary.

Note: Because the proof print function sends the contents of the **View/Edit** window to the printer, you will normally see all of the overlays and layout data in the project in a proof print. To print only the layout data, in the **Window** menu, deselect **Merge windows**.

Problems mapping a drive with Windows Explorer on your iSeries

Before installing Infoprint Designer, you might discover that you cannot map a drive through Windows Explorer. If this happens, contact your iSeries system administrator to ensure that your iSeries is running NetServer, which is included as part of your iSeries operating system.

If the installation program issues this message:

```
Installation not possible
```

Ensure that the drive you have mapped to your iSeries is at a level in the directory structure higher than `\\`*`server-name`*`\QIBM\ProdData\AFPDesigner`. Although it depends on how you have set up file sharing in your iSeries integrated file system, the drive should be mapped to `\\`*`server-name`*`\QIBM`.

Pasting text into an overlay yields hex data

If you have copied text onto the clipboard and want to paste it into a text object on an overlay, you must have the blinking I-beam cursor reflecting that you are in text entry mode in the **Overlay Editor** when you select **Paste**. If you select **Paste** when you are not in text entry mode, the text data in hexadecimal form is placed on the overlay.

Landscape overlay rotates to portrait when starting Layout Editor

If you designed an overlay in landscape presentation and then switch to the **Layout Editor** to map data, the contents of the **View/Edit** window might be rotated to portrait presentation. To set the presentation of the layout to landscape,

1. from the **Edit** menu, select **Page properties...**.
2. On the **Size/first line**page, for **Direction**, select **Down**.
3. Select **OK**. The **View/Edit** window is rotated to landscape presentation.

To avoid this situation for future layouts, on the **Layout properties** dialog, select **Landscape** when creating a new layout.

The PC copy of an iSeries spooled file does not format correctly in the Data window

When you download a spooled file from your iSeries, a copy of it is saved on the PC so that Infoprint Designer can reopen the data file anytime you work with the project that uses that data. The spooled file attributes, such as the host code page and record format, are saved in an .INF file with the same name as the name you provided for the PC copy of the data file.

On the Layout Editor's **File** menu, if you use the **Get sample data** function to open the PC copy of the file, the values from the .INF file are shown in the **Line data options** dialog. If you change these values, for example, changing code page 37 for EBCDIC data to the ASCII code page 437 or entering a different record length than the original file had, Infoprint Designer might not display the data correctly in the **Data window**.

To solve the problem without changing anything in the project, use Notepad to open the .INF file with the same name as the data file in the `Designer\data` directory. Make sure the values on the **Line data options** dialog match the values included in the .INF file. If they are not the same, change the values on the **Line data options** dialog. Do not change the .INF file.

Problems printing to an iSeries-attached PCL printer

If you cannot print the output from Infoprint Designer on a PCL printer, check the version of your operating system and the applied PTFs.

- Printing output formatted with form definitions and page definitions created by Infoprint Designer on a PCL printer is not supported on OS/400 V4R5.
- On OS/400 V5R1, PCL printing of Infoprint Designer layouts requires installation of PTF SI02688.
- Ensure that Convert line data(*YES) is specified on the printer file being used. For more information, see step 2 in Chapter 6, "Using your AFP resources with your iSeries application," on page 55.

Problems printing to an iSeries-attached IPDS printer

When printing your job that uses resources created with Infoprint Designer these are some common problems you might have:

- Fonts on printed page appear different than on Designer screen
- When printing from the iSeries, the job goes on HOLD.
- Overlays or page segments are not being printed.

If you have one of the above problems, try these solutions:

- On the iSeries, use the command DSPMSG QSYSOPR to check for font substitution or “resource not found” messages. If there are such messages, make sure that the fonts (character sets and code pages), page segments, and overlays that were sent up from Designer are in a library that is in the library list at the time the job is run.
- If the font library used for the Designer project is RASTER.LBP, check to see if the resolution of the font (240 or 300-pel) matches the resolution of the printer being used. To check the font resolution, use the WRKFNTRSC command.
- If the font library used for the Designer project is DEFAULT, check to see if the printer being used supports downloaded outline fonts.

If you have with data printing twice, see “Data prints twice from iSeries.”

Data prints twice from iSeries

If you see the same print data twice on output from the iSeries that was formatted using a layout built by Infoprint Designer, it is likely that the default suppression built by Infoprint Designer got deleted. Infoprint Designer builds this default suppression when you start the layout. It is initially set up to suppress printing of all data. This way, only the fields that you map into the **View/Edit** window print. Any data in the spooled file that you leave unmapped is suppressed. If the suppression is deleted from the form definition, the iSeries will use its defaults to print data that you did not map in Infoprint Designer. This could cause the data to appear twice; once by default and the second time as you mapped it. Restoring the DFLT suppression should resolve this problem.

To restore the suppression, follow these steps:

1. From the **Window** menu, select **Form definition** and right click the subgroup.
2. On the **Edit subgroup** dialog, enter DFLT in the **Suppression** area and select **Define**. DFLT moves into the list beneath the entry field.
3. Select **OK**.

“Licence not valid” error message

When you are not in demo mode, Infoprint Designer checks for a license on the iSeries server every 10 minutes. If it cannot connect to the iSeries, you will get a “Licence not valid” error message. There are several situations that can cause this error to appear. If you get this message, check these:

- Make sure your FTP server is started. To check this, on the iSeries look for jobs qtftp* in SBS QSYSWRK. If the server is not started, enter STRTCPSVR *FTP.
- Make sure the IP address specified for your FTP server is correct.
- The public authority to `\QIBM\ProdData\AFPDesigner\session` must be *RWX. This authority is set by the Infoprint Designer installation program and should not be changed.
- If your iSeries password changed, follow the steps in “Program starts in demo mode” on page 75 to change the password that Infoprint Designer uses to log you on to the iSeries.

Appendix A. Infoprint Designer sample projects

Table 3. Sample projects supplied with Infoprint Designer

Project	Description	Form definition features	Page definition features
BASIC	Basic data layout with invoice overlay; simplex	Single copy	Mapping most but not all fields. Changes in position and fonts from SCS printing
TWOCPY	Two copies of each page (Invoice and Packing slip)	Subgroups to select input bins and overlay and to select suppression of prices on packing slip	Field mapping and suppression of prices for packing slip.
BACK1	Like BASIC with Terms and Conditions page on back	Constant back (overlay prints with no application data)	Field mapping
BACK2	Like TWOCPY with Terms and Conditions on back of Invoice and a blank back on the packing slip	Subgroups and constant back	Field mapping and suppression of prices for packing slip.
COND	Like TWOCPY with conditional processing based on “Continued”.	Subgroups to select input bins and overlay and to select suppression of prices on packing slip.	Different page format used for Total page versus Continuation pages based on conditional processing.
COMBO	Subgroups, constant back, and conditional processing.	Subgroups and constant back	Different page format used for Total page versus Continuation pages based on conditional processing.
COR	Landscape project to simulate computer output reduction (COR) function on iSeries.	Overlay used is rotated 90°	Print direction DOWN specified in page format.
SEEDS	Multiple-up layout for a label application.	Landscape orientation	Manual duplication and repositioning of printlines.

Note: *IBM @server iSeries Printing VI: Delivering the Output of e-business* provides detailed descriptions of how each of the sample projects was created.

Appendix B. Additional Font Information

Adding fonts

If you have fonts in AFP format on your PC that you want to use with Infoprint Designer, you must update the font catalog to reference them. You need to know if the fonts you are adding are in raster or outline format. If they are raster fonts, you need to know their resolution (240 or 300 dpi). IBM recommends that you keep these fonts in a separate directory from the AFP Font Collection that is installed with Infoprint Designer. The default directories used by Designer are `\Designer\fonts\raster` for raster fonts and `\Designer\fonts\outline` for outline fonts.

Follow these steps to add the fonts to Infoprint Designer's font catalog:

1. Start Infoprint Designer and do not open a project.
2. In the Overlay Editor, from the **Edit** menu select **Change library**. If you are adding raster fonts, Select `\Designer\userisis\RASTER.LBP` as your library profile. If you are adding outline fonts, select `\Designer\userisis\DEFAULT.LBP` as your library profile.
3. From the **Defaults** menu select **Libraries**. A dialog like this opens:

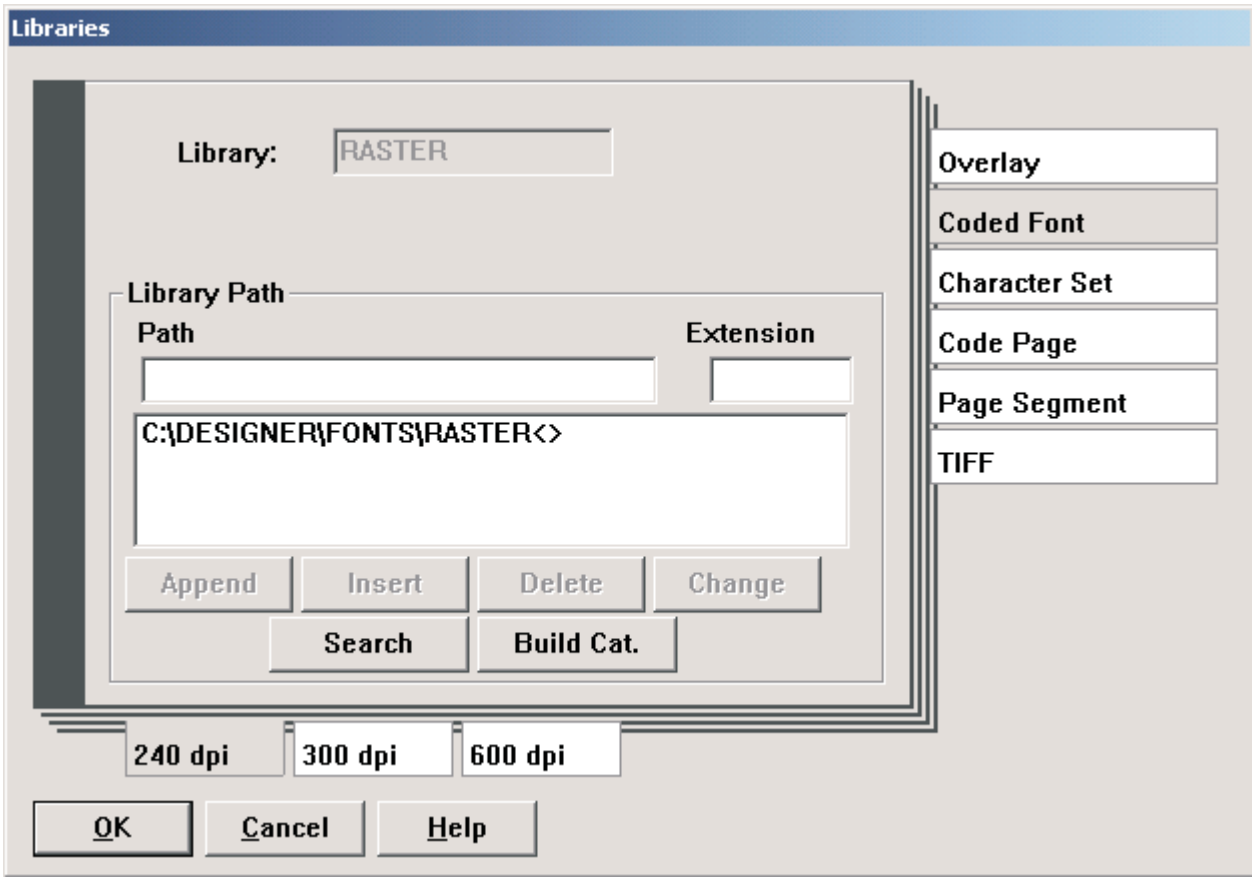

Figure 33. Libraries dialog

4. Select the **Coded font** tab on the right side. If you are using raster fonts, select the proper dpi tab from the bottom of the dialog. For example, **300 dpi**. The selected tab is gray.
5. Enter the directory in which the fonts are stored in the **Path** field. For example, `c:\Designer\myfonts`. Select **Append**. The path appears in the list of paths.
6. Select the **Character set** tab on the right side of the dialog. If you are using raster fonts, make sure the appropriate dpi tab stays selected on the bottom of the dialog.
7. In the **Path** field, enter the same directory you specified in step 5 and select **Append**. The path appears in the list of paths.
8. Select **OK**.
9. Messages are issued that say the Font catalog is being built, with filenames flashing by. Depending on the speed of your PC, this might take a while.
10. When the font catalog build has completed, test to see if the fonts are accessible to Infoprint Designer. To do this, select the **Text** icon from the toolbar. Click in the **View/Edit** window. The **Select Font** dialog opens. Scroll the list of **Typefaces** to find your new fonts.

    Note: The entries **Typefaces** list are retrieved from a description field in the font file. If your AFP font provider did not supply meaningful text in this description field, you might see a dot or a line as an entry for your new font.

Using MICR fonts with Infoprint Designer

IBM provides three MICR fonts in AFP format that are installed with the MICR font option by the Infoprint Designer installation program. The installation program builds references to these fonts into the Infoprint Designer font catalogs, so you can select them from the font list. All of these MICR fonts are 300 dpi raster fonts that were developed for use with the IBM 4028 printer and have not been verified to print acceptably on any other IBM printers or printers from other manufacturers. IBM does not claim that the use of these MICR fonts on any printer meets the requirements of check-processing equipment.

Two of the MICR fonts provided are only accepted by AFP printers that identify themselves as MICR-capable printers to PSF for OS/400. If your AFP printer rejects these fonts, contact the vendor providing your MICR capability. If you choose to print your MICR application on a PCL printer using Host Print Transform[1], these fonts work, but the guarantees provided by AFP for secure MICR printing are not enforced.

The third MICR font is accepted by all printers, but prints with hollow characters. This lets you develop the overlays and layout to test your MICR application even if a MICR printer is not available.

Table 4 on page 83 summarizes the font files provided as unsupported MICR samples.

1. In V4R5, Host Print Transform does not support PCL printing using page definitions and form definitions created by Infoprint Designer. In V5R1, PCL printing requires installation of PTF 2I02688. V5R2 does not require any PTFs.

Table 4. Font files provided as unsupported MICR samples

File name	Contents
C0R0AE13.300	E13B character set; true MICR font
C0R0AT13.300	E13B character set; MICR test font; hollow characters
C0R0ACMC.300	CMC-7 character set; true MICR font
T1001032	E13B code page
T1001033	CMC-7 code page
X0AE13	Coded font for C0R0AE13 and T1001032
X0AT13	Coded font for C0R0AT13 and T1001032
X0ACMC	Coded font for C0R0ACMC and T1001033

If you have any other AFP MICR fonts on your PC that you want to use with Infoprint Designer, use the procedure described in “Adding fonts” on page 81 to define the fonts to Infoprint Designer.

Font file naming conventions

AFP applications on the iSeries commonly use 8-character names for coded font files, such as X0N210BC. Infoprint Designer uses 6-character names for coded font files, and truncates the X0 (raster) or XZ (outline) prefix, showing only the final four characters of the font name in, for example, the toolbar of the Overlay Editor. Because of this and other cases where the 8-character font names could not readily be truncated to four characters, the Expanded Core fonts in the AFP Collection are provided in both naming schemes: 8-character names and 6-character names. Infoprint Designer installs only the fonts with the 6-character names.

To ensure that you have this same set of fonts installed on your iSeries, ensure that the libraries named CF4LA1 (raster) and CO4LA1 (outline) are restored from the AFP Font Collection. Instructions to do this are available on the iSeries (AS/400) AFP Font Collection Tools Support and Maintenance Web page at `http://www.ibm.com/printers/R5PSC.NSF/web/rdfont01`.

Use Table 5 on page 84 to help you decode the 4-character font names used by Infoprint Designer. Assume that the 4-character name (for example, H0FT) has the form ***RSTP***, where

R Type family
S Style and weight
T Code page, combined with style and weight
P Point size

With Table 5 on page 84, you can see that the **H0FT** font is a Roman-Bold Helvetica font using the International #5 code page in 30-point.

Table 5. Decoding 4-character font names used by Infoprint Designer

Letter	Category	Possible Values	
R	Type Family	**H** Helvetica **N** Times New Roman **4** Courier **5** Letter Gothic **6** Gothic Text **7** Prestige **8** Boldface	
S	Style and Weight	**0 - B** Values assigned randomly for Roman medium, Roman bold, Italic medium, and Italic bold.	
T	Code page (combined with style and weight)	**D** International #5 code page with Roman medium **F** International #5 code page with Roman bold **E** International #5 code page with Italic medium **0** International #5 code page with Italic bold **S** Euro code page with Roman medium **V** Euro code page with Roman bold **U** Euro code page with Italic medium **W** Euro code page with Italic bold	
P	Point size	**Typographic fonts:** **6** 6 points **7** 7 points **8** 8 points **9** 9 points **0** 10 points **A** 11 points **B** 12 points **C** 13 points **D** 14 points **E** 15 points **F** 16 points **G** 17 points **H** 18 points **I** 19 points **J** 20 points **K** 21 points **L** 22 points **M** 23 points **N** 24 points **O** 25 points **P** 26 points **Q** 27 points **R** 28 points **S** 29 points **T** 30 points **U** 31 points **V** 32 points **W** 33 points **X** 34 points **Y** 35 points **Z** 36 points	**Uniformly spaced fonts:** **5** 5 points (24 pitch) **6** 6 points (20 pitch) **7** 7 points (17.1 pitch) **8** 8 points (15 pitch) **9** 9 points (13.3 pitch) **0** 10 points (12 pitch) **B** 12 points (10 pitch) **D** 14 points (8.5 pitch) **J** 20 points (6 pitch)

For a complete table mapping 6-character font names to 4-character font names, refer to *A Guide to Understanding AFP Fonts* at `http://publib.boulder.ibm.com/prsys/pdfs/Guide-to-fonts.pdf`.

Appendix C. Using the IPDATA Sample Application

As described in Chapter 6, “Using your AFP resources with your iSeries application,” on page 55, after your AFP resources have been uploaded to the iSeries, you must change the printer file and run the application again to see the results. The IPDATA sample application facilitates these steps for any project built with the data from the invoicing program referenced in the examples in this book. If you do not have the IPDATA sample application installed on your iSeries, follow steps 1 and 5 in “Installing Infoprint Designer on your iSeries” on page 8.

The IPDATA sample application can be run in two modes:

- Creating the sample spooled file
- Applying the project’s page definition and form definition. This involves re-running the sample application.

IPDATA includes the INV command that runs the application in both modes.

Creating a sample spooled file:

1. After the IPDATA library is installed, from an iSeries command interface, enter Edit Library List (EDTLIBL) or Add Library List Entry (ADDLIBLE) command to add IPDATA to your library list.
2. Enter INV and press F4. You can change any of the parameters except the page definition and form definition parameters. The Size of file parameter lets you create a small sample file (6 pages) or a large sample file (117 pages).
3. Enter Work with All Spooled Files (WRKSPLF) to verify that the INVSCS spooled file has been created. It is created on your default output queue.

Running the sample application with your new design:

1. Save your Infoprint Designer project. From the **File** menu, select **Upload to iSeries...** to compile and transfer all of the new print resources.
2. On the iSeries, ensure that the libraries you need (including the font libraries) are in your library list. You can use Edit Library List (EDTLIBL) to do this.
3. Enter INV and press F4. Fill in any values you want, be sure to specify the page definition and form definition names. The form definition and page definition names are the same as the layout file’s name.
4. The INV command automatically takes care of the other printer file changes. In this mode, the INV command overrides the printer file for the sample invoicing application (printer file INVSCS) and runs the application program.
5. Use Work with All Spooled Files (WRKSPLF) or Operations Navigator to verify that the new INVSCS spooled file has been created. On the Work with All Spooled Files screen, the new spooled file has an asterisk next to the number of pages indicating that it is an AFP spooled file.

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EuroReady

Infoprint Designer is capable of processing data containing the euro sign. Font character sets and code pages that contain and map the euro sign consistently with the application must be present either in a host library or in the printer. AFP fonts that support the euro sign are included in the AFP Font Collection for OS/400 that ships with Program Number 5648-B45 and 5722–SS1.

Glossary

This glossary defines technical terms and abbreviations that are used in this documentation. If you do not find the term you are looking for, refer to the index of this publication or view *IBM Dictionary of Computing*, located at: `http://www.ibm.com/networking/nsg/nsgmain.htm`.

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Definitions that are specific to IBM products are so labeled—for example, “In SNA,” or “In the 3820 printer.”

These cross-references are used in this glossary:

- **Contrast with.** Refers to a term that has an opposite or substantively different meaning.
- **See.** Refers to multiple-word terms in which this term appears.
- **See also.** Refers to related terms that have similar, but not synonymous, meanings.
- **Synonymous with.** Appears in the commentary of a preferred term and identifies less desirable or less specific terms that have the same meaning.

A

Advanced Function Presentation™ (AFP). A set of licensed programs, together with user applications, that use the all-points-addressable concept to print on presentation devices. AFP includes creating, formatting, archiving, retrieving, viewing, distributing, and printing information. See *presentation device*.

AFP. See *Advanced Function Presentation.*

AFP data stream. A presentation data stream that is processed in the AFP environment. MO:DCA-P is the strategic AFP interchange data stream. IPDS™ is the strategic AFP printer data stream.

AFP Viewer. (1) Refers to the AFP Workbench Viewer and the AFP Viewer Plug-in. A Windows IBM-licensed PC product that lets you see AFP output in a WYSIWYP (what-you-see-is-what-you-print) format. (2) A Windows platform for the integration of AFP-enabling applications and services.

AFPDS. A term formerly used to identify the composed page; MO:DCA-P-based data stream that is interchanged in AFP environments.

architecture. The set of rules and conventions that govern the creation and control of data types such as text, image, graphics, font, fax, color, audio, bar code, and multimedia.

ASCII. American National Standard Code for Information Interchange data encoding, which is the normal (default) type of data encoding in an AIX® environment. Contrast with *EBCDIC*.

B

Bar Code Object Content Architecture™ (BCOCA™). An architected collection of control structures used to interchange and present bar code data.

BCOCA. See *Bar Code Object Content Architecture*.

bin. A paper supply on a cut-sheet printer. See also *cassette*.

bitmap font. See *raster font*.

C

carriage control character. An optional character in an input data record that specifies a write, space, or skip operation.

cassette. In a cut-sheet printer, a movable enclosure for paper supply. See also *bin*.

ccsid. See *coded character set identifier*.

character. (1) A symbol used in printing. For example, a letter of the alphabet, a numeral, a punctuation mark, or any other symbol that represents information. (2) A byte of data.

channel code. A number from 1 to 12 that identifies a position in the page definition. A carriage control character can select a position defined by a particular channel code.

character set. (1) A finite set of characters upon which agreement has been reached and that is considered complete for some purpose; for example, each of the characters in ISO Recommendation R646 “6- and 7-bit coded character sets for information processing interchange.” (2) For page printers, the font library member that contains the character graphics and their descriptions.

coded character set identifier. The ID associated with a code page.

coded font. A font library member that associates a code page and a font character set. For double-byte fonts, a coded font associates more than one pair of code pages and font character sets.

code page. A font component that associates code points with character identifiers. A code page also identifies how undefined code points are handled.

code point. A one-byte code representing one of 256 potential characters.

concatenate. (1) To link together. (2) To join two character strings.

concatenated data set. In iSeries, a group of logically connected data sets that are treated as a single data set for the duration of a job step. See also *data set*.

continuous forms paper. A series of connected forms that feed continuously through a printing device. The connection between the forms is perforated to enable a user to tear them apart. Before printing, the forms are stacked, folded along the perforations. Contrast with *cut sheet paper*.

control character. A character that starts, changes, or stops any operation that affects recording, processing, transmitting, or interpreting data (such as carriage return, font change, and end of transmission).

cut sheet paper. Paper that is cut into separate sheets before it is printed on. Contrast with *continuous forms paper*.

D

data set. A named set of records that are stored and processed as a unit. Synonym for *file*.

data stream. (1) All information (data and control commands) sent over a data link, usually in a single read or write operation. (2) A continuous stream of data elements being transmitted, or intended for transmission, in character or binary-digit form, using a defined format.

default. An attribute, value, or option that is assumed when none is explicitly specified. (I)

disabled mechanism. PSF support that enables jobs to print with alternative options if the printer selected for the job does not support a requested option. Contrast with *enabled.*.

document. (1) A publication or other written material pertaining to a specific subject or related subjects. (2) In word processing, a collection of one or more lines of text that can be named and stored as a separate entity.

double-byte coded font. A font in which each character is defined by two bytes. The first byte defines a coded font section and the second defines a code point in that section. Double-byte coded fonts are needed for the support of languages that require more than 256 graphic characters. Two bytes are required to identify each graphic character. Kanji is printed by using a double-byte font. Contrast with *single-byte coded font*.

download. To transfer data from a processing unit to an attached device such as a microcomputer for processing.

duplex printing. Printing on both sides of a sheet of paper. Contrast with *simplex printing*.

E

EBCDIC. Extended binary-coded decimal interchange code.

electronic form. See *overlay*.

electronic overlay. See *overlay*.

enabled. (1) Pertaining to a state of the processing unit that allows certain types of interruption. (2) A condition of the printer (physically selected) in which the printer is available to the host processor for normal work. Contrast with *disabled mechanism*.

end-user interface. A method by which a customer can obtain the services of a product, for example, coding samples, commands and command lists. Not every product has an end-user interface. Some products provide their services through programming interfaces, some provide services through a command line interface, and others provide services only to other products.

escape character. The control character X'2BD3' in a text-control sequence that indicates the beginning of the sequence and the end of any preceding text.

euro. The monetary unity of the European Monetary Union (EMU), introduced alongside national currencies on the first of January, 1999.

EuroReady product. A product is EuroReady if the product, when used in accordance with its associated

documentation, is capable of correctly processing monetary data in the euro denomination, respecting the euro currency formatting conventions (including the euro sign). This assumes that all other products (for example, hardware, software, and firmware) that are used with this product are also EuroReady. IBM hardware products that are EuroReady might or might not have an engraved euro sign key on their keyboards.

exception. A condition that exists when the printer:
- Detects an invalid or unsupported command, order, control, or parameter value from the host
- Finds a condition of which the host system must be notified
- Detects a condition that requires the host system to resend data

execution. The process of carrying out an instruction or instructions of a computer program by a computer. (I) (A)

extended binary-coded decimal interchange code (EBCDIC). A coded character set of 256 eight-bit characters.

F

field. Individual pieces of data, such as a customer name or address, that you map onto the page

font. A family or assortment of characters of a given size and style; for example, 9-point Bodoni Modern. (A)

font character set. Synonym for *character set*.

form. A division of the physical medium. Multiple forms can exist on a physical medium. For example, a roll of paper might be divided by a printer into rectangular pieces of paper, each representing a form. An envelope is an example of a physical medium that has only one form. The IPDS architecture defines 4 types of form: cut-sheets, continuous forms, envelopes, and computer output on microfilm. Each type of form has a top edge, a front side, and a back side. Synonymous with *sheet*.

format. (1) A specified arrangement of such things as characters, fields, and lines, usually used for displays, printouts, or files. (2) To arrange such things as characters, fields, and lines. (3) To prepare a document for printing in a specified format.

form definition. A resource that PSF uses to define the characteristics of a form. It specifies overlays to be used (if any), paper source (for cut-sheet printers), duplex printing, text suppression, the position of MO:DCA™ data on the form, and the number of copies and modifications of a page.

G

GOCA. See *Graphic Object Content Architecture*.

Graphic Object Content Architecture (GOCA). An architecture that provides a collection of graphics values and control structures used to interchange and present graphics data.

GIF. See *graphical image format*.

graphical image format (GIF). A digital format that is used to compress and transfer graphical information over computer networks. For example, GIF is a common format for graphical information on the Internet.

H

hardcopy. (1) A copy of a display image that is generated on an output device such as a printer and can be carried away. (T) (2) A printed copy of machine output in a visually readable form, for example, printed reports, listings, documents, and summaries.

hexadecimal. Pertaining to a numbering system with base of 16. Valid numbers use the digits 0 through 9 and characters A through F, where A represents 10 and F represents 15.

host font. See *host resource*.

host processor. The processing unit to which the page printers are attached through a data-transfer interface.

host resource. A resource found in a system library, in a user library, or inline in the print data set.

host system. (1) A data processing system that prepares programs and operating environments for another computer or controller. (2) The data processing system to which a network is connected and with which the system can communicate.

I

image. A pattern of toned and untoned pels that form a picture.

image data. A pattern of bits, with values of 0 and 1, that defines the pels in an image. (A 1-bit is a toned pel.)

Image Object Content Architecture (IOCA). An architected collection of constructs used to interchange and present images.

IOCA. See *Image Object Content Architecture*.

initialize. (1) In programming languages, to give a value to a data object at the beginning of its lifetime. (I) (2) To set counters, switches, addresses, or the

contents of storage to zero or other starting values at the beginning of, or at prescribed points in the operation of, a computer routine. (A) (3) To prepare for use. For example, to initialize a diskette.

inline. The direction of successive characters in a line of text. Synonymous with *inline direction*.

inline direction. The direction of successive characters in a line of text.

inline resource. A resource contained in the print data set.

input/output (I/O). Pertaining to a device whose parts can perform an input process and an output process at the same time. (I)

Intelligent Printer Data Stream™ (IPDS). (1) The data stream generated by PSF to send to an IPDS page printer. (2) An all-points-addressable data stream that enables users to position text, images, and graphics at any defined point on a printed page.

interface. A shared boundary. An interface can be a hardware component used to link two devices. It can also be a portion of storage or registers accessed by two or more computer programs.

I/O. Input/output.

IPDS. See *Intelligent Printer Data Stream.*

iSeries Information Center. A Web site that contains technical information about the iSeries, including instructions for completing tasks and informational topics. You can access the version of the Information Center corresponding to the version of the OS/400 operating system you have installed. To access the Information Center, go to `http://www.ibm.com/servers/eserver/iseries/infocenter`.

J

JPEG. Joint Photographic Experts Group. A standard format for storing compressed true-color images.

Joint Photographic Expert Group (JPEG). The name of the committee that developed the JPEG standard format.

L

library. A file or a set of related files, for example, a page definition library containing one or more page definition files.

licensed program. A utility that performs a function for the user and usually interacts with and relies upon system control programming or some other IBM-provided control program. A licensed program contains logic related to the user's data and is usable or adaptable to meet specific requirements.

line data. Data prepared for printing on a line printer such as an IBM 3800 Printing Subsystem Model 1. Line data is usually characterized by carriage control characters and table reference characters. Contrast with *MO:DCA*.

line printer. A device that prints a line of characters as a unit. (I) (A) Contrast with *page printer*.

logical page. A presentation space. One or more object areas or data blocks can be mapped to a logical page. A logical page is rectangular and has specifiable characteristics such as size, shape, orientation, and offset. Orientation and offset are specified relative to a coordinate system for the medium.

logical page origin. (1) The point on the logical page from which the positions of images, graphics, page overlays, and text with 0-degree inline direction are measured. (2) The point on the logical page represented by Xp=0, Yp=0 in the Xp coordinate system.

M

medium overlay. An electronic overlay that is invoked by a form definition for printing at a fixed position on the form. See also *page overlay*.

Microfilm device. An output device that presents a hardcopy on microfilm.

migration. Activities that relate to the installation of a new version or release of a program to replace an earlier level. Completion of these activities ensures that the applications and resources on your system will function correctly at the new level.

Mixed Object Document Content Architecture™. A strategic, architected, device-independent data stream used for interchanging documents.

MO:DCA. See *Mixed Object Document Content Architecture.*

MO:DCA data. Print data that has been composed into pages. Text-formatting programs such as DCF can produce composed text data that consists entirely of structured fields.

MO:DCA data page. A page of print data that consists entirely of structured fields.

MO:DCA print data set. A print data set that consists entirely of structured fields.

MO:DCA-P. Mixed Object Document Content Architecture for Presentation.

multiple-up printing. Printing more than one page of application data on a single surface of a sheet of paper. Multiple-up printing is specified in the page definition.

N

N-up printing. Dividing a side of a sheet into a fixed number of equal-size partitions. N-up printing is specified in the form definition.

nested resource. A resource mapped in an overlay.

non-square pixels. An image that has different resolutions in the X (horizontal) and Y (vertical) directions is said to have non-square pixels.

O

outline font. A font technology in which the graphic character shapes are represented by a series of mathematical expressions that define the outer edges of the strokes. The resulting graphic character shapes can be either solid or hollow. Outline fonts can be scaled (sized) to any size. The IBM outline font character sets have a prefix of CZ. Contrast with *raster font*.

overlay. A collection of constant data, such as lines, shading, text, boxes, or logos, that is electronically composed in the host processor and stored in a library. It can be merged with variable data during printing. Contrast with *page segment*.

P

page. A collection of data that can be printed on a physical sheet of paper.

page format. A subset of a page definition, containing controls that govern the arrangement of text on a page.

page overlay. An electronic overlay that can be invoked for printing and positioned at any point on the page in the print data. See also *medium overlay*.

page printer. Any of a class of printers that accepts MO:DCA-P pages. Contrast with *line printer*.

page segment. A resource containing MO:DCA data and images, prepared before formatting and included as part of the input for a print job.

parameter. (1) A variable that is given a constant value for a specified application and that may denote the application. (I) (A) (2) An item in a menu for which the user specifies a value or for which the system provides a value when the menu is interpreted. (3) Data passed between programs or procedures.

pel. See *picture element.*

physical medium. A physical entity on which information is presented. Examples of physical media are display screens, paper, foils, microfilm, and labels.

picture element (pel). An element of a raster pattern about which a toned area on the photoconductor might appear. See also *raster pattern*.

pitch. A unit of measurement for the width of a printed character, reflecting the number of times a graphic character can be set in 1 linear inch. For example, 10-pitch has 10 graphic characters per inch. Contrast with *point*.

point. A unit of measurement about 1/72 of an inch. It used to measure the height of a font. Contrast with *pitch*.

point size. The height of a font in points.

presentation device. A device that produces character shapes, graphics pictures, images, or bar code symbols on a physical medium. Examples of physical media are display screens, paper, foils, microfilm, and labels.

print job. The data that a user submits to PSF for printing.

Print Services Facility (PSF). PSF is a licensed IBM program that manages and controls the input data stream and output data stream that required by supported IBM page printers. PSF manages printer resources such as fonts, images, overlays, form definitions, and page definitions, and provides error recovery for print jobs.

When printing line data, PSF supports external formatting by using page definitions and form definitions. This external formatting extends page printer functions such as electronic forms and use of typographic fonts without any change to applications programs.

printable area. The area on a sheet of medium on which print can be placed.

printer. A presentation device that produces hardcopy output. See *presentation device*.

processor. In a computer, a functional unit that interprets and executes instructions. (I) (A)

PSF. See *Print Services Facility*.

R

raster font. A font technology in which the graphic characters are defined directly by the raster bit map. Contrast with *outline font*.

raster pattern. A series of picture elements (pels) in scan lines to form an image. See also *page segment.*

resolution. In computer graphics, a measure of the sharpness of an image. It is expressed as the number of lines and columns on the display screen or the number of pels per unit of linear measure.

resource. (1) A collection of printing instructions that are used by PSF in addition to the print data set to produce printed output. PSF resources include coded fonts, font character sets, code pages, page segments, overlays, form definitions, and page definitions. (2) Any source of aid that is used for performing a task, such as disk storage space, computer processing time, and communication lines.

resource name. The name under which a resource object is stored, the first two characters of which indicate the resource type:

X0-XG,XZ	Coded font
T1	Code page
C0-CG,CZ	Font character set
S1	Page segment
F1	Form definition
P1	Page definition
O1	Overlay
H1	Recommended for microfilm

rotation. The number of degrees a graphic character is turned relative to the page coordinates.

S

segment. Synonym for *page segment*.

sheet. A division of the physical medium on which data is presented. The IPDS architecture defines 4 types of sheet: cut-sheet forms, continuous forms, envelopes, and computer output on microfilm. Each sheet has a front side and a back side. Some types of media consist of multiple sheets; for example, a roll of continuous forms can be divided at the perforations into rectangular sheets. Each sheet usually has carrier or tractor-feed strips, also. Microfilm is another example of a medium comprising multiple sheets, whereas an envelope has only one sheet. Synonymous with *form*.

simplex printing. Printing on one side of the paper. Contrast with *duplex printing*.

single-byte coded font. A font in which the characters are defined by a one-byte code point. A single-byte coded font contains only one coded font section. Contrast with *double-byte coded font*.

spooled file. A file created by an application program that contains the actual information to be printed. It also contains some of the data that controls the format of the printing.

structured field. A self-identifying, variable-length, bounded record that can have a content portion that provides control information, data, or both.

subpage. A part of a logical page on which data can be placed. In the page definition, multiple subpages can be placed on a physical page as specified in the print data.

syntax. The rules and keywords that govern the use of a programming language.

T

table reference characters (TRC). An optional control character in an input record that identifies the font with which the record is to be printed. The table reference character corresponds to a font number defined in a page definition font list or to the order of font names listed in the CHARS parameter in the JCL.

Tag Image File Format (TIFF). A graphic file format used to store and exchange scanned images; compatible with a number of personal computing platforms.

terminate. (1) To stop the operation of a system or device. (2) To stop execution of a program.

text. A graphic representation of information on an output medium. Text can consist of alphanumeric characters and symbols that are arranged in paragraphs, tables, columns, or other shapes.

TIFF. See *Tag Image File Format*.

token ring. A network configuration in which tokens are passed in a circuit from node to node. A node that is ready to send can capture the token and insert data for transmission.

trace. A record of the execution of a computer program. It exhibits the sequences in which the instructions were executed. (A)

TRC. See *table reference character*.

U

upload. (1) To transfer programs or data from a connected device, typically a personal computer, to a computer with greater resources. (T) (2) To transfer data from a device, such as a workstation or a microcomputer, to a computer. Contrast with *download*.

V

Viewer. See *AFP Workbench Viewer*.

X

X-axis. In printing, an axis perpendicular to the direction in which the paper moves through the printer. See also *Y-axis*.

X-extent. A measurement along the X-axis.

Y

Y-axis. In printing, an axis parallel to the direction in which the paper moves through the printer. See also *X-axis*.

Y-extent. A measurement along the Y-axis.

Bibliography

This bibliography lists the titles of publications containing additional information about Infoprint Server for iSeries, the OS/400 operating system, Advanced Function Presentation, and related products.

The titles and order numbers might change from time to time. To verify the current title or order number, consult your IBM marketing representative.

You can obtain many of the publications listed in this bibliography from the Printing Systems Digital Library: `http://www.ibm.com/printers/r5psc.nsf/web/manuals` or the Online Publications Website: `http://publib.boulder.ibm.com/`.

Infoprint Server

Publication	Order Number
Infoprint Server for iSeries: User's Guide	G544-5775-03
Infoprint Server for iSeries: Introduction and Planning Guide	G544-5774-02

Advanced Function Presentation (AFP)

Publication	Order Number
iSeries Guide to Output	S544-5319-05
Printing and Publishing Cluster Collection CD-ROM	SK2T-2921

OS/400

Publication	Order Number
iSeries Guide to Output	S544-5319-05
AS/400 Command Language Reference	SC41-3722
Printer Device Programming	SC41-5713-06
Install, upgrade, or delete OS/400 and related software	SC41-5120-07

PrintSuite

Publication	Order Number
APU Guide for PrintSuite	S544-5351
SAP/R3 Guide for PrintSuite	S544-5412
Page Printer Formatting Aid: User's Guide	S544-5284-07
AFP Toolbox for Multiple Operating Systems User's Guide	S544-5292

Redbooks

Publication	Order Number
IBM AS/400 Printing V	SG24-2160
IBM @server iSeries Printing VI: Delivering the Output of e-business	SG24-6250

TCP/IP

Publication	Order Number
Internetworking with TCP/IP, Principles, Protocols, and Architecture	SC31-6144
TCP/IP Tutorial and Technical Reference	GG24-3376
TCP/IP Configuration and Reference	SC41-5420-04

Index

Special characters

A

B

C

D

E

F

G

H

R

S

T

U

W

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Getting Started
Version 1 15

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