



POWER TO THE PRINTER™

IBM

iSeries Print and eOutput Solutions

Content Management Quarterly Call

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 ***e-business printing solutions***



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Notes

This presentation is focused on iSeries software solutions for e-business output. The conference call segment will hone in on the synergies with these solutions and Content Management solutions.

 ***e-business printing solutions***



Topics

- ▶ Objective: Solution Synergies
- ▶ e-Output
- ▶ Infoprint Scenarios and Solutions
- ▶ Infoprint Products
- ▶ Opportunity
- ▶ Summary, Action
- ▶ Resources
- ▶ Infoprint on eServer



Notes

The game plan for today's session. The presentation has far more detail than what will be covered.

We'll first define e-business output, or e-output . . . a very hot market space.

We cover a series of application scenarios to bring home the solution concept.

Then, we'll have a brief primer on iSeries output, to show the framework in which the products play.

Then, we'll cover the key products -- Infoprint Server, Infoprint Designer, PSF/400 as well as integrated products such as iSeries Access.

Finally, we'll look at opportunity segments and how to address them.



Enabling "e-output"

- ▶ E-business is changing the face of business communications
 - ◆ Traditional information methodology has been "print and distribute"
 - ◆ Networks, Internet, and electronic documents are transforming this methodology
 - ◆ Electronic documents mean:
 - Tie to preprinted form is broken
 - Flexibility in content
 - Flexibility in delivery
 - ◆ Networks and Internet drives e-business process reengineering
 - Printing, if required, must take place later in the flow
 - Electronic documents and reports can flow as the process requires
- ▶ The output of e-business - "E-output"
 - ◆ Ability to create fully electronic pages of information and deliver them to the desired destination in the desired format



Notes

e-Output is to e-business what printing has been to business. It is the output of e-business. Simply put, e-Output means the ability to create fully electronic pages of communications -- such as statements, invoices, barcoded labels, reports -- and deliver those pages to the required destination in the appropriate format. That could mean printing the pages and distributing in hardcopy format. It could also mean Web access, PDF, e-mail, archival and retrieval, fax, and related methods.

V5 has significantly extended iSeries capabilities in e-Output.

The following section entitled Application Scenarios will give concrete examples of new V5 functions being implemented into iSeries customer business environments.



Nexus of Infoprint and Content Management

- ▶ e-business changing the face of business communications
 - ◆ Infoprint and Content Management both fit into this solution segment
- ▶ Fully electronic documents the standard
 - ◆ AFP the standard for fully graphical business pages
- ▶ Print now only one delivery mechanism of many
 - ◆ Real-time delivery essential with many e-business-reengineered applications
 - ◆ Infoprint and Content Management both address this area
- ▶ High penetration of AFP on eServer
 - ◆ 50% on i and z
 - ◆ Handling of AFP communications an IBM competitive advantage
- ▶ Customer requirement of an end-to-end total solution can include:
 - ◆ Infoprint Designer and similar offerings (Streamserve, Exstream, Elixir) for document design
 - ◆ Infoprint Server for electronic segmentation, immediate electronic routing
 - ◆ Content Management for archival, "cached" electronic routing
- ▶ Premium paid by IBM and customer for knowledgeable BPs in this critical solution segment



Notes

These are characteristics that are key and relevant to output solutions.



Reengineer your output

- ▶ **Scenario:** Your current output - statements, invoices, reports -- is inadequate.
- ▶ **Requirement** - You need to improve the content, appearance, and effectiveness of your communications and accomplish this in a productive manner without disruption.



Solution: Infoprint Designer for iSeries



Notes

The need to reengineer or redesign your business output may result from a number of requirements, most of which have direct ROI implications:

- ▶ The costs of preprinted forms, including material costs and operational inefficiencies.
- ▶ Requirements from customers or suppliers, for example, the need to generate barcoding on documents.
- ▶ Your current documents are not effective.
- ▶ Your documents change on a frequent basis and the current tools to make design changes cannot respond.
- ▶ Your competitors are far ahead in document content, effectiveness, and process -- this is starting to affect sales.
- ▶ You are transforming key business processes for the Web and your documents need to be fully electronic to support that.
- ▶ You are looking at the possibilities of Infoprint Server -- PDF and e-mail, electronic delivery of documents and reports -- and again, you need fully electronic documents to play.
- ▶ The current system of changing design requires programming changes, escalating costs for what should be simple changes, requiring unacceptable delays, and causing disruption is stable application code.

Enter Infoprint Designer for iSeries. A new fully graphical design system for iSeries, fully integrated with the iSeries output architecture and fully application-independent.



e-Output to the Web

- ▶ **Scenario** - Monthly reports are sent out to departments in hardcopy. This results in significant time delays and increasing costs.
- ▶ **Requirement** - You would like to produce the reports in electronic format and enable immediate, online access.



Solution: Infoprint Server for iSeries



Notes

In this e-Output scenario, documents and reports are being printed in hardcopy format and distributed. The output is not timely and the process is not efficient. Using new PDF services, the documents /reports can be transformed into PDF format and stored for inbound access within the iSeries database (specifically the IFS, or Integrated File System). Consumers of those documents and reports can access them electronically via a browser or client PC.



Email document/report distribution

- ▶ **Scenario** - monthly sales reports are printed, manually separated and mailed to regional office managers.
- ▶ **Requirement** - Customer would like to automatically distribute and send the relevant reports to specific managers via e-mail.



Solution: Infoprint Server for iSeries



Notes

Here's a similar example, but with a different solution.

Again, reports are being produced by an iSeries application, printed, and delivered in hardcopy.

In this case, we want to do two things electronically. First, we need to break up the overall report in order to deliver segments to particular people. For example, this may be a 1000-page sales report comprised of 10 different sales regions. Thus, the goal would be to create 10 regional reports.

Secondly, we want to deliver the reports electronically. And, we want to deliver them by pushing them out . . . as opposed to having the recipient come get them as we did for the previous scenario.

We'll use the segmentation support in OS/400 and Infoprint Server to automatically trigger the creation of 10 PDF files representing the regional report segments.

Then, we'll automatically pass each PDF file, in turn, to the integrated e-mail function so that an e-mail with the specific report (PDF) for that sales region attached is sent to the one (or more) recipients.

This "outbound" electronic process, coupled with segmentation, ensures timely delivery of the right information to the right people.



Server Print Consolidation

- ▶ **Scenario:** Customer has an ERP application which generates data in PCL format. They also have numerous network print applications and proliferation of desktop personal printers.
- ▶ **Requirement** - They would like to consolidate their printing, taking advantage of the speed, power and throughput of their high-speed iSeries system printer - plus the IPDS error recovery.



Solution: Infoprint Server for iSeries, IBM iSeries printers, PSF/400



Notes

As your company re-engineered its network topology to take advantage of networks and the Internet, printing and printers followed suit. This decentralization of printing was initially viewed as a good thing. However, as your applications and print volumes increased, this decentralized structure became a liability. Applications are producing a range of ASCII print data streams (PCL, Postscript, PDF) and the printers themselves were designed for personal and workgroup printing, not business printing.

Companies are realizing that having a large number of decentralized printers (or web servers or PCs for that matter) adds significant operational costs, complexities, and roadblocks to process changes.

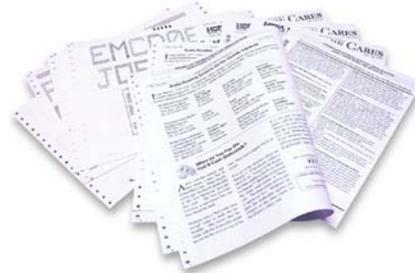
Let's consolidate our business printing. We'll use the new ASCII transform capabilities of Infoprint Server to change PCL, Postscript, and PDF print jobs into the native page format of the iSeries (AFP) and then consolidate these jobs on a new high-speed, highly reliable, cost-effective, integrated iSeries printer - the IBM Infoprint 85 and 105.

This enables you to apply the efficiencies and reliability of iSeries-integrated printing to your decentralized printing -- saving costs and improving service.



iSeries Access and Document Delivery

- ▶ **Scenario** - Key customer has called and would like a recap of their orders for the past month. That data exists on a section of the monthly sales report by customer.
- ▶ **Requirement** - Be able to select that customer's data and e-mail the information immediately.



Solution: iSeries Access and Infoprint Server



Notes

There are many ad hoc or interactive requests for documents or reports. With V5R2, both iSeries Navigator and iSeries Access for Web provide for access to PDF and e-mail functions and enable electronic presentation or delivery of the information.

Because of the complete integration of PDF services into the iSeries architecture, standard output management functions easily translate into desired PDF functions. For example, in this scenario, let's assume that this customer's sales data is on pages 21-50 of the customer sales report. If you were printing this range, you would simply override the print file attributes to request this page range. The same function works with PDF since PDF is implemented as a virtual printer. Select the page range then specify the PDF options with iSeries Navigator and you're done.



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Output Primer

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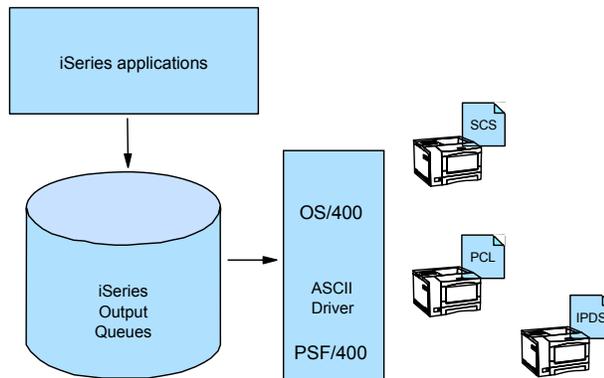
Notes

Before we look at the products, a 50,000 foot primer on iSeries output architecture.

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iSeries Output Architecture - Pre-V5



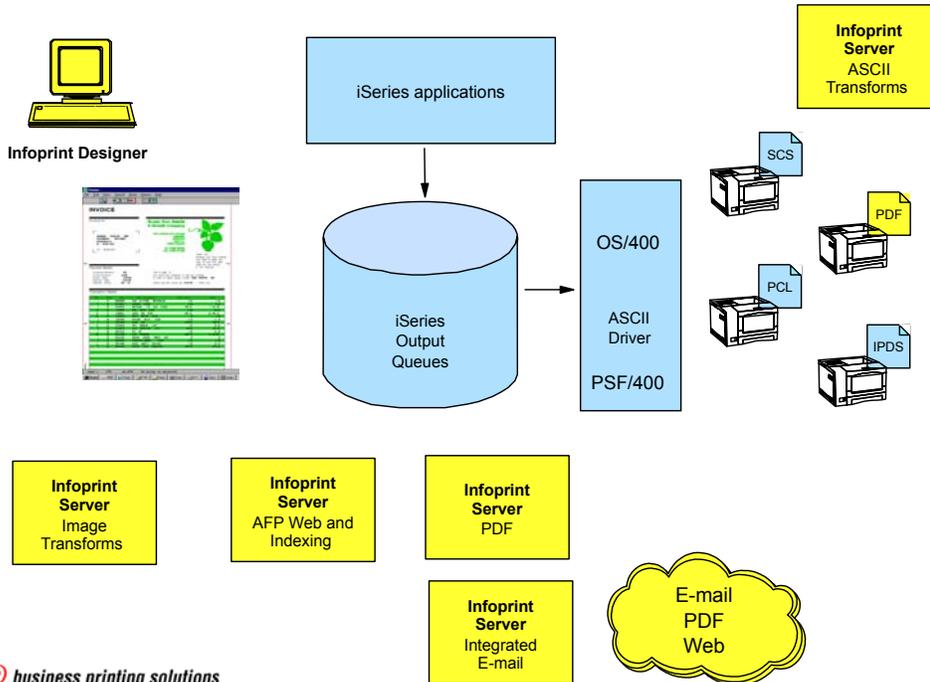
Notes

Let's start prior to V5 and look at the basic print flow on iSeries. Applications on the iSeries create output -- also called spooled files -- that are written to iSeries output queues. With the print data in the queue, there are three print drivers to deliver the output to a printer. For simple output, the TwinAx print driver supports line-mode printers (SCS). For PCL and ASCII printers, there are three print drivers shipped with OS/400 -- remote output queue, PCL Driver, and SNMP Driver. These drivers use Host Print Transform for transform services. For IPDS printers, the print driver/manager is Print Services Facility/400 (PSF/400). When printers are attached via TCP/IP, then the two choices are PSF/400 and the ASCII drivers.

The ASCII print drivers are the simplest. PSF/400 is the most advanced. Customers can choose drivers and printers based on (1) volume of printing and (2) how important the specific print job is.



iSeries Output Architecture - V5



Notes

First, in the top left you see the new graphical document design system - Infoprint Designer for iSeries (5733-ID1). This makes it far easier to compose documents and reports. More importantly, it composes fully graphical, electronic documents -- for example, a customer statement with electronic forms, images, bar-coding, and graphics. A fully electronic document, with the iSeries placing every element on the page, is a prerequisite for e-Output. If a customer is using preprinted forms, then they cannot participate in the key e-Output downstream electronic delivery functions.

The other new boxes (in yellow) relate to Infoprint Server for iSeries (5722-IP1). Infoprint Server has five components and is focused on providing electronic delivery. So, you see that PDF and e-mail functions are added. And, the ability to produce AFP in a portable, Web-ready format. And, the ability to transform Web image formats to iSeries format. You can now take fully electronic output pages sitting in iSeries output queues and deliver them electronically, inbound via client or browser or outbound via e-mail.

The last component of Infoprint Server - in the top right on the flowchart -- is the ASCII transform server. This enables the iSeries to extend its role as a print server, taking jobs that are being produced in non-iSeries formats (i.e., PCL, Postscript, and PDF) and converting them to AFP for iSeries-managed printing. These jobs could reside on network clients/servers, or on iSeries applications (such as ERP) that create ASCII data streams.

With V5R2, the basic flow stays the same but there are significant enhancements. There are new capabilities in the design "front-end" - Infoprint Designer. Infoprint Server has big changes in PDF functions and in e-mail options. More on that later.

Equally important, Infoprint Server functions are now integrated with other standard iSeries interfaces, including iSeries Navigator and Web Access. We'll look at the details in a few minutes.



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Products

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OK . . . now the products.

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Infoprint Server (5722-IP1)

Focus of Infoprint Server

- Electronic Distribution of output
- iSeries management of network print

iSeries support for PDF

- Transform services for any iSeries standard output (AFP, IPDS, SCS, even OV/400)
- PDF output to e-mail, IFS, or PDF printer
- High-function PDF Server
- Segmentation - "Electronic Burst and Bind"

Integrated e-mail of output

- PDF output can be automatically e-mailed
- Multiple e-mails based on segmentation
- Exits for customization

iSeries as a network print server

- PCL, Postscript, and PDF to AFP
- Postscript and PDF transform is IBM-Adobe full-function Level 3

Portable, web-ready AFP

- Add external resources to AFP data for portability and browser view
- Add indexing for navigation and report segmentation

Image transforms

- GIF, TIF, and JPEG transforms to IOCA
- Windows-based



Notes

Infoprint Server for iSeries is a license program product (5722-IP1) - it is on the V5 standard CD set and available for install and 70-day evaluation. The focus of Infoprint Server is on the network, extending the considerable capabilities of the iSeries beyond printing to the management and dissemination of output. As business applications are re-engineered into e-business applications, the output of those applications may need to change and flow electronically to the consumer of that output.

For enterprise printing requirements, Infoprint Server delivers improved efficiency, improved reliability, and lower overall printing costs by applying iSeries printing management and iSeries-attached printers to the task of handling all of the essential printing generated across the network.

On the e-business output side, Infoprint Server provides PDF and portable AFP support for the iSeries. Any standard iSeries-AS/400 output format can be transformed into PDF. The PDF is text-based, fully navigable, high-performance. In addition, enhancements to DDS (OS/400) enable you to segment an output file, triggering the PDF server to create multiple PDF files - this is an "electronic burst and bind" function. More than this, e-mail of output (via PDF) has been integrated and automated into this process. Output files can be transformed to PDF and automatically sent to any destination. Integrated e-mail also provides user exits for customization (i.e.. using the trigger field - a customer number for instance - to look up an e-mail ID in an address book)

AFP output can be treated similarly. A new command - Create AFP Data (CRTAFPDTA) provides three critical functions: (1) convert print formatted with page definitions to AFP, (2) create a portable file by pulling in external fonts, page segments, and overlays, and (3) insert indexing to facilitate easy navigation when viewing the print file.

The other key focus of Infoprint Server is iSeries management of network output. Infoprint Server provides transforms for PCL, Postscript, and PDF into AFP so output generated in those formats can be brought into the iSeries and effectively managed to the printer. The Postscript and PDF transforms are the result of joint development by IBM and Adobe and deliver full-function Level 3 capability.

Finally, the standard web, e-business image formats are GIF, TIFF, and JPEG. Infoprint Server provides transforms (Windows-based) to convert those to iSeries-AS/400 image (IOCA - page segments)



Infoprint Server Positioning

- ▶ What is it?
 - ◆ Strategic new solution that extends iSeries output capabilities to "e-output"
- ▶ Customer value
 - ◆ Business reengineering resulting in decreased costs, increased service levels, competitive advantage - the whole e-business package
- ▶ Sales approach
 - ◆ Lead with PDF and e-mail -- iSeries customers are excited about the way these capabilities will impact their business
 - ◆ Emphasize integration, Infoprint Server as component of end-to-end solution
- ▶ Competition
 - ◆ Nonintegrated print and output serving software, normally running on NT or Unix
 - ◆ Competition has limited PDF (Infoprint Server will handle any output, no matter how complex)
 - ◆ Customer may buy based on simple demo but gets locked into later proprietary, "downstream" solutions such as fax, archive
- ▶ Who do I call on?
 - ◆ PSF/400 accounts, mid to enterprise iSeries accounts
 - ◆ Any customers, large or small, requiring PDF, e-mail support
 - ◆ Dovetail with Domino, Websphere, ERP, e-business implementation projects



Notes

Basics in Infoprint Server . . . see sales trifold for quick summary.



Case Study: E. D. Smith

- ▶ **Customer Environment**
 - ◆ One of the best-known names in the Canadian food industry
 - ◆ Beta customer for V5R1
 - ◆ AFP shop, with Fax, AFP Utilities, IPDS printers
- ▶ **Requirements**
 - ◆ Reduce paperwork flow
 - ◆ Speed pace of business
- ▶ **Solution**
 - ◆ Started with remittance documents, to PDF and e-mail
 - ◆ Added electronic report distribution
 - ◆ Added year-end reports to Notes database (in PDF)
 - ◆ Added ability to e-mail any spooled (output) file
- ▶ **Competition**
 - ◆ None
- ▶ **Reasons for Buying IBM**
 - ◆ Natural, integrated extension to present business processes
 - ◆ Easy to implement



Notes

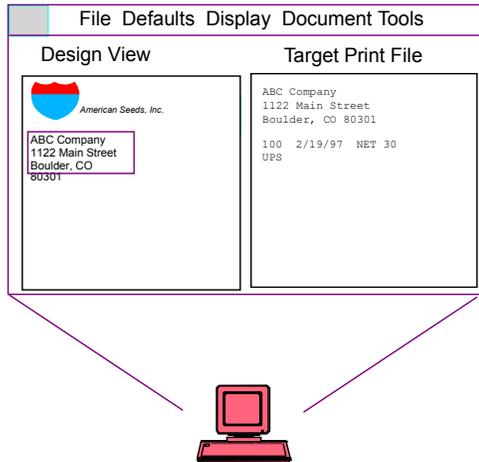
Very persuasive ROI in this customer for Infoprint Server.



Infoprint Designer (5733-ID1)

Product Summary

- State of the art design front-end to the robust, integrated AFP/IPDS print/presentation subsystem on iSeries-AS/400, geared for the non-technical user



Key Features

- Integrated for design
- Integrated for production
- Overlay Design editor for designing electronic forms
- Image Design editor for designing images
- Layout Design editor for designing the entire print application
- Creates standard OS/400 print resources
- Professional, high-precision system geared to the demands of business
- Output redesign without application changes
- AFP Font Collection fonts built in
- Product ID 5733-ID1



Notes

Infoprint Designer is new and runs on V4R5 and V5.

Infoprint Designer for iSeries provides a fully-graphical document composition interface to the iSeries-AS/400 printing and e-output system. It supports the requirements of today's complex documents and reports, producing fully electronic documents combining data, text, electronic forms, graphics, image, bar coding, and typographic fonts. Infoprint Designer for iSeries can be used for the design of new output applications or the re-engineering of existing applications.

Infoprint Designer for iSeries consists of three components:

Infoprint Overlay Editor designs overlays (electronic forms) to be used in the print application

Infoprint Image Editor designs the images to be used in the print application

Infoprint Layout Editor puts all the design components together into the final document or report

With Infoprint Designer for iSeries, you can build complex print applications easily. It enables you to design image components, design electronic forms, automatically retrieve current application data or spooled files, design the final page layout, and upload all component resources to the iSeries-AS/400 so the application can be put into production. The entire interface is designed for a non-technical user.

You really need a demo to appreciate the ease of use, power, precision, and integration of Infoprint Designer. See:

<http://www.ibm.com/eserver/series/printing>

for the Infoprint Designer homepage, the place to order the demo CD.

Infoprint Designer is integrated in three ways, (1) design functions are integrated with automatic retrieval of application data and automatic upload and creation of print resources, (2) you are designing iSeries page resources in native formats, and (3) the application resources enable the designed print application to be put into production with a simple printer file change.

Under the covers, Infoprint Designer defines the format of pages with page and form definition resource objects. These are part of the iSeries print architecture. Designing with these resources is application-independent (unlike DDS). They are also compatible with existing or new applications that define output data with DDS. With V5R1, OS/400 will automatically write these applications as full AFP (ensuring viewing and PCL support).



Infoprint Designer Positioning

- ▶ **What is it?**
 - ◆ New, fully graphical, tightly integrated output design system for iSeries
- ▶ **Customer value**
 - ◆ Business output reengineering without application change results in productivity gains, significantly increased ease of use, decreased application costs, higher responsiveness in communications, enablement for e-business-driven process changes
- ▶ **Sales approach**
 - ◆ Demo (Demo CD)
 - ◆ Communicate that this is an integrated application design tool, not a forms package - a much higher level
 - ◆ Tops the competition on design functionality, and then it neatly integrates on the back-end with the entire AFP/IPDS/E-output architecture of the iSeries
 - ◆ Runtime can be no charge (ie. Gannett)
- ▶ **Competition**
 - ◆ PCL-based, nonnative, usually requires entire transform subsystem on iSeries, does not flow to "downstream" functions unless competitor supplies
 - ◆ No integration, the entire production system may in fact run on NT or Unix or even within the printer
- ▶ **Who do I call on?**
 - ◆ PSF, AFP Utilities customers
 - ◆ Competitive customers



Notes

Basics on Infoprint Designer . . . again, see sales trifold.



Case Study: Gannett

▶ Customer Environment

- ◆ Largest newspaper chain (in circulation) in US, with \$6.6B in sales
- ◆ USA Today, 97 regional newspapers, plus and cable and TV
- ◆ Over 120 iSeries systems, IT staff of 190

▶ Requirements

- ◆ Output composition standard for all distributed newspapers
- ◆ Output architecture determines all follow-on solution decisions
- ◆ Printer acquisition dependent on composition decision

▶ Solution Components

- ◆ Infoprint Designer for iSeries now
- ◆ Infoprint Server for output "back-end"
- ◆ IBM iSeries IPDS printers

▶ Competition

- ◆ Optio, the installed standard

▶ Reasons for Buying IBM

- ◆ Integration
- ◆ Affordability of solution across distributed environment
- ◆ IBM expertise in developing proof of concept



Notes

Large iSeries account with 110 systems. Using Designer to reengineer output.



Marketing Resources



Notes

The basic sales tool for sales would be the sales trifolds.

If you look at Server and Designer from a sales cycle perspective, you can see what's available.



Sales Cycle, Resources (iSeries)

Phase:	Infoprint Designer	Infoprint Server
Interest	Commerce, iSeries Print web site	Commerce, iSeries Print web site
Hands-on, demo	Infoprint Designer demo CD	70-day Try and Buy (automatic with V5)
Proof of Concept	Infoprint Designer product CD and temporary license key	70-day Try and Buy (automatic with V5)
Competitive Positioning	Marketing Aid on sales site	Marketing Aid on sales site
Customer References	Gannett, Group Dekko, Missouri Farm Bureau	E. D. Smith, Lin-Pac, Fort Dodge Animal Health
Education	Getting Started Guide iSeries Printing Redbook VI iSeries Jumpstart IBM Course K2516	Product documentation iSeries Printing Redbook VI iSeries Jumpstart IBM Course K2518
Implementation	Onsite education and implementation (i.e.. Gannett)	Implementation services (Lin Pac)
Close	AFP Utilities migration incentive SW bundling promotion	SW bundling promotion
Marketing Support	Sales Trifold ATS, Techline, Field Specialists, Select BPs iSeries Product Managers	Sales Trifold ATS, Techline, Field Specialists, Select BPs iSeries Product Managers
Customer Support	iSeries Supportline	iSeries Supportline



Notes

Summary of resources by sales cycle segment.



Infoprint Solutions on eServer

▶ zSeries

- ◆ Infoprint Server, IBM Remarketed solutions
- ◆ Product Manager: Nancy Wood

▶ iSeries

- ◆ Infoprint Server, Infoprint Designer, IBM Remarketed solutions
- ◆ Product Managers: Bill Shaffer, Sharon Foster

▶ pSeries

- ◆ Infoprint Manager, IBM Remarketed solutions
- ◆ Product Managers: Myra Aronson, Angel Bustamante

▶ xSeries

- ◆ Infoprint Manager, IBM Remarketed solutions
- ◆ Product Managers: Myra Aronson, Angel Bustamante



Notes

Summary of resources by sales cycle segment.



Summary

- ▶ Printing has become e-business-driven "e-output", a mainstream requirement for eServer customers
 - ◆ Important to win the wider e-output solution decision
 - ◆ IBM print and e-output a significant competitive advantage
- ▶ Natural synergy in solutions with Infoprint and Content Management
- ▶ Natural synergy in skills to market and install Infoprint and Content Management solutions
- ▶ IBM support for certified Infoprint Business Partners
- ▶ For more information (iSeries):
 - ◆ Customer: www.ibm.com/eserver/series/printing
 - ◆ Sales: www.printers.ibm.com/sales . . . **key resources are the 4 sales trifolds.**
- ▶ For more information on eServer:
 - ◆ Contact Infoprint product manager.



Notes

Summary..