ISIS Papyrus

# Focus Report

# Document Solutions for the Paper and Internet World

## Corporations seek integrated solutions, not just products.

Your business documents are your primary points of contact with customers. They are critical to effective customer communication and must be generated in a highly personalized way in a variety of formats. Ideally, the document is developed once and used in the same electronic format for printing to different printer hardware and for the Web.

### The Web Creates New challenges

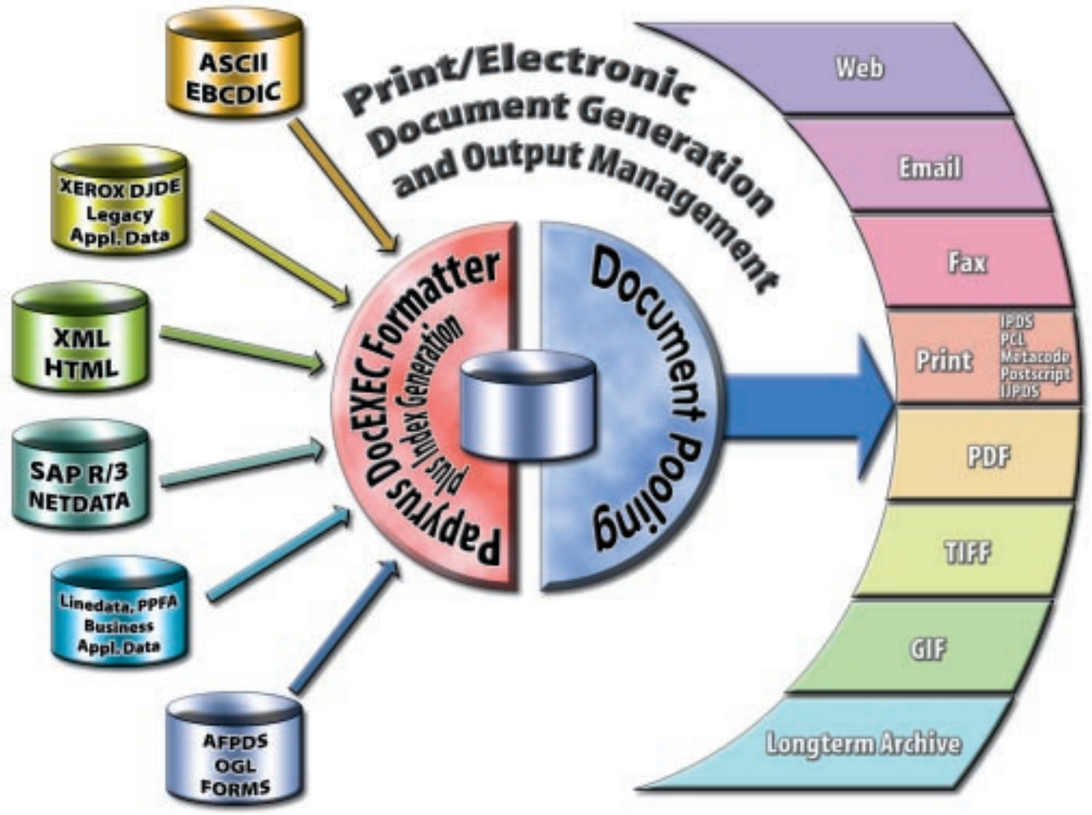
Today's solutions on the market assemble products of different vendors that are not integrated. They either propose to develop the document for each printer type and once more for Web presentation or they will recommend you to rewrite your business data application in a tagged based language format such as XML or HTML.

This results in large cost and time consuming coding effort associated with the maintenance of several separate systems that will provide serious inconsistencies between the paper and the Web based document model. For printing, a high quality output is desirable but electronic file formats such as HTML don't print well.

### On the Leading Edge

Using Papyrus, the previous does not apply. Papyrus can work directly with any type of business data in any format. By generating an architectured electronic document format, the same document can be used for multi channel output. There is no requirement for extensive consulting services or many months of coding. Papyrus guarantees the perfect result for all output targets.

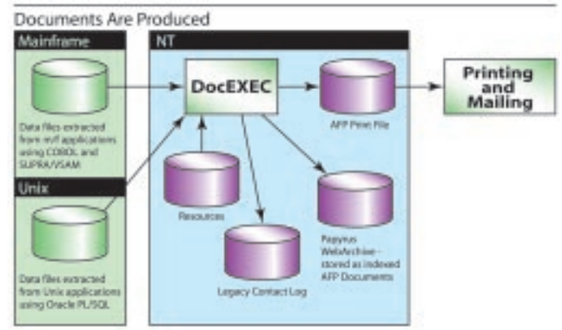
# Providing Total Solutions




**Papyrus can leverage existing data directly from ERP systems or other sources and produce high quality document output in a variety of formats. Regenerating the document for each format is not required.**

## M&G takes full advantage of Web Technology by using the Papyrus WebArchive and Java Applet for AFP viewing.

M&G




**A report by Mr. Martin Gunn, Project Manager of M&G, at the ISIS Roadshow in Henley-on-Thames, UK in June 2000.**

M&G, a leading unit trust provider, is part of Prudential with several offices in the UK employing 1100 people. They produce approximately 12 million pages of customer output per year. Their aim was to establish a single, standard interface for producing all computer generated customer documentation.

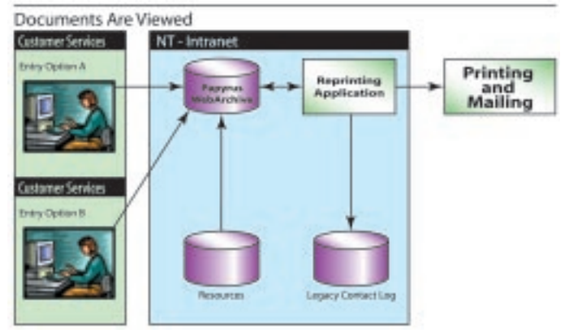
With the old system, they faced poor consistency across system output, low quality documents (240 dpi, black and white only), inflexibility and high cost of supporting multiple systems.

### The Way Forward

- Provide consistency across and within products and systems
- Raise the quality of business documents by using color, charts and high resolutions
- Implement standards
- Provide output electronically
- Provide tailored 'one to one' documents.

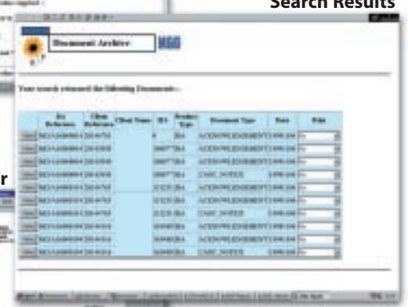
### The Solution

The Papyrus Designer Package was chosen to develop the document applications and its resources such as fonts, forms and logos. Papyrus DocEXEC Formatter is used on NT. Printing is done using a highlight color duplex cutsheet IPDS printer from OCE. For storage and retrieval, the Papyrus WebArchive solution was chosen. This includes the viewing of the documents using the Papyrus Java AFP Viewer Applet with the Microsoft Internet Explorer.

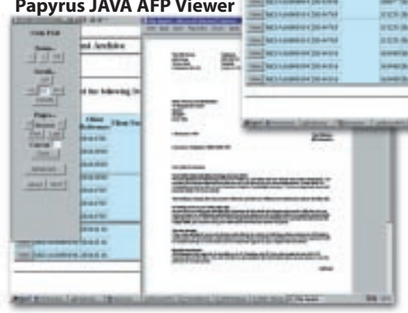



**Search Window**

**Search Results**



**Papyrus JAVA AFP Viewer**




# Effective Customer Communication

## by creating a Print-Electronic Delivery Solution.

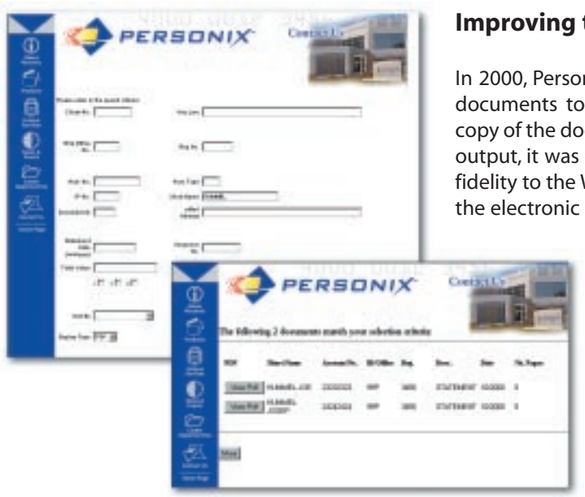
Personix successfully deals with this challenge by using Papyrus as an electronic document presentment solution that supports both paper and digital document delivery.

Personix is the leading provider of card personalization and high-speed laser printing/ mailing products and services. Personix provides services to customers in a wide range of industries including financial services, brokerage, healthcare, telecommunications, retail, and travel/membership. Product applications include statements, checks, tax forms, VISA® and MasterCard® cards, identification cards, explanation of payments, membership cards and marketing letters.

Personix has more than 5,000 clients worldwide and is backed by the strength of its parent company Fiserv, a leader in information technologies for the financial industry.

### History and Background

Since 1997 Personix is successfully using Papyrus to develop, format and print customer document applications. *"'We were impressed by the graphical development interface, by the document composition speed, the ability to do 3D pie charts and the ISIS service"* says Todd Stine when presenting the solution at the ISIS Roadshow. More customers are added every month with new document composition requirements which include defining of complex business rules, inserting of logos and messages and service printing to existing Xerox Metacode, IBM/Oce IPDS and PCL printers.




### Improving the Service

In 2000, Personix approached ISIS with the requirement to deliver the printed documents to the Web. Since Papyrus always generates a unique electronic copy of the document in AFP format which is ready to be used for multi channel output, it was an easy task to deliver the equivalent printed document in high fidelity to the Web. Papyrus WebArchive provides the transparent conversion of the electronic document format to PDF and GIF.

### Project Requirements

Utilize the AFP file from their monthly statement print for viewing on the internet. This would also require that the user be able to query the statements based on customer name, account number, statement date, etc. These query parameters need to have the ability to be reconfigured when additional systems are brought online.



### An Integrated Solution

① Papyrus Designer takes any type of data from legacy and ERP systems and merges it with a document template for delivery to multiple devices. The easy to use graphical document design tool leads to quick results at a low cost.

② The formatting of the business data with the related document design provides the output device independent electronic document format AFP, including the document index information. Both tasks are fulfilled with Papyrus DocEXEC in one document formatting run.

③ The generated electronic document format is either printed using Papyrus Server to different printers (IPDS, Metacode, PCL) or sent directly to the Papyrus WebArchive for Internet delivery.

④ For document viewing in the browser, the PDF format was chosen. Papyrus WebArchive converts the document and its resources on the fly into PDF when requested for viewing by the user. No font substitution is required. The document is viewed in perfect quality as it was printed.

PERSONIX

### QUICK FACTS

**Location: Stafford TX, Indianapolis IN, St. Paul MN, Nashville TN**

**Employees: 800+**

**Print output: 500+ million pages/year**

**Computing platforms: Windows NT, OS/390**

**Printer platforms: Xerox, IBM, OCE**

**Revenue: 100 million+, Fiserv 1.8 billion**

### The Technical Implementation of the Internet Delivery Solution

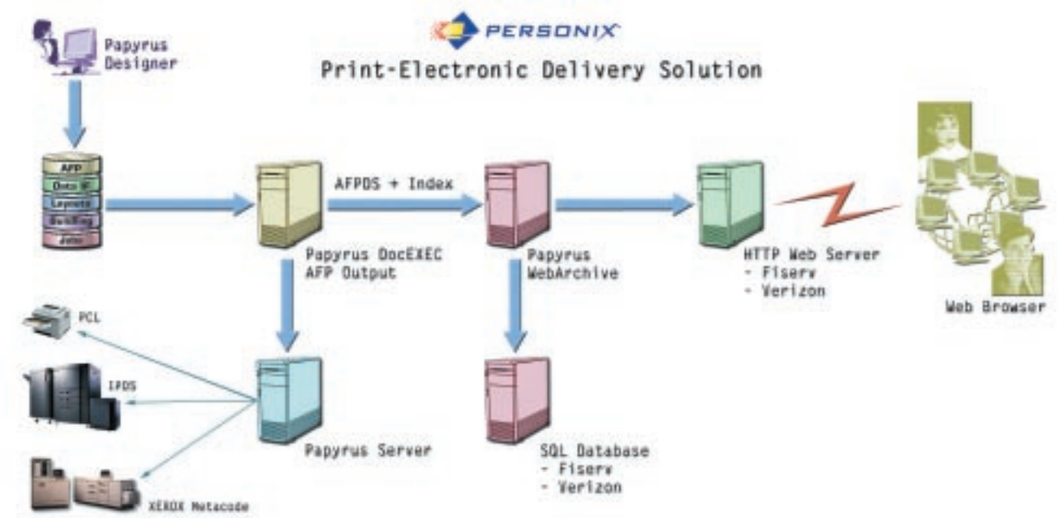
Initially, the system would contain a single database for the Fiserv Security Statements. Fiserv decided to use their existing website and security to interface with the WebArchive installation at Personix. This was achieved by installing a secure dedicated connection between Fiserv and Personix. Next, Fiserv would incorporate their own custom front end GUI which would use the ISIS CGI scripts to query and display results. The choice was made to view documents in PDF format. Again, the ISIS CGI's were able to convert the AFP document to a PDF and present it over the internet with one click of the mouse.

The system automatically runs the file check-in and updates the production resources with any new fonts, logos or marketing messages. This is handled with NT Scripting and the use of the NT Scheduler Service. AFP files are sent via FTP to the WebArchive Server where their resources are moved into the production area and the documents are checked into the MS SQL database.

There is an administrative system also provided as part of the WebArchive Package. Single documents or entire job runs can be deleted from the WebArchive database using these functions. This enables Personix to keep varying amounts of statements online based on each of their customers requirements.

### Summary

Personix has brought the Verizon Telecom CRM application online for Internet viewing of Welcome and Information Kits as well as Fiserv's 1099 statement application for it's representatives. The Papyrus WebArchive with the CGI interface and template files is an integrated solution which enables new customer documents to be easily configured and brought online without hardcoding.



Successful implementation of a multi channel, One-to-One business document solution for Web delivery and automated print.

## Introduction

In 2000 the bank implemented a banking portal as a virtual customer service branch office. The requirement was to offer outstanding customer service by providing 24x7 access to information with highly personalized business documents viewed through the web application. Depending on customer requirements, the same document must also be printable in high quality and automatically enveloped and mailed. Leveraging existing business data directly from the ERP system for electronic document presentment and printing was a prerequisite.

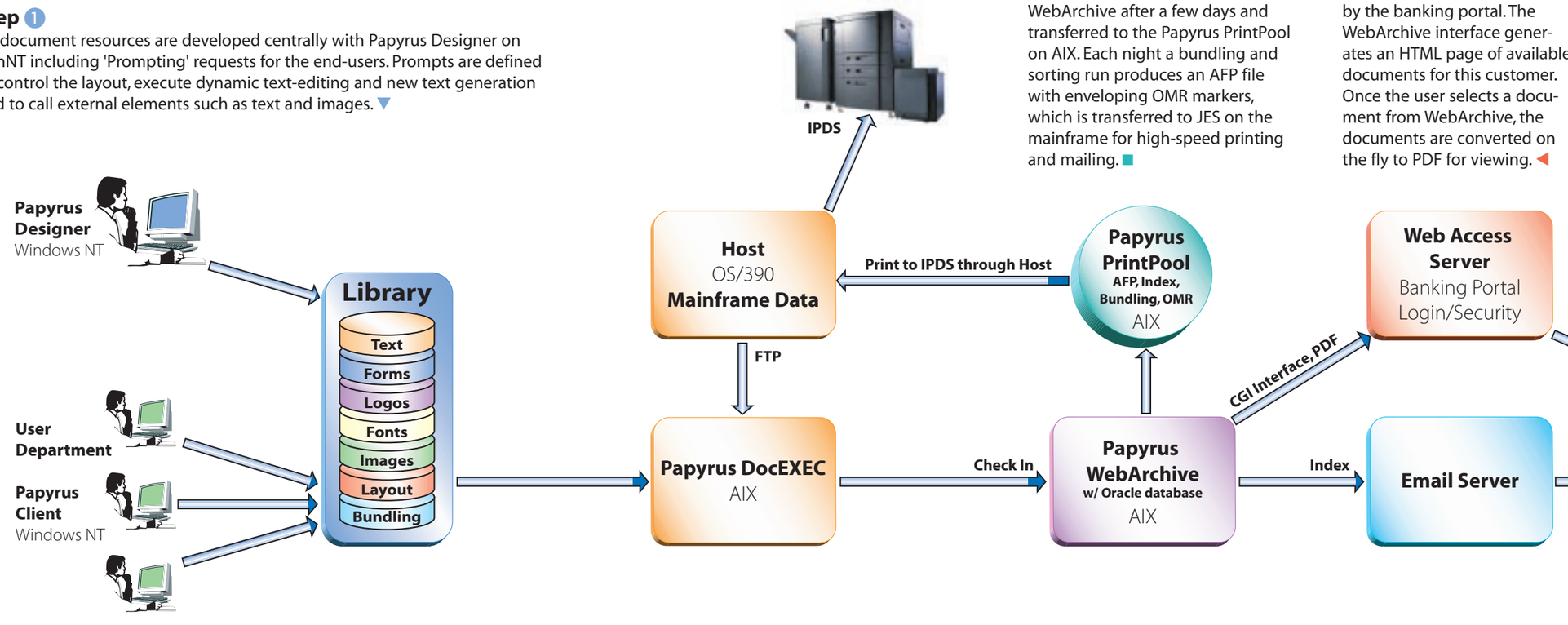
## The Requirements

- ★ Internet Banking document service based on existing OS/390 mainframe application programs
- ★ Viewing of the document in the browser in PDF format
- ★ Optional printing of same documents on mainframe attached IPDS printers
- ★ E-mail notification to customer that new documents are available in the e-Postbox
- ★ Around the clock access: 24 hours, 7 days

## How the Complete Production Cycle Was Implemented

### Step 1

All document resources are developed centrally with Papyrus Designer on WinNT including 'Prompting' requests for the end-users. Prompts are defined to control the layout, execute dynamic text-editing and new text generation and to call external elements such as text and images. ▼




### Step 2

The Papyrus Client on Windows NT is used by the end-users to edit text elements in a front-end document application. For example, parts of the 'Bundesanzeiger' had to be captured and in the following copied and finally bundled with every outgoing letter. To secure that only those text elements go into production that have been authorized, a signoff based on the 'four eye principle' was implemented. All documents generated by the users are stored in a transfer area and picked up by the application every two hours. ▶

### Step 3

The input data on the OS/390 is selected and transferred to AIX. The layouts/forms and text elements are dynamically loaded by the Papyrus DocEXEC on AIX to be formatted with the business data from the OS/390 system into an AFP file. In case of missing elements, an error log file is generated. ▶

### Step 4

The document file produced in batch is split up according to the AFP index information and checked into the Papyrus WebArchive on AIX using an Oracle database. ▶

### Step 5

The customer is informed by an e-mail notification that his documents are available on the website. These e-mail notifications are sent at night and contain the hyperlink to the website. ▲

**By the way...**
Although the solution shows a fairly complex application, there were less than 4 weeks of total on-site support needed from ISIS. This included the document development effort.
The total project phase was 5 months.



**Freedom of Platform Choice with Papyrus**

- ★ Legacy business data resides on OS/390
- ★ Document development with Papyrus Designer on NT
- ★ End-user front-end document application on NT
- ★ DocEXEC formatting on AIX
- ★ WebArchive on AIX
- ★ PrintPool for output management on AIX
- ★ High volume printing on OS/390

# The Key is Integration

### Step 7

In case the customer does not pick up his documents via the Internet, they are checked out from the WebArchive after a few days and transferred to the Papyrus PrintPool on AIX. Each night a bundling and sorting run produces an AFP file with enveloping OMR markers, which is transferred to JES on the mainframe for high-speed printing and mailing. ■

### Step 6

The user logs in through the banks website where security and authorization is performed by the banking portal. The WebArchive interface generates an HTML page of available documents for this customer. Once the user selects a document from WebArchive, the documents are converted on the fly to PDF for viewing. ◀

internet|b@nk

## QUICK FACTS

The portrayed Bank, is one of the biggest banks with branch offices in Germany, employing more them 4000 people. The main business focus is investment and Internet banking. Its activities also include property financing and services for institutions and companies as well as trading.

**Message listing in the Web browser**

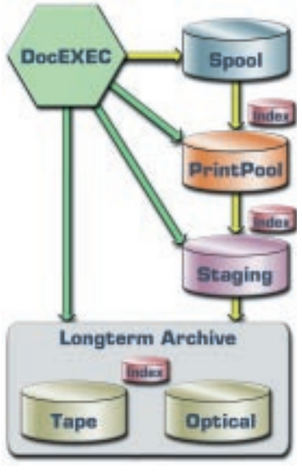
**Message viewing in the Web browser**

# Papyrus System Architecture


- ☆ Document Design is graphical and integrated
- ☆ Data interface through database, file or user prompts
- ☆ Document formatter provides support for all platforms
- ☆ Printer services manage the time-of-print conversions
- ☆ Bundling, distribution, sorting and archiving are integrated
- ☆ Distributed systems and workflow with Object Management
- ☆ All application elements are stored in a central library

## Papyrus Output Management Concept

The Papyrus DocEXEC formatter outputs an electronic copy of the business document in AFP format with document index information at time of formatting. With AFP as the document architecture, the document is generated in a printer and platform independent format. It can be printed, archived, viewed in the browser or sent per e-mail and fax without further technical or organizational effort. Papyrus provides the transparent conversion into different output targets with 100% fidelity.

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