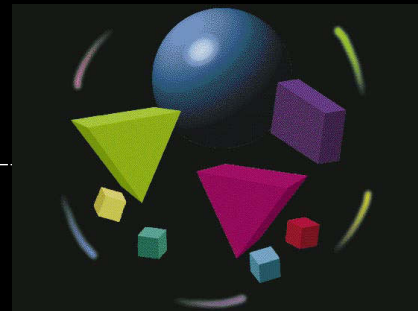


# CASE IN PRINT

IDEAS FOR BETTER PRINT MANAGEMENT  
FROM LEVI, RAY & SHOUP, INC.



## WEST ALLIS MEMORIAL HOSPITAL: INNOVATIONS IN PRINTING HELP IMPROVE FISCAL FITNESS

In every sector of the economy, companies are striving to control costs and eliminate waste. However, few industries have been hit as hard as the medical field. Hospitals are scrutinizing their operations to identify where they can maximize the productivity of both their computer systems and their personnel.

West Allis Memorial Hospital (WAMH) is no exception to this trend. This 250-bed hospital located in the western suburbs of Milwaukee has managed to streamline its operations, thereby cutting costs and actually increasing the level of service provided to patients. The key to this boost in efficiency was a fundamental re-examination of the hospital's enterprise print management strategy, initiated by IS Director Dave Konkel and Assistant IS Director Gary Weckwerth.

### RETHINKING PRINT MANAGEMENT AT WEST ALLIS MEMORIAL

Gary Weckwerth and Ron Rozek (Technical Systems Coordinator) are responsible for keeping the hospital's IBM 9121 MVS mainframe running, as well as maintaining the SNA network and a



combination of channel-attached line printers, laser printers, and LAN-attached PCL printers.

To identify potential savings, Gary and Ron evaluated how much money the hospital spent on reports and documents. They identified three ways that IS could save the hospital money:

- Improve IS department functions to increase staff productivity
- Reduce the cost of pre-printed forms used by various departments
- Eliminate redundant printing systems by using one printer for multiple functions

Any one of these measures would have provided a significant cost savings. Combined, they added up to over \$75,000 of savings in the first eighteen months.

### REDUCED DOWNTIME MEANS INCREASED PRODUCTIVITY

West Allis Memorial's MVS mainframe is relied upon by medical specialists in every department to help deliver exceptional care to patients. For example, nurses order diagnostic tests for patients and print out information about the patients' medication. Test results are entered by laboratory and radiology. The Admissions Department uses the system to track billing and insurance information about patients. The mainframe combines the information with other patient statistics and produces summary reports.

Managing the output from these applications was a daunting task. Weckwerth's group found

the solution to this challenge: Dynamic Report System (DRS) and VTAM Printer Support (VPS) by Levi, Ray & Shoup, Inc.

The hospital has many CICS applications handling patient information, financial data, and other information vital to the hospital. To route output from all



*Using bar-coded stickers to identify and track lab specimens increases efficiency while decreasing the risk of tracking errors.*

these online applications to JES, West Allis Memorial chose DRS. "By installing DRS, we're able to react to our users' output needs much more quickly, without modifying our application code," Rozek says.

Once on the JES spool, application output is picked up by VPS and routed to the appropriate printer. VPS provides a central point for controlling all mainframe output in the hospital. The combination of DRS and VPS keeps WAMH's applications from stalling, even if a printer becomes disabled.

"When a printer goes down, VPS can route the output to another printer, based on rules we establish," Rozek explains. "From the user's perspective, VPS and DRS eliminate downtime."

## **USING BAR-CODES TO DECREASE TRACKING ERRORS**

Another way West Allis Memorial hopes to improve user productivity is by implementing a bar-code system for recording and tracking patient information. The goal is to replace the current system, in which every patient receives a plastic card with his or her name and ID number embossed on the face. The information on this ID card is manually transferred to lab reports and other forms used in the hospital.

According to the Director of Admissions, Pam Zimmer, "These documents are often duplicated, and when you look at a second or third-generation copy, the numbers are hard to read. This can lead to errors in patient information."

To improve this situation, the IS department is developing a new system. When registering a patient, the admissions staff will use a laser printer to print a sheet of labels displaying information like the patient's name, ID number, doctor name, and a unique bar-code. The stickers will be attached to various forms and items—wherever the patient information is required. "With bar-coding, we will be able to retrieve patient information more quickly and we can run quality checks instantly," Rozek says. "We can also completely eliminate the need for embossed plastic ID cards."

## **AFP AND VPS/IPDS ELIMINATE THE NEED FOR PRE-PRINTED FORMS**

Anyone who has ever been in a hospital knows the myriad of forms involved in even a simple checkup. Insurance claims forms, HMO statements, and itemized bills are just a few examples of the documents used by the staff at West Allis Memorial.

The expense of printing and storing thousands of pre-printed forms was a significant financial burden on the hospital. Another problem: changes in hospital procedures or insurance policies could make a form obsolete, meaning wasted paper and money.

The solution was clear. Working together with Tom Hajny, the Director of Patient Financial services, Rozek created electronic versions of the forms. By leveraging their existing investment in IBM's Advanced Function Printing (AFP) architecture, Ron could use these "blank" electronic forms as OVERLAYS on a laser-printed page. The patient information (including the person's bar-code) could be placed electronically in the appropriate position on the page.

To print the AFP output on their IPDS printers, the hospital chose VPS/IPDS, an extension to VPS. VPS/IPDS interprets the AFP resources used to create the forms, generates IPDS datastreams, and delivers the datastreams to the appropriate printer.

In terms of performance, an important attribute of VPS/IPDS is what it does not do. Namely, it does not convert line data to IPDS data streams every time. VPS/IPDS only converts line data when required by PAGEDEFs, FORMDEFs, or imbedded AFPDS codes. This improves processing speed and reduces resource requirements, especially when AFP and non-AFP datasets are intermixed.

How much did West Allis Memorial save by replacing pre-printed forms with AFP documents? According to Rozek, "We saved about \$13,000 per year for each pre-printed form I converted to an AFP overlay. Last year, I converted five forms. Now, as we run out of an old pre-printed form, I simply create an electronic version instead of calling the print shop and ordering more."

One particularly expensive pre-printed form was identified by Pam Zimmer, Director of Admissions at WAMH. The Outpatient Admission form contained six identical pages of disclaimer and consent information with blanks for the patient's signature.

There were both legal and programming challenges involved in eliminating this form, but Pam worked with the hospital's legal aide to accomplish the task. Utilizing the duplexing features of the hospital's laser printers, Ron was able to print the disclaimer page on the back side of other forms used during outpatient admissions. This move saved both paper and money—over \$25,000 in the first year.

Impressed with the savings from this project, West Allis Memorial will try to save another \$25,000 by eliminating the Inpatient Admissions form as well.

## ONE PRINTER IS BETTER THAN TWO

The pre-printed forms not only cost money to produce, but they also were expensive to use. Because each form ran on its own dedicated line printer, there was also the cost and hassle of maintaining a number of extra printers.

For example, the radiology department's application printed out two documents for each patient: one patient worksheet, and one pressure-sensitive label. This required two line printers sitting side-by-side.

"Now, we just load the two drawers on our IPDS printer with different types of stock: one tray contains blank paper and the other one holds the labels," Ron says.

Another place Rozek was able to eliminate unnecessary printers was in the admissions department. "Previously, they had two embossing machines (for patient ID cards), two laser printers, and six line printers loaded with various forms. With AFP and VPS/IPDS, we can now do the same work with two IPDS printers."

Ron estimates that the IS department's new approach to printing has enabled them to eliminate the need for approximately 30 printers throughout the hospital.



*By implementing AFP and VPS/IPDS, West Allis Memorial was able to eliminate a six-part preprinted admissions form. This move saved over \$25,000 in the first year.*

## AUTOMATED FAXING SPEEDS INFORMATION TRANSFER

Like IS departments everywhere, the IS department at West Allis Memorial is under constant pressure to provide more information to various groups. The information has to be both useful and timely. This presents a special challenge when the people who need the information are outside the physical bounds of the organization.

West Allis Memorial performs various tests in the lab and radiology departments for independent physicians, clinics, and smaller offices. The test results are entered into the mainframe and a report is generated. WAMH technicians used to send some of the results by mail or by manually faxing the reports. Both methods were untimely and unnecessarily expensive, considering the sheer numbers of test results sent out on a weekly basis.

To remedy this problem, Steve Oravetz, Network Administrator at WAMH, set up a dedicated fax server to send documents to locations outside the building. "VPS treats the fax server like any other output

device. Users have the option of sending the output to a printer, to the fax server, or both. This is a key part of our operations, made possible by VPS."

## THE BENEFITS OF ENTERPRISE PRINT MANAGEMENT

Like West Allis Memorial Hospital, companies everywhere are being forced to re-examine their business processes and find ways to save money and increase their effectiveness. One often-overlooked way to streamline an organization's operations is to examine the overall print strategy, and develop an overall enterprise print management solution.

Levi, Ray & Shoup is committed to raising the awareness and profile of print management throughout organizations worldwide. Enterprise print management should be a deliberate, strategic effort on the part of companies who want to maximize the use of their resources while standardizing and efficiently managing their computing environments.

The result of developing an enterprise print management strategy varies with the needs of the organization. For West Allis Memorial Hospital, re-examining their print strategy contributed to a substantial cost savings, as well as an increase in productivity.

To discuss your organization's current print strategy and ensure that it can meet the expanding needs of your enterprise, contact the enterprise print management specialists at Levi, Ray & Shoup. Whether your interests are cost savings or increased performance, LRS can provide the products and the expertise to fit your needs.



*The IS department offers hospital staff flexibility in output management, using VPS to print to remote printers, centralized printers, or via a fax server.*



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ENTERPRISE PRINT MANAGEMENT

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