Simplifying a Complex Capture Problem

UNDERGROUND VAULTS & STORAGE

PSIcapture & SharePoint Deliver Next-Generation Patient Records Management Solution for Underground Vaults & Storage

Since 1959, Underground Vaults & Storage (UV&S) has provided records and information management solutions to the business community. UV&S specializes in secure records and asset storage and management and serves national and international clients representing numerous industries, including healthcare, legal, financial, insurance, cultural, oil/gas, entertainment and government.

The Problem

UV&S initiated a project in the fall of 2007 to create a secure medical records management portal for one of the largest Pediatric Clinics in the state of Kentucky. The project goal was to deliver secure, HIPAA-compliant online access to active patient records. After a thorough test pilot of alternative hardware and software combinations for document capture, Underground Vaults & Storage selected the combination of PSIGEN PSIcapture, Kodak I660 and Windows SharePoint Services to deliver record management portal services to the client.

The project benefits include enhanced patient care through instant medical record access, integration between the Clinic's new EMR system and the portal, and the successful recovery (for physician use) of two whole examining rooms, which had previously been required for the storage of paper records.

Solution Requirements

The first attempt at using document capture and content management technology for patient records was undertaken by the Clinic, using desktop scanners and a new Electronic Medical Records (EMR) system. Within a few weeks of starting this effort, Clinic personnel realized that the capture volume and complexity requirements exceeded what the Clinic felt comfortable attempting by itself. The content types requiring capture included encounter forms, prescription forms, hearing test results, shot records, growth charts and more. Many of these content types are small and variable form factor, and all are organized by patient folder.

UV&S began tackling the capture challenge in January of 2008. The initial scanner hardware and capture software combination chosen for the pilot ran into a number of problem areas, including OCR/barcode/patch code recognition for document separation, blank page detection and management, partial batch processing and double feed handling. The end result of the initial capture hardware/software pilot was inadequate for the Clinic and UV&S. Capture throughput with this combination was only 50,000 pages per month, and the vendor efforts to improve performance were consuming excessive time and effort from UV&S staff, without improving throughput results or addressing the identified problems.

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CAPTURE

Medical records are scanned using Kodak scanners, utilizing barcode and patch code separation sheets for structure.

PSIcapture

PSIcapture processes, separates, names and provides folder structure based in part on barcode recognition.

MIGRATION

SharePoint

Documents are migrated into multi-level folders in Microsoft SharePoint Document Libraries.

The PSIGEN Solution

UV&S started a new phase of the pilot by switching the capture solution to a Kodak I660 Scanner with Perfect Page, combined with PSIGEN PSIcapture Enterprise software. A key breakthrough in the new phase was made in barcode recognition and document separation. PSIcapture uses sophisticated barcode recognition technology to reliably find a single barcode indicating the beginning of each new patient folder. The initial capture software product had attempted to address the same requirement with a variety of unsuccessful methods, including multiple barcodes per coversheet. Other improvements in the new pilot phase included:

» the ability to perform partial batch capture and release with managed exception item processing,

» the preservation, inspection, and exception management of all detected "blank pages" (which sometimes included important physician notes, phone numbers and drug formularies),

» the incorporation of lookup services for auto-indexing by using a single patient identifier number, and

» dramatic simplification of the document preparation process.

Conclusion

The throughput for the system since May 1, 2008 is easily determined using the built-in capture reporting module in PSIcapture. The Kodak I660/PSIcapture solution is now processing over 500,000 images per month, 10 times what the hardware/software combination tried in the initial part of the pilot could deliver. The Microsoft/ Kodak/PSIGEN solution enabled UV&S to meet and exceed the requirements of the Clinic, and to deliver a new and successful service offering in a strategic new market. Lisa Ream, Scanning Manager for UV&S, said "PSIGEN was able to show us a much better solution in just four hours, on the very first day they installed their software with the Kodak I660. Our productivity went up dramatically, right away. The decision to go with PSIcapture was very popular with all of the personnel in the Scanning Center, as the product made us much more productive and allowed us to really deliver on the Clinic's expectations for the new portal. With PSIcapture we feel comfortable that we can process up to 1 million complex medical record documents per month with one production scanner and one operator. We are able to qc and release patient charts immediately. And we can give the Clinic a one-hour turnaround time from an initial request."

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Solution Components in Summary:

Capture Software:	PSIGEN PSI**capture** Enterprise Workstations
Content Repository:	Microsoft Sharepoint Server
Scanners:	Kodak High-Speed Scanners