



PSIGEN PSI: Capture, Kodak I660, and Microsoft SharePoint Deliver Next Generation Patient Records Management Solution for Underground Vaults & Storage

Summary

Underground Vaults & Storage (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, on line access to active patient records for Clinic personnel. After a thorough test pilot of alternative hardware and software combinations for document capture, Underground Vaults & Storage selected the combination of PSIGEN PSI: Capture, Kodak I660, and Windows SharePoint Services to deliver record management portal services to the client. Scanner hardware, portal hosting, and portal development services for the project were provided by NovaCopy, Inc. (www.novacopy.net), a fast growing business technology solution provider offering secure web based document management solutions. 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.

Creating the Portal Structure

The Windows SharePoint Services (WSS) implementation divided the basic portal view into two main tabs: Active Patients and Inactive Patients. These two tabs are further divided into four sections: Demographics, Test Results, Progress Notes, and Consults. Documents were captured and migrated into the portal in two phases: active patient charts followed by inactive patient charts. The inactive charts must be kept until each patient turns 28 years old. UV&S receives ad hoc requests from the Clinic to make a wide variety of new documents instantly active on the portal. The announcements section of WSS is used to notify Clinic users when these documents are active on the portal site. The overall look and feel of the portal was customized to match the public facing web site of the Clinic.

Solving a Complex Capture Challenge

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 EMR (Electronic Medical Records) 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 scanner hardware/software pilot was inadequate for the Clinic and UV&S: capture throughput with this combination was only 50K 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.

On May 1, 2008 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 PSI: Capture Version 3.3 software. A key breakthrough in the new phase was made in barcode recognition and document separation. PSI: Capture 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. Another major gain was made in switching to the Kodak I660 with Perfect Page. Perfect Page allowed image pre-processing to be performed at the rated speed of the scanner. The initial solution had utilized image pre-processing technology which substantially slowed the rated speed of the scanner hardware, decreasing total throughput. Other improvements in the new pilot phase included 1) the ability to perform partial batch capture and release with managed exception item processing, 2) the preservation, inspection, and exception management of all detected 'blank pages' (which sometimes included important Physician notes, phone numbers, and drug formularies), 3) the incorporation of lookup services for auto-indexing by using a single patient identifier number, and 4) 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 PSI: Capture. The Kodak I660/PSI: Capture solution is now processing over 500K images per month, a 10X improvement over the hardware/software combination tried in the initial part of the pilot. 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 4 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 PSI: Capture 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 PSI: Capture 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"



Solution Components in Summary

Capture Software:	PSI: Capture Enterprise 3.3 from PSIGEN Software
Portal Platform:	Windows SharePoint Services from Microsoft
Scanner:	Kodak I660 with Perfect Page
Hosting and Portal Development:	NovaCopy

About PSIGEN Software, Inc.

PSIGEN Software products help organizations convert paper documents into digital assets. Our largest customers include scanning service providers, business process outsourcers, and the corporate services divisions of Fortune 500 corporations. We have significant customer concentration in financial services, healthcare, and manufacturing. Our channel partners include document imaging value added resellers, major brand MFP dealers, Microsoft solution providers, and document management software vendors. Web Site: www.psigen.com Email: sales@psigen.com Phone: 949-916-7700

About Underground Vaults & Storage

Underground Vaults & Storage specializes in secure records and asset storage and management. UV&S serves national and international clients representing numerous industries including healthcare, legal, financial, insurance, cultural, oil/gas, entertainment, and government. Web Site: <http://www.undergroundvaults.com>