



# COMPU-DATA International Automates Medical Records for Geisinger Health System

Geisinger Health System a leading Healthcare Organization Implements a "decentralized indexing/centralized scan " capture solution to Process Millions of Pages of Information a Year and selects COMPU-DATA International, LLC to design the solution and Automate Medical Records Processing

## The Situation

From its founding in 1915, the physician-led Geisinger Health System ([www.geisinger.org](http://www.geisinger.org)) has grown to dozens of facilities serving 38 mostly-rural counties in central and northeastern Pennsylvania. In 2002, its 600-plus physicians and thousands of staffers treated 30,000 inpatients at two hospitals and an alcohol treatment center, and over 700,000 outpatients at 50 facilities. The resulting medical records, diagnostic reports, research analyses and business accounts generated millions of pages of information.

To keep pace, a simple imaging solution installed in the mid-1990s to automate business records has grown into a content management system that captures, manages, transports, stores, and intelligently conveys information from dozens of sources to innumerable destinations. From physicians to account service representatives, each user quickly receives information matching their needs, responsibilities and privileges.

For patients, the effect is profound. Their histories, test results, and payments are instantly available from any Geisinger facility. If an orthopedist sets Jane Roe's fractured arm 50 miles from her home clinic, her local facility — with a few keystrokes — views the X-rays, patient records, and billing information, the same day or six weeks later when she arrives to have the cast removed. Similarly, she can get invoice copies or make payments at any facility. As back files grow over the years, physicians can instantly retrieve generations of medical records when tracking congenital conditions and propensities.

## The Challenge

Things didn't always work so smoothly. The 1995 Business Office imaging project, intended to speed processes and reduce storage, disappointed everyone. Problems ranged from hardware to the network. "We had big issues with volume and throughput," relates Marla Fritz, Business Office Director. "We wanted to expand beyond our office and do forms processing, but we had no ability for that."

To move forward, in August of 1997, IT management hired David M. Partsch, who brought extensive image and data capture experience with him. Now Geisinger Program Director of Enterprise Imaging and Content Management, Partsch found the system was unable to use key capture technologies such as document separators, barcode headers, or auto indexing. He led a search for more full-featured capture product that ended with Kofax Ascent Capture and by 1998 Ascent Capture was being used at their Corporate Imaging Department.

Flushed with success it took on more scanning opportunities, moving beyond the Business Office for the first time to capture, lab orders, payroll timesheets, requisitions, physician credentialing documentation and insurance forms. As the millennium waned, IT wanted to use document technologies even more, but the original storage-and-retrieval system "wasn't holding together very well," Partsch says. In June 2000 it became clear that the system needed a new back end and process automation to reach IT's goals for



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expansion. With this new goal Fritz and Partsch joined forces to implement a solution that would allow Geisinger to easily track and capture many of the hospital's documents but specifically their patient records created throughout their hospitals and facilities and automatically load them into their document management system.

Partsch led a search through seven solutions vendors that ended with COMPU-DATA International, LLC (CDI) ([www.cdilac.com](http://www.cdilac.com)) for the design, development and implementation, and Vignette Integrated Document Management ([www.vignette.com](http://www.vignette.com)) for the central repository. With CDI's support and experience Geisinger successfully added the Business Process Management infrastructure and automated the decentralized indexing/centralized scan capture system with their business processes and the document management repository. "Back then, workflow was an afterthought," notes Geisinger IT Vice President Dave Macko, "but now we can't imagine life without it. At any given time, we run about six million pages through our workflows."

### The Solution

"We went live with our Document Imaging & Management System (DIMS) in December, 2002 capturing all medical data using centralized scanning while all the indexing was being done at the satellite clinics. Because the clinic personnel were familiar with the paper documents they received from visiting patients, we used their expertise to identify each document's type, select the metadata and print the barcode header sheets for each document and batch. They insert the header over each document, and ship batches of documents to Corporate Imaging by interoffice mail."

"Behind the scenes, every time they print a barcode header sheet, the system extracts information from our supporting data bases and generates a workflow case in our enterprise workflow automation system so we are tracking all these documents through the system. All the indexing, such as patient information, type and number of pages, occurs at the clinics. The workflow knows we are going to get all this information from the clinics and this allows Corporate Imaging to schedule their resources and plan their workloads. When the documents arrive at Corporate Imaging, the system acknowledges receipt and talks to Kofax Capture automatically creating the scanning task in that system. If documents don't arrive the system notifies us automatically and will escalate the issue to a manager. The system automatically creates the batches to be scanned with all their attributes: case name, number of pages, and number of documents. It does the matchups automatically and if there is a mismatch, the system alerts the operator, who can accept it, reject or fix it. The workflow integrates cleanly and efficiently with Kofax and Vignette so no one has to manually enter any of the attributes."

In early 2003, Geisinger began full-scale scanning of medical records information with three new high-resolution, high-speed scanners. "Immediately following the medical records procedures we deployed, as planned, the automation of all of our existing non-medical documents through the same system. Now we are tracking all documents this way."



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### The Results

DIMS continue to expand in size and scope. Since its implementation, Geisinger has acquired another hospital and consolidated its remote facilities to better service 2.6 million people in 43 counties — and all of our facilities use DIMS. Additionally, medical records —

electrocardiograms, for example — show test results in color, Geisinger now uses color scanners for the capture of all patient records. The storage requirements are high, but the need is vital. Partsch peers into the near future: "Our whole methodology now is based on decentralized indexing and centralized scanning, but we have had departmental requests, so we are looking at distributed capture for images and electronic files. Additionally, we are evaluating full text recognition and retrieval for specific departments, and enterprise search and automatic categorization as a corporate strategy."

"In 2008, Geisinger has grown to 700-plus physicians/scientists, 250-plus residents/fellows and thousands of staffers with over 2.8 million patient encounters at three hospitals, an alcohol treatment center, and 40 community practice sites. The resulting medical records, diagnostic reports, research analyses and business accounts now generate tens of millions of pages of information."

"CDI continues to be our partner as we plan our future. They have been very good about supporting our long-term needs with the technologies they offer and advising us on other technologies that will work best for us. When we need support, they are quick to resolve questions or issues. As an IT department, we have great confidence in the company, their knowledge and their product offerings," he concludes.

For more information on this and other customer successes please email us: [sales@cdlac.com](mailto:sales@cdlac.com)

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