# A Safe Prescription for Medical Data Storage

*"…Emphasis on providing digital medical records applications made the need for reliable storage our paramount concern.… While reliability and performance are more important than cost, thankfully the Infortrend devices delivered on all fronts."*

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| **Business:** | *Digital medical records management* |
| **Challenge:** | *Create a storage solution to reliably handle high traffic, highly sensitive data* |
| **Solution:** | *EonStor® RAID subsystems met needs for:* |
| | *- standalone operation* |
| | *- simple setup; no RAID card* |
| | *- high performance and reliability* |
| | *- low-cost maintenance* |

**MEDICAL INFORMATICS ENGINEERING (MIE)** was incorporated in 1995 to create a secure, private communications network to allow physicians, medical groups, hospitals, and insurance companies to securely transmit electronic medical information.

The idea quickly took shape and became known as the MedWeb—a subscription service committed to the concept of creating an infrastructure that allows physicians to route information the same way they route referrals.

Based on subscribers' requests, MIE developed specialty software applications to interface with proprietary systems—to package, send, and receive information, and to handle various aspects of medical office workflow. The company chose and remains committed to a single architecture, using open databases and Web-based design tools. The result is WebChart, which comprises multiple modules that interact seamlessly within standard browsers, and without the need to load software on individual PCs.

Almost ten years later, over 85 percent of physicians in northeastern Indiana subscribe to the MedWeb, and use the service to securely transmit clinical billing information, patient-health information, radiographic images and reports, dictation and transcription—and even data generated by its competitors' software.

Use of MIE's WebChart electronic health record is now being used by roughly 45 percent of the clinicians in northeastern Indiana.

## THE STORAGE DIAGNOSIS

With so many healthcare providers and their patients relying on MedWeb, MIE had to make sure their storage platform could reliably handle the high traffic, highly sensitive information.

MIE management and system administrators compiled an extensive list of storage solution requirements. Chief among these were standalone operation, simple and low cost maintenance, and no requirement for a RAID card in the server. After screening various RAID storage products available in the market, the field was narrowed to just a few storage systems; after three weeks of testing, Infortrend's EonStor line was selected.

"Other systems we tested had very poor uptime reliability and performance, especially when compared with Infortrend," commented Jason Eicholtz, systems administrator for MIE. "We were looking for a combination of cost, performance, reliability, and build quality. Infortrend offered us lower investment and a simple storage solution. When the host computer needs nothing special to use or see the storage array, that's a huge plus."

## A RELIABLE, COST-EFFECTIVE SOLUTION

MIE has incorporated several Infortrend products into its system, starting with the 12-drive bay SCSI-to-ATA subsystems, and has now standardized on the Fibre-to-SATA models. Infortrend's RAID products are part of MIE's secure data center, as key components of its application services provider (ASP) digital medical records (DMR) applications. EonStor subsystems are also part of MIE's Picture Archiving and Communications Systems (PACS) solutions used in hospitals, imaging centers, and specialty medical practices. MIE has approximately 14TB of storage in its data center; some MIE customers have EonStor units installed on their premises, with an estimated 16TB stored on remote sites. Currently, the storage devices are directly attached to each server; the company may move to a Fibre switch in the future.

"MIE's focus on the healthcare industry, with an emphasis on providing digital medical record applications, made the need for reliable storage our paramount concern," said Peter Norder, executive in charge of MIE's marketing, sales, and implementation. Added Jason Eicholtz, "While reliability and performance are more important than cost, thankfully the Infortrend devices delivered on all fronts. Since our deployment is with ATA drives, our rack space, power usage, and cooling needs are far lower than a similar sized solution using SCSI drives."

## PROGNOSIS FOR THE FUTURE

Infortrend is a key element of MIE's internal storage and PACS solutions, and will be part of the company's product offering as MIE expands the implementation of its DMR solutions on a national level.

## ABOUT MIE

MIE is a recognized leader in the field of digital medical records management. In 2004, officers of MIE were asked to join the faculty of the Medical Records Institute, and to speak at its national conference on various clinical informatics topics. Mr. Norder has been invited to join the Indiana University School of Informatics Program Advisory Board, and regularly speaks on a regional and national level on the topics of clinical workflow enhancement and digital medical records. For the third consecutive year, MIE has garnered the Growth 100 Award given by the Indiana University Kelley School of Business to recognize the fastest growing, privately held companies in the state of Indiana. Medical Informatics Engineering is located at 4101 W. Jefferson Blvd., Fort Wayne, IN 46804 • Phone: 260-459-6270 • Fax: 260-459-6271 • www.mieweb.com ∎