RADIN

Case Study Phoenixville Hospital

RADIN and Phoenixville Radiology: Reaching Out Through the Community

The Phoenixville Hospital Department of Radiology has earned the reputation as one of the leading imaging departments in the country—and for good reason. The health system's radiologists have contributed to the development of conventional and cutting-edge modalities such as conventional radiography, computed tomography (CT), positron emission tomography (PET), interventional radiology, ultrasound, radionuclide imaging, and nuclear magnetic resonance.

The Division of Community Radiology (DCR) within the department provides radiologic services in communities throughout the Delaware Valley. Obviously, its information technology needs to be just as cutting edge as its imaging capabilities. When the DCR looked to upgrade its teleradiology capabilities, its intent was to improve institutional operations as well as the quality of patient care.

To meet its high standards, the division opted for the web-based image distribution system RADIN, distributed by the RADIN group. "Teleradiology was the most important consideration for us," said David Malamed, MD, a radiologist with the DCR and director of information systems. "It was configurable for that purpose because it had the required compression levels and proper tool sets."

The DCR is comprised of several sites that provide radiology exams that are interpreted and reported by Department of Radiology faculty. It also provides all radiology services at Phoenixville Hospital and Chester County Hospital. Needless to say, the ability to easily access images and to share information at remote locations was vital to its mission. RADIN provided the ability.

RADIN, a web-based image distribution system, enables the transfer of medical images via the Internet and/or Intranet. The web server technology sends images all throughout the hospital system, both on site and off site. "It can go anywhere," says Malamed, "into the operating rooms, the radiologists' reading areas, into doctor's offices and even at home for off-hours emergency work. It also can go anywhere in the Phoenixville hospital and the satellite offices."

Immediately following implementation, the division realized the extent of the system's capabilities. "We were surprised how stable and functional the product was," said Malamed. "Because it has dual compression levels—one that could be used for teleradiology and one that could be used for final diagnosis—we found a product capable of both separate functions."

Though RADIN is primarily used as viewing software, the division has also found it helpful in an archival capacity. "RADIN proved so stable that we started using it as a PACS within our hospital," revealed Malamed. The system has the capability to accommodate a high number of concurrent users—as many as 500. "Right now, we're licensed for 10 users, that means that 10 people can work at once," said Malamed.

The system's security and cost effectiveness were also critical considerations. The upgrade was not only vital to the division's mission, but the security elements are necessary in today's healthcare climate—

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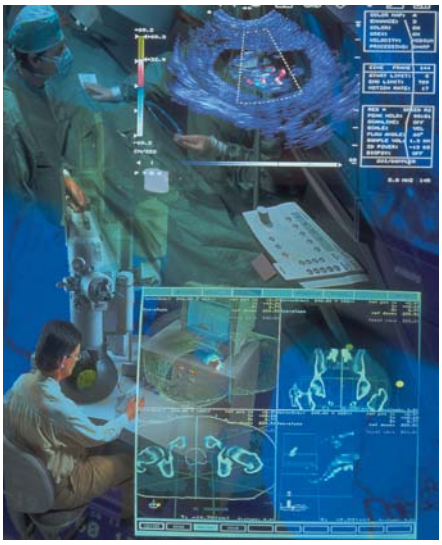

the post HIPAA environment—where healthcare facilities must address the issues and challenges of electronic security and patient privacy. Security features include user authentication, secure data trans-mission through encryption, access control, and configurable user permissions. Each user has its own password, and user access is logged, which creates an audit trail. To ensure data security, outside connections and access data transfer can be encrypted. "It is password protected and HIPAA compliant," said Malamed. The RADIN system proved to be quite cost effective. The thing that is great about RADIN, compared to some of the PC-based units, is that you can use it anywhere you want to, and it does not have very strict computer requirements."

Requirements are rather basic and include standard Microsoft technology. The viewing stations—regular PCs—only require suitable display and access to the widely available Internet Explorer. Still, the RADIN system is complex enough to simplify inter-departmental communication.

Further, RADIN allows for easy, rapid and inexpensive implementation. Malamed reported that installation was accomplished quite smoothly, without any of the complex logistics that often accompany information technology upgrades. RADIN was up-and-running quickly and with negligible staff inconvenience.

Extending the system's reach is easily accomplished as well. "If doctors tell me they don't have RADIN in a particular nursing station but they need it, more than likely I could go up there, direct the computer to the website, and that's all," said Malamed. "True, it may not run quite as fast, or it wouldn't page through the images quite as fast as one of the more dedicated machines we have down in radiology, but it would still be perfectly reasonable for the more casual user."

Malamed indicated the upgrade to RADIN also has had a positive impact on diagnosis. "It certainly has been helpful in that area," he said.

"For instance, our CR units compare to radiology units, so we frequently go from plain film back to RADIN, so that we can do windowing and leveling.The system also has a very effective sharpening tool, which shows us the tips of some catheters that otherwise are difficult to perceive." Ultimately, patient care is improved. "The speed of access means we can plan treatment more efficiently, which is good for us and good for the patient," said Malamed.

In addition, the system's time-efficiency factor has increased staff productivity. "We used to have hanging films," recalled Malamed, "but now, when we need to search for images, it is only a matter of a few mouse clicks."

Not surprisingly, the RADIN upgrade was overwhelmingly well received. "Everyone is positive about RADIN. In order to enable the hole staff to work effective, we need to buy some more licences of RADIN," said Malamed.

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