St. Vincent Medical Center Cardiologist
Adopts ImageGrid™ PACS Appliance for Remote Diagnostic Reading
and HIPAA-compliant Image Archiving

The Customer

Established in 1856 by the Daughters of Charity of St. Vincent de Paul as the first hospital in Los Angeles, St. Vincent Medical Center has been providing dedicated healthcare services for more than 150 years. In addition to serving its diverse community, the hospital offers a wide range of medical specialties – from comprehensive cancer treatment and multi-organ transplantation to the management of cardiovascular diseases.

St. Vincent Medical Center burst onto the national cardiovascular scene in 1957 by becoming the first hospital on the West Coast to perform a successful open-heart surgery. Currently, the hospital operates the prominent Heart Center at St. Vincent Medical Center, the home to leading-edge interventional procedures and advanced surgical techniques using cardiac computed tomography (CT), magnetic resonance imaging (MRI), high-resolution ultrasound and other advanced imaging modalities.

Chief among the practicing cardiologists at the Heart Center is James R. Katz, M.D., F.A.C.C., who is a trendsetter known for technology advances benefiting users and patients, and for pushing the envelope to bring cardiac imaging to the next level.

The Challenge

As a staff physician and a private practice entrepreneur, Katz is an expert in digital medical image management – in particular, the distribution and management of cardiac imaging studies and data. By combining a Siemens Medical Solutions KinetDx™ DS3000 server system with a Pioneer Electronics DRM-7000 720-disc, DVD FlexLibrary™ digital repository at his office located adjacent to the St. Vincent Medical Center, he is able to stay connected with the Center's Radiology Information System (RIS) via secure optical fiber LAN connection. This unique implementation enables Katz to mirror and archive a monthly average of 160 cardiac imaging studies from the Center's RIS onto his office-based server for remote diagnostic reading and interpretation.

While this image-management configuration initially proved to be a valuable time and resource saver, the system eventually was found to be lacking since it didn't provide the robust connectivity and image-archiving features necessary to facilitate growth and remote diagnostic reading away from the office.

"To effect growth and maximize my investment in digital repository and reporting tools, I needed a solution that could facilitate expansion and increase my bandwidth for diagnostic reading at the same time," says Katz. "Time and space constraints limit the number of patients

that can be imaged at St. Vincent. However, if I'm connected remotely to other institutions, I can increase my capacity considerably – and even absorb an additional 30 studies a month. This is a significant increase that is immediately felt at the patient level."

According to Katz, there are numerous underserved medical facilities in the 30- to 70-bed range in California that own a PACS or are willing to invest in a DICOM-standard server solution like the Candelis ImageGrid™ PACS Appliance to maximize local imaging study management and realize the full potential of their digital imaging investment.

"These medical facilities may perform four to eight cardiac imaging studies per week but still have difficulty finding qualified cardiologists to read and interpret the data. Some are forced to refer patients to other facilities simply because they lack the qualified onsite professionals to do the job. A PACS or DICOM-standard server that allows for remote-location imaging study management and archiving can make a big difference," claims Katz.

In trying to implement a workable remote reading solution, Katz discovered his biggest challenge wasn't necessarily acquiring new patients, but an inability to remote query/retrieve imaging studies in a timely fashion using his existing image-management system. Compounding the problem was the lack of robust connectivity needed to route image files as large as 80 megabytes from distant locations.

The Solution

After considering numerous vendors and image-management options, Katz deployed the Candelis ImageGrid in conjunction with his existing Siemens DS3000 server and Pioneer DRM-7000 digital repository at his St. Vincent office. A second ImageGrid 1000 was installed at his remote home office location to mirror the imaging studies received at his office.

The ImageGrid provides Katz with six terabytes (TB) of raw capacity scalable to 100 TB, always-online access to images and, more importantly, robust WAN connectivity to support remote diagnostic reading and HIPAA-compliant image archiving.

"With the Candelis ImageGrid, imaging studies are automatically forwarded from the St. Vincent office server to my home office server to be archived locally. Imaging studies are always-online and immediately available for remote reading without the time-consuming query/retrieve process – this is where Candelis and the ImageGrid is ahead of the curve," explains Katz.

Optimized to manage large volumes of DICOM images and studies, the ImageGrid features internal architecture purpose-built for data-intensive modalities, such as cardiac CTs, MRIs and ultrasounds. In addition, the ImageGrid features both disk-based and tape archiving configurations for reliable, easy-to-implement Information Lifecycle Management (ILM) to help streamline the image-management workflow.

The Results

Armed with always-online access and the ability to automatically route imaging studies, Katz was able to realize immediate benefits and facilitate his growth plans to offer remote diagnostic reading services.

"On the distribution side, the ImageGrid provides immediate, economical HIPAA-compliant redundant image archival to remote locations and eliminates the need to query/retrieve studies or manually transfer imaging studies onto DVDs," he adds. "On the acquisition side, the ImageGrid is the perfect solution for budget- and resource-constrained medical facilities that need to realize the benefits of remote diagnostic reading. The ImageGrid server benefits patients with enhanced medical technology and physicians with greater overall convenience."

Thanks to ImageGrid implementation at his practice, Katz is actively marketing his remote diagnostic reading capability, with support from Candelis, to attract underserved medical facilities looking to enhance their outpatient cardiac imaging referrals.

"The ImageGrid remote diagnostic reading implementation is priced 85- to 90-percent less than other vendor offerings," claims Katz. "Compared to other vendors, Candelis is far more motivated to work with the end user to integrate new features in future product developments – which should prove significantly more valuable as remote diagnostic reading becomes widespread."

With the ImageGrid, medical facilities can avoid the cost of traditional PACS in their quest to provide reliable HIPAA-compliant archiving. In addition to providing budget-conscious administrators with a significant cost savings, the ImageGrid boasts advanced features and connectivity to support next-generation medical imaging approaches, such as remote diagnostic reading. The ImageGrid's proactive self-monitoring systems also allow facilities to reduce their IT administrative costs with minimal administrative support.

Location
Los Angeles

Services
Cardiovascular medicine and integrated imaging – CT, MRI and Ultrasound

Key Business Challenges
- Meeting the needs of future growth and increasing patient load
- Timely remote access to imaging studies and data without query/retrieve
- Digital image-management solution offering HIPAA compliance and scalable capacities

ImageGrid™ Key Benefits
- Cost-effective, always-online medical image archiving
- HIPAA-compliant connectivity and mirrored archive image-management
- Enhanced connectivity for distribution via WAN for remote diagnostic reading
- Web-based proactive self-monitoring/system diagnosis