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Telemammography Tool Frees Up Rads

By Alex Dobuzinskis

With the aid of a Web-based system for viewing mammography studies, a radiologist can save time and effort by working from home instead of going to the office.

Candelis Inc, a medical informatics company based in Irvine, Calif, has developed a system that allows users to receive mammography reports over a virtual private network connected to a central server. The company's ImageGrid Mammography Web Viewer also can be used to view CT, MRI, and ultrasound studies.

"Now that everything is digital, having a Web-based mammography viewer allows the radiologist to essentially do diagnostic reads from anywhere, so they don't have to be tied to their office," said Hossein Pourmand, vice president of business development for Candelis. One of the early clients of the ImageGrid Mammography Web Viewer is a radiologist based in Newport Beach, Calif, who uses the system to work from home, according to Candelis.

But the system has other applications aside from the ability to work from home, Pourmand said. "In a hospital environment, instead of the doctors having to go to only a particular room or one particular station, this gives them more flexibility in terms of doing diagnostic reads from anywhere," he said. The system received FDA approval in February. Candelis developed the system after its ImageGrid PACS appliance started being used in mammography labs. Customers told the company that they liked its ImageGrid PACS system, but they had to use other applications to view reports, Pourmand said. In response, Candelis developed the ImageGrid Mammography Web Viewer, which uses the Digital Imaging and Communications in Medicine (DICOM) standard.

Since radiologists working with mammography reports need to have access to many prior relevant studies, the system allows for customizable prefetching of relevant priors, according to Candelis. The system does not require a radiologist to install special software on the computer being used as the viewer. Instead, the software is installed on a server, and the user can access that server from a remote location via a secure connection over the Internet—a system that is called the "thin client" approach, Pourmand said.

By comparison, other systems use a "thick client" approach, so the software has to be located on the computer being used as a viewing station, which makes those systems more expensive, he said. "Most of the mammography viewers are thick client, and they don't have the easy-access that ImageGrid has as a thin client, Web-based mammography solution," Pourmand said.

The ImageGrid Mammography Web Viewer also has many of the standard features that come with a PACS viewer, Pourmand said. Those include integration with mammography Computer Aided Detection (CAD), Breast Imaging Reporting and Data System (BIRADS) capabilities, the ability to view multiple studies side-by-side, image processing, measurement and viewing tools, quick retrieval of large studies, and the ability to export studies and perform DICOM printing, according to Candelis. The system also has Cine Tool, a feature that allows users to view successive images in loop or shuffle mode.

While the ImageGrid Mammography Web Viewer is mainly intended for radiologists, it is also being used in OB/GYN offices, especially as those environments are beginning to evolve into more wide-ranging women's health practices, Pourmand said.

"We have OB/GYN customers who are augmenting their practice by doing digital mammography as well," he said. With the ImageGrid Mammography Web Viewer, an OB/GYN doctor can send a mammography study to a qualified radiologist and get a response back through the system, Pourmand said.

"The OB/GYN doesn't necessarily need to be conversant and fluent" in how to interpret a mammography study, Pourmand said.