RamSoft PACS helps Turkish provider enhance its radiology services and capabilities

In Turkey, and throughout much of Europe, few radiologists command the respect that Prof. Dr. Levent Celik does. Never one to stand pat, he has long hoped to develop a leading subspecialty radiology service in a country that has fallen well short of Western technological advancement.

His dream moved closer to reality when Maltepe University School of Medicine in Istanbul, where Prof. Dr. Celik is a professor of radiology, installed a PowerServer PACS from RamSoft in 2006. Today, the hoped-for subspecialty service is growing, efficiency among radiologists is increasing, and staff couldn't be more pleased.

"My main goal was to establish a teleradiology service," Prof. Dr. Celik said. "The RamSoft product has gone a long way toward enabling that."

Success Snapshot

Challenge:

To develop a leading subspecialty radiology service in a country that has fallen well short of Western technological advancement.

Result:

Staff are **20% more efficient**, and reporting times have **reduced by 10%**. Bandwidth usage has been reduced while keeping image quality excellent.

Anchored by three servers, the RamSoft system links seven medical sites staffed by 25 radiologists, 52 users and an estimated 120 employees. Each year nearly 100,000 patients undergo more than 75,000 exams using the myriad modalities that are in place, including six MRI, eight CT, one PET, one nuclear medicine, five CR, and two ultrasound systems. In all, the seven sites operate 30 imaging systems across all modalities, with easy image sharing.

"Our hope was to establish a subspecialty radiology practice among all of our sites," Prof. Dr. Celik said. "In the past, some radiologists never came to the university for subspecialty exams. Since we installed the PACS, more and more of them are using our capabilities for non-general procedures."

Prof. Dr. Levent Çelik

There were other reasons for implementing the PACS. Practitioners wanted to establish a mammography network to serve the 11 million people in greater Istanbul, and organizational integration needed improvement. Additionally, remote consulting and the ability to practice during the evening hours were lagging. The RamSoft system promised improvement in these areas while enabling workflow tracking and improvements. PACS-based dictation using voice recognition and the use of advanced processing capabilities also were enabled.

Prof. Dr. Celik, who holds a master's degree in business administration, was just the person to implement change. A foremost radiology consultant with expertise on Turkish hospitals, he is recognized for his thorough approach to radiology issues, particularly those

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> - Prof. Dr. Levent Celik

pertaining to developing countries with fast-growing health-care economies—such as Turkey.

According to Prof. Dr. Celik, the RamSoft PowerServer came to the attention of Maltepe by chance. Site visits and demonstrations ensued, systems developed by two major players were evaluated, and the RamSoft product ultimately won out.

"In the end I decided to acquire a web-based product that was better suited for our needs," Prof. Dr. Celik said. "We believed RamSoft had very strong knowledge of the field and an outstanding product, and that's what convinced us."

The RamSoft PowerServer gives Prof. Dr. Celik a reliable, faul tolerant, web-based approach to PACS, accommodating unlimited users and workstations. Key capabilities include study tracking from start to finish; unparalleled real-time worklist flexibility; prefetching of current and prior studies to each site or workstation; flexible viewing protocols, permitting image display based upon users' preferred layout for each body part and modality; a full complement of clinical tools to facilitate optimal image manipulation; a digital dictation module enabling physicians to dictate reports and have them transcribed into formatted Microsoft Word reports; and automatic configuration of workstation client PCs.

While implementation was smooth, there were glitches. "Our main problem was internet speed," Prof. Dr. Celik said. "The internet infrastructure in Turkey is roughly where it was in the U.S. four of five years ago. However, by installing more expensive line and increasing our bandwidth we were able to increase the download rate between servers."

The effort paid off. Today, the RamSoft system is a key component of the hospital's burgeoning radiology program.

"It's really important, especially in the hospital," Prof. Dr. Celik said. "We're more organized. We're no longer film dependent—we now read all of the reports on monitors. The most obvious improvement is that we no longer have to hard-copy archive."

In fact, Prof. Dr. Celik estimated that staff are about 20% more efficient, and reporting times have been reduced by about 10%. Through it all, exam times have remained static. And with compression and bandwidth optimized, image quality has been excellent.

"The RamSoft product has changed our practice for the better in many respects," he said. "As we look ahead to growing our subspecialty service, we do so with great optimism. The RamSoft PACS has made a big difference to our approach, and we're looking to the future with renewed vigor."

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