



Thinking Systems--An Apt Name for a RIS/PACS Innovator

January 14, 2010
by Barbara Kram, Editor

DOTmed recently interviewed Xiaoyi Wang, Ph.D., president and co-founder of Thinking Systems. The small company is making a remarkable impact in the global PACS arena. Their Modality Broker software enables OEM systems to incorporate many modalities, including older images, all on one platform either on the web or a workstation.



DOTmed News: Tell us about the value of multi-modality PACS and RIS. How does this differ from conventional approaches?

Dr. Wang: In order to better answer these questions, we should first look at what a conventional PACS is designed for. A conventional PACS is designed based on the assumption that images are static, two-dimensional, and gray-scale. This assumption holds true for general radiology modalities, including CR/DR, conventional CT, and conventional MR. However, it falls apart when it comes to molecular imaging modalities (nuclear medicine, PET-CT, and SPECT-CT), volumetric CT (such as CTA), functional MR, and cardiology modalities (nuclear cardiology, echocardiology, cardiac catheterization, and digital ECG). Because of the inability of conventional PACS to support these modalities, physicians will have to rely on either modality workstations, or screen captures to interpret images from these modalities. Dependency on modality workstations greatly reduces the efficiency and productivity of physicians, because they will need to go from workstation to workstation, or even floor to floor, to read cases. Dependency on screen captures greatly reduces the accuracy of diagnosis.

DOTmed: What are the benefits of multi-modality PAC to doctors, hospitals, and patients?

Dr. Wang: The obvious advantages of a true multi-modality PACS and RIS are that physicians will be able to view, processing, and analyze images of all modalities on one single platform. They will have the proper clinical tools at their fingertips to make the most accurate diagnosis for each type of images. They no longer have to hop from workstation to workstation and be forced to use different vendors' tools to view and process images, and to report findings. This not only greatly improves the efficiency and productivity of physicians, but also the accuracy of diagnosis. The end result is better quality of care for patients, better profitability for hospitals, and better quality of work life for doctors.

DOTmed: How do your solutions respond to U.S. market trends and economic forces in health care?

Dr. Wang: Thinking Systems is a recognized industry leader in providing comprehensive enterprise PACS solutions for all modalities. Besides offering comprehensive conventional PACS solutions, we are especially well recognized in the industry not only for our comprehensive PACS solution for molecular imaging, including PET-CT fusion, SPECT-CT fusion, and general nuclear medicine processing and review, but also our

comprehensive cardiovascular PACS solutions for nuclear cardiology processing, quantification, and structure reporting, echocardiology review and structured reporting, and cardiac catheterization review. These cutting edge solutions are available not only on our unified PACS/RIS platform, but also available on major third party enterprise PACS through integration, including Philips iSite® PACS, Fujifilm Synapse® PACS, and other industry leading enterprise PACS. Our multi-tiered solutions include workstation-based solutions providing high throughput and convenient multimodality comparison, thin-client based solutions enabling clinicians to access images and clinical tools from anywhere anytime through Internet, and client-less solutions providing access from any platform with a Web browser, be it Windows, Mac, or PDA.

DOTmed: What are the big trends now in nuclear medicine?

Dr. Wang: Molecular imaging modalities have been among the fastest growing modalities in the industry, especially the hybrid modalities, such as PET-CT and SPECT-CT, which combines functional imaging and anatomical imaging for the most accurate diagnosis. To support this growth, and to be able to take advantage of the technologies offered by these modalities, PACS infrastructure will have to be in place so the values provided by these modalities can be extended to the point of patient care. Molecular imaging is now more than ever a deciding factor in the selection process of new PACS purchases, PACS upgrades, and PACS replacements. In addition to the continuing advancement of technology in the modality itself, bringing molecular imaging to enterprise PACS will be the trend in the years to come.