

The Society for Computer Applications in Radiology

THE SOCIETY for Computer Applications in Radiology (SCAR) is participating in the planning for the first public demonstration of a special implementation of the DICOM Standard for Digital Imaging and Communication in Medicine. The American College of Radiology (ACR) and the National Electrical Manufacturers Association (NEMA) have developed and published Versions 1 and 2 of the ACR/NEMA Standard in 1985 and 1988 respectively. Both organizations are participating in the development of Version 3 for network applications, scheduled for release early in 1993.

The demonstration will be during the annual meeting of the Radiological Society of North America (RSNA) in the *infoRAD* Learning Center and will be open to RSNA '92 registrants all week. Although this demonstration will be limited to one specific implementation of the Standard and includes only two core commands, it should illustrate the concept of universal connectivity by equipment vendors who comply with the provisions of the Standard. To complement the physical demonstration, there will be many presentations on this subject, in the *infoRAD* theaters, by radiologists, physicists, and other experts familiar with the technology and its use in practice.

Twenty-five companies have indicated their willingness to participate in the demonstration. Some companies will send images to a Central Test Node (CTN), some will receive images from the CTN, and other companies will perform both functions. The CTN was developed specifically for this demonstration by the Electronic Radiology Laboratory of the Mallinckrodt Institute of Radiology in St Louis, MO.

A set of clinical images for the demonstration will be provided by members of the Radiological Information System Consortium. This set will include selected images from each of the digital modalities and examples of digitized film produced from conventional x-ray examinations. After removal of patient identification, these

images will reside on the CTN and will be available to all participants on the network. There will also be "private" files on the CTN for storage of images transmitted by each of the participating companies. Access to these images will be limited to that contributing company.

RSNA is providing the local area network which is based on Ethernet and supports the Transmission Control Protocol and Internet Protocol (TCP/IP). The companies on the network will provide the Demonstration Prototype Nodes and related equipment to communicate with the CTN. Because the primary purpose of this implementation is to show network connectivity through the use of the DICOM Standard, and because it will be located at the *infoRAD* Learning Center, marketing and sales activities are prohibited, but demonstration attendees may obtain related product information in the technical exhibit areas of RSNA.

During the week there will be many related presentations at *infoRAD* by highly qualified speakers recommended by SCAR. These presentations are intended to supplement the demonstration with information on the application of the DICOM Standard to clinical practice and to provide an opportunity to discuss with users their experience with digital imaging management systems. There will also be several refresher courses and scientific papers given at the meeting that are pertinent to the technical and clinical aspects of the *infoRAD* demonstration.

There is also a SCAR membership meeting planned for Wednesday evening during the RSNA meeting, giving members the opportunity to comment on SCAR's future role in such demonstrations.

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