The Society for Computer Applications in Radiology

Has DICOM Become a Victim of Its Own Success?

IT WAS NOT LONG AGO that the radiology community was struggling to catch up with the rapid growth of technology. Six years ago we were not able to identify a nonmilitary radiology department that was truly digital. Since then, the world of radiology has changed. Radiology residents are now finishing their training without seeing the difficulties associated with a film-based department. These young physicians are not aware of all the problems that prevented our specialty from embracing the digital technology sooner than other industries. However, once these radiologists begin to see the operation of a nondigital department, they realize quickly that the radiology community has many more barriers to overcome before the full benefits of digital technology can be adopted.

We all can remember one of the major difficulties in the implementation of a PAC system: the connecting of a multitude of devices, manufactured by different companies, to one single network and database. A few years ago connecting a single device to a PACS network was a major project. Today, as a result of tireless efforts of a group of engineers and physicians, we have a standard that facilitates the communication part of a PACS. Development of the Digital Imaging and Communications in Medicine (DICOM) standard has not been an easy task. In addition to the difficulties in refining DICOM, the acceptance of DICOM by different manufacturers has been slower than most radiologists would prefer. Although it is much easier to connect a new device to the PACS network because of DICOM, there still is a significant need to continue the work in this area.

In the past, the American College of Radiology (ACR) has been a major supporter of the development of DICOM. Unfortunately, the DICOM effort on the part of ACR may be reduced as a result of a general budget cutting during next year. Much of the perception is that DICOM is "done" and what remains is just to implement it. However, this is far from true. Continued development of DICOM is at a near-critical juncture, and expansion of the work of the DICOM Working Groups already is strain-

ing resources. The collaborative effort of the Radiological Society of North America (RSNA) and the Healthcare Information Management Systems Society (HIMSS), an effort called "Integrating the Healthcare Enterprise (IHE)," which uses DICOM as a major component, is beginning to have an impact on healthcare systems. There is expanded international cooperation with DICOM meetings routinely scheduled in Europe and Asia and with some of the DICOM Working Groups supported by secretariats outside the United States. Nonradiologic specialties are increasing their level of participation in DICOM with particular support from the American Academy of Ophthalmology for their members. DICOM Structured Reporting, one of the most anticipated but also most complex parts of DICOM, is being implemented in commercial systems. These are but a sampling of the large list of issues and work items that the DICOM Standards Committee and its Working Groups are facing. A goal of the DICOM Standards Committee is to issue updated versions of the Standard yearly.

We need to think about how to fill the gap that would be created should the ACR implement budget reductions that would affect funding of the DICOM effort. Although the ACR is unlikely to eliminate DICOM support completely, reductions in the budget for DICOM will mean reduced travel support for those ACR members who give their time to work on the Standard. If anything, the expansion of the work of DICOM would suggest a need to increase ACR member participation, not potentially decrease it.

The Society for Computer Applications in Radiology (SCAR) includes many members who also are members of the ACR and other professional and scientific organizations. It may be helpful for the SCAR membership to use its influence with vendors and some of these other scientific organizations to help support the burden of DICOM work that has, on the radiology professional side, been borne solely by the ACR.

DICOM has been instrumental in bringing radi-

ology to the 21st century and has benefited vendors and professional users alike. Perhaps it is time that a greater share of the burden for future development be shared by more of the beneficiaries.

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