# Telemedicine Forum being established

We are told that information is the currency of the Nineties. Information could simply be regarded as any data which is useful. A significant advantage of information in digital format is the ability to utilise that information at two or more different locations, markedly increasing its usefulness. Intrinsic to the information revolution over the preceding decades have been advances in computer and telecommunications technology. The single overriding factor in the success of these information technology industries was the use of standardised hardware and software components, ensuring compatibility between a variety of manufacturers, permitting the industry's phenomenal growth. These standards include mechanical and electrical connections, transmission media, electronic signal characteristics and sophisticated software protocols and applications.

The ability to capture, process and store information in digital format has already had a huge impact on Radiology. Just as in information technology the development of medical and radiological standards at various strata has been a critical element in allowing the cohesive and productive evolution of technical advances in our profession.

The same need for standards must apply to the rapidly germinating field of telemedicine, as a specialized hybrid branch of information technology and medicine. Again multiple layers of standards and protocols are required covering physical, electrical and software aspects, but beyond that are the medical and medicolegal considerations.

There are at least three good practical reasons for developing locally accepted standards - firstly, to protect the public and the medical profession; secondly, to allow intercommunication between systems; and thirdly, to avoid obsolescence. Already examples of inferior performance of teleradiology systems have raised the level of anxiety concerning medicolegal action. Standards may well differ according to individual circumstances of specific telemedicine systems, with the various permutations of potential links between and within hospitals, practices, clinics and homes.

Should a set of basic South African hardware and software standards addressing medical image transmission be published? Should these be verified and certification be implemented? One would envisage that DICOM 3 standards would be non-negotiable. Digital image and monitor specifications would probably be the next most important, requiring at least a 2000 by 2000 matrix size and 12 bits of contrast resolution for diagnostic chest radiology (and possibly a 4000 by 4000 matrix size for mammography), ideally with high luminance, flicker-free screens.

Compression is a more contentious issue, particularly whether it is permissible to allow "lossy" compression with the attendant irreversible loss of data. Intercommunication between various systems and future upgrade potential would be shared concerns, probably ultimately determined by market forces.

Following a meeting of interested parties in Cape Town on 20 January 1996, proposals and discussion on these topics led to the formation of a steering committee on telemedicine which has as its objective the establishment of a National Forum on Telemedicine.

This committee presently consists of Dr Jan Lotz (chairman), Prof Steve Beningfield (UCT), Dr Pieter Serfontein (Provincial administration Western Cape), Dr Ashwin Hurribunce (SANDF), Dr Stuart Rutherfoord (Pathologist, University Stellenbosch) and Dr Lennox Mathews (Advisor, Dept of National Health). Private practice, state, provincial, military and academic groups are therefore represented and both radiology and pathology specialties are included. Any representatives from other interested groups or specialities would be warmly welcomed. The intention of the proposed forum is to represent all interested parties, acting as a conduit between users of telemedicine and central government. The Department of Health has already constituted a committee evaluating the appropriateness and application of telemedicine in this country and has been informed of the planned development of the forum. This governmental committee would be the most likely avenue of communication with central structures, and many of these issues are perhaps more appropriately addressed at that level. We hope that the proposed national telemedicine forum will serve to help cultivate the discipline required to prevent the devaluation of our own unique currency, medical information.

A South African National Telemedicine Forum homepage can be accessed on Internet at the following address: http://www.sun.ac.za/local/academic/Anat_Path/neuro_path/telemed.html

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