香港中文大學
THE CHINESE UNIVERSITY OF HONG KONG

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TO NEWS EDITORS
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HONG KONG ENTERS NEW ERA OF MEDICAL IMAGING

Hong Kong makes strides into a new era of medical imaging today with the launching of the Chinese University of Hong Kong's innovative broadband communications network, MAGNET.

The Medical Imaging Network System is designed for doctors to transmit and process images taken of patients, for more timely and precise diagnosis.

A high-speed network for connecting hospitals and medical schools in Hong Kong, MAGNET enables doctors and medical students to examine, analyze and exchange images captured by sophisticated diagnostic machines -- including magnetic resonance imagers, computerised tomography scanners and nuclear medicine -- at different locations via computer workstations.

A hundred medical images can be transferred between distant hospitals within the network in one to two seconds. Many image processing functions are also available for facilitating diagnosis.

The first network of its kind in Southeast Asia, MAGNET is the first-phase result of an on-going research project on broadband communications started 18 months ago by the Chinese University's Information Engineering Department.

The idea of setting up a broadband network was first raised two years ago by the Vice-Chancellor of Chinese University, Prof. Charles Kao. Medical imaging was chosen as the first application to be developed.

"MAGNET symbolises the spirit of sharing and caring in Hong Kong as well as the speed that things happen here," the Secretary for Health and Welfare, Mrs Elizabeth Wong, said at the inauguration ceremony of MAGNET this morning. This home-grown technology will bring to Hong Kong strategic advantages, she said.

The Hospital Authority has mapped out a long-term strategy for the implementation of information technology applications, she said, and MAGNET will play a key role to complement these applications.

Also speaking at the ceremony, Prof. Kao said the successful implementation of the project has dual significance for Hong Kong.

"For doctors, the network greatly facilitates the diagnostic process. For the telecommunications sector, this first broadband network for Hong Kong points the way to the many exciting possibilities broadband communications can offer," he told the doctors, business executives and government officials attending the ceremony.

The first phase of MAGNET, already in operation, connects the Prince of Wales Hospital and the Information Engineering Department of the Chinese University in Shatin with the St. Teresa's Hospital in Kowloon.

At present, 30 doctors at the Prince of Wales Hospital and St. Teresa Hospital -- mainly radiologists and surgeons --- are registered users of MAGNET.

It is envisaged that network may eventually be extended to all private and public hospitals in Hong Kong and even private practitioners via their personal computers.

The system can also extend to international connections to facilitate the flow of advice from overseas experts.

Broadband communications network refers to the high-speed network which uses optical fibre and has broad bandwidth to support multiple services including data, voice, images, graphics and video. As such, MAGNET has the potential applications in transmitting product design sketches, multiple-location video-conferencing, live transmission of surgical demonstrations, three-dimensional image reconstruction to indicate the location of a tumour within the human body.

The optical fibre link in MAGNET is provided by Hong Kong Telecom. Over the past years, the Hong Kong Telecom Foundation has made generous donations to the Faculty of Engineering of CUHK to support the applied research.

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For press enquiries, please contact Mrs. Shirley Kwok or Mr. Ali Li of the Chinese University's Information Office at 609-7294 or 609-7293.

Footnote:

Magnetic Resonance Imagers (MRI), introduced in the early 1980, are able to differentiate densities of tissues and see through bones. It is often used for head imaging. Each MRI machine can cost US$1.5 million - US$2.5 million.

Computerized tomography scanner (CT), introduced in early 1970s, is capable of producing cross-sectional images of the head and the body of a patient. It costs US$0.45 million to HK$1.2 million to purchase.

Nuclear Medicine (NM) requires injection of contrasting fluid into organs for imaging.

These expensive equipment are not available in every hospital. Hospitals share the use of these equipment by referring patients to the hospitals which have such machines eg. Queen Elizabeth Hospital, St. Teresa Hospital. Thus the MAGNET network will greatly facilitate the transmission of images, especially of these referral cases.

Note to Editor:

A photograph taken at the opening will be available via GIS press box this afternoon.