

Shun Hing Distinguished Lecture Series 2007**The Multimedia Communications Revolution of
the 21st Century**

by

Professor Lawrence Rabiner**Center for Advanced Information Processing(CAIP)
Rutgers University, USA****Date: 28 June 2007, Thursday****Time: 4:00 p.m. - 5:30 p.m.****Venue: Lecture Theater, 9/F, William M.W. Mong Engg. Bld., CUHK****Abstracts**

We are now in the midst of a Multimedia Communications Revolution in which virtually every aspect of telecom is changing in ways that would have been considered unthinkable just a decade or so ago. Perhaps the greatest challenge in realizing this communications revolution is to figure out how to provide a range of new services that seamlessly integrate text, sound, image, and video information and to do it in a way that preserves the ease-of-use and interactivity of conventional telephony, irrelevant of the bandwidth or means of access of the connection to the service. In order to achieve this overarching goal, there are a number of technological problems that must be considered, including:

- compression and coding of multimedia signals, including algorithmic issues, standards issues, and transmission issues;
- synthesis and recognition of multimedia signals, including speech, images, handwriting, and text;
- organization, storage, and retrieval of multimedia signals;
- access methods to the multimedia signal;
- searching;
- browsing.

In each of these areas a great deal of progress has been made in the past few years, driven in part by the relentless growth in processing and storage capacity of VLSI chips, and in part by the availability of broadband access to and from the home and to and from wireless connections.

It is the purpose of this talk to review the status of the technology in the areas of telecom, multimedia compression, and multimedia understanding, and to illustrate some of the challenges and limitations of current capabilities.

Biography of the Speaker

Lawrence Rabiner was born in Brooklyn, New York, on September 28, 1943. He received the S. B., and S. M. degrees simultaneously in June 1964, and the Ph.D. degree in Electrical Engineering in June 1967, all from MIT.

From 1962 through 1964, he participated in the cooperative program in Electrical Engineering at AT&T Bell Laboratories. During this period Dr. Rabiner worked on digital circuitry, military communications problems, and problems in binaural hearing. Dr. Rabiner joined AT&T Bell Labs in 1967 as a Member of the Technical Staff. He was promoted to Supervisor in 1972, Department Head in 1985, Director in 1990, and Functional Vice President in 1995. He joined AT&T Labs in 1996 as Director of the Speech and Image Processing Services Research Lab, and was promoted to Vice President of Research in 1998 where he managed a broad research program in communications, computing, and information sciences technologies. Dr. Rabiner retired at the end of March 2002 and is now a Professor of Electrical and Computer Engineering at Rutgers University, and the Associate Director of the Center for Advanced Information Processing (CAIP). He also has a joint appointment as a Professor of Electrical and Computer Engineering at the University of California at Santa Barbara.

******* ALL ARE WELCOME *********ENQUIRIES: SHIAE, CUHK, Tel: 3163 4351/ 2609 8304**** light refreshment will be served after 3:30 p.m. on 9/F **