



THE CHINESE UNIVERSITY OF HONG KONG
Department of Information Engineering and
Shun Hing Institute of Advanced Engineering
Jointly Present Seminar

**A Model for Analyzing the Interaction between
Bandwidth Demand and Supply**

by

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Venue : Rm. 833, Ho Sin Hang Engineering Building,
The Chinese University of Hong Kong

Abstract

The Internet has performed admirably well in coping with an exponential growth in traffic volume. Much credit for this robustness goes to TCP's congestion control mechanisms. However, TCP only controls the flow in a connection, whereas the number of connections is controlled by users. Borrowing terminology from economics, TCP controls bandwidth supply while the user controls bandwidth demand, and their equilibrium determines the network state.

There is already a huge literature on modeling bandwidth supply, but very little has been done for and width demand. This talk models separately this supply and demand, and use them to analyze the interaction between network and user behavior, and their complementary roles in Internet congestion.

(This is work in progress, done in collaboration with Robert Morris.)

Biography

Y.C. Tay received his B.Sc. degree from the University of Singapore and Ph.D. degree from Harvard University. He has a joint appointment with the Departments of Mathematics and Computer Science at the National University of Singapore (<http://www.math.nus.edu.sg/~mattyc>). His main research interest is performance modeling (transaction processing, multimedia load-sharing, parallel rendering, wireless access, Internet equilibrium and page replacement).

**** ALL ARE WELCOME ****

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