



THE CHINESE UNIVERSITY OF HONG KONG
Department of Information Engineering

Seminar

**Retransmission \neq Repeat: Simple Retransmission
Permutation Can Resolve Overlapping Channel Collisions**

by

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Date : 30 August, 2010 (Mon.)
Time : 11:00am-12:00noon
Venue : Room 1009, William M.W. Mong Engineering Building
The Chinese University of Hong Kong

Abstract

Collisions in overlapping channels can be a major problem in the deployment of high-speed OFDM networks. In this talk, I will present Remap, a simple, novel paradigm for handling collisions in overlapping OFDM channels. Remap introduces a novel concept of retransmission permutation that permutes the bit-to-subcarrier assignment after each transmission, departing from the traditional, simply-repeat paradigm. Remap is simple to implement and able to exploit collision-free subcarriers to decode frames despite successive collisions in overlapping channels. Remap is implemented in software radio for 802.11g. I will present its decoding performance under different SINR settings.

Joint work with Kun Tan (MSR Asia), Harish Viswanathan (Bell Labs), Ying Xu (BUPT), Yang Richard Yang (Yale).

Biography

Li (Erran) Li received his Ph.D. in Computer Science from Cornell University in 2001 where Joseph Y. Halpern was his advisor. Since graduation, he has been with the Networking Research Center in Bell Labs. His research interests are in networking with a focus on wireless networking and mobile computing. He has served as a program committee member for several conferences including ACM MobiCom, ACM MobiHoc, IEEE INFOCOM and IEEE ICNP. He is an editor of WINET and IEEE Parallel and Distributed Systems, and a guest editor for JSAC special issue on Non-Cooperative Behavior in Networking. He has published over 40 papers. His email address is erranli@research.bell-labs.com

**** ALL ARE WELCOME ****

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