



SEMINAR

Perceptual Speech Quality Control for Modern Mobile Networks

by

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- DATE/TIME: **Friday 15 August 2008 at 10:00AM**
- VENUE: **Billings Room 3.04** (3rd Floor)
School of Electrical, Electronic & Computer Engineering
Electrical Engineering Building
The University of Western Australia
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ABSTRACT:

One of the important aspects of mobile communication industry is satisfying customers' needs most economically. Indeed, customers expect good and consistent quality of service from the provider. In mobile telephony, this amounts to controlling the speech quality as "perceived" by the customers. Controlling the perceptual speech quality necessitates reliable measurement of the quality first, followed by exercising direct control on it. The end-users' quality has traditionally been monitored and controlled based on radio link measurements such as the C/I, BER, or FER. For telephony, because of the characteristics of speech signals, these measurements are unreliable indicators of the quality "perceived" by the end-user.

The ultimate measure of the perceived speech quality is realized through subjective listening tests, but this is not practical for real-time day to day applications. In recent years, objective quality measurement algorithms have been developed to predict the subjective quality with considerable accuracy. And the ITU-T P.862 Perceptual Evaluation of Speech Quality (PESQ) model is the state of art in the International Telecommunication Union's Telecommunication Standardization sector (ITU-T) recommendation for objective quality measurement method. However, these algorithms have yet to be applied for end user quality control in cellular networks. In this seminar, the research framework and the works that had been done for application of the PESQ algorithm for perceptual speech quality control is presented.

ABOUT THE SPEAKER:

Zamani is a second year PhD candidate under the Western Australia Telecommunication Research Institute (WATRI), EECE, UWA. He was obtained Bachelor of Science in Electronic Engineering from Hanyang University, South Korea in 1999 and Masters of Science in Digital Communication System from Loughborough University, UK in 2002. He is currently working on 'Application of the PESQ algorithm for perceptual quality control for cellular network' for PhD research. This research is supervised by Prof Sven Nordholm & Assoc Prof Roberto Togneri.