

**IEEE International Conference on Communications'05 (ICC 2005)
in Seoul, Korea (16-20 May, 2005)**

Conference report by Sung Rae Cho, Master student

Supervisors: Prof. K. Pawlikowski (CSSE) and Associate Prof. H. Sirisena (ECE)

Conference Description

The 40th annual IEEE International Conference on Communications was held in Coex Convention Centre, in Seoul, Korea, between the 16th and 20th of May 2005. It was the first time this conference was held in Asia. The theme of the ICC 2005 was 'Towards the era of ubiquitous networks', reflecting today's trend in telecommunication networking towards convergence and seamless provision of services.

The conference featured the latest developments in networking technologies and was attended by many specialists from academia and industry from all over the world. The technical program of the ICC 2005 consisted of tutorial sessions, technical paper presentations and business applications.

Technical papers were presented during the conference and eight specialized symposia, divided in the following topics:

- Communication Theory
- Communication QoS, Reliability, and Performance Modeling
- Multimedia Communication and Home Networking
- Optical Networking
- Signal Processing for Communications
- Wireless Communications
- Wireless Networking
- Next Generation Networks for Universal Services
- General Conference

Fourteen tutorials were presented (chosen out of out 27 tutorials proposed). They included four full-day and 10 half-day tutorials on:

- Wireless Broadband Communications,
- Achieving QoS, Security and Mobility in IEEE 802.11 WLANs and Future Directions,
- Architecture for End-user Services in Next Generation Networks,
- Infrastructure-Based Multihop, Relay and Mesh Wireless Networks,
- Ultra-Wideband Communications: From Concept to Reality,
- Coding for Multiple Antennas,

Wireless Ad-hoc Networks,
Technology and Practice of Operational Situation Management in Dynamic Networks,
CDMA2000-1xEV-DV and EV-DO,
Next Generation Networks and Internet,
A Primer on Service Quality Management,
Radio Resource Management in Multicarrier and Multihop Wireless Network,
MIMO Detection: Theory and Practice,
Mobility and Security Management in Wireless IP Networks.

The business application sessions (BAS) consisted of 11 sessions and covered the most practical and promising state-of-the-art technologies of interest to competitive communication service providers, vendors and operators. They included the following topics:

Broadband Access and Metropolitan Networks: The Wired Infrastructure

Broadband Access Networks II: Wireless Access Alternatives

3G and Wi-Fi: Competitors or Cooperators?

Broadband Wireless Services & Applications

Convergence of Broadcasting & Telecommunication

Trends and Challenges in the Mobile Communications Industry

Standards - An Enabler for the Communications Industry

Internet Technologies for Communication

Home Electronics and Networks

New Network Paradigms: Sensor and Ad-Hoc Networks

Current Trends and Reform Activities in Radio Frequency Spectrum Management

For more details, please see the conference website: www.icc05.org/main/main.html

Submitted papers and presentations

In total, 2150 papers were submitted. Nine individual TPC teams worked to review the papers, allocating three or more reviewers to each paper. Based on the review data, the TPC had selected

692 papers for presentation (35% acceptance ratio) and publication in the Proceedings of the IEEE ICC 2005. The accepted papers were divided into 16 parallel sessions and presented during three days of the conference.

I have presented a paper on “An End-to-End Freeze TCP with Timestamps for Mobile Ad Hoc Networks”, written by me, Assoc. Prof Harsha Sirisena (ECE) and Prof. Krzysztof Pawlikowski (CSSE). My presentation was scheduled on the last day of the conference. Each speaker had 15-20 minutes for his/her presentation, and no more than 5 minutes for questions and answers. Due to such time limitations, I decided to concentrate my talk on the technical details of the protocol proposed in our paper, rather than discussing its performance. I had prepared a number of slides illustrating the protocol’s goals and its basic operations. My intention was to encourage the audience to read our paper, where more information about our new protocol could be found.

The conference program had four more papers from our university. I also noticed that a professor from our university served as a session chair. I was proud that, at such a prestigious conference, five papers (including the paper presented by me) were written by authors from the University of Canterbury. No other university from New Zealand contributed a paper in this conference.

Since my graduation at the University of Canterbury, I have become interested in wireless local area networks as well as in the issue of power and channel efficiency in WCDMA. So I attended several presentations related to these topics, and I gained a lot of useful information. This was the first time I participated and presented a paper at an international conference. It was a unique and unforgettable experience, a precious experience in my professional career.

Acknowledgement

I would like to thank the Department of Computer Science and Software Engineering at the University of Canterbury for making my participation in this conference possible. I am very grateful for being able to participate in such a prestigious conference and to present my first technical paper there. It was really a great experience.