

## The 15th Asia-Pacific Conference on Communications



**Report by William Liu, a PhD student at the University of Canterbury, who, as a member of the PlanetLab NZ research group, participated in the 15<sup>th</sup> Asia-Pacific Conference on Communications (APCC 2009), Shanghai, China, 8th-10th October 2009.**

Having received a generous support from the PlanetLab NZ research program operating under the 2008 KAREN (Kiwi Advanced Research & Education Network) Capability Build Fund from REANNZ (Research and Education Advanced Network New Zealand Ltd), I was able to attend the 15<sup>th</sup> Asia-Pacific Conference on Communications (APCC 2009), held in Shanghai, China, 8th-10th October 2009.

APCC 2009 was organized through the technical co-sponsorship of the China Institute of Communications (CIC), the Korea Information and Communications Society (KICS), the IEICE Communications Society, the IEEE Communications Society Asia Pacific Board. The conference provided a forum for scientists and researchers across the world for presenting research results and discussing topics related with next-generation communication technologies, while encouraging collaborative work on innovations that may shape the world, in particular in Asia-Pacific Region. The next conference, APCC 2010, will be held in Auckland, New Zealand, between October 31 and November 3, 2010; see <http://APCC2010.aut.ac.nz>.

I am a PhD candidate in the Department of Electrical and Computer Engineering at the University of Canterbury. My participation in this conference was very relevant with my study as my PhD research project, which is in the area of Network Resiliency in Next Generation Networks (NGNs). It gave me an excellent opportunity to present my research results to an audience of international experts on the subject. I give two oral presentations of my work: (i) on a novel framework on survivable routing and (ii) on shared path protection in a distributed control environment. Most importantly, I was able to share my research problems and to receive comments and ideas from experienced researchers,

I have also explored two promising new research directions, which could benefit the postmodern network development in our New Zealand. One of them is related with designing next generation mobile networks and their evaluation steps from 3G technologies, such as HSPA (High Speed Packet Access) and LTE (Long Term Evolution), to IMT-Advanced or 4G. The other topic is about the future optical communications. The G-MPLS is considered to be the most comprehensive, prevailing and advanced control plane. However, it still has a poor deployment even after a decade

of development, and in addition, it lacks support for optical switching at sub-wavelength granularities such as OPS/OBS as well as other useful features such as delayed or scheduled reservation. Accordingly, research endeavors in a universal framework, supporting integrated electronic and optical switching, as well as various switching paradigms such as OCS and OPS/OBS, are becoming more and more important. Investigations of these issues could be done by means of experiments conducted on such an experimental networking facility as PlanetLab, which can be accessed from PlanetLab NZ nodes at our university.

My participation in this conference would be not possible without a generous support from the PlanetLab NZ research program operating under the 2008 KAREN Capability Build Fund from REANNZ. I would like to thank again for the support I received.