

Report from a Conference Leave within PlanetLab NZ program (31 July - 9 August, 2010) (EuroView2010, Wurzburg, Germany, August 2-4, 2010)

Purpose

I am a PhD student working in Network & Simulation Research Group, of Computer Science and Software Engineering Department. I was graciously awarded a conference scholarship within PlanetLab NZ program, for participating in the Euro View 2010, which was held in Wurzburg, Germany, from August 2-4, 2010 and for visiting the research group of Prof. Phuoc Tran-Gia in the Institute of Computer Science at the University of Wurzburg, which is actively involved in research on Future Internet Applications. Purpose of this visit was to learn about latest research in the field of Future Internet and get new ideas for my PhD research proposal.

Summary

The conference was organized by University of Wurzburg, Germany. This was 10th consecutive year of the conference. The theme of conference was Future Generation Networks and it was focused on "**Future Internet Design and Experimental Facilities**". The conference was attended by 155 participants from all over the world. The participants were from industry, academic and research institutions. The first two days were allocated for a variety of topics and the third day was devoted to German - Lab experimental network status meeting. A number of international experts from USA, Europe and Asia shared their insights into different aspects related to Future Internet and a total of 43 papers were presented.

The first day started with registration of the participants arriving from international destinations. It was followed by four sessions. In the morning session, Prof Phuoc Tran-Gia delivered the welcome address and conference was formally opened by Chancellor, University of Wurzburg. It was followed by a keynote talk given by Prof. Dr. Lawrence Landweber (University of Wisconsin, US) about challenges being faced by researchers working on problems related with Future Internet. The first session was devoted to Prototypes and Testbeds, followed by the second session about Global Environment for Network Innovation (<http://www.geni.net/>). It was chaired by Aron Falk, GENI Project Office, who also gave the latest update of the GENI project. The third session, chaired by Prof. Kurt Tutschku (University of Vienna, Austria), was about Architectures and Convergence, during this session, a number of participants from industry shared their experience related with working with experimental testbeds as well. . The last session of the day was dedicated to New Protocols and Interfaces and was chaired by Dr Wolfgang Kellerer (the Head of NTT DoCoMo's European Research labs in Munich, Germany).

Four sessions were held on the second day. Morning session was devoted to Routing and Security, and was followed by a session on Future Internet Activities in the 7th Framework Program of European Union. It was organized by Dr Max Lemke (the Deputy Head of Unit for “New Infrastructure Paradigms and Experimental Facilities” in the Directorate General Information Society and Media of the European Commission).. He also gave an insight into the current and future projects under the FIRE initiative (Future Internet Research and Experimentation). The next session about virtualization highlighted the current research trends in the field, and was chaired by Dr Marco Hoffmann (Nokia Siemens Networks,. Munich, Germany). In the final session, authors suggested various solutions for solving problems related with mobility within future networks. Future research plans of the G-Lab in the field of Wireless and Mobile Services were also presented. The demo sessions organized by some of the presenters were highly interesting as they allow to assess the currently progress leading to implementations of Future Internet technologies.

Aside of presentations of the current achievements and future research plans, the workshop was very successful in fostering the communication among researchers from industry, universities, and various research institutes. A large number of participants from Europe, USA, and Asia attended this conference. I was the only participant from New Zealand.

Social Activities

Coffee breaks and delectable buffet lunches during the conference provided ample opportunities for socializing and informal discussions. A special social event was also arranged on the concluding night at the magnificent Wurzburg Residenz. Wurzburg Residenz, a palace designed by several of the leading Baroque architects, which served as home for Wurzburg's powerful prince-bishops of the Schönborn family. The participants were given a short guided tour of this famous World Heritage site and were later treated to a sumptuous formal dinner in the Imperial Hall of the palace.

Outcome

After the conference, I also visited the research group of Prof. Phuoc Tran-Gia in the Institute of Computer Science at the University of Wurzburg, which is actively involved in research on Future Internet Applications & Overlays. I availed this opportunity to discuss different ideas for my PhD research proposal with them. It was an enriching and fruitful learning experience. I was exposed to stimulating talks, debate and discussion about the latest trends in the field of Future Internet. It gave me an opportunity to gain knowledge, new ideas for PhD proposal, and network of useful contacts.

I have decided to work on Information Driven Routing for Future Internet applications. I will measure dynamically capacity of outgoing links, traffic carried over

outgoing links and available buffer space at routers to detect congestion and make re-routing decision utilizing this information without incurring too much overhead/increasing latencies. I also plan to use PlanetLab for implementation of proposed protocol and considering use of Open Flow for testbed experimentation.

I am thankful to the Department of Computer Science & Software Engineering at the University of Canterbury, REANNZ, and Professor Dr. Krys Pawlikowski in particular, for granting me this conference scholarship.