

## **Econ@Tel/STSM Research Visit Report**

### **Visitor:**

Mikko Heikkinen, Researcher, TKK Helsinki University of Technology, Finland,  
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### **Host:**

Fabio Hecht, Researcher, CSG@IFI, University of Zurich, Switzerland,  
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Burkhard Stiller, Lab Director, CSG@IFI, University of Zurich, Switzerland,  
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### **Duration:**

October 26 – November 6, 2009

### **Background:**

Heikkinen is studying techno-economics of mobile peer-to-peer systems and is developing a system dynamics model to illustrate the incentive and value flows in mobile peer-to-peer systems. Hecht is studying peer-to-peer video streaming and is developing a prototype application for open peer-to-peer video streaming called LiveShift.

### **Planned purpose of the visit:**

The purpose of the visit is to do an intensive phase in collaboration leading to a joint scientific publication. The topic of the publication is a case study of the techno-economic model on LiveShift. In order to realize the publication, both LiveShift and the techno-economic model will require adaptation. The required changes are planned and potentially implemented during the visit.

### **Results of the visit:**

M. Heikkinen had developed together with his colleague Thomas Casey at TKK a preliminary version of a value analysis framework for novel ICT services and technologies, and applied it to communications services. It was agreed upon with Hecht that during the visit the value analysis framework would be applied to video streaming services, including LiveShift.

During the first days of the visit, the goal turned out to be reasonable. M. Heikkinen and Hecht conducted a study on existing video streaming services, including LiveShift. Then, during the remainder of the first week, they applied the value analysis framework to the case of video streaming services.

The second week M. Heikkinen spent writing a draft of a journal article describing the value analysis framework and its application on communications and video streaming services. Hecht commented on revisions of the draft.

On November 5, 2009, M. Heikkinen presented the preliminary results to the team of Prof. Dr. Burkhard Stiller, who also supervises F. Hecht's PhD thesis. M. Heikkinen and the team discussed about the framework and its application.

### **Future work:**

The aim is to finish and submit the journal publication by the end of the year 2009. M. Heikkinen, Th. Casey and F. Hecht will continue collaboration on revising the draft versions of the article based on feedback from several sources.