Methods for measuring Mobile Quality of Experience with the Experience Sampling Method

Master thesis/Exjobb
Mobile Services Laboratory / Communication Systems

Task
Successfully using a mobile and wireless device is predicated upon a number of factors that all contribute to or detract from the end user’s experience. Traditionally have QoS, i.e. bandwidth, jitter, latency, and coverage, been used as quantitatively measured and determined factors. However, the end user may often be unconcerned with QoS metrics; what matters is the day-to-day usage of the mobile device itself, and the services that can be reached through it. This leads to a need to understand, measure and study Quality of Experience; the subjective and context-dependent expectations and satisfaction users have with their devices and their possibilities. Measuring the Quality of Experience means that end users must be able to express and provide their opinions, thoughts and reactions regarding the use of their devices. This project is about to define and implement different approaches to measure and study Quality of Experience using the Experience Sampling Method.

A master thesis in this area may include the following:
- Find and evaluate previous and ongoing work using ESM
- Select and propose a subset of QoE factors relevant to a given usage scenario
- Argue a relation between selected QoS parameters and the resulting QoE
- Contribute to the design of an ESM study
- How to use and scale ESM’s studies using crowdfunding platforms
- Contribute to the instrumentation of devices for capturing QoS and QoE data
- Executing a practical study and analyzing its results.

Competence
We are looking for a motivated MSc student who has fulfilled the course requirements for the degree project. Good skills in App and web development is needed, in addition, we require experience with some statistic math tools such R and/or SPSS, as well as good spoken and written English.

Application
Applications should include a brief personal statement, CV, and a list of grades. In the application, make sure to mention previous activities or other projects that you consider relevant for the position. Candidates are encouraged to send in their application as soon as possible. Suitable applicants will be interviewed as applications are received.

Start time: As soon as possible
Location: KTH, Kista, Stockholm

Mobile Service Laboratory
The Mobile Service Laboratory at the Department of Communication Systems’ overall aim is to foster innovation, education and research in mobile services. The lab is pursuing the study, design, benchmarking, and evaluation of mobile applications and their associated services.

Contact
For more information, please contact Konrad Tollmar (konrad@kth.se).
https://www.kth.se/en/ict/forskning/cos/research/mslab
http://www.flashpoll.eu/