

BACHELOR /MASTER THESIS:

Android Quality Monitor for Mobile Voice Networks

DESCRIPTION

In a voice service the speech quality is affected by various degradations. These are often caused by properties of the communication channel, such as missing packets or low bitrate codecs. To measure the performance of a voice service, it is important to know how the quality was perceived by the service user. Traditionally, to measure the quality of transmitted speech, subjective experiments with naïve participants are conducted. Since subjective methods require a significant effort to prepare, signal-based models have been established. These models make a prediction of the perceived quality by a comparison of the reference and the degraded speech signal.

The goal of the thesis is to develop a system that allows for measuring the speech quality of mobile voice networks. To realise this, on the sender side an answering station, with which a speech sample can be send from an Android smartphone through the voice channel, needs to be developed. On the receiver side, an app that automatically calls the answering station and records the voice channel is required.

The thesis may be written in German or in English.

REQUIREMENTS

- Android programming skills
- Experience with custom ROMs and rooted Android phones is helpful
- Interests in auditive / quality perception
- Course of study: computer science, computer engineering, electronic engineering, audio communication, media technology or related areas

CONTACT

Gabriel Mittag, gabriel.mittag@tu-berlin.de

Dr. Babak Naderi, babak.naderi@tu-berlin.de