Technische Universität Berlin

Quality & Usability Lab

Announcement

21.05.2019

BACHELOR/MASTER THESIS:

Simulation of Intelligbility in Human-to-Human Conversation Simulation

DESCRIPTION

The conversational quality of telephone calls not only consists of the audible degradations in the speech signal but also on the impacts of those degradations to the interaction. Conversation simulation is a tool that helps modelling human behaviour during degraded telephone conversations and thus giving insights on the subjective quality experienced by the conversation partners.

Problems in speech intelligibility in those telephone conversations may be caused by degradations such as paket-loss, where parts of the transmitted signal are not timely transmitted over the network. While such audible degradations have an immediate effect on the *listening* quality, they also affect the conversation as a whole by introducing misunderstandings that have to be resolved.

In this thesis, the candidate should annotate instances of misunderstandings in recorded telephone conversations with transmission problems (i.e. packet-loss). The impact of the position of the degradation to the intelligibility of the speech should be assessed and a model should be built that predicts the intelligibility of utterances based on the location of packet-loss.

The conversations that are analysed in this thesis will be in German.

REQUIREMENTS

- Python programming skills
- Experience with speech signal processing
- Knowledge in speech and conversation quality is a plus
- Great interest to the topic and well organized

CONTACT

Thilo Michael, thilo.michael@tu-berlin.de
(Deadline: 31.12.2019)