

At the research group **Intelligent Networks** of **TU Berlin**, which is part of **Deutsche Telekom Laboratories**, there is an opening for a

## Master's Thesis (Project / Master- / Bachelor- / Diplomarbeit)

on the following topic:

# Performance Evaluation of Existing Video Quality Metrics

### Topic Description

With provisioning of broadband access for mass market, even in wireless and mobile networks, multimedia content, especially real-time streaming of high-quality audio and video, is extensively viewed and exchanged over the Internet. Quality of Experience (QoE) aspects, describing the service quality perceived by the user, are vital factors in ensuring customer satisfaction in today's network services. Creating frameworks for accessing quality degradations in streamed video currently is investigated as a complex multi-layered research topic, involving network traffic load, codec functions and measures of user perception of video quality.

This thesis will focus on a performance evaluation of existing metrics designed for predicting the image or video quality, respectively. Selected metrics that are not already implemented will have to be implemented. Selected metrics will be applied to an existing database of video sequences. Their performance will be compared with ratings of subjects that have been obtained in previous empirical tests.

### Concrete Tasks

- Literature survey on related methods
- Implementation of quality metrics, if not already implemented
- Evaluation of the implemented scheme
- Comparison of the evaluated schemes

### Requirements

- Studies in computer science, engineering or related fields
- Knowledge in statistical and statistical modeling
- Programming skills

### Contact

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