institute of media informatics

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Implementation of Haptic Feedback for Presenters in Remote Presentations

Master Thesis

Background

In comparison to presentations and lectures that are given in presence, the verbal and non-verbal communication between presenter and audience in remote presentations suffer from the absence of a physical, collocated connection. While the communication between presenter and audience works naturally and implicitly in a collocated scenario, online presentations pose a particular challenge in exchanging information between audience and presenter. Since online presenters only have limited space on their presentation devices, it is difficult to have an overview over the slides, the presenter notes, and the audience. Thus, it is more difficult for the presenter to estimate whether the audience can follow the talk or whether they are even paying attention. Additionally, communication attempts by the audience like virtually raising a hand or writing into a chat may be overlooked while the presenter is focused on their talk. In the literature, several attempts have been made to establish a connection between the presenter and the audience in online scenarios by showing explicit information about the audience to the presenter. This could for instance happen by showing an abstract visualization of the audience's attention level. However, these additional visual cues contribute to overloading the visual channel during the presentation. Other channels, in particular the haptic one, are not used to communicate any kind of information to the presenter and therefore provide an excellent opportunity to convey information about the audience to the presenter.

Research Goal

In this thesis, you will investigate whether haptic output is suitable to provide feedback for the presenter in remote presentation scenarios. You will work on identifying locations for haptic output devices which are suitable to make the presenter aware of the audience's state of mind and their attempts to communicate to the presenter. Finally, you will build and evaluate those devices.

This thesis is going to be supervised collaboratively with the Media Computing Group at RWTH Aachen University (https://hci.rwth-aachen.de/).

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