TU Clausthal

# Informatik-Kolloquium

## Forschungsprojekt

## von Niklas Osmers, B.Sc.

Montag, den 11.10.2021, 17:00 Uhr,

BigBlueButton https://webconf.tu-clausthal.de/b/mic-n9m-x9f

## "Supporting Awareness of Asynchronous Changes in an Augmented Reality Furniture Consultation Setting"

In the context of a growing industry around Augmented Reality (AR), the furniture industry is one of many fields that are currently being researched for effective uses of AR. Within it, the research project ARBAY considers the digitalization of furniture consultation an interesting and promising area.
As part of a typical (analogue) consultation, customers and consultants both cooperate with each other in order to discuss preferences and configuration alternatives. Usually, this process is limited to one's own physical presence in the furniture store and 3D visualizations on computer screens. However, with the use of the technology developed in the research project ARBAY, customers get the opportunity to receive this consultation in a remote manner. Using the HoloLens, customers can view various couch configurations from within their living room while also being able to interact with any of these virtual representations.
While most of this procedure takes place in synchronicity with both the consultant and the customer collaborating at the same time, this technology also allows for asynchronous cooperation. While asynchronous cooperation is already being a part of today's consultations i.e., through any preparation tasks done by either the consultant or the customer prior to a scheduled meeting, it has not received much attention in literature. Especially, the matter of creating awareness about changes that have been done asynchronously is nearly untouched in the context of AR.
As part of my personal research track, I want to investigate this gap in literature. Within the project ARBAY, I will be designing an awareness mechanism that supports customers in reviewing changes that have been made by a consultant between consultation sessions. The mechanism consists of two awareness cues, a textual explanation of what has been changed for which reason, and a visual highlighting of the area where changes have been made. In a full-factorial user study, I will then compare the two different parts of my mechanism against each other, their combination and a baseline. I present findings based on self-reported user data, observations of user's behavior and interviews with participants.

**Betreuer der Arbeit:** Prof. Dr. Michael Prilla und Prof. Dr. J.P. Müller

Technische Universität Clausthal • Institut für Informatik • Julius-Albert-Straße 4 • 38678 Clausthal-Zellerfeld
Tel +49 (0)53 23 72-7140• Fax +49 (0)5323 72-7199 • http://www.in.tu-clausthal.de • info@in.tu-clausthal.de