TU Clausthal

Kolloquiums-Reihe des Instituts für Informatik

Mittwoch, den 29.05.2019, 16:30 Uhr,
Seminarraum 124, C10, Arnold-Sommerfeld-Str. 1

Forschungsprojekt:

Evaluating Pointing Modes and Frames of Reference for Remotely Supporting an Augmented Reality User in a Collaborative (Virtual) Environment

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With the availability of powerful and affordable Augmented Reality (AR) devices, scenarios have become popular in which people wearing AR devices are supported by remote experts. In these scenarios, experts often use 2D devices such as tablets or computer screens to access the 3D mixed reality setting of the other person. This raises the question which interaction mechanisms help the remote expert to access and interact with the 3D setting of the other person while using a 2D input device. In this research project, this problem was reviewed from the perspective of
remote consultation processes in sales situations, particularly for furniture. A study aimed at answering the question of how a consultant can support a customer wearing AR glasses in their home to choose furniture while using a 2D input device was conducted. Different methods of pointing to areas in a room and different perspectives for placing furniture in it were compared. In a consulting situation designed along real consultation processes, to what extent using different modes affected the task load, tool usability and success of the consultation as well as which methods the users preferred was investigated. For the study, a prototype was developed, which implemented these different methods for pointing and placing and was tested with workers of a furniture store. The testing results show that while most task load, usability and success scores were leveled, the participants reported clear favorites for all situations. From this, design recommendations for remote consultation processes combining the use of 3D AR and 2D interfaces were derived.