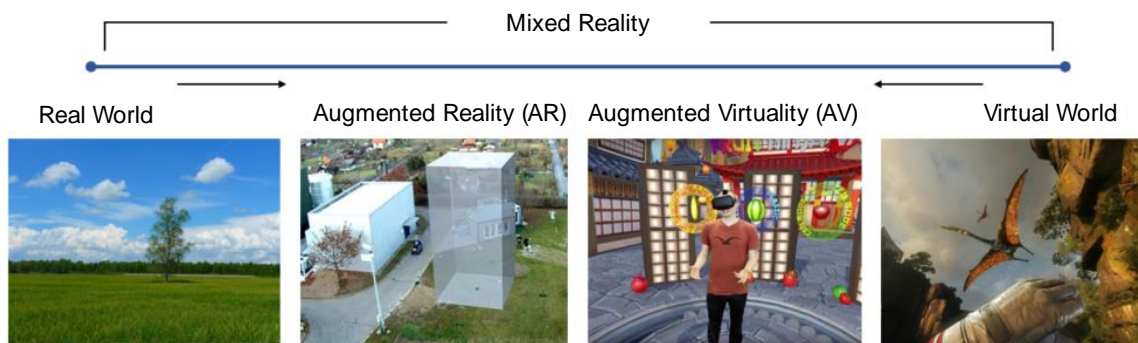**TOPIC FOR BACHELOR- OR MASTER THESIS**

DEVELOPMENT AND EVALUATION OF

AUGMENTED / VIRTUAL REALITY APPLICATIONS

PROF. DR. GREGOR ENGELS, DATENBANK-UND INFORMATIONSSYSTEME

A simplified depiction of the Reality-Virtuality-Continuum according to Milgram / Kishino (1994)

Motivation

Cognitive assistance systems offer a variety of possible use cases especially in the context of learning environments in artificial reality (AR/VR) scenarios. In our project it's OWL AWARE, we are researching new application scenarios, development methods and new forms of interaction to support the development of novel assistance systems.

In this subject area there are various open Bachelor and Master thesis topics, which deal with the systematic development and evaluation of AR/VR applications.

Possible Topics

- Systematic literature survey for AR/VR development methods
- Prototypical development of AR/VR applications for different scenarios (assembly, maintenance, navigation, …)
- Development of new modeling languages to capture AR/VR specific aspects
- Development of model-driven or component-based development methods for AR/VR applications
- Usability Evaluation of AR/VR applications in terms of efficiency, effectiveness, and user satisfaction
- Data-driven UX Evaluation of AR/VR applications through user feedback (human-in-the-loop, digital-twin approaches)
- Conception and development of context-adaptive AR/VR applications
- Continuous quality assurance and software testing for AR/VR applications

If you are interested in one of the above mentioned topics or have your own topic suggestions, feel free to contact us!

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