Use of Augmented Reality in Technical Documentation

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Abstract

In industrial enterprises, Augmented Reality (AR) applications can be used in many ways, including in technical documentation for task sequence instruction in the service sector. Applications that go beyond prototypical implementation are still rare. As initial research indicates, they may hold great potential for enterprises. As compared with current mobile applications in technical documentation, AR may – depending on the field – generate added value by combining the analog and digital world, since it can consider different kinds of contextual information. There are currently still many open questions regarding successful implementation because of technical obstacles, and because the presentation of information is a challenge. The user has to receive all necessary context-sensitive information including warnings, but simultaneously, the display should not appear overloaded. New concepts and answers must therefore be developed on questions such as: What are the preconditions for successful implementation? Which tasks can be supported in the most effective way by the use of AR? What are promising concepts for information display in an AR application in industry? This contribution discusses these questions and presents preliminary approaches to the solution on the basis of a research project that will take place at the Centre for Technical Communication at the ZHAW.

Keywords

Augmented Reality, Technical Documentation, Service, Context-Sensitive Information

Biography

Catherine Badras is Head of the Centre for Technical Communication at the ZHAW Zurich University of Applied Sciences. She is Co-Programme Director (BA in Applied Languages) and Head of the Specialisation in Technical Communication. One focus of her current research is the provision of context-related information by means of Augmented Reality applications for industry, e.g. for maintenance in the field of mechanical engineering, the usability aspect being in the foreground.
After graduating in Electrical Engineering at the Technische Universität (TU) Berlin, Catherine Badras gained her doctorate (Dr. phil.) in the field of Technical Communication at the same university.
She has worked in the area of technical communication since 1990. From 1999 to 2001, she was President of the Swiss Society for Technical Communication, TECOM Switzerland. Before taking up her appointment at the ZHAW, she held a managerial position (CEO) at a leading technical communication service company in Zurich.

Martin Schuler is Research Associate at the ZHAW Zurich University of Applied Sciences at the Centre for Technical Communication in Winterthur, Switzerland. He holds a BA in Translation with a specialization in Technical Communication from the Zurich University of Applied Sciences, Winterthur, Switzerland, and is currently writing his master thesis in Human Computer Interaction Design at the University of Basel. His research interests include HCI, user-centered design, augmented reality, eye tracking and usability testing. He is a member of Tecom Switzerland and UXPA.

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