Abstract

After over 50 years of research development Augmented Reality (AR) has finally begun to enter mainstream use. Modern cell phones enable people to carry around AR technology in their pockets, while wearable devices such as Google Glass promise seamless interaction with information overlaid on the real world. Companies such as Microsoft, Intel, and Google all provide glimpses of what well designed AR experiences could provide, but the reality of AR is often far different. This presentation provides an overview of the advances made in the last 10 years since the first 3DUI conference, and then outlines the research questions that still need to be addressed before AR can enjoy the same level of success as other mainstream user interface paradigms. Examples will be drawn from popular Science Fiction and research being conducted at the HIT Lab NZ and other leading research laboratories and companies.

Bio

Professor Mark Billinghurst is a researcher developing innovative computer interfaces that explore how virtual and real worlds can be merged. Director of the HIT Lab New Zealand (HIT Lab NZ) at the University of Canterbury in New Zealand, he has produced over 300 technical publications and presented demonstrations and courses at a wide variety of conferences. He has a PhD from the University of Washington and conducts research in Augmented and Virtual Reality, multimodal interaction and mobile interfaces. He has previously worked at ATR Research Labs, British Telecom, Nokia, Google[x] and the MIT Media Laboratory. In 2001 he co-founded ARToolworks, one of the oldest commercial AR companies. One of his research projects, the MagicBook, was winner of the 2001 Discover award for best Entertainment application, and his AR Tennis project won the 2005 IMG award for best independent mobile game. In 2012 he was awarded the ISMAR lasting impact award for the paper with the greatest impact in AR over the previous ten years, and the 2013 IEEE VR Technical Achievement Award for contributions to research and commercialization in AR. In 2014 he was elected as a fellow of the Royal Society of New Zealand in recognition for his significant technological accomplishments in the field of Augmented Reality.