Diminished Reality as Challenging Issue in Mixed and Augmented Reality (IWDR2015)

Organizers
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Abstract
Diminished Reality (DR) has been considered as a sub-technology of Mixed and Augmented Reality (MR/AR). While MR/AR means technologies that add and/or overlay visual information onto images of real scene for providing users to enhance their visual experiences with the added/overlaid information, DR aims the similar enhanced visual experiences by deleting visual information from the images of real scene. Adding and deleting visual information might be considered as same technical issues, but they are actually totally different. In DR, visual information that is hidden by the deleted object should be recovered for filling into the deleted area. This recovery of the hidden area is not required for general adding/overlaying based MR/AR, but should be one of the typical issues for achieving DR. Camera pose estimation and tracking is a typical issue in MR/AR, but the condition of the scene and required performance for DR are not always the same as MR/AR. For example, the object to be diminished/removed should be detected and tracked while the camera is freely moving for DR.

In this workshop, 7 papers related to various aspect on DR, such as technical issues for DR, examples of applications of DR, expected futures with DR, and human factors of DR. After review by the program committees, we are happy to accept all 7 papers because of high evaluation scores for all 7 papers.

Organizer Background

Prof. Hideyuki Tamura received B.Eng and the doctorate degrees both in electrical engineering from Kyoto University, Japan. His professional career starting in 1972 includes a Senior Research Official at the Electrotechnical Laboratory, MITI, Japan, the Director of Media Technology Laboratory, Canon Inc., and a member of the executive board of Mixed Reality Systems Laboratory Inc. In 2003, he joined Ritsumeikan University, where he is now an Eminent Professor, Research Organization of Science and Technology.

Prof. Hideo Saito received his Ph.D. degree in Electrical Engineering from Keio University, Japan, in 1992. Since then, he has been on the Faculty of Science and Technology, Keio University. In 1997 to 1999, he had joined into Virtualized Reality Project in the Robotics Institute, Carnegie Mellon University as a visiting researcher. Since 2006, he has been a full Professor of Department of Information and Computer Science, Keio University.

Prof. Fumihisa Shibata received the M.E. degree in computer science and the Ph.D. degree in engineering from Osaka University, Suita, Osaka, Japan, in 1996, and 1999, respectively. In 2003, he joined Ritsumeikan University, Kusatu, Shiga, Japan, where he was an Associate Professor at the College of Information Science and Engineering. He has been a Professor at Ritsumeikan University since 2013.

Associate Professor Yoshinari Kameda received his M.E. degree from Kyoto University in 1993 and Ph.D. in 1999. In 1996, he joined Kyoto University and started his research on human pose estimation and multimedia understanding. In 2003, he moved to University of Tsukuba and expanded his researches to virtual reality, augmented reality, and mixed reality. He has been an associate professor at University of Tsukuba since 2004.

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