

Multiple Main User Recognition

Hye-Jin S. Kim, Il-Kwon Jeong

Next Generation Visual Computing Research Section, Electronics and Telecommunications Research Institute, Korea
marisan@etri.re.kr, jik@etri.re.kr

Abstract—We present a method for selecting main users among multiple candidates. For human-machine interaction, a machine choose a single or multiple users to interact with them. The proposed method provides an ordered user probability that indicates whether one can be a main user. We estimate various features such as distance to a user, eye detection, gaze direction, moving velocity, and acceleration. Experiments show that our algorithm effectively differentiates main users from the others.

Keyword—Recognition, Multiple Candidates, Interaction

Hye-Jin S. Kim received her MS degree in computer science and engineering from Pohang University of Science and Technology, Pohang, Rep. of Korea, in 2003. She has been a research scientist at the Electronics and Telecommunications Research Institute, Daejeon, Rep. of Korea, since 2005. Her research interests include machine learning, human-robot interaction, and computer vision.

Il-Kwon Jeong received his MS and Ph.D. degrees in electrical engineering from Korea Advanced Institute of Science and Technology, Daejeon, Rep. of Korea, in 1994 and 1999, respectively. Since April 1999, he has been with Electronics and Telecommunications Research Institute, Daejeon, where he was a Senior researcher, became a Principal researcher in 2010. His current research interests include computer graphics/vision, digital holography, HCI, and virtual/augmented reality.