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Instant Casting Movie System for Entertainment Revolution

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ABSTRACT OF THE TALK

Our research project, Dive into Movie (DIM) aims to build a new genre of interactive entertainment which enables anyone to easily participate in a movie by assuming a role and enjoying an embodied, first-hand theater experience. This is specifically accomplished by replacing the original roles of the precreated traditional movie with user created, high-realism, 3-D CG characters.

DIM movie is in some sense a hybrid entertainment form, somewhere between a game and storytelling. We hope that DIM movies might enhance interaction and offer more dramatic presence, engagement, and fun for the audience. Our work on DIM is ongoing, but its initial version, Future Cast System (FCS), is up and running. In the initial version, we focus on creating audiences' highrealism 3-D CG characters with personal facial characteristics, replacing the original characters' faces in the original traditional (background) movie.

The FCS system has two key features: First, it can full-automatically create a CG character in a few minutes from capturing the facial feature of a user and generating her/his corresponding CG face, to inserting the CG face into the movie in real-time which do not cause any discomfort to the participant; Second, the FCS system makes it possible for multiple participants to take part in a movie at the same time in different roles, such as a family, a circle of friends, etc. The FCS system is not limited to academic research; 1.6 million people enjoyed a FCS entertainment experience at the Mitsui-Toshiba pavilion at the 2005 World Exposition in Aichi, Japan. I introduce this ongoing DIM project and review FCS experience in Expo 2005.

BIOGRAPHY

Dr. Shigeo Morishima is the professor of Faculty of Science and Engineering, Waseda University. He received the B.S., M.S. and Ph.D. degrees, all in Electrical

Engineering from the University of Tokyo, Tokyo, Japan, in 1982, 1984, and 1987, respectively. From 1987 to 2001, he was an associate professor and from 2001 to 2004, a professor in Faculty of Engineering, Seikei University, Tokyo. He was a visiting professor in University of Toronto from 1994 to 1995. His research interests include Computer Graphics, Computer Vision, Multimodal Signal Processing and Human Computer Interaction. Dr. Morishima is a member of the IEEE, ACM SIGGRAPH and the Institute of Electronics, Information and Communication Engineers Japan(IEICE-J). He is a trustee of Japanese Academy of Facial Studies. He received the IEICE-J achievement award in May, 1992 and the Interaction 2001 best paper award from the Information Processing Society of Japan in Feb. 2001. Also he is a visiting researcher of ATR Spoken Language Communication Laboratory from 2001. He is a leader of Digital Animation Labs, Tokyo.