Acoustic Echo Cancellation for the Telepresence System

Inseon Jang, Hyun Woo Kim, Do Young Kim

Future Internet Research Department
ETRI (Electronics and Telecommunications Research Institute), KOREA
{jinsn, kimhw, dyk}@etri.re.kr

***Abstract*— This paper presents an implementation of an acoustic echo cancellation (AEC) system for the Telepresence environment where high quality speech communication is required. Implemented AEC system consists of the blocks related to pre/post-processing, the partitioned block frequency domain adaptive filter (PBFDAF) with a variable step size. Simulation results using real audio recording with the Telepresence system confirms superiority of the Implemented AEC.**

***Keyword*— Acoustic Echo cancellation, Telepresence, Video Conference, Smart Work**

Inseon Jang has been with ETRI (Electronics & Telecommunications Research Institute) since 2004. She received the B.S. degree in information and communication engineering from Chungbuk National University, Korea, in 2001 and the M.S. degree in computer engineering from POSTECH, Pohang, Korea in 2004. Her main research interests include audio signal processing, telepresence and issues on smart-work.

Hyun Woo Kim was born in Seoul, Korea, in 1978. He received the B.S. and M.S. degrees in electrical engineering from Seoul National University(SNU), Seoul, Korea, in 2001 and 2003, respectively. Since 2003, he has been with the Electronics and Telecommunications Research Institute (ETRI), Daejeon, Korea, where he is currently a senior member of engineering staff. His research areas include speech signal processing, speech coding and speech enhancement.

Do Young Kim (M'96) has been with ETRI (Electronics & Telecommunications Research Institute) since 1987. Currently, he is a director in Smart-work Research Team as a principal researcher. He received the BE and MS degree in electronics engineering from Sungkyunkwan University (SKKU), Korea, in 1983 and 1985 each. He received the PhD degree in computer engineering from the Chungnam National University (CNU), Korea, in 2008. His main research interests include true tele-presence, high-definition voice/Video processing and systems, real-time media processing, and issues on smart-work.