Efficient Contents Sharing Between Digital Signage System and Mobile Terminals

Eunil KIM*, Hyun Jin LEE*, Dong Hun LEE*, Uk JANG*, Hwa Suk KIM*, Kee Seong CHO*, Won RYU*

* Smart Screen Convergence Research Department, Broadcasting and Telecommunications Convergence Research Laboratory, Electronics and Telecommunications Research Institute, Daejeon, Korea

eunilkim@etri.re.kr, petrus@etri.re.kr, nwxnemo@etri.re.kr, ukjang@etri.re.kr, hwskim@etri.re.kr, chokis@etri.re.kr, wlyu@etri.re.kr

Abstract— **Digital signage is a Digital Information Display (DID) which expresses traditional advertisements of outdoor billboards by digital. In early digital signage was limited to provide contents consists texts, images and videos, but now it is combined with the network so contents can be installed, operated and replaced from a distance. Furthermore interaction with users and with user's mobile terminals is getting important. Thus, the transfer of contents between digital signage terminal and user's mobile terminals will occur frequently. In this paper, we suggest the structure of the digital signage system and the efficient method of content sharing through the diagram of the system structure and signal flow.**

Keyword— **Digital Signage, Contents Sharing, Transform, Multicast, Mobile Terminal**

Eunil KIM received his BS and MS in electric and electronic engineering from KAIST(Korea Advanced Institute of Science and Technology), Daejeon, Rep. of Korea, in 2007 and 2009 respectively. In 2009, he has been with ETRI, Daejeon, Rep. of Korea, where he is currently a member of engineering staff. His research interests include smart-service, digital signage, and convergence technology of broadcasting and telecommunications.

Hyun-Jin Lee received the B.S. and M.S. in electronic engineering from Kyungpook National University, Korea, in 1997 and 1999, respectively. He joined the ETRI(Electronics and Telecommunications Research Institute) in 1999. Since then, he has been engaged in the research and development of Mobile Switch system based on ATM, Optical Internet, and Access Mediator system. He is currently working in fields of IPTV Service Control Technology in ETRI. His interests include the areas of next generation network control system, IP Multimedia Subsystem, and Converged Services.

Dong-Hun Lee graduated with the B.S. and M.S in computer engineering from Chungnam National University, Korea. He joined the ETRI in 2007. Since then, he has been engaged in the research and development of signaling system for IMS, Video Conference. He is currently working in fields of IPTV Service Control Technology in ETRI. His interests include the areas of next generation network control system, IP Multimedia Subsystem, and Converged Services.

Hwa-Suk Kim graduated with the B.S. in computer engineering from Kyungpook National University, and with M.S. in computer science from Chungnam National University, Korea. She joined the ETRI in 1991. Since then, she has been engaged in the research and development of signaling system No.7 for ISDN, CDMA, ATM. She is currently working in fields of Broadband Convergence Network Control Technology in ETRI. She is interested in the areas of network and service control for NGN and IPTV.

Kee-Seong Cho received the B.S. and M.S. in electronic engineering from Kyungpook National University, Korea, in 1982 and 1984, respectively. He joined the ETRI in 1984. Since then, He has been engaged in the research and development of CDMA systems, Mobile Switch system based on ATM, and Access Mediator system. He is currently working in fields of Broadband Convergence Network Control Technology in ETRI. His interests include the areas of next generation network control architecture, IP Multimedia Subsystem, and IPTV.

Won Ryu received a B.S. degree from the Department of Computer Science and Statistics at Pusan National University, Busan, Korea, in 1983, an M.S. degree from the Department of Computer Science and Statistics at Seoul National University in 1988, and his Ph.D. degree in information engineering from SungKyunKwan University, Kyonggi, Korea, in 2000. Since 1989 he has been working as a researcher, and currently, he is the Director of IPTV Technology Research Department, ETRI. His research interests include all-IP-based convergence service and control plane, mobility, NGNs, wire/wireless interworking technology, VoIP, and IPTV.