## A Study on Fast Delivery of SI over RF/PON Transmission System

Jae Cheon Han\*, Byoung Jun Ahn\*\*, Sung Kwon Park\*\*

\*Korea Digital Cable Laboratories, 12, World Cup Buk-ro 54 Gil, Mapo-gu, Seoul, Korea

\*\*Convergence Communications Lab., Hanyang Univ., 17 Hangdang-dong, Sungdong-gu, Seoul, Korea

jupiter@klabs.re.kr, bjahn@hanyang.ac.kr, sp2996@hanyang.ac.kr

Abstract— More and more people are watching video over internet using connected devices such as smartphone, and internet traffic is being burst. In order to deal with these environments, technical development and standardization on RF/PON transmission system have been carried out. For commercialization, RF/PON transmission system is designed to accommodate the connected device as a new means to serve broadcast services and to be deployed without any changes of the existing broadcast facilities. But it takes up to 2 minutes at the worst case to deliver service information to subscriber's device, and it might cause subscriber's dissatisfaction. In this paper, we propose a better way to reduce the transmit time to a couple of hundreds milliseconds.

Keyword— RF/PON, SI, Service Information, CATV, Cable, Multi-screen, Giga Internet



Jae Cheon Han received the M.S. degree in Computer System from Soongsil University, Korea in 1999. He was a research staff member with ETRI (Electronics and Telecommunications Research Institutes) during 2002~2007. He is working for KLabs ((Korea Digital Cable Laboratories) as a principle researcher since 2008. His research interests include VoIP, SIP, Hybrid Fiber Coaxial network, giga-internet, and multi-screen service.



**Byoung Jun Ahn** received the M.S. degree in electronic communication engineering from Hanyang University, Korea in 2007. He is in the doctoral course in electronic computer and communication Engineering of Hanyang University. He is working for KLabs (Korea Digital Cable Laboratories) as a chief researcher since 2007. His research interests include CATV, Hybrid Fiber Coaxial network, Broadcast & Communication network, and optical engineering.



Sung Kwon Park received the B.S. from Hanyang University in 1982, the M.S. degree from Stevens Institute of Technology, Hoboken, New Jersey, USA in 1983 and his Ph.D. degree from Rensselaer Polytechnic Institute, Cookeville, TN, USA in 1987. From 1987 to 1992 he was an assistant professor in Electrical Computer and Systems Engineering Dept. of Rensselaer Polytechnic Institute, and an associate professor in Electrical Engineering Dept. of Tennessee Technological University in 1992. He is a professor of Hanyang University, Korea since 1993, and his research interests include digital broadcasting, vehicle network, smart network and future network.