

Session A : Sensor & Home Networks

Wiring the Physical Network of the Next Generation Home Network

Yu Kakishima, Kohei Okada, Dai Hanawa, and Kimio Oguchi



Yu Kakishima

*master course student, Information Networking Lab.,
Graduate School of Engineering, SEIKEI University
dm073202@cc.seikei.ac.jp*

Biography

Yu Kakishima received the B.E. from Seikei University, Japan in 2007. Since April 2007, he has pursued a postgraduate degree in Seikei University, Japan. He is a member of IEICE. His research interests include configuration of the home network.

Abstract

The next generation home network needs an infrastructure that can handle the large volumes of data yielded by the transfer of high definition images and data streams from different kinds of terminals. Optical fiber cable is the most promising candidate for the next generation home network; such cable offers extremely large capacity.

This paper examines the network topology or the wiring course from ONU (Optical Network Unit) to the optical wall socket and introduces a formula that allows us to calculate the total wiring length (of optical fiber cable) in a home for different network topologies. Moreover, the longest transmission distance needed to configure the home network is calculated.