

ABSTRACT

The demand for broadband services has prompted the application of access network technology to homes/offices known as the access network Fiber To The Home (FTTH). One of the technologies that is widely implemented today is the Gigabit Capable Passive Optical Network (GPON) where this material is one of the materials taught at SMK Telkom Bandung. From the initial survey to the location, it is known that it is very necessary to present material through videos and practicum modules which are expected to be able to help teachers and students in the teaching and learning process.

In this Final Project, the construction of ftth networks from Optical Line Termination (OLT) devices to Optical Distribution Point (ODP) devices will be carried out and also the creation of video-based learning systems and modules. The scope of the material discussed is starting from the basic theory of FTTH networks with GPON technology, network structure, Implementation Examples, and Network Design.

The results of developmen The practicum lab was tested by taking measurements using OTDR tools for the-12 installed optical fibers, all of which met the damping limits (below 9.09767 dB). In addition, the results of the FTTH lab development and all practicum modules and practicum videos were asked for an assessment with the questionnaire method with teacher and student respondents with the results of most (81.54%) stating satisfied / very satisfied.

Keyword : *Fiber To The Home (FTTH), Gigabit Capable Passive Optical Network (GPON), practicum module, networking.*