

314. FTTH NETWORK DEPLOYMENT AND FAULT MONITORING SYSTEM USING CFDS TECHNIQUE

DIVYA.G-ME

APPLIED ELECTRONICS

AKT MEMORIAL COLLEGE OF ENGINEERING AND TECHNOLOGY

This paper introduces a MATLAB-based graphical user interface (GUI) development named as Centralized Failure Detection System (CFDS) to increase the efficiency, survivability and reliability of fiber to the home (FTTH) access network. The developed program will be installed with optical line terminal (OLT) at the central office (CO) to monitor the status and detect the failure line that occurs in the drop region of FTTH network. The objective of this paper is to accumulate every network testing result to be displayed on a single computer screen and then specify the failure location in drop region of FTTH network downwardly. Conventionally, the failure line of FTTH network can be measured using optical time domain reflectometer (OTDR). CFDS is interfaced with the OTDR to display multi measurement results on a single computer screen in a time and also the further information when click on each individual line. The program will identify and present the parameters of optical line such as the line's status either in working or non-working condition, magnitude of decreasing as well as the location, failure location and other details as shown in the OTDR's screen. The analysis result will be sent to field engineer or service provider for promptly action. Keywords: detection of faulty fiber, identification of failure location, fiber-to-the-home (FTTH), centralized failure detection system (CFDS), Visual Basic, downwardly.

Journal of Science and Innovative Engineering & Technology