ABSTRACT

BOAN TUA PASARIBU. Operational and Maintenance design of Fiber Optic and Digital Subscriber Line Access Multiplexer Devices. Supervised by MEUTHIA RACHMANIAH.

PT. Telekomunikasi Indonesia has a sub-section called Fiber Optic and Radio Maintenance (FRAM) that is responsible in the implementation of maintenance for the Fiber Optic (FO) devices and Digital Subscriber Line Access Multiplexer (DSLAM). In this section there are sub-team squads who will make the implementation of maintenance for FO and DSLAM devices, but recording reports are made by each unit manually. Manual recording results in a long recapitulation of data. Further, difficulty arises in getting data from the previous problem-solving solutions that have been experienced when the same problem occurs in the field. This prevents the problem to be solved timely and correctly. Therefore, these research is conducted for the automation of this task or process. Serving and providing data storage become easier and make summarization of data faster and easier for users to obtain the history of activities that have been made.

Application for operational and maintenance FO&DSLAM devices was built using the CodeIgniter framework utilizing the concept of Model View Controller (MVC). The database management system used is MySQL with phased development methodology as a research method.

Results from this research is the application for operational and maintenance of Fiber Optic and DSLAM devices. This application is a web-based system that aims to help automation for maintenance activities, intended to maintain the system DSLAM device and the quality of network access in accordance with technical specifications that have been defined. The application developed provides security and accuracy of data. The application also makes it easier for users to obtain the history of activities that have been made. So when the same problem happens in the field, splitting the problem does not need to re-searched.

Keywords: FRAM, fiber optic, DSLAM, CodeIgniter, Model View Controller, automation.