

ABSTRACT

Internet needs continue to increase every year, to meet people's needs for the internet requires high-speed data transmission media. Optical fiber is a transmission medium that uses light as a medium for transmitting information that offers high data rates. Areas not yet covered by fiber optic networks will require the construction of a new network to meet the people's need for the internet. The problems that occurred in the previous design were infrastructure routing and the calculation of the feasibility value of optical fiber was still done manually without using a system, so that it could slow down infrastructure design. In addition to infrastructure routing, feasibility value calculations such as the Link power budget, Rise Time Budget, Bill of Quantity and Quality of Service are performed manually using the available formulas. This makes it ineffective and not monitored properly.

Based on these problems to overcome problems and smoothness in infrastructure development, a website for Optical Communication System Network Infrastructure Design is realized. There are map and database features on the website so that technicians and office employees can exchange information easily during the design process for building new network infrastructure.

This study uses a qualitative method with research stages starting from the literature study stage by conducting research on some related literature and studies, then the development stage is for designing and designing website applications, then the testing stage is carried out to determine the feasibility of website performance and the website implementation stage. Based on the results of the design, it shows that the infrastructure routing and calculation of the SKSO feasibility value on the Website Application For Fiber Optical Communication System Network Infrastructure Design is accurate and can be implemented.

Keywords : *Optical Fiber, Website, Routing, Link power budget, Rise Time Budget, Bill of Quantity dan Quality Of Service*