ABSTRACT

In today's digital era, the demand for fast and stable internet services continues to grow, prompting Internet Service Providers (ISPs) to build network infrastructures that are resilient to service disruptions. Internet service interruptions can disrupt customer activities and potentially affect the Service Level Agreement (SLA), which serves as a performance assessment metric for ISPs. One indicator of such disruption is a cable cut. To meet SLA requirements, ISPs need appropriate strategies based on reliable references regarding the selection of optimal optical cables.

The author conducted a study comparing the use of different types of optical cables. In this research, the optical cables used are ADSS (All-Dielectric Self-Supporting) cables and DW (Drop Wire) cables. It is hoped that this research can be used by ISPs, as well as serve as a knowledge resource for the general public and students about optical cables, thereby helping to minimize service disruptions.

The comparison between the two types of cables is based on measurement parameters such as attenuation, splice loss, MRTG (Multi Router Traffic Grapher), and SLA percentage. For data collection, the research was conducted in Cibiru Hilir and Pangauban villages, which use DW cables, and in Lengkong and Cinunuk villages, which use ADSS cables.

The test results for attenuation, splice loss, and MRTG serve as the basis for calculating SLA percentages. In the areas using DW cables, the SLA percentages were 98.86% and 96.06%, respectively, while for ADSS cables, the figures were 98.5% and 100.0%. Based on the findings, it can be concluded that ADSS cables are more optimal for network infrastructure implementation and help maintain SLA compliance.

Keywords: *ADSS cables, Drop Wire cables, Attenuation (loss), Splice Loss, MRTG, and SLA.*