

## ABSTRACT

In this research, it describes the implementation of the Minimum Service Standard (SPM) counter on the fibre optic communication system (SKSO) backbone network. SPM is used to ensure that the quality of service provided by the network meets predetermined standards. The author uses an enhanced SPM calculation method to consider Quality of Service (QoS) factors. The test results show that the SPM counter can be implemented on the backbone network of the optical fibre communication system well. The authors found that the SPM counter can help improve the quality of service provided by the network. The use of fibre optic communication systems demands the implementation of SPM to ensure optimal service levels.

In this context, researchers explored the integration of SPM at the backbone level to improve service quality and reliability. This implementation involves developing a calculation algorithm that is integrated with the backbone system, with a focus on monitoring and managing quality parameters such as throughput, latency, and jitter. The author provides 2 solutions to assist in the calculation process of SPM integration, the first solution is to create an application on android that has features to calculate and search for maps of STO installation points. The next solution is to develop a *website* that can calculate and display data.

Based on the results of the study, it was revealed that most technicians (86.7%) gave high ratings (scores of 8-10) to the selected features on the Mobile Application, indicating a high level of satisfaction with the effectiveness and usability of these features. Meanwhile, a small number (13.3%) expressed moderate satisfaction (scores 5-7). The study involved 15 technicians from three different companies, namely Telkom Akses, Huawei, and First Media. A brief conclusion from this research shows that the Mobile Application successfully met the technical needs and expectations of the users, demonstrating its potential as an effective tool in technical work.

Keywords: Minimum Service Standard, Quality of Service, Backbone, Mobile Application, Website Application.