

## ABSTRACT

*In the times of development the need for the internet is increasingly important, facilitating long-distance communication. one of supporting the internet needs with the backbone connection that connects a network. Submarine Cable Communication System (SKKL) or the so-called submarine cable is one example of backbone communication that is held under the sea to connect networks between islands and countries.*

*In this study a design of the Marine Cable Communications System Using optical amplifiers on the Tanjung Pakis network located on the JASUKA system (Java, Sumatra, Kalimantan).*

*Expected output parameters are Q-Factor output, Bit Error Rate, and Power Receive. From the design simulation results obtained the value of Bit Error Rate (BER) in the first OLT is 2.66-53, while the second OLT is 4.26-57. The first Q-factor is 15.3 and the second Q-factor is 15.8. whereas for the first OLT Receiver value is -12,278 dB while the second OLT is -12,272 dB.*

*Keywords : Submarine cable, Tanjung pakis, Repeater, Q-factor, Bit Error Rate, Power receive.*