

ABSTRACT

The Cable Communication System (SKKL) is a communication system that uses optical cable transmission media that is held not in the sea. The more population growth in Indonesia, the more people need the data exchange process.

Existing capacity does not allow to serve the many needs of the population to exchange data Conditions with a 77 % load traffic value on the Tanjung Pakis-Tanjung Pandan link. The main link found in Tanjung Pakis - Tanjung Pandan if there is over traffic will result in that link disconnection so that an alternative link needs to be made that can handle in the event of an undesirable condition.

Of all the scenarios designed, scenario 3 is said to be feasible with the design of textit link using the type of cable G.655 as far as 973.52 kilometers with 9 EDFA amplifiers getting the value of textit Link Power Budget -12.78 dBm with SNR value for 26.02 dB, the value of textit Q-factor is 9.99 and the value of textit Bit Error Rate is 8.59×10^{-24} . It is said to be feasible based on the minimum value of each performance parameter.

Keywords: SKKL, optical cable, capacity, existing, alternative