

ABSTRACT

Submarine communication cables are an example of underwater link backbone communications that are interconnected between cities and between countries. Backbone is a high-speed network that becomes the main path in a network. Forged the distance to be traveled by a submarine cable link is very far (more than 5,000 km), then required supporting devices such as optical amplifier or repeater, for communication that can get to the destination by minimizing the lost data.

In this study will analyze a design how the influence of the use of optical amplifier to the Network Cable Communication Network (SKKL) in the path of the system of Indonesia Global Gateway (IGG). There is a choice of optical amplifier use by using Repeater-ed system or using Repeater-less system.

Using existing parameters, obtained for best results in Indonesian Ocean Gateway cable communications system using repeater-ed configuration with Q-Factor value 68, bit error rate (BER) 4.42×10^{-22} , and received power value of 2.206 dBm.

Keyword: Submarine Cable, Indonesia Global Gateway System (IGGS), Optical Amplifier, Repeater, Repeatered, Repeaterless, Erbium Doped Fiber Amplifier (EDFA), Raman Amplifier