

ABSTRACT

The development of increasingly sophisticated information technology can affect the needs of the community, one of which is the need for services on satellite communication systems. The carrier power emitted by an antenna called EIRP is very influential in VSAT performance. In Indonesia, the EIRP is different in each region. EIRP is the main parameter that affects the quality of the link in the communication system. This study aims to determine the better quality of the communication link based on the comparison of EIRP values of 41 dBW in Medan and 43 dBW in Gorontalo. The results obtained from the EIRP comparison can be seen from the C/N, Eb/No and BER generated on each link. Based on the results of the analysis carried out, a larger EIRP will affect a better communication link seen from the C/N results which are the main parameters to determine the quality of the communication link. With an earth station EIRP of 58.03 dBW and a saturation EIRP of 41 dBW, it produces a C/N of 15.33 dB on the Bogor-Medan link. Meanwhile, on the Bogor-Gorontalo link with an earth station EIRP of 58.08 dBW and a saturation EIRP of 43 dBW, it produces a C/N of 15.48 dB. In addition, an analysis of the percentage of optimal use of power and bandwidth can be used to improve VSAT performance on the Bogor-Gorontalo communication link. Medan and Bogor-Gorontalo.

Keywords: *EIRP, VSAT, Power and Bandwidth.*