ABSTRACT

There are a total of 7 (seven) geostationary communications satellites owned and operated by Indonesian businesses that are located there. Even though all areas of Indonesia have been perfectly covered by the footprint coverage of several geostationary communications satellites operated by Indonesian telecommunications operators, some of the country's population still lacks connectivity, particularly in the country's 3T (outermost, underdeveloped, and frontier) regions, remote areas, and/or small islands. HTS or High Throughput Satellite is the latest technology currently in satellite communications. The HTS Apstar 5C satellite uses KU Band frequencies as uplink and downlink from the remote site. The coverage area on the Apstar 5C HTS satellite is divided into several spot Beams so that frequency usage becomes more efficient and reusable. At each Spot Beam there is a Remote Reference which functions as a reference for installing a new remote site. The Kratos device installed in each Remote Reference functions as a monitoring tool that contains the EIRP Downlink parameters used as a reference for Availability by BAKTI Kominfo as the basis for billing Invoices to Telkomsat. In order to meet the performance criteria desired by the customer and to optimize the resources used, the development of a satellite communication network requires planning and designing a system called the Link Budget. This study analyzes the comparison of the calculation results for the EIRP parameters using the Link budget method and the results from Kratos measurements installed in each Remote Reference. The EIRP calculation using the link budget method on the Bogor RR Beam 2 Antenna has a value of 45.78 dBW which is almost the same as the Kratos measurement result of 46.11 dBW. The calculation results of the Link Budget method on RR Beam 3 Surabaya are 44.78 dBW and the Kratos measurement results have an average value of 43.68 dBW.

***Keywords**: VSAT*, *HTS, EIRP, Link budget*, *Kratos*.