

ABSTRACT

A large population in an area requires communication network infrastructure to facilitate residents in using communication technology with the surrounding area. Supporting telecommunications infrastructure can facilitate the flow and processing of information so that communication between each customer can run well. The use of microwave devices is suitable for use because of its efficiency and is more suitable for long-distance communication that takes into account geographical and infrastructure conditions. The areas of Jatisumberlawang and Peleman which are located in Sragen Regency have a large population growth, so it is necessary to design a microwave transmission network using Pathloss 5.0 with a frequency of 15,000 MHz to facilitate the use of communication technology with the surrounding area. The results of the design using Pathloss 5.0 will be used as a design comparison from Huawei. Planning using Pathloss 5.0 produces an availability value of 99.99164% and based on calculations using the formula to obtain an availability value of 99.998611%. From the results of the Huawei design, the availability of 99.98988%, while the results of calculations using the formula produce 99.9998155%. In this Availability parameter, the results of the Pathloss 5.0 design are better than the Huawei design with a difference of 0.00176% and have met the ITU-R G.827 standard.

Keywords: link microwave, pathloss, Sragen availability.