

ABSTRACT

Along with the increasingly rapid development of telecommunications technology, adequate telecommunications equipment is needed. In order to overcome interference obtained from geographical conditions, it is necessary to design a very mature microwave link. In this paper a microwave link design is used using antenna point to point configuration, space diversity and non diversity at sites in the same area. The design was carried out in the Thousand Islands area, precisely Pari island with south latitude coordinates $5^{\circ} 51'29.38''$ S and east longitude coordinates $106^{\circ} 37'3.48''$ E and Pramuka Island in south latitude coordinates $5^{\circ} 44'47.15''$ S and east longitude coordinates $106^{\circ} 36'48.71''$ E. Microwave link design using PathLoss 5.0 software. Based on the design using Pathloss 5.0 using the point to point configuration of the annual rain + multipath availability value that is 99.95682%, when using the non diversity configuration the resulting annual rain + multipath availability value is 99.91683% and when using the space diversity configuration The resulting annual rain + multipath availability value is 99.90859%. The three available availability values meet the ideal conditions because the value is above 99%, the value obtained at the point to point configuration gets a better availability value.

Keywords: *Link Microwave, Point to Point, Space Diversity, Non Diversity, Availability*