ABSTRACT

Link microwave should be line of sight between the transmitter antenna and receiver antenna without obstacle. But in reality there are some obstacle on a link microwave. If there is an obstacle then need a passive repeater to repeat information signals to be received by the receiving antenna. Passive repeaters used for repeat the radio signal by changing the direction of the radio beam. To support the cellular technology needed link microwave design that uses Pathloss 5.0. Microwave radio communication need prediction methods. Prediction methods commonly that used Barnett Vigants and ITU-R P.530-7 / 8. Purpose of using two methods is that design of link microwave be more accurate. The design is done with any step, first step is choose data that is data of the latitude, longitude, elevation. . And then second step is design planning microwave link with Pathloss 5.0, require a passive repeater and two prediction methods (Barnett Vigants dan ITU-R P.530-7/8) . Next step is analysis planning microwave link. Planning microwave link with two prediction method has a difference on unavailability due to multipath. Microwave link that use Barnett Vigants method, result of unavailability is 0,023%, and if use prediction methods ITU-R P. 530 7/8 result of unavailability is 0,000087%. So, ITU-R P.530 7/8 more better than Vigants Barnett.

Keywords : *Link microwave, Passive Repeater, Back to Back Antenna, Availability, Barnett Vigants, ITU-R P.530 7/8, Pathloss 5.0*