

Abstract

Many tourists who come especially Kawah Putih Tourist Area. Tourists not only come to the sights but tourists usually like to open their social media to capture the moment in social media and make communication links. But in White Crater Places have poor network quality because of the amount of attenuation caused by the area including the mountains and has forest around the crater white tourist. Needed an LTE cell planning in Kawah Putih Tourist Area Tour so that users of LTE network service still have good service quality at White Crater Tourist Area.

In this final project, it will be discussed about Microwave Backhaul planning and LTE cell planning in Kawah Putih Tourist Area. Before performing LTE cell planning first because without the backhaul the transmission can't propagated. microwave backhaul planning is simulated in Pathloss 5.0 software with the parameters used are Availaibility and SES. After the parameters are analyzed then the LTE cell planning using Coverage Planning and Capacity Planning and generate the number of cells that can serve tourists inthat place. The number of cells obtained in coverage planning will be simulated in Atoll 3.2 software using RSSI and BLER parameters .

In the microwave backhaul planning results obtained the availability > 99.99% and SES <1 sec on each link that has a minimum received power is -84 dBm. In the LTE cell planning obtained in scenario 1 has RSSI value equal -67,36 dBm with a covered area of 0.0025 km² and a BLER value equal 0% with a covered area of 0.005 Km². In scenario 2 has an RSSI value equal -61,60 dBm with an area of 0,0025 km² and BLER value equal 2% with a covered area equal 0,0025 km².

Keywords : *microwave backhaul,coverage planning,capacity planning,LTE,availability*