ABSTRACT

Cellular telecommunication is an important thing in its existence in the modern era like today. Community needs for information and communication continue to grow over time, including people in urban areas. However, there are still several places, one of which is the Kota Baru Parahyangan residential area in the city of Bandung where the quality of cellular services is still not optimal in the male protection area.

The Kota Baru Parahyangan area is a residential area in the city of Bandung where there is still a lack of cellular access, both 3G and 4G technology. This condition makes cellular providers, namely 3 operator, take the initiative to create a technology called BTS Hotel or commonly known as ODAS (Outdoor Distributed Antenna System) with a unique concept that helps in providing connectivity in locations where towers are not based on various regulations.

The BTS Hotel system was chosen to increase the number of cellular antennas, but it could cover the costs of equipment, land and human resources. One of the strong reasons is that for the aesthetic value of the residential area and the security side, they have to build a conventional tower. The results of this BTS hotel design are expected to produce parameter values for LTE, such as the RSRP value of 70% on a value of > -90 dBm and 70% SINR at a value of > 5 dB in accordance with the 3 operator KPI standard and also the parameter values for UMTS, such as the RSCP value of 70% at a value of > -78 dBm and Ec / No > -12 dB so as to improve quality and capacity 3G and 4G networks in Kota Baru Parahyangan Padalarang housing complex, Bandung..

***Keywords**: cellular, BTS Hotel, ODAS, KPI.*