

ABSTRACT

At the Kebon Jeruk District location, there are three locations that are used as user complaints for the LTE network. The location at Binus University Anggrek, Syahdan, Rawa Belong Flower Market. The cause of the occurrence such as many new buildings with thick concrete which causes the LTE network to be less good.

To overcome this, optimization is carried out with the RET (Remote Electrical Tilting) parameter, RET has a function to change the slope of the sectoral antenna with a downtilt slope. From these parameters, measurements are made for the value of the receiving signal, capacity, payload. The measurement of the receiver signal value uses the RSRP value, the capacity value uses the number of users using the LTE network, the payload value looks at the user's data consumption usage in GigaByte (GB) units.

Before optimization, the slope of the degree is at 30 degrees, then calculations are carried out to find the ADT (downtilt antenna), R. Outer and R. Inner values. After that, the antenna was tilt from 30 to 40 degrees with the Huawei OSS U2000. the before measurement gets receiver signal value of -96.57 dBm, the after measurement for receiver signal value becomes -96.24 dBm, an increase of 0.33 dB. The before capacity measurement got as many 24 users/BTS, then for the after measurement it became 26 users/BTS, an increase of 2 users/BTS was obtained. Measurement of payload before of 15.175 Gb/week, for measurement of payload after is 16.395 Gb/week. An increase of 1220 Gb / Week.

Keywords : RET (Remote Electrical Tilting), Receiver signal, Capacity, Payload, RSRP (Reference Signal Received Power).