

ABSTRACT

The ability of 4G LTE technology that has a wider coverage area than previous technologies must be maximized. Network optimization is carried out so that Telkomsel operators can provide better services so that the company's revenue revenue has increased. One way to optimize the network is by changing the sectoral tilt antenna consisting of mechanical tilt and electrical tilt. Antenna tilt process must be planned by the RF Engineer in order to get the right coverage area that is an area that has a denser settlement. Drivetest is done before the network is optimized and after the network is optimized as a comparison material for network performance analysis. TEMS Investigation software is used for drivetest activities that are connected to GPS and handsets that have been locked to receive Telkomsel's 4G LTE network. Parameters measured in the field are Cell Identity, RS SINR and RSRP. This parameter is a more specific parameter to determine the 4G LTE signal quality. The three parameters tested were Cell Id, Signal to Interference Noise Ratio (SINR) and Reference Signal Received Power (RSRP). Cell Id changes were not in the previous bad category 25.08% to 21.77%. SINR experienced a better signal quality improvement of 52.68% to 54.78%. RSRP experienced a significant change previously 49.9% to 49.57%. It can be concluded that after the sectoral antenna tilting there is a good increase.

Keywords: 4G LTE, Optimization, Drivetest