

## ABSTRACT

*Daan Mogot Road is the main road connecting Jakarta and Tangerang. As a non-highway road and a very congested area every day, this road should have a good cellular network performance value, especially LTE which is currently dominantly used by the community. After the LTE drive test using Tems Pocket was carried out on February 15, 2022 using a video call service by using LINE apps and May 3, 2022 using the Youtube script on the TEMS Pocket apps, RSRP (Reference Signal Received Power) values, SINR (Signal to Interference Noise Ratio), RSRQ (Reference Signal Received Quality) were obtained and got poor values on every parameters. There were also cases such as LTE connection drop, handover fail, and radio link failure on both test drives.*

*Optimization has been carried out with the proposed four improvement methods, such as physical tuning, power configuration, adding the nearest site coverage, and adding a new site using Atoll to improve some of these areas with an average target of RSRP > -100 dBm, SINR > 3 dB, RSRQ > -15 dBm, and throughput > 7.200 kbps.*

*From the four proposed improvement methods, each bad spot are got optimal repair results. With the average of the four repair parameters, the RSRP value is -97,7 dBm, SINR 10,39 dB, RSRQ -13,9 dB, and throughput 52,923.33 kbps. The physical tuning method is the main method in this proposed improvement by changing the azimuth, mechanical tilting, and antenna height with the impact of increasing the SINR and RSRQ values significantly and slightly increasing the RSRP value. With the addition of the power configuration method after physical tuning, it can increase the value of the four parameters significantly.*

***Keywords: Daan Mogot Street, LTE Drive Test, RSRP, SINR, RSRQ, Throughput, LTE Network Optimization.***