

## **ABSTRACT**

*Radio Area Network In South Jakarta is a shopping district and a crowded shophouse. The need for cellular or voice communications services is needed in this location. After the measurement, it was often the case of 3G network interruption including poor signal quality and data connections failed.*

*Measurement of quality of 3G network by using drive test method. This measurement is done by using software Tems Investigation 11.0.1. The case study area in this final project is Radio Dalam area of South Jakarta. From the results of this measurement is done analysis, if found the problem then done optimization in the area. The optimization results are then simulated using software atoll 3.2.1.*

*Based on the analysis, there is a problem of bad coverage of RSCP values ranging from -120 dBm to -86 dBm, RSCP simulation ranges from -83 dBm to -78 dBm and simulation after RSCP ranges from -74 dBm to 0 dBm. Furthermore, the bad quality 1 Ec/No values range from -30 dB to -15 dB, before Ec/No simulations ranged from -12 dB to -8 dB, and after Ec/No simulations ranged from -8 dB to 0 dB. There is a blocked call problem with Ec/No -15 dB, before Ec/No simulation around -12 dB to -8 dB and after Ec/No simulation ranges from -8 dB to 0 dB. Next is the low througput problem the average number of RSCP successes is 95.6% and Ec/No 89.3% After the simulation before the average RSCP success rate is 95.729% and Ec/N is 96.506%, then the simulation after the average Average success of RSCP is 97,341% and Ec/No is 98,173%.*

*Keywords: Drive test, Atoll 3.2.1, TEMS Investigation 11.0.1, Radio Dalam*