

## ABSTRACT

*One potential place to do planning of Mobile Network coverage are the Domestic Terminal Building and International Terminal Building Ngurah Rai International Airport. This is because there are many visitors are in there, and because the construction and the walls of that building caused signal strength that received by users in that building are very little. To overcome this problem, it is necessary to do LTE indoor network planning, so the users which are inside the building, can have fast and reliable data communication service, which can be accessed anytime and anywhere.*

*This planning conducted 2 calculations, there are coverage calculation, used an antenna with 30 dB transmit power, and number of antennas that obtained in coverage calculation are 63 antennas on International Terminal and 31 antennas on Domestic Terminal. And capacity calculation which obtained 64 antennas on International Terminal and 33 antennas on Domestic Terminal.*

*In this LTE network planning, coverage result simulation will be simulated using RPS 5.4 software (Radio Propagation Simulator) . This simulation uses two scenarios, the first scenario uses the number of antennas on the calculation of coverage and the second one uses the number of antennas on the calculation capacity, the results of simulation, scenario 1 is the best case scenario with streght RSL (Receive Signal Level) values are obtained at -26.57 dBm on International Terminal and -29.31 dBm on Domestic Terminal, while the value of SIR (Signal Interference Ratio) are obtained 8.366 dB for the international terminal, and 11.15 dB for domestic terminal. this final project also calculated the throughput of each scenarios, the throughput values obtained by the two scenarios are 1008 Kbps for each terminals.*

*Keywords : LTE, Coverage, Capacity, Link Budget, RSL, Throughput.*