

## ABSTRACT

*Metro Indah Mall (MIM) is one of the most visited shopping center in Bandung. This mall is located in the South Bandung exactly in Soekarno Hatta Road, Kawasan Niaga MTC No. 590, Sekejati, Buah Batu, Bandung, West Java (40623). Based on the result of survey which has been done, LTE (Long Term Evolution) network quality in the building is quite bad, this is proved by walk test before. In additon, building height, building materials, and building construction are also affecting the attenuation of existing signals. Based on walk test results, the RSRP (Reference Signal Receive Power) value is  $<-100$  dBm which is indicate that the signal quality is poor and not compatible with XL operator paramerter standard.*

*In this Final Project, we plan to create IBC (Indoor Building Coverage) in Metro Indah Mall, Bandung. Implementation of IBC LTE design use TEMS Pocket software to know the value of RSRP and SINR parameters (Signal to Interference Noise Ratio) in Walk Test before stage, capacity and coverage planning, and simulation using RPS (Radiowave Propagation Simulator) software.*

*By calculate the coverage and capacity planning, we can obtain that the number of required antenna in the planning are 30 antennas. Based on the simulation result, the average RSRP is  $-33.65$  dBm until  $-51.61$  dBm and the average SINR is  $20.48$  dB until  $30.72$  dB. By compare the simulation results with the standard value of XL it is found that the planning has compatible with operator standard and causing Metro Indah Mall Bandung coverage has increased.*

***Keywords : Indoor Building Coverage, Walk Test, LTE, IBC, Metro Indah Mall, Bandung***