

## ***ABSTRACT***

Selluler Communication Technology is very rapidly growing. Most people use mobile phones or cellular systems to communicate. But there are still problems related to the signal for users of the cellular communication system, one of them in Apartment Suites @ metro. The Apartemen Suites @Metro is one apartment on Soekarno - Hatta street No.689, Jatisari, Buah Batu, Bandung. The apartment building is a frequent residence and has many users of cellular telecommunication services, thus requiring good LTE network quality. Too much attenuation of the building construction and the absence of IBC installation on the building cause the building area has poor quality LTE network services.

The solution to improve the quality of this service is to plan the installation of Indoor Building Coverage (IBC) for LTE network in Apartment Suites @metro using case study of XL operator. As in IBC LTE planning is using TEMS Pocket and Investigation software to determine the value and state of RSRP and SINR parameters at Walk Test Before stage while for capacity and coverage planning along with link budget by using propagation model cost 231 Multiwall Model and perform simulation using RPS software.

With the planning of Indoor Building Coverage (IBC), it is expected that standard RF parameter values such as RSRP parameters value  $> -90$  dBm and SINR value  $> 5$  dB can be exceeded and can be used as one of reference for Apartment Suites @ Metro and also the operator on during IBC installation at Apartment Suites @metro.

**Keywords: Indoor Building Coverage (IBC), LTE, Capacity and Coverage Planning, TEMS Pocket, RPS, Selluler.**