

## ABSTRACT

At the moment the buildings development increase incisively especially in metropoliss, so that network of outdoor cellular which there have to cover the area unable to again serve subscriber especially in building. This matter caused since the increasing of big amount trafik and very quality signal wear away in the building. To overcome the problem need to building a network of cellular indoor.

At this Final Project will be studied process of planning indoor cellular network focussed at planning of radio of core network, that is one part of which be in control of link of mobile station with base station by reckoning subscriber capacities, determination and calculation pathloss models, network configuraton and evaluate to scheme result and also making of tool software planning to water down process of planning of good network seluler from facet of configuraton site and also analyse link budget of at each comitment area.

Steps taken in process of planning of this seluler indoor network cover test signal of at each comitment area before installation of network indoor, estimate amount trafik required in comitment area of based on subscriber amount, GOS of The desired, specification from operator party, and the penetrating factor of service. Then will be done also the planning number of indoor antenna, radius coverage of every antenna and position of optimal antenna pursuant to service quality.

Pursuant to planning result, building of Darmawangsa Square require 11 traffic channel to serve burden trafik 5,25 Erlang, so that be required 2 TRXS which is consisted of 14 trafik channel and offer trafik 8 Erlang. Antenna indoor requirement in building to each floor is 13 antenna omni and 1 antenna directional to basement, 2 antenna Bi-Directional for the Ground floor, 7 antenna omni and 1 antenna directional to 1<sup>st</sup> floor, 5 antenna omni and 1 antenna directional to 2<sup>nd</sup> floor and 3<sup>rd</sup> floor. From result of measurement drive test after earn said that configuraton of network indoor have earned to serve subscriber in building and have up to standard of KPI that is 90 % from komitmen area fulfill Rx Level - 85 dBm.