ABSTRACT

Some of wireless telecommunication operator Indonesia have implement CDMA 2000-1x communication system. Most of that system generally use macro sell concept which has vast coverage and high power transmit. But macro cell system has weakness, where for indoor coverage, user cannot establish communication link. Indoor coverage planning is one of the solution for that proble.

The question that show up in indoor coverage planning is how to make indoor coverage planning especially for CDMA2000 1X, so signal quality received can meet the requirement.

This Final Project present the planning of CDMA network inside building (indoor) in shopping centre Istana Plaza Bandung. The planning consist of two aspect, that is trafik aspect and transmission aspect. Trafik aspect will describe analysis of channel capacities calculation of radio link for voice and data application based on estimated user by using Erlang B modelling. Transmission aspect will present analysis of transmission parameter calculation of radio link which covering power link budget calculation to determine the coverage by using indoor propagation model Indoor Soft Partition, technology determination using Indoor BTS system. Finally based on coverage ability of each cell, building floor wideness and trafik requirement, we can determine equiptment of indoor network that is needed and its placing location/node as well.

The design result of indoor network planning of Istana Plaza Bandung needs 17 indoor antenna, 1 indoor BTS, 6 power splitter (2 splitter 1:2, 3 splitter 1:3, 2 splitter 1:4), 3 power tapper, 3637m coaxial cable. From this planning result, can covered each floor in Istana Plaza Bandung building.