

ABSTRACT

Network development of TELKOMFlexi Using system CDMA2000 1x in Bandung is still new (launching at January 2004) so that there are some insufficiency in its planning result. One of its problems is receive signal level in building in shopping centres specially Carrefour shopping centre which located in Jalan Peta Bandung. Early survey using CDMA cellular phone shows, that the received signal of the phone is very poor, though the nearest BTS is only about 600 metre from location. In contrary, receive signal level is strong enough outside the building so that the phone can works properly.

This Final Project present the planning of CDMA network inside building (indoor) in shopping centre Carrefour. The planning consist of two aspect, that is trafik aspect and transmission aspect. Trafik aspect will describe analysis of canal capacities calculation of radio link for voice and data application based on the mean of total visitor 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 COST 231 Multi Wall, technology determination (repeater system, and Indoor BTS system). Finally based on coverage ability of each cell, building floor wideness and trafik requirement, we can determine total antenna(s) that is needed and its placing location/node as well.

The result of planning analysis shows that to fulfill the communication requirement for all visitors in shopping center Carrefour Bandung that taking place in $14165,076 \text{ m}^2$ wide area with total traffic prediction 369,024 kbps or equal with 38 voice channel 9,6 Kbps will require 9 antenna and each antenna cover $1613,74 \text{ m}^2$ wide area or 22,67 metre radius.