

ABSTRACT

CDMA2000 1x is a cellular technology that can provide voice and data services with data rate up to 153,6 kbps and commercially implemented. CDMA2000 1x has become an alternative for AMPS and CDMA IS-95 to evolve to the next generation with more many services and highly reliable.

This final project research is about the cellular network dimensioning base on the CDMA2000 1x using call admission control algorithm in bandung area. Steps taken for the purpose for this dimensioning are data-collecting of bandung area coverage and regional division based on pattern distribution, Next step taken is to make the model from the system and also calculate the site-width and site-radius, used frequency allocation, calculating the signal quality of edge coverage, applying of CAC and calculation traffic for each services.

The result from using CAC algorithm at CDMA2000 1x is to maintain the connection in order to reside in above threshold level, in this case is SIR value. With the required SIR guarantee an existing connection is not influenced by new call. In result, the system quality has become stable against the possibility of dropp call which is caused by infeasible call or call improper that can be accepted by power accepted below boundary threshold.