

ABSTRACT

CDMA2000 1x system is a cellular technology standard that can accommodate voice and data service with data rate until 153,6 kbps and commercially ready to implemented. This system is alternative for AMPS and CDMA IS-95 to evolution to next generation. This technology is evolution from first generation (1G) of wireless communication system that provides voice service only, then the second generation (2G or 2.5G) that able provides voice and low to medium speed data services, and the last is the third generation (3G) that have been extremely increase so its able to provides voice, multimedia and high speed data services.

The Final Project research about cellular planning process based on CDMA2000 1x on radio core network existing by using repeater. The next step is to analyze the effect on BTS consequence of repeater site planning, and analyze repeater performance. Repeater site planning are done to fix blank spot area are not yet cover by BTS.

The steps that are done in this planning are repeater planning : determine blank spot area, site repeater, distance between repeater from BTS, site donor antenna and service antenna, antenna isolation, and repeater gain. Then, we calculate link balancing, power distribution for forward channel, calculation of signal quality at edge of coverage, and analyze relationship between active search window with distance between BTS and repeater. To fix this planning and solve the problem in this paper, writer use data and information which are obtained from operator Telkom Flexi Bandung, with apply network that base of CDMA2000 1x. The result from this paper is to get the repeater network planning development of CDMA2000 1x using of network equipments aspect be able use in Bandung.