

## ABSTRACT

TELKOMFLEXI is a service of wireless communications base on technology of CDMA 2000 1x developed by Fixed Wireless Network Division of PT.TELKOM. By this technology, it can give data and voice service by rate till 153,6 kbps.

At this final project, we study about CDMA 2000-1x performances in business area environment. As a system that new in its operation in PT Telkom, CDMA 2000-1x system have potency to have insufficient in the plan and also in its operation. One of the internal issues of TELKOMFLEXI is drop call. The parameters will be analyzed are link power budget, search window size, handover, and signal strength at the biggest drop call region that happened at business area in Denpasar by looking the grade of drop call data.

From traffic originating data and terminating analyze result indicate that BTS which have high drop call are BTS Unggasan with percentage equal to 2,054%, BTS Tampak Siring with percentage equal to 2,968%, BTS Petang with percentage equal to 2,036%, and BTS Tegalalang with percentage equal to 2,66%. From analysis of link power budget, statistical of drop call, data handover, data F3000, and search window, drop call are caused by overlap radius between BTS, overlapping SRCH\_WIN\_A between BTS, no frame, and bad frame. The solution that offered are development of repeater or New BTS in district that accepting low power receive, the decrease of SRCH WIN A to BTS Tampak Siring, Tegalalang, Petang and Unggasan from 6 (10 chip) become 5 (7 chip) to decrease interference, and for BTS Unggasan need conducted degradation of power transmit of BTS from 40 dBm ( 10 Watt) becoming 33,25 dBm ( 2,11 Watt) or degradation of tilt antenna from 0 becoming 1,336°.