

ABSTRACT

Increasingly increasing of amounts user at system hence interference also increasingly increases also. Capacities a system WCDMA hardly depend on interference happened (soft limit). So is required a reliable technique to limit number of user at network which can lessen Congestion and call dropping. *Call admission control* (CAC) be part of radio resource management (RRM) which is an algorithm location at radio access network (RAN). Principle of CAC that is receiving or not a call based on a certain parameter.

At this end duty will study influence *Call Admission Control* (CAC) to capacities and quality of service such as quality of signal, level interference, power change, probability blocking and delay admission and delay rejection at system WCDMA.

Result of this research indicates that an algorithm admission control applicable to guarantee that an access radio system operates on a value (*threshold*), where an radio interface air is applied fully (maximum) and quality of service (QoS) to user which there at system before all and also new user (call for admissions) has just remain to well guaranteed. For $E_b/N_0 = 5$ decibel average of active user of which can be handled 92 user 1 its(the cell, for $E_b/N_0 = 6$ decibel can handle 72 user 1 its(the cell, $E_b/N_0 = 5$ decibel can handle 58 user 1 its(the cell, and $E_b/N_0 = 2$ decibel (call for handoff) can handle 183 user 1 its(the cell. Probability blocking for this R-CAC algorithm system is $213 \% = 0,0213$ and its(the dropping probability $108 \% = 0,0108$.