

## ABSTRACT

The development of the information and communication technology is the affect of the occurrence of new applications. The purpose of 3<sup>rd</sup> generation (3G) of communication system is to integrate multiple communication and information services such as high-speed data communicated and integrated video and multimedia access and traffic. The Universal Mobile Telecommunication System (UTMS) network is a new technology that tries to proof its existence with its innovation, which is multi band multiple access technology called Wide Band Code Division Multiple Access (WCDMA).

The increase of number of users has affected the increase of the interference. This Final Research simulates admission control algorithm, which determine the number of active users that can be handled by a system and how that algorithm maintains the service quality of the existing system user with the entrance of a new call. The focus is on signal quality, such as interference value, which affects admission control process. The performance of a cellular radio network very much depends on the number of interference in the system.

The simulation is projected to support the assumption that the uplink performance can be proven with this planning feature using admission control. Thus, it can be applied to increase the efficiency and the optimality of network control method, where a good result is when a system can maximize its capacity without reducing its quality.

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