

## ABSTRACT

HSPA can be classified into two link, there are HSDPA (*High Speed Downlink Packet Access*) and HSUPA (*High Speed Uplink Packet Access*). Both of them work with the same core network as 3G/UMTS. The excess of this HSDPA system is a high bit rate (until 14.4 Mbps) also ability to be accessed by many user. It is because of use of several additional techniques, such as *Adaptive Modulation and Coding* (AMC), traffic scheduling, and HS-DSCH.

This final assignment review about scheduling mechanism's performance, a mechanism used to manage multi user flowing traffic distributions so all traffic reach their destinations. *Round Robin* and *Channel State Dependent Fair Service* (CSDFS) is used. There are two scenario in this final assignment. First, investigate background traffic influence. Second, investigate the number of users influence. QoS parameter from ITU-T standardization is used to observe both scheduling mechanisms' performance which enclosed in the end of this Final Assignment paper. Finally, to generate data to be analyzed, *Network Simulator-2* version 2.30 is used.

Simulations' results show that number of user have influence to QoS performance in each users which the greatest number decrease QoS performance and the *background traffic* (which is raised to 80 % of utilization) is not giving too much affection to performance within 10 users. The result of two scenario in this final assignment show CSDFS better than Round Robin. These simulations' results are influenced by used algorithm in each scheduling mechanism and network reability.