ABSTRACT

For increasing downlink performance on wireless service was introduced HSDPA (High Speed Downlink Packet Access). This technology is development from 3G UMTS (Universal Mobile Telecommunication Systems). There are extra channels on HSDPA which called HS-DSCH (High Speed Downlink Shared Channel). It enables the multiple users to share the channel together by simultaneous, TTI *(transmission time interval) 2 ms, so that provide low delay and high data rate until 14,4 Mbps. Because of the different Quality of Service (QoS) demand from users, so used traffic scheduling to allocate that resources.*

In this final assignment was performed simulation and analysis Two-Phase and Maximum Carrier to Interference ratio (C/I) traffic scheduling performance on HSDPA wireless network by using Matlab 7.0. And compare the result based on throughput, packet delay, fairness, and average queuing length parameters.

The simulation's result show that Two-Phase scheduling generated higher throughput than Maximum C/I, with differ ± 0,6 Mbps on without multipath fading situations and differ ± 0,5 Mbps with multipath fading situations. In delay aspect, Two-Phase scheduling generated lower packet delay than Maximum C/I, with differ ± 14 ms *on without multipath fading situations and differ ± 6 ms with multipath fading situations. In fairness aspect, Two-Phase scheduling generated higher fairness than Maximum C/I, with differ ± 0,04 on without multipath fading situations and differ ± 0,1 with multipath fading situations. In average queuing length aspect, Two-Phase scheduling generated lower average queuing length to Maximum C/I, with differ ± 40* Kbit *on without multipath fading situations, and differ ± 17* Kbit *on with multipath fading situations.*

Key words: HSDPA, Traffic Scheduling, Two-Phase, Maximum C/I