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*