ABSTRACT

In 3G/UMTS (*Universal Telecommunication System)* generation, there are some services that can be purposed by *user*, as example is video and image. Needs of video and image, not only just *downlink*, but also *uplink*. Because of it, *user* need for video and image cannot separated from *bit rate* nor *transfer rate*. As conclusion to fulfill those needs, here comes W-CDMA. W-CDMA technology open high speed bandwith up to 3,5 Mbps.

Nowadays, newest technology that has been developed from 3G is HSPA (High Speed Packet Access) that can catagorized by 2, included : HSDPA (High speed *Downlink* Packet Access) adn HSUPA (High Speed *Uplink* Packet Access). In HSUPA, this technology provide *downlink* at same speed as HSDPA technology. What make it different is basically maximum speed for HSDPA *downlink* is 14,4 Mbps, and maximum *uplink* speed of HSUPA is 5.76 Mbps.

This final project simulates the effect of *traffic* scheduling techniques, included *Maximum C/I* and *Proportional Fair (PF)*, using Matlab R2007a with parameter of *throughput, queue delaying, fairness,* and *average queue length.* From those simulate, there is conclusion that *throughput* value to in *Maximum C/I* is higher than *Proportional Fair value* for all condition. For *fairness* value, these scheduling valued ± 0.81 in non-*fading* condition, and ± 0.65 with *fading*. But in *queue delaying*, those scheduling valued by ± 20.32 TTI with *fading* condition, and ± 23.76 TTI with non-*fading* condition. Without *fading, average queue length* for *Maximum C/I* is ± 97,095 Kbps, and ± 94.173 Kbps for *Proportional Fair*. Therefore, with *fading*, those two parameter has same value, ± 122.068.

Key words: HSUPA, *Traffic Schedulling, Maximum C/I, Proportional Fair*