ABSTRACT

High Speed Downlink Packet Access (HSDPA) was newest technology in the mobile telecommunications system, with the data rate that was high until reaching 14.4 Mbps. The video streaming was one of the services that was provided by HSDPA network. With the video streaming, user might not be waiting file the video was finished in download before just could be turned and enjoyed but user could do download and play at the same time in one time. In the application of the video streaming, frames was sent in an orderly fashion from server to client, afterwards client received frames this and put forward him. The pattern of the arrival frames this must constant, meaning that frames that came to be able to not be too fast or too long. Therefore packet scheduling really was needed in the sending of the package of the video streaming to guarantee QoS the package of the data in the network.

This final project simulated the influence of the achievement of the scheduling algorithm in the HSDPA network for the video streaming application was based on the parameter throughput, delay, packetloss and jitter from three sorts of the scheduling technique, among them round Robin, Max-C / I, and fair channel dependent scheduling. The video streaming application modelled with generate a CBR (Constant Bit Rate) traffic with used software modelling tool ns-2 (ns-allinone-2.30) and added EURANE (Enhanced UMTS Radio Access Network Extension) module to ns2 as the configuration of HSDPA network.

From results of the simulation that was received, Scheduling round Robin had the value of the parameter QoS that was ugliest, with the value troughput that was smallest, and thought delay, paketloss and jitter that was biggest compared with Max's scheduling for C/I or fair channel dependent scheduling. Whereas the value of the parameter QoS Max's scheduling for C/I was between round Robin and fair channel dependent scheduling. And from the simulation that was carried out could be concluded that for the video streaming appilication, fair scheduling channel dependent scheduling was the scheduling technique that really was good for the High Speed Downlink Packet Access network (HSDPA) from the aspect of throughput maximum as well as delay, packetloss and jitter minimum.

Keyword : HSDPA, video streaming, scheduling algorithm