

ABSTRACT

The higher the human need for information technology, especially telecommunications led to the birth of new technology in the world of telecommunications. One of the technologies being developed today in cellular networks are W-CDMA. This technology is classified as broadband (Broadband) with speeds up to 3.5 Mbps. Today new technology is the result of the development of 3G is on HSPA (High Speed Packet Access) that can be classified into 2, namely: HSDPA (High Speed Downlink Packet Access) and HSUPA (High Speed Uplink Packet Access).

In HSUPA, this technology offers downlink speeds equal to the speed of HSDPA technology. What makes it different is that the total HSUPA uplink speeds reaching 5.76 Mbps. This is because HSUPA enhanced uplink uses a special channel (E-DCH) in which each UE already has a special uplink connection. So that the package would be sent scrambling to occupy the canal channel. Therefore necessary traffic scheduling (Scheduling Traffic) to arrange delivery of data packets for channel (E-DCH) can be used optimally by selecting the appropriate scheduler best performance.

In this final simulated the effect of the kinds of scheduling Technic (scheduling) traffic such as FIFO (First In First Out), Modified Deficit Round Robin (MDRR) and Weighted Fair Queuing (WFQ), using OPNET 14.5 based on the parameters of throughput, queuing delay, fairness and packet loss. From the simulation produced a conclusion, the WFQ algorithm has a very good performance when using a VoIP service and HTTP as values obtained throughput is 11.02 KBps, 8.71 KBps for both HTTP when 15 users and 20 users and 30.7 Kbps, 29.4 Kbps for video. For FTP and video services, MDRR algorithms have best performance with throughput of 14 KBps (15 users), 1.18 KBps (20 users) for FTP, while for the video obtained at 354 KBps (15 and 20 users).

Keywords: Uplink, HSUPA, scheduling Technic.