ABSTRACT

The third generation in wireless system (3G) expanded HSDPA (High Speed Downlink Packet Access) by adding phisycal layer, using Adaptive Modulation and Coding (AMC) and also fast scheduling. The expansion of it is wished it could enhance the user capacity in the network, which is can help the expansion of real time multimedia technology, such as VoIP (Voice over Internet Protocol). One of the characteristic that have to notice for performing VoIP over HSDPA is the using of its speech codec used to packetisize voice into HSDPA network. And to have the guarantee of transmitting packet which would receive by user still in good condition, used the best choosing of scheduling algorithm.

In this final project, would be done the comparison simulation of performance between AMR codec, G.711, G.726 and G.729. And also the comparison simulation of performance in scheduling algorithm between Round Robin, Maximum C/I and FCDS that will be added by some kinds of background traffic. The result that have to rich from the simulation was the analysis of QoS (such as Throughput, Packetloss, latency, jitter and MOS). And knowing an impact of using various codec and scheduling algorithm on the performance of VoIP over broadband wireless.

Keyword : Codec, Scheduling Algorithm, VoIp, HSDPA, EURANE