ABSTRACT

Long Term Evolution (LTE) is a wireless system to replace the previous wireless technology, UMTS/3G. The beginning of the LTE service was adopted by TeliaSoneria celullar operator in Stockholm and Olso on 14 December 2009. The aims of this technology are to decrease the cost used not only by users but also telecommunication operators, to extend the region, to increase system capasities and to reduce the delay probabilities. This technology is able to transfer downlink data up to 100 Mbp and uplink data up to 50 Mbps. High speed transfer which developed from this LTE technology is very useful due to the high demand of Voice Over IP, Streaming and Video Conference. Beside, those all need high performance and quality to support. The performance and quality from the LTE technology is highly depend on scheduling technique.

In this Final Project do the analyzes quality and performance by using Delay, Packet loss, Throughput and Fairness index parameters on downlink using Proportional Fairness scheduling alogarithm and Log Rule on LTE-Sim and using VoIP trafic, Video and Best Effort for the scenario.

The result of this experiment showed that Proportional Fairness algorithm scheduling is better in every VoIP service due to the increasing on user scenario and speed. It showe that both algorithms are compatible in LTE network on traffic real-time service condition, on the other hand they aren't compatible in non-real-time service like BE. both algorithms are adjustable in traffic condition needed

Keywords : LTE, Scheduling, PF, Log Rule