

ABSTRACT

LTE (Long Term Evolution) is a wireless network technology formulated by 3GPP as a replacement technology for previous wireless technology, UMTS / 3G. This technology was developed with the purpose of improving several aspects including improvement of spectral efficiency, increased capacity, and higher performance. LTE technology is capable of sending data up to 100 Mbps in the downlink scheme, and 50 Mbps in the uplink scheme. With the high speed of data transmission, LTE technology is very profitable because user requests for services such as Voice Over IP and Video Streaming are very high. So, to meet user demand, scheduling techniques are needed to affect the performance and quality of LTE (Long Term Evolution) technology.

In a previous study[1], did a performance analysis with a downlink scheme used Proportional Fairness and Modified Largest Weighted Delay First algorithm on LTE-Sim. The results obtained from the test that VoIP delay PF (0.003sec) is better than the MLWDF VoIP delay (0.054sec), and MLWDF Video delay (0.04sec) is better than the PF algorithm (0.37sec).

In this Final Project shows that the Frame Level Schedule scheduling algorithm is better for Video services, and Proportional Fairness scheduling algorithm is better for VoIP services. The results obtained from the test that the VoIP delay value generated by the PF algorithm (0.004sec) is better than FLS algorithm (0.007sec), and FLS video delay (0.05sec) is better than FLS algorithm (7.94sec).

Keywords : *LTE, Scheduling, Proportional Fairness, Frame Level Schedule*