ABSTRACT

Long Term Evolution (LTE) *network is a high speed wireless telecommunication network that uses radio waves as a medium-frequency data transmission to the user equipment. The radio waves that are available depend on the amount of available bandwidth. The limited amount of available bandwidth requires method which referred as scheduling. Scheduling function as delivery scheduling data using radio waves based on the decision values generated by the algorithm of each scheduling is referred to as a value metric. In this research using the test method is based on the parameters in which the distances of all users at the same distance and when devices are at different distances in each scheduling scenarios. This research aimed to test the performance of the scheduling Throughput to Average and Proportional Fair by using services based on TCP / IP with UDP packet. This research was limited to the number of eNodeB is 1, the number of users is 10 users with two types of scenarios of each user placements and types of data traffic that is used is 1500 bytes UDP packets at intervals of 20 milliseconds. The first scenario, UE is at the same position by the ENB at 500 meters and 1000 meters. In the second scenario, each UE is at different positions by the ENB at the distance of 0 meters to 500 meters and 0 meters up to 1000 meters. This research was conducted by simulating the performance of scheduling using NS3 software version 3.24.1 which is supported by the C++ programming language. The testing parameters of this research are comparison of the scheduling performance based several parameters, that is throughput, delay, jitter and packet loss ratio. The results of this research is the throughput of PF scheduling is better 7.99% than TTA scheduling. Delay of TTA scheduling is better 323.5 % than TTA scheduling. Jitter of TTA scheduling is better 752.2 % than TTA scheduling and the packet loss ratio of PF scheduling is better 20.84 % than TTA scheduling*

Keyword – *LTE Network, Scheduling, Throughput to Average, Proportional Fair*.