

ABSTRACT

Mobile telecommunications technology gradually evolved to support better services to users of telecommunications services. In the present era it is in accordance with the demands of customers who want a variety of types of services that can be accessed in one particular platform, like triple play services which is a voice, data, and video. However, customers also demand good service quality. From the development of the customer demands require a technology standard that can support it, namely LTE (Long Term Evolution). LTE is a network based on Internet Protocol (IP) standardized by 3rd Generation Partnership Project (3GPP). To support it, LTE requires a mechanism that can support. One of them by applying methods of scheduling packets in each service. Scheduling is a different treatment to packets that come in accordance with the priorities of the scheduling algorithm.

In this final assignment is studied LTE network performance by analyzing the value of QoS parameters like delay, packet loss ratio, throughput, and fairness index. To know the performance it is simulated scheduling Log Rule and Frame Level Schedule (FLS) in multicell scenario using Voip traffic, Video, and Best Effort in the downlink direction based on the number and speed of the user.

The results of this final research showed that scheduling algorithms FLS is very well better than log rule in term of throughput values, while of scheduling algorithms log rule is very well better than FLS in terms of delay based on the number and speed of the users. This indicates that both scheduling algorithms suitable for use in LTE networks within conditions of traffic real time services, but not for non real time services such as BE. The usage of both scheduling algorithm can be adapted to the needs of traffic condition that needed.

Keywords: LTE, Scheduling, QoS, triple play services, Log Rule and FLS.