

ABSTRACT

Long Term Evolution (LTE) is the fourth generation of mobile technology. Implementation of LTE aims for users to communicate quickly and briefly, be it video, voice and data communications. But this time has entered the era of big data where each user requested data services large enough. So often the problem of overload traffic due to too many EU requests service on eNodeB that includes a region, consequently eNodeB is congested. The indication of a congested eNodeB is the small throughput obtained by the user. The purpose of this research is to reduce traffic overload on eNodeB congested by applying mobility load balancing (MLB) using pareto efficiency scenario by changing handover parameter value. The indication of successful MLB implementation is pareto improvement on the throughput of user serving in eNodeB congested and in user handover to eNodeB neighbors. However, as the effect of MLB is applied, the throughput of eNB neighbor becomes worse off so that pareto efficiency condition is obtained through the resulting throughput on each eNB becomes more balanced. The results obtained from this study is obtained a total increase in the user in the handover of eNB congested to eNB neighbors for downlink throughput of 1189.8 Kbps. In the EU serving in eNB congested obtained a total increase in downlink throughput of 5057.6 Kbps.

Key Word: : *LTE network, Load Balancing, Pareto efficiency, traffic distribution*

