

## ***ABSTRACT***

LTE have X2 and S1 mechanism for handover. In general the performance of handover, which is belongs to the handover, affected from several reason, there are the amount of the user, acceleration speed, and time to trigger. For the research regarding enchantment performance of handover that required the characteristics change factors beyond the handover latency, as well as the boundaries of the maximum number of enodeb user's, which it did not fielded the performance of LTE. The purpose of this project is to determine the effect of changes in the number of users, speeds and time to trigger against the handover latency. As well as obtaining the function changes in the number of users of the handover latency. So that the maximum amount of users that did not bring down the performance of LTE can be determined. These may be obtained by simulating LTE handover on NS 3 by changing the amount of users, speeds and time to trigger, as well as record the latency handover. The changing of functions in amount of users of the handover latency is obtained by the method of regression and Pearson correlation coefficient. The result is the function of enhancement handover latency towards the amount of user is a linier, while the changing of handover latency towards the speeds and time to trigger up and down. The changing function of the amount user towards handover latency is  $y = 0,86 x + 18,4$ . In this way the maximum amount of users at one enodeb that did not reduced the performance of LTE is in good condition 143 users and 443 users in a bad condition.

***Keywords:*** LTE, NS 3, Handover