

ABSTRACT

Data communication using networked control system (NCS) has evolved over time. Delay and dropout are the main parameters to be considered in NCS. 4G LTE is a new technology which has high speed and easy to reach to access internet. The purpose of this research is to know the performance of 4G LTE network for the implementation of NCS for mobile system in simple plant. Parameters measured in this research is the effect of moving speed on the value of delay and dropout and the effect of time interval of delivery and packet data size sent against the value of delay and dropout.

This test is done by connecting two devices that are connected to the 4G LTE network. This test is done when moving on the highway. Both devices are connected using Hamachi's LogMeIn app using virtual network, then both devices create data packets with Packet Builder and Packet Sender for channeling between devices and analyzed using Wireshark application.

From this study the author is able to determine a small delay and dropout value on each packet data transmission in order to implement the 4G LTE network for NCS on a moving system.

Keywords : *delay, packet dropout, 4G LTE, networked control system, mobile.*