

ABSTRACT

TCP congestion control is an algorithm used in reliable and connection oriented. TCP congestion controls to regulate the sender speed sends data to recipients by looking at the condition of the link. TCP ensures 100% data received by the receiver can be a new reference on the development of transport layer for future communication technologies due to the need for applications increased and also based on behavior on the new technology.

In this final project, performance comparison analysis between CUBIC and TCP YeAH algorithm to knowing the better TCP congestion control protocol. This simulation is performed in the 5G network mmWave because mmWave frequency has the characteristics to vulnerable to the obstacles. This vulnerability make the links between eNodeB and the user becomes unstable. The application that need a reliable connection, transport layer will be necessary in this case. The unstable link will occur congestion on the network.

Performance parameters measured on the system side are the throughput, droprate and latency on the scenarios one user without obstacle, one user with obstacle, two users without obstacle, and two users with obstacle. In the overall scenario, the result of latency on TCP YeAH is better than CUBIC with an average decrease is 0.186%. In without obstacle scenario, CUBIC throughput and droprate is better than TCP YeAH with an average throughput increase is 0.0037% and an average droprate is 0.765%. In obstacle scenario, droprate and throughput CUBIC is worse than YeAH with average droprate increase is 12.63% and average throughput increase is 0.0237%.

Keywords : mmWave, CUBIC, TCP YeAH, Network Simulator 3