

## ABSTRACT

Delay is the time needed to send a data that is affected by distance and physical media. Referring to the implementation of RFID Over Fiber service in Telkom University that is used as a media to detect attendance of students, lecturers and other staff especially in Tokong Nanas building. Tokong Nanas have denser traffic density compared to other buildings with a total 10 floors and the number of students who take the presence as much as  $\pm 7,000$  students each day.

Problems often occur when tapping the presence is when multiple tags simultaneously in the field produced by the reader and transmit data at the same time, so this is what caused the collision. In case to reduce the possibility of collisions and improve working performance of RFID, it is necessary to analyze RFID delay parameter on the network using the anticollision Slotted Aloha protocol.

Based on the conclusion before their engineering network topology between the measurement and the calculation, the overall average delay difference in the amount of 11.7%. After engineering server topology with the addition of a buffer, the obtained decrease data transfer time by an average of 35%. This mean the deacresing delay occurs which are characterized by the difference in the data is much larger than before their engineering network topology, so it can improve QoS, especially delay in the RFID network Over in the Tokong Nanas Fiber building.

Kata kunci : *AntiCollision, RFID Over Fiber, Delay, Slotted Aloha.*