ABSTRACT

Nowadays, the wireless network is a mandatory requirement of every person in the world. Wireless networks make everyone can access the information quickly and easily. IEEE 802.11ah is the latest wireless network protocol standard that is part of the development of the IEE 802.11 standard. IEEE 802.11ah has a frequency of 1 GHZ so that WIFI area coverage can be more extensive than a previous conventional network, that is 2.4 GHZ.

The decrease in QoS information on due to collision when accessing Access Point. One that causes a collision between nodes because not only the density of nodes that access to the Access Point simultaneously but can be due to the Hidden Node on a Network. This Hidden Node issue is not spared on the latest standard network, IEEE 802.11ah.

This research conduct with Hidden Node on IEEE 802.11ah, using NS-3 (Network Simulator - 3). With parameters of measurement are the delay, PDR, energy consumption and throughput on AP side. This simulation is done with network scenarios where network condition without hidden nodes, the number of nodes and hidden nodes increases and set with the RAW features

We can conclude that performance of the network due to hidden node can make peformance being worst and can be depressed impact of hidden node with RAW feature on IEEE 802.11ah network standard. RAW feature changes with station amounting to 100 to suppress the impact of hidden node on network performance, obtained average throughput 2,2615275 Mbit / s, average delay 0,143143063 second, average packet delivery ratio 41,875% and average energy consumption 2, 676018363 joule. 802.11ah energy consumption is more efective than 802.11n. 3,8389321 joule is for 802.11ah dan 8,99700294 joule is for 802.11n.

Keywords: *IEEE 802.11ah,Hidden Node,NS-3,RAW*