

ABSTRACT

The rapid developments of telecommunication technology force user to get along with it. One of the developments is the growth of WPAN (Wireless Personal Area Network). This network uses Bluetooth as its transmission media. The Bluetooth with standard 802.15.1 is given by IEEE (Institute of Electronic and Electrical Engineering) in 1999.

This non cable network aimed to directly do several applications, such: data synchronization, data transfer, facsimile, computation, internet connection, and so on. The specifications of Bluetooth are; operates at 2.4 GHz ISM band, uses small power, has 1 Mbps maximum data rate, and has small coverage area which is 0 – 100 m.

This research is intended to simulate the Scatternet network topology as one of the Bluetooth topology and to analyze the QoS (Throughput, Delay, and Packet Loss) as the function of time. Scatternet is the multiple Piconet topologies, a network that has master which can connect maximum seven slave Bluetooth devices. Here, master determines the hopping path through by the slave with 1 Mbps maximum data rate transfer owned by each Piconet.

The result from this research showed that the more slaves maintained by the Scatternet's master influences the QoS and the more of client mobilities cause the decrease of network performance.