ABSTRACT

In the current technological developments computer networks are often used, because they provide convenience in communicating through internet media. Wifi technology with a 5 GHz frequency offers higher speeds than the 2.4 GHz frequency. The problem in this study is that there are several unstable wifi network positions at a distance of 20-30 meters where the 2.4 GHz router is housed. The research was carried out by implementing a 5 GHz router and analyzing the two routers, namely the 2.4 GHz router and the 5 GHz router. The purpose of this research was to determine the QoS performance of the quality of the wifi signal at 2.4 GHz and 5 GHz frequencies with a distance of 5 – 30 meters, this research using wireshark tools and parameters taken throughput, packet loss, delay, and jitter and using the Point to Point Protocol Over Ethernet (PPPoE) protocol connection which will be set up manually by IP on the proxy. Results of QoS Throughput on a 5 GHz router at a distance of 5 meters 2904 kbps at a distance of 2.4 GHz router at a distance of 30 meters at 125 kbps, on the packet loss parameter of a 5 GHz router at a distance of 5 meters 0% on a 2.4 GHz router at a distance of 30 meters by 1.6%, for parameters delay for 5 GHz routers at a distance of 5 meters is 2.3 ms and for 2.4 GHz routers at a distance of 30 meters is 37 ms and for Jitter routers 5 GHz at a distance of 5 meters is 2.3 ms, and for a 2.4 GHz router at a distance of 30 meters 37 ms. Questionnaire ratings were obtained from wifi users at boarding houses in the good category, after being implemented on a 5 GHz router. The results of the study are that 5 GHz routers have better and more stable performance at a distance of 5 – 30 meters

Keywords : QoS, PPPoE, Mikrotik, 2.4 Ghz, 5 Ghz