ABSTRACT

This study aims to apply point to point wireless network technology using Mimosa C5x antennas for the process of exchanging data between buildings with TCP protocol via FTP Server application by varying the frequency and antenna Tx Power. The Quality of Service testing process uses Wireshark software with parameters to be measured, namely Throughput, Packet Loss, Delay, and Jitter with results that will be compared with the TIPHON standard. The test is carried out on the receiving side at the time of data transfer with 5 PDF files measuring 100-500 MB in each scenario with 6 scenarios. Scenario 1-3 uses a frequency of 5750 MHz with variations in Tx Power -6 dBm, 8 dBm, and 17 dBm. Scenario 4-6 uses a frequency of 5800 MHz with variations in Tx Power -6 dBm, 8 dBm, and 17 dBm Based on the measurement results, the best throughput average value is obtained in the 5th scenario (5.79 MBps) and the lowest throughput is 4.18 MBps in scenario 3. The Packet Loss value obtained has a very good category, namely 0% for all scenarios. The best average delay value is obtained in scenario 2 (0.23 ms) and the worst delay is 0.30 ms in scenario 3 with a very good category. The average value of the best Jitter for scenario 2 (0.44 ms) and the worst Jitter of 0.55 ms in scenario 3 with a very good category. Results Based on the QoS obtained, the results of implementing a point-to-point wireless network using the Mimosa C5x antenna are very good.

Keywords: Wireless, Point to Point, Mimosa C5x, QoS, TCP