ABSTRACT

The development of technology and communication has produced several communication media that can be used to share information. One of them is through internet media. Utilizing a point-to-point wireless network is an effective approach to overcome the problem of internet access that is difficult to reach with network cables, namely by connecting two networks located in different locations using radio signals. This research is intended to apply wireless network technology which aims to expand the internet network using the Mimosa C5x antenna device with the point to point method. The parameters used refer to quality of service (QoS), which includes throughput, packet loss, delay and jitter. Testing was carried out using the Wireshark application. The test results will be compared to see whether they meet TIPHON's QoS standards. QoS testing was carried out 10 times divided into 2 stages. The first stage is to stream the video on youtube.com for 30 seconds with video quality 240p, 360p, 480p, 720p, up to 1080p. The second stage is the same as the first stage, only the video streaming duration is longer, namely 60 seconds. Based on the results of the measurements carried out, in the first and second stages, the average throughput value was 736,043 bps & 805,377 bps, so it was included in the poor - very good category, in accordance with TIPHON standardization. For the packet loss measurement results, both the first and second stages have a very good category, namely 0%. The delay measurement results obtained an average of 10.96 ms & 14.65 so it was in the very good category, namely less than 150 ms with an index of 4. The jitter measurement results obtained had an average of 10.96 ms & 14.65 so it was in the category which is good, namely less than 75 ms with an index of 3. Based on the QoS results obtained, the results of implementing a point to point wireless network using the Mimosa C5x antenna are very good and meet TIPHON standards.

Keywords: *Wireless network, Point to Point, Mimosa C5x, Quality of Service, Wireshark*