

ABSTRACT

Pemda Jabar has develop Wide Area Network (WAN) infrastructure that the purpose is to increase public services. To make it work success, it must be supported by a high quality network that guaranty all data in sending process flows fast and valid. Therefore, this final project paper the writer interest to examine the quality and performance of the network which Pemda Jabar has been developed. This paper examine the link that connect between BAPESITELDA and SETDA which apart about 1 km. Parameter that used to examine the performance of Wide Area Network (WAN) are includes; throughput, delay, and bit error rate (BER).

This examination begin with collecting the data, then processing, and finally analyzing. The data collected by measure the link that already exist and follow the procedures. First, the writer has to make a preface measure with choose and determine amount of sample that used in real number of measure, and we find 5 samples in this examination. The measure process of samples is using a software IP Traffic 2.3 which can record the throughput and delay, but the measure of Bit Error Rate (BER) is using manual's way. In process sending data, 3 big file used, there are; 5.08 MB, 14.3 MB and 26.8 MB.

Data from the result of measure are describe the link performance, but that result is not directly used in analyze. Because data from the result of measure is in log file format (IP Traffic), so it can not used in analyze. And then this data must be process for more so we make into a format that appropriate to analyze.

Analyze process is doing by compare the result of measure with the calculation according standard IEEE 802.11a. From result of the measure found; throughput about 0.5 Mbps and Interpacket delay 19.5 ms, but the result of calculation found that; throughput 1.646 Mbps and Interpacket delay 6.919 ms. The difference between the result of the measure process and the calculation process is about 3x. After we trough analyze process, we can found the reason from the difference come, mostly because using of protocol TCP which has overhead and error correction system.

Key Words : WAN, Performance, Throughput, Interpacket Delay, Bit Error Rate