

ABSTRACT

In the digital era, network performance in a university environment is crucial to support academic and administrative activities. Telkom University, as a leading technology-based institution in Indonesia, faces challenges in the form of slow and uneven internet connection speeds. This study aims to evaluate network quality using Quality of Service (QoS) parameters, namely throughput, packet loss, delay, and jitter. Measurements were conducted at three strategic locations on campus, namely Building A, GKU, and TULT, using observation methods and data analysis using Wireshark. The evaluation was carried out based on two standards: TIPHON and ITU-T Y.1541. The results showed that according to the TIPHON standard, Building A obtained excellent scores in throughput and packet loss, but only good in delay and jitter. GKU experienced problems with throughput (poor), although other parameters were classified as good to very good. Meanwhile, TULT showed superior performance in almost all parameters, except jitter which was classified as poor. Based on the ITU-T Y.1541 standard, GKU performed the most stable because all parameters were in Class 0, except for throughput. Building A has a delay in Class 1, while TULT has extreme jitter in Class 5. Overall, the TIPHON standard is more comprehensive because it covers all four QoS parameters with quantitative classification, making it more effective for comprehensive campus network evaluation.

Keywords— *Telkom University, TIPHON, ITU-T Y.1541, Quality of Service, performansi jaringan, throughput, delay, jitter, packet loss.*