

ABSTRAK

Perkembangan teknologi telekomunikasi di dunia terjadi sangat pesat karena adanya kebutuhan untuk berkomunikasi dan bertukar atau mengakses data dengan cepat dan mudah dengan teknologi canggih yaitu HP (*Hand Phone*). Perkembangan komunikasi ditandai dengan pengembangan teknologi sistem komunikasi bergerak yang dimulai dari generasi pertama ke generasi berikutnya, yaitu teknologi terbaru jaringan 4G atau LTE. Kegiatan di Gedung Institut Teknologi Telkom Jakarta menggunakan jaringan internet diberbagai kebutuhan seperti untuk kegiatan tertentu mahasiswa dan mengakses online learning. Pengukuran jaringan diperlukan pada gedung Institut Teknologi Telkom Jakarta di kawasan Daan Mogot KM 11. Tujuan penelitian ini adalah untuk mengetahui informasi pengukuran Jaringan Data (Jaringan 4G LTE Telkomsel) di gedung Institut Teknologi Telkom Jakarta dengan menggunakan aplikasi Speedtest by Ookla dan Open Signal di Smartphone. Dari hasil penelitian dapat disimpulkan bahwa perbandingan performansi jaringan Telkomsel dengan angka throughput bagus 50% dan jitter (75 ms) hasil yang cukup bagus, packet loss (0-10%). Hasil penelitian dapat disimpulkan bahwa perbandingan Pengukuran jaringan Telkomsel dengan angka download 20 Mbps dan upload 10 Mbps hasil yang cukup bagus, ping atau latency 25 ms.

Kata Kunci : *Jaringan 4G, Aplikasi Speedtest, Aplikasi Open Signal, Download, Upload, Latency, Jitter, Packet Loss, Throughput*

ABSTRACT

The development of telecommunication technology in the world occur rapidly due to the need communicating, exchanging, and accessing data quickly and easily with smartphone, name is smartphone. The development of communication is characterized by the development of mobile communication system technology starting from the first generation to the next generation. The latest technology of 4G or LTE networks. The activity at the Telkom Institute of Technology Jakarta building use internet access points in various need such as for certain student activity and access online learning. Network performance analysis is required at the Telkom Institute of Technology Jakarta building in the Daan Mogot KM 11. The purpose of this study was to find out information on measuring data networks (Telkomsel's 4G LTE network) in the Institute Technology Telkom Jakarta building using the Speedtest by Ookla application and Open Signal on Smartphones. From the result of the study, it can be concluded that the comparison of data network performance with a good throughput figure of (50%) and jitter (75 ms) results are quite good, packet loss (0-10%). Results of the study, it can be concluded that the comparison of Telkomsel network measurement with a download rate of 20 Mbps and uploading 10 Mbps results are quite good, ping or latency of 25 ms.

Keyword : 4G Network, Speedtest Apps, Open Signal Apps, Download, Upload, Latency, Jitter, Packet Loss, Throughput