

INTISARI

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Jaringan komputer dan internet serta jaringan penghubung antar gedung dibutuhkan untuk mendukung aktivitas operasional dan akademik di lingkungan kerja Universitas Musamus. Untuk mengakomodir kebutuhan tersebut diperlukan jaringan penghubung yang dapat menghubungkan seluruh gedung dengan menggunakan jaringan Wireless (WiFi), beberapa gedung yang telah terhubung yaitu gedung Dekanat, gedung Lab. Informatika, gedung PKM dan gedung Lab. Multimedia dengan topologi *Point-to-Multipoint*. *Jaringan penghubung antar gedung dengan menggunakan WiFi* perlu dianalisis untuk mengetahui kinerjanya. Parameter QoS *throughput*, Packet Loss dan *Delay* digunakan sebagai parameter pengujian.

Pengukuran dilakukan dengan mengirimkan PING dengan protokol ICMP dengan ukuran data 1000 Bytes-10.000 Bytes, pengukuran dilakukan selama 7 hari pada pukul 12.00 WIT. Pengukuran dilakukan pada empat gedung, yaitu Dekanat, Lab. Informatika, PKM dan Lab. Multimedia.

Nilai total rata-rata parameter *throughput* adalah 3579,8 Bps. Nilai total *packet loss* yang didapatkan adalah 15,5 % dengan kategori sedang menurut standar TIPHON. Total nilai parameter *delay* bernilai 398,5 ms, termasuk kategori sedang menurut standar TIPHON.

Kata Kunci: *Quality of Service, WiFi, Jaringan Antar Gedung.*

ABSTRACT

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Computer, internet and interconnection networks between buildings is needed to support operational and academic activities in Musamus University work environment. Interconnection between building that connects entire building in Musamus University is needed to accommodate these. Interconnection between building can be established using Wireless network (WiFi), several buildings which have been connected is Dekanat, Informatics Lab., PKM and Multimedia Lab. with Point-to-Multipoint topology. Interconnection network between building using WiFi needs to analyzed to determine its quality. QoS parameters of throughput, Packet Loss and Delay used as parameter testing.

Test conducted by sending ICMP PING protocol with 1000 Bytes-10.000 Bytes of data size, measurements were performed for 7 days at 12:00 WIT. Measurements were performed on four buildings, Dekanat, Informatics Lab., PKM and Multimedia Lab.

Total average value of throughput is 3579,8 bps, whereas when sorted by the measurement is 439.99 Bps. Total average value of packet loss is 15.5%, with medium category by TIPHON standards. Total average value of delay parameter is 398.5 m, classified as medium category by TIPHON standards.

Keywords: Quality of Service, WiFi, Interconnections Network Between Buildings.