ABSTRAKSI

Dengan semakin berkembangnya teknologi informasi dan komunikasi. Pemanfaatan jaringan komunikasi data terus mengalami perkembangan yang pesat. Saat ini komunikasi dapat dilakukan secara elektronik misalnya melalui e-mail, instant messaging, sambungan telepon melalui internet, dan juga Video Conference. Kelebihan dari Video Conference adalah pengguna selain dapat berkomunikasi juga dapat secara langsung melihat lawan bicaranya sehingga seakan – akan bertatap muka secara langsung.

Salah satu bentuk realisasi dari program tersebut adalah dibangunnya LAN (Local Area Network) dan WLAN (Wireless Local Area Network). Tidak hanya itu, bandwidth yang disediakan juga sudah termasuk dalam kategori broadband. Tetapi pada kenyataannya, jaringan tersebut belum dimanfaatkan secara optimal. Untuk itu, dalam Penelitian ini akan dicoba dalam Penerapan Aplikasi Video Conference dengan ISDN standarisasi protokol H.323 PT. TELKOM. Sebelum aplikasi ini diterapkan, perlu dilakukan pengkajian terhadap performansi jaringan (Delay, Jitter, Throughput, dan Packet Loss) sebagai bahan pertimbangan kelayakan implementasi.

Setelah dilakukan sejumlah percobaan dengan beberapa skenario didapatkan hasil bahwa delay arah downlink lebih baik dan teratur daripada uplink dengan delay rata – rata <250ms, Jitter uplink rata – rata <30 ms sedangkan downlink rata – rata >30 ms, packet loss arah uplink rata – rata 0% dan arah downlink bervariasi dengan rata – rata <10%, throughput cukup baik, kualitas video cukup baik

Kata kunci : Video Conference, LAN, WLAN, Protokol H.323, Delay, Jitter, Packet loss, Throughput

ABSTRACT

With the growing information and communications technology. Utilization of data communication networks continue to experience rapid growth. Currently the communication can be done electronically for example by e-mail, instant messaging, telephone connection via the internet, and video conferencing. The advantages of video conferencing users are able to communicate in addition can also directly see that as if his interlocutor – will come face to face directly. One form of realization of the program is to build a LAN (Local Area Network) and WLAN (Wireless Local Area Network). Not only that, the bandwidth provided is already contained in the broadband category. But in reality, the network has not been used optimally. Therefore, in this study will be tested on the Implementation of Video Application Conference with H.323 ISDN protocol standardization of PT.TELKOM. Before this application is applied, need to do the assessment and analysis of network performance (Delay, Jitter, Throughput, and Packet loss) as a material consideration of feasibility of implementation.

After doing some experimenting with several scenarios derived that downlink delay and better organized than the uplink with Delay – average <250ms, Jitter uplink – average <30 ms while the downlink – average > 30 ms, Packet Loss rate uplink - 0% and the average downlink varies with – average <10%, Throughput is quite good, quite good video quality.

Keywords : Video Conference, LAN, WLAN, H.323 Protocol, Delay, Jitter, Packet loss,

Throughput