ABSTRACT

IMPLEMENTING LIVE STREAMING USING MULTICAST LISTENER DISCOVERY PROTOCOL IN ITTELKOM LAN

After information exchange done by sending and receiving electronic mail nowadays the development is moving towards computer network application with multimedia research as the main services, which is multimedia-based communication service application that combines video and voice. Conventional applications on TCP/IP network mainly engage communication between two hosts. In its growth, computer network users sense the necessity to communicate with more than two sides at once. VideoLAN Streaming is one of the applications in computer network that is multimedia, real time, interactive and the solution to multipoint communication needs.

VideoLAN Streaming is one method for transmitting many kinds of multimedia with streaming. Hoped this system could be implemented in ITTELKOM LAN for study and entertainment purpose in favor of the ITTELKOM lectures and students, particularly in video, music and data services (triple play). Before implemented in ITTELKOM, VideoLAN Streaming has been tested at Computer and Communication Laboratory. This final task will be designing streaming server operating video, music, and streaming from webcam in IPv6 ITTELKOM LAN using Multicast Listener Discovery (MLD). The simulation uses different transmission for each system with using IPv6 unicast and IPv6 multicast.

The simulation result indicates that bandwidth used by multicast network better than unicast network. Delay in IPv6 unicast almost increase 50% better than delay in IPv6 multicast. IPv6 Multicast network is nicely used for video and audio streaming application compared to IPv6 unicast network.

Keyword: VideoLAN Streaming, Multicast Listener Discovery (MLD), multicast, unicast, IPv6.