

## ABSTRACT

Triple Play is technology that can combine voice services, video and data in one channel. One of the implementation of triple play service is IPTV (Internet Protocol Television). IPTV is a digital television service delivery system using an IP network via a broadband connection. IPTV serving both the live broadcast (live) or the program or video files stored on the server with a VoD (Video on Demand). Delivery in IPTV processes using IP multicast (broadcast) or IP Unicast (VoD). Recently PT. Telekomunikasi Indonesia has launched a network-based IPTV service speedy. Speedy is a high-speed Internet service based on ADSL technology that enables communication of voice, data and video simultaneously on copper cable access network media.

In this thesis the design and analysis on the QoS (Quality of Service) IPTV service using a speedy network that includes parameters of delay, throughput, jitter and packet loss. This analysis will be conducted based on the results of the pilot IPTV service in a multicast and unicast with some variation of bandwidth of 512 Kbps, 1 Mbps, 3 Mbps, 6 Mbps and 8 Mbps.

From the test results and analysis obtained the minimum bandwidth for IPTV services amounted to 3 Mbps. This is based on the parameters of delay of 5.51 ms, 1.47 Mbps throughput, jitter and packet loss of 12.27 ms for 0% is still below standard. At the bandwidth of 6 Mbps and 8 Mbps range that can be served to a maximum of 2 km IPTV service.

**Keywords:** Triple Play, IPTV, ADSL, QoS