

## Abstract

Television (TV) as a medium for information and entertainment are popular for the most people. Along with the development of the network TV can be transmitted using portocol, so the term IPTV.IMS acts as a network *control* in NGN technology capable of providing support in the converged network. IPTV has the distinction based on IMS IPTV architecture with a growing current or just peer to peer video streaming. SIP is a protocol that is used to divide each service session in the IMS architecture and the communication from *client* to *server* or between *clients*. Implementation of IMS-based IPTV must specify the *bitrate* and codec that is suitable for use on *client* types and the available *bandwidth*.

IPTV is television video services as usual, except that the medium used for transmission of IP *packets* is the media. IP Multimedia Subsystem (IMS) is a key element of architecture who want to combine two 3G mobile network services with internet service. *Client* and *bandwidth* management to give consideration to provide appropriate services for *clients*. Standard architecture used is a standard issued by 3GPP.

In this thesis the implementation of IPTV in the network scenarios that use IMS *server* as *client* communications controllers use variations of video for VoD service. In the test used include DivX5 codec, Matroska (H.264), XVID with different *bitrates*. Judging from the performance of IPTV networks are built on a scenario, where the parameters measured include: *interarrival delay*, *jitter*, *throughput*, and packet loss ratio, then the *bitrate* of the video requires a great resource. the highest *packet loss* in the testing is 80.67%, *bandwidth* management is needed for every *client* who is listed along with the desired specification services.

Keywords: IPTV, IMS, performance, 3GPP, the codec.