

ABSTRACT

IPTV (Internet Protocol Television) is a system that used to send digital television services to clients that have been registered (as a subscribers) in that system by multicast method using IP network infrastructure. The sending of digital television broadcasting usually used in controlled management that is better than public internet for guaranted quality of services (QoS). Another problem that will be face in this technology is the limitation of bandwidth. Computer network that used to flow any application, is also used as streaming media that need high bitrate. This process can make the network load increase so the services will not going better.

In this research that analyzed the performance comparison of IPTV network using MPEG-4 and H.264 video codec with multicast method and also implemented in a local network. Quality analysis in network could be known with adding amount of bitrate, adding background traffic, and adding some active clients for each codec. Quality analysis in picture performance known from measuring MOS (Mean Opinion Score).

From the result of measurement concluded by using the comparison of QoS parameter in network performance such as inter-arrival-packet delay (δ), delay jitter, packet loss, and throughput that actually both codec have the same performance relatively, but in picture quality performance analysis H.264 video codec have better quality from measuring MOS (Mean Opinion Score). For implementing in IPTV network with low bitrate because of bandwidth limitation, H.264 video codec is better to be used to make a good picture quality.

Keywords : IPTV, MPEG-4, H.264