ABSTRACT

ANALYSIS COMPARISON OF NETWORK QUALITY VOIP ON H.323 AND SIP PROTOCOLS

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The use of VoIP technology is certainly very beneficial for society at large because of the presence of VoIP communications services to be cheap or it can be said to be efficient when compared to regular telephone media. The protocol can be used to build the VoIP protocols include H.323 and Session Intitiation Protocol (SIP). Selection of the protocol to be used would need to be analyzed in order to know the quality of the output of the VoIP network. Therefore it is necessary to do a study about the difference between H.323 and SIP protocols.

Research conducted using the GNU Gatekeeper as the IPPBX server for H.323 and Asterisk for SIP. Softphone used is Yate who has had a multi-protocol support. Parameters observed include delay, jitter, packet loss, and Mean Opinion Score (MOS). Measurement of these parameters is done using specialized software tools to analyze VoIP is VQManager. Type of codec used is G.711 Codec, and type of IP using IP version 4. Testing is done by limiting the bandwidth on the network is 512 Kbps, 256 Kbps and 64 Kbps.

Based on the results of tests performed on bandwidth connections over 64 Kbps generated voice sounds very clear, in both H.323 and SIP protocols. However, in tests with lower bandwidth connections at 64 Kbps voice generated between H.323 and SIP protocols differ very much. The voice on the H.323 protocol more clearly than the voice on the SIP protocol.

Keywords : VoIP, H.323, SIP, Protocol, QOS.