# Abstract

*Communication is the need of every human being. Preceded by a telephone, current communications lead to technology that supports the visualization of the user. One such technology services is a video call. Along with the development of technology and audio visual data can be passed through the Internet using IP addressing method. IMS emerged as a platform that enables multimedia services can be passed through an IP-based networks. In this final assignment IPv6 addressing method is used.*

*The use of IMS architecture to provide video service call leaves the question of whether the performance of services is eligible to use for the video call? So is the use of IPv6 in addressing, whether it is better in terms of addressing the performance of the method of the previous version? To answer these problems, the authors tested the performance of services on the video call using IPv6 IMS architecture. To test the performance of services parameters: dellay, jitter, packet loss, and throughput are used. The author also examines the performance of video call services using IPv4 for IMS architecture compared with the results when using IPv6 addressing.*

*Test results indicate IMS-based video call service on IPv6 network is better in performance than when using IPv4. The architecture of IMS topology on final assignment also ensures the feasibility of using up to 500 users simultaneously.*

**Keywords** : video call, IMS, IPv6, delay, jitter, packet loss, throughput, SIP