

Abstract

Technological developments in the field of Telecommunications today is progressing rapidly. This gives a good impact to the development of Next Generation Network which includes the IP Multimedia Subsystem. IMS ,an IP-based technologies, has the capability of deliver information to customers, especially in messaging, voice and multimedia services. Mobile Virtual Network Operator allows businessman to create a new operator by renting network owned by Mobile Network Operators

With implementation of IMS in the MVNO, the new operators can leverage the capabilities of the IMS without having its own network. So, research is needed on the implementation of IMS core network outside the MNO, which is a network that will be used by the MVNO. SIP session setup delay and retransmission will be the main parameter to be tested in this final assignment. Scenerio used is the application of IMS when the *client* uses the same MNO networks, both 3G and 2G. Additionally, it will be tested among operators by utilizing VPN Tunneling to overcome sound problems when both IMS *client* uses a different MNO.

Tools used as IMS server is UCT Open IMS Core , Boghe IMS *Client* as a *client*, CDMA modem and GSM modem.

The results showed, when IMS implemented on a public network, the value of the session setup *delay* and SIP retransmission are unpredictable. This is happened because there is no control over public network. However, in general, the 3G network for each operator has a pretty good performance with the indicated value of session setup *delay* around 0,3s to 1s , that is under a standard, and also retransmisi around 15% to 30%.

Keyword : IMS, Public Network, CDMA, GSM, EVDO , HSDPA,EDGE, CDMA 1x