THESIS ABSTRACT

The IP Multi-Media Subsystem (IMS) is an IP multimedia and telephony core network. It is defined by 3GPP and 3GPP2 standards and organizations based on IETF Internet protocols. IMS is access independent. IMS permits and enhances real time, multimedia mobile services such as rich voice, video telephony, messaging, conferencing and push services by responding to the emerging trend to move toward a common, standardized subsystem. IMS represents a standardized, reusable platform providing a better way to experiment with, deploy, integrate, and expand consumer and enterprise voice and data services.

The next generation networks provided a new face to the telecommunication world. Earlier the main emphasis was on speech and speech related services, but nowadays the main aim is to enable faster data rates and various multimedia services. IP Multimedia Subsystems (IMS) provide a single platform for all the present as well as future technologies.

This thesis, succeed to Service design, deployment and modeling over IMS enable NGN platform. Present research work based on Own IMS Test Bed Setup using Open IMS Core network, adapting SIP as session protocol this test bed deployed low sized IMS Client for rendering service. IMS client performs with IMPS (Instant Messaging and Presence Service) over Testbed. Using IMPS service integration concept evaluated and the IMS Network capacity to Traffic management and Load Balancing also observed, own technique for each work demonstrated.

For future mobile application, IMS adaptability demonstrated with Interactive Application deployed, the IMS enable MoBlog application deployed over IMS Low Sized Client over Open IMS Core Test bed. All of these analyses have resulted in recommendations for the performance enhancements with optimal resource utilization in IMS framework.