

## ABSTRACT

IMS (*IP Multimedia Subsystem*) is a telecommunications network architecture currently developed in the framework of the technology to the NGN (*Next Generation Network*) based *Softswitch*. Integration with IMS-based internet service, QoS can be built much better than previous technologies.

*OpenIMSCore* (IMS Open Source) is one of the open source software developed by one institution in Germany that called *FOCUS* in 2006, as one of the solutions converged *fixed* and *mobile* networks. *OpenIMS* Software is a server-based VoIP service allowing *SIP* signaling protocol to communicate with other servers in this case is an *IP PBX Panasonic KXTDE 100/200*.

*IP PBX* is a digital telephone exchange pure IP-based and can communicate with the central telephone exchange Analog and IP. At this final project titled "*Analysis Implementation of Interconnection Open IMS Core server and Pure IP PBX for VoIP service*" provided one way to interconnect *IP PBX* and *OpenIMS* using management of a number called *ENUM*. *OpenIMS* server and *ENUM* server run on the Ubuntu Linux operating system, and *IP PBX* used *Panasonic KX-TDE 200* version.

In this test it was found that the highest *PDD* value of the system is 7,2857 second on interconnect *OpenIMS* and *IP PBX* using *ENUM* with call rate 250 call / sec. As for the smallest *PDD* value of the system is 0,00385 second on Asterisk communication without *ENUM* server and without the nuisance calls. In addition, an analysis of the system, with parameters: *Post Dial Delay*, *delay*, *jitter*, and *packet loss*, so it can be determined *PDD* and *QoS*.

Keywords: *VoIP*, *NGN*, *IMS*, *IP PBX*