

## **ABSTRACT**

Nowdays, the world of telecommunication are growing so fast. It is proved by the new technology that appear recently, called NGN (Next Generation Network). This technology try to combine the voice signal, data, multimedia, and internet in one paket of data. If this technology can be implemented, many people hope that this technology will be a great technology in the future.

In NGN technology, there are two protocol which are commonly used. There are Megaco (H.248) and Session Initiation Protocol (SIP). Megaco is a call control protocol between Media Gateway (MG) and Media Gateway Controller (MGC) which is commonly used to handle communication to PSTN. Meanwhile, SIP is signaling protocol which is used for VoIP or multimedia session.

A new problem arise when a PSTN want to communicate with a VoIP customer or SIP Phone or vice versa. In this communication, both of protocol above are used. In these case, we need to analyze interworking capability between both of above protocol which is discussed in this final project. This final project will discuss about the commands that are used in Megaco and SIP, the message format in Megaco and SIP, message mapping, and interworking capability.

In the end, the result of my research showed that the process delay which came from the communication which its caller was came from analog phone, with or without interworking process, was longer than others. And in translation process, delay in building communication and terminating communication was longer than others.