

## **Abstract**

The evolving of technology has provided a variety of services that provide convenience especially on the Internet. With a variety of services that have been available, people will continue to want a new technological innovation that provides easy ways to integrate diverse technologies in a container in the form of application. So that IMS became an architecture that provides a place to bring together a variety of existing services.

Security needs also arise when there is a service running on IMS architecture should be given the protection of confidentiality. In this final project implemented a security protocol SRTP to VoIP services in the IMS. Then see its effect on data security and extra time due to the addition of a data packet size after implemented security protocols. Software that used is OpenIMSCore, Asterisk, Boghe IMS client, Blink asterisk client, Wireshark, Cain and Abel.

The test results obtained the results of SRTP doing security in the form of sound recordings that are masked as VoIP results in sniffing and data register, invite, session establishment between the two clients is encrypted. The time required is a bit longer but it did not interfere with the user convenience.

**Key Words:** SRTP, IMS, VoIP, Sniffing.