

## Abstract

*General Packet Radio Service* (GPRS) is one of services on *Global System for Mobile Communication* (GSM). GSM is cellular communication technology. With GPRS, data communication can be done by two or more between mobile device. One of applications of GPRS is internet or intranet.

The fact of data transmission security on GPRS is an important aspect. Such as a member of Intelligence Institute or army want to send data that is secret, of course he does not want the data to be known by public. So that is needed security system to guarantee security while data transmission. One of them is used cryptography. The algorithm that is used for cryptography is Rivest Shamir Adleman (RSA) algorithm. RSA is one of encryption algorithm that security was proved. It is because RSA is included to asymmetric algorithm or public-key cryptosystem, that has two keys, one key for encryption is called public key and the other for decryption is called private key.

This final project will build security system to secure data transmission on GPRS uses cryptography with RSA algorithm in mobile device uses Java 2 Micro Edition (J2ME) technology. J2ME is technology from Java to build an application in mobile device.

**Key words :** GPRS, GSM, mobile device, cryptography, RSA, asymmetric/public-key cryptosystem, public-key, private key, J2ME.