

ABSTRACT

The development of mobile phone technology nowadays is very fast and advanced. By the development of it, now mobile phones not only could send messages or make a call, but also equipped with ID touch technology, although there are still some shortcomings of the application. The security of a mobile phone in communication is not guaranteed, as in the form of a short message service.

SMS content on its own security is still not assured, so that the authors make an encryption and decryption application using the RSA algorithm for securing information in a short message service in purpose to make mobile phone user can communicate in short messages service without worrying of the attackers who want to know the content of the message sent by the user. This application uses Eclipse based java language programming which can be developed on android based smartphone.

The output of this system is the SMS's delivery process which has been encrypted will be sent if ≤ 160 characters, and text will not be sent if ≥ 160 characters, the encryption and decryption process takes an average time of 0.18 seconds, the avalanche effect testing using different plaintext input for each experiment will produce a different ciphertext with an average percentage of 10.35%, while the brute force testing takes over $1,652 \times 10^{68}$ years to try all possible keys there.

Keywords : Android, RSA Algorithm, Application, SMS