ABSTRACT

IMPLEMENTATION OF ECC AND PAILLIER ALGORITHMS ON AUDIO STEGANOGRAPHY USING LEAST SIGNIFICANT BIT (LSB) METHOD

Oleh
Agdelssa Itaqullah Putra Nalramus
NIM 21102105

The digital age is transforming the way people communicate, do business and store information. The exchange of digital data is increasingly massive, bringing convenience while fuelling concerns about data security. Data leakage and misuse of information are real threats that can result in financial loss, reputation, and even privacy violations. The internet has become the most preferred communication channel today, where almost all documents such as text, images, audio, or video, are transmitted over the internet. This shows that security in transferring data over the internet is becoming increasingly important, especially in securing confidential information from unauthorised parties. There are several methods to secure secret message data, such as steganography techniques and cryptography techniques. In cryptographic techniques there are many algorithms available, in this research the author uses double cryptographic algorithms, namely Elliptic Curve Cryptography (ECC) and Paillier. As for the steganography technique, the author uses the Least Significant Bit (LSB) method for the technique of hiding messages in a medium, the media used in this research is audio. To check the authenticity of the data also uses Message Digest 5 (MD5).

Keywords : Data Security, Elliptic Curve Cryptography (ECC), Paillier, Least Significant Bit (LSB), Audio