Abstract

This final project discusses the design of video security by applying selective encryption method to secure the video data. In general, the video data has a lower value compared with other digital data (such as confidential data on a company, bank information, etc.). Therefore selective encryption to secure the data selected in the video for selective encryption is one method that can resolve performance problems. Selective encryption is a technique to encrypt a portion of the video data, while other data is left as it is. Encryption uses RSA algorithm, one of the public-key cryptosystem that is very often used to provide privacy to the authenticity of the digital data. Security encryption / decryption of data this model is the difficulty of factoring the modulus n is very large.

MPEG-1 and MPEG-2 are the video format used in this final project, since both formats have bitstream structures are virtually identical, so that the processing can be done with a same single algorithm. Visual data to be encrypted is the layer of the picture frame I and frame P. Video security can be achieved by encrypting the data.

In this final project will be built a software using the Java platform based design. Tests conducted is to encrypt and decrypt video with MPEG-1 and MPEG-2. Test results video examines the security can be realized by using selective encryption method and key length corresponding to the RSA algorithm to be implemented and in accordance with the needs that can be seen on the parameters of Brute Force Attack.

Kata kunci : *MPEG Video, Cryptography, Selective, RSA, Brute Force attack*