

## **ABSTRACT**

*Protecting data from an attack is important in the process of information exchange. Therefore we need a method to maintain the security and confidentiality of data, so that data can only be accessed by certain people. Cryptography is a method by hiding information from third parties.*

*To secure a real-time data required an algorithm that has an optimal level of quality and security. The algorithm used is AES (Advanced Encryption Standard). AES is a symmetric ciphertext-based cryptography algorithm that can encrypt and decrypt video surveillance. AES has the expected cipher properties: resistant to known password analyzes as well as flexible use in various hardware and software. This algorithm uses the same key when encryption and decryption and its input and output are blocks with a certain number of bits. The selection of data block and key sizes will determine the number of processes that must be passed for the encryption and decryption process.*

*In this Final Project is designed an application program based on Java Dekstop. There are two application programs, Server Application and Client Application. This application program is used to transmit recorded video using laptop webcam in real-time. Testing is done in two ways through live streaming from webcam and uploading Movie.Mjpeg standard file*

*The result of this research is the best delay for live streaming 0.08 seconds, to send Movie.Mjpeg file .0,04 seconds. Testing for Avalanche Effect got good result that is 59,375%. The result of Normalized Correlation for live stream is 0.119 and sends Movie.Mjpeg file is 0.*

**Keywords: Cryptography, AES, video surveillance, live streaming**