

## **ABSTRACT**

*Currently the spread of data in the form of digital video over the internet is becoming increasingly common . Movie trailers , video clips and video that contains a review of the commercial products , become a pull factor consumers to buy the product. This video needs to be disseminated protected to avoid abuse and pelanggaran copyright law . One way is using the watermarking technique .*

*Watermarking is a way to protect the intellectual property rights of multimedia products ( pictures / photos , audio , text , video ) by inserting information into multimedia data . Insertion of the information used in this thesis using watermarking technique and its application to the AVI video format by the method of randomization Least Significant Bit ( LSB ) and the System of Steganography using Bit 4 ( SSB - 4 ) . Insertion of information on video using a Pseudo Random Number Generator ( PRNG ) as a method of randomization . PRNG output will determine the method of insertion of information that will be used . In LSB method , the insertion of information will replace the LSB bits of the original video . While the method of SSB - 4 , insertion of bits of information to replace the bits to 4 of the original video .*

*Testing and analysis of video watermarking using the Mean Square Error ( MSE ) Peak Signal to Noise Ratio ( PSNR ) and Mean Opinion Score ( MOS ) . Insertion watermarking using the method of randomization PRNG bits LSB and SSB - 4 run through a desktop application . This application is made by MATLAB ( R2012b ) .*

**Key:** Watermarking, AVI, PRNG, LSB, SSB-4