

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

In this study, researcher successfully combined three methods that are important in transmitting classified documents, namely: Triple Data Encryption Standard (3DES) – Cryptography, Least Significant Bit (LSB) – Steganography and Zipped Information Package (ZIP). Thus, the researcher can draw several conclusions that can be conveyed by paying attention to the limitations of the existing problems, namely:

- a. The encryption program of “Combination Design of Triple Data Encryption Standard (3DES) – Cryptography and Least Significant Bit (LSB) – Steganography on Zipped Information Package (ZIP) Extended Classified Documents” can be presented and used in the transmission of classified documents to increase security, disguise the presence and minimize the size of the classified documents.
- b. The decryption program of “Combination Design of Triple Data Encryption Standard (3DES) – Cryptography and Least Significant Bit (LSB) – Steganography on Zipped Information Package (ZIP) Extended Classified Documents” can be presented and used in the transmission of classified documents to increase security, disguise the presence and minimize the size of the classified documents.
- c. The results of statistical analysis in “Combination Design of Triple Data Encryption Standard (3DES) – Cryptography and Least Significant Bit (LSB) – Steganography on Zipped Information Package (ZIP) Extended Classified Documents” shows that this program is feasible to use in sending classified documents as needed in terms of file size, processing time and PSNR on video and image objects.

5.2 Recommendation

This research was successfully presented, but there are still things that need to be improved. The following are some recommendations that can be suggested to develop further research in aspects:

- a. Confidentiality.
 - 1) This research is limited to using the "cyberdefense" key. It is expected that in future research to use longer and more complicated keys. Not only the alphabet, but also other characters in the ASCII Table to increase the level of complexity in information theft.
 - 2) It's hoped that future research can simulate attacks carried out by a data thief hacker to test how strong the confidentiality aspect of program that has been compiled.
- b. Authentication.
 - It's expected that in future research, an additional program can be prepared to ensure that secret file is sent by sender and received by actual recipient so that it can measure level of authentication of the program.
- c. Non Repudiation.
 - The sender cannot deny that the information sent comes from him, so it is hoped that further research can be added to the program for the non-repudiation aspect.
- d. Ratio.
 - This research has successfully applied ZIP compression into a combination program. However, the author missed the part to measure the ratio aspect between file size before and after ZIP compression. It's hoped that future research can add a program to measure the ratio of ZIP.