*ABSTRACT*

*In this era, when development of technology increase rapidly, every aspect of our life becomes inseparable from the role of technology, includes the process in exchange of information. The security in the process of exchanging information are things worth to notice . The emergence of a third party is feared for hacking the message when it still in the process of exchanging message. It makes the encryption and decryption process of secret data very essential. But the current cryptographic technology is not enough to carry out the task alone. It requires other technology security techniques such as steganography, in response to these problems.*

*This research has successfully created an implementation and combination of the science of cryptography and steganography. By using the blowfish algorithm for the encryption and decryption process , and combines it with the paste through media images using the least significant bits method. Programming is processed in the Java programming language that is quite popular and can be accessed in many technological devices.*

*The result of implementation is tested with PSNR examination and avalanche effect examination as testing parameters. The conclusion of the test is the implementation has been successful with PSNR examination values ranges between 30dB - 40dB and avalanche effect examination values ranges between 35.94 % - 50 % .*

*Keywords : Cryptography , Steganography , Blowfish , LSB*