

ABSTRACT

This Final Task is all about having simulation process and performance analysis of *steganograph* method of video using *Discrete Wavelet Transform* (DWT). The reason of using DWT method in video steganograph is LSB modification creates huge size of *stego video*, then *masking* and *filtering* method will change the cover of visual video directly. This method is going to be implemented in *embedding* and *extracting* process later while hoping that embedded information cannot be detected, it has against (robustness) to many signal procession, and the carrier video is not broken.

Firstly, size and frame numbers of *embed video* which has information are processed. Then another video which has larger size and more frame numbers is prepared as carrier media (*host video*). Next step is locate the *embed video* into *host video* based on principle of DWT. After that, IDWT is needed to get *stego video* which *host video* that has been embedded already with *embed video*. In the end, the *stego video* will be extract to its formers which are *host video* and *embed video* just for appropriate person who reserve the right to have the information.

Condition, that will be considered that anything are related with carrier video and embed video as data hiding, are kind of video application influence, size of video, number of video frames, location of hiding data in embedding and extracting system, and then robustness of video to any noise which is given such that *Noisse Gaussian*. Performance of steganograph system will be tested by MSE (Mean Squire Error), PSNR (Peak Signal to Noise Ratio), BER (Bit Error Rate), and MOS (Mean Opinion Score). More small value of MSE, then error numbers are less. In the contrary, more high value of PSNR, then quality product becomes better in steganograph system. Trying to get highest quality of embed video with minimum error, then MSE and PSNR have to be ~ 0 and ~ 8 . In this final project, the better place to embed is sub band HH (*High High*) frequency.

Keywords: *steganograph, DWT, embedding, extracting*