

ABSTRACT

Security of information exchange process is an important matter in telecommunication. Steganography is the art and science of writing hidden messages such that the existence of a secret message is known only to the sender and receiver. Audio steganography uses audio as the cover media. By utilizing the limited ability of human hearing, audio cover is embedded by the secret message while retaining the audio cover's quality.

Psychoacoustic modeling is used to select the appropriate embedding position in the audio cover. The output of the psychoacoustic modeling is the threshold of human hearing so that secret messages can be inserted in the area below the threshold which is not sensitive to human hearing, so it won't decline the audio cover's quality. Secret message in the form of text has been encoded beforehand using convolutional code. Convolutional code has the ability to detect and correct errors so that the secret message can be sent to the receiver with minimum *error*.

Based on testing of the systems, stego audio have obtained good quality (SNR > 30 dB), and the extracted message is 100% back in normal condition. The system is quite resist to AWGN attack with SNR of AWGN > 55 dB. MOS test result shows that the system have quite good imperceptibility, MOS mark at 4.3875.

Keyword: Audio steganography, *convolutional code*, *Psychoacoustic*