

ABSTRACT

Steganography is information hiding technique which hide information existence upon human sense. Steganography implementation are on several digital media such image, audio and video. These days, information technology is widely used and rapidly growing which makes communication become vulnerable while steganography also can be one of choice to overcome this matter.

Steganography using Sudoku puzzle method is one of information hiding technique in spatial domain where as digital image is used as host and text message as input of secret message. This method also use Sudoku solution as reference matrix in embedding and extraction process. Embedding process begin with secret message conversion from text to 9-base number digit, then in digital image as host make pixel pairs that later will be mapped on reference matrix's coordinates to figure out best embedding position for each message digit. In extraction process also use similar way which begin with make pixel pairs from stego image that will be mapped on same reference matrix so that will direct to embedded message position and find the desired message digit and convert them again to text.

This research resulting a good quality stego image that already examined and reaching PSNR value above 50 dB. Extracted secret message accuracy reached 94,6 %. Computation time of system also very good it is below a second. Subjective examination using MOS with 30 respondents participating. System also examined by four kind of attack/noise there are salt & pepper, Gaussian, localvar and poisson, also rescale attack and system can endure salt & pepper *noise*.

Keyword : *Steganography, information hiding, Sudoku, pixel pair.*