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Abstract

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Modified Graphstega Based On Chart Scale Modification

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Recently, steganography is frequently used for providing covert channel. There are two types of steganography, noisy and noiseless. Noisy steganography approach hides the message by altering the bit of cover. The alteration process produce noise such that it will raise suspicion. Desoky and Younis proposed a method in noiseless steganography namely Graphstega that conceal the message as plotted data point in a chart [1]. Graphstega has low suspicion level since the chart-cover was built based on the message such that there are possibilities where the data represented by the message is unrealistic. Thus, it will raise suspicion. The Modified Graphstega Based on Chart Scale Modification camouflaged the message into a chart that was built based on existing (realistic) data. This research used Sudoku puzzle as secret sharing scheme. The solution of Sudoku puzzle will be used for determining the points where the message was camouflaged. The result of the showed that Modified Graphstega Based on Chart Scale Modification had better performance in suspicion level, security level and robustness than Desoky's one. The security level of the Modified Graphstega Based on Chart Scale Modification depended on the message length, the bit representation of the maximum of plotted data in the chart-cover, the number of x-axis scale and curve pattern. **Keywords**: Steganography, Noiseless Steganography, Graphstega, Sudoku puzzle, secret sharing scheme