

ROBUSTNESS OF THE SECRET MESSAGE IN STEGO FILE AGAINST FLIP AND ROTATION ATTACK*

Hristo Paraskevov[†] Stanimir Zhelezov[‡]
Boryana Uzunova-Dimitrova[§]

Abstract

This paper provides an algorithm to achieve robustness with the extraction of the secret message from a Stego file after an applied attack from the flip, rotate type, or any random combination thereof. The LSB method is at the base of the algorithm, which is applied with a column modification when reading the matrix of pixels. Ratios are used, such as PSNR and embedding efficiency. To assess the results histogram and steganalytic analyses are applied as well. It is experimentally proved that the proposed method can be successfully applied to extract the secret message with these attacks, even if an LSB Inversion attack is attached to the file as well.

MSC: 68U10, 68P30, 94A08, 94B05

keywords: Active Stego Attack, Data Hiding, Steganography

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[†]paraskevov@gmail.com Faculty of Mathematics and Computer Science, Shumen University, Shumen, Bulgaria; Paper written with financial support of project RD-08-119/2016 Steganography in mobile devices and 3-dimensional modeling

[‡]stanzhelezov@yahoo.com

[§]uzunova.b@abv.bg