Steganalysis for reversible data hiding

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Abstract: In recent years, several lossless data hiding techniques have been proposed for images. Lossless data embedding can take place in the spatial domain or in the transform domain. They utilized characteristics of the difference image or the transform coefficient histogram and modify these values slightly to embed the data. However, after embedding message bits these steganography changed the nature of the difference image histogram or the transform coefficient histogram gradually. In this paper, we introduce two new steganalytic techniques based on the difference image histogram and the transform coefficient histogram. The algorithm can not only detect existence of secret messages in images which are embedded by above methods reliably, but also estimate the amount of hidden messages exactly. © 2009 Springer-Verlag Berlin Heidelberg.
Author Keywords: Cover Image; Histogram Shifting; Integer Wavelets; Lossless Data Hiding; Steganalysis; Steganography; Stego Image; The Difference Image
Index Keywords: Cover-image; Difference images; Histogram Shifting; Integer wavelet; Lossless data hiding; Steganalysis; Stego image; Graphic methods; Image enhancement; Steganography; Metadata

Year: 2009
Source title: Communications in Computer and Information Science
Volume: 64
Page : 1-8
Link: Scorpus Link
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Editors: Slezak DKim TZhang YMa JChung K
ISSN: 18650929
ISBN: 9.78E+12
DOI: 10.1007/978-3-642-10583-8_1
Language of Original Document: English
Abbreviated Source Title: Communications in Computer and Information Science
Document Type: Conference Paper
Source: Scopus
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