Abstract

In this paper, based on histogram modification, a feasible reversible data hiding scheme is proposed by using prediction error expansion and edge detected information. The benefit of
RDH lies on security of hidden data as well as quality of color image used to carry this data. RDH provides the facility of retrieving the embedded data as well as the cover medium used for hiding data without any degradation. The algorithm makes use of canny edge detection to exploit correlation between the three channels in color image. This will add the advantage of increasing accuracy of prediction error in one channel. Histogram modification is the method to extract and embed the data in image. For this, image is divided into two blocks and histograms of these blocks are modified. For finding overflow and underflow pixels during embedding, it uses a location map. The algorithm can embed and extract the data even though the color image has subjected for different noises like Gaussian noise, salt and pepper noise, image rotation and staircase artifacts.

References

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Index Terms

Computer Science

Image Processing

Keywords

Prediction Error Precision  Histogram Modification  Canny Edge Detection  Location  Map