

## 结合重排序和直方图平移的调色板图像可逆信息隐藏

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## Reversible Data Hiding Based on Reorder and Histogram Shifting in Palette Images

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**摘要** 提出了一种新的调色板图像可逆信息隐藏方法. 首先, 将调色板的颜色重新排序, 使得相邻索引值对应的颜色尽可能相近. 然后, 对排序后的索引值直方图平移以嵌入秘密信息. 在嵌入过程中, 将对应的索引值改为与之相近的颜色索引值, 以有效缓解含密图像视觉质量的下降; 多次利用最大最小点, 大大提高了嵌入率. 实验结果证明, 本方法在保证可逆的同时显著提升了嵌入量, 并维持了较高质量的视觉效果; 同时, 对于索引值直方图无零点的情况同样适用, 克服了已有方法的局限性.

**关键词:** [调色板图像](#) [可逆信息隐藏](#) [重排序](#) [直方图平移](#)

**Abstract:** This paper proposes a novel reversible data hiding method for palette images based on the characteristics of the palette image and its histogram. The 256 palette colors are reordered to make colors of neighboring indices close. Then the pixel color indices, which are based on the maximum and the minimum points of the color index histogram of the image are used to embed data. The reordering improves visual quality and embedding capacity. Experimental results and performance comparison with other reversible data hiding scheme for palette images are presented. It can embed more data than many of the existing reversible data hiding algorithms, and overcomes their limitations.

**Keywords:** [palette image](#), [reversible data hiding](#), [reorder](#), [histogram shifting](#)

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