Abstract

The development of multimedia and digital imaging has led to high quantity of data required to represent modern imagery. This requires large disk space for storage, and long time for transmission over computer networks, and these two are relatively expensive. These factors prove the need for images compression. Image compression addresses the problem of reducing the amount of space required to represent a digital image yielding a compact representation of an image, and thereby reducing the image storage/transmission time requirements. The key idea here is to remove redundancy of data presented within an image to reduce its size without affecting the essential information of it. We are concerned with lossless image compression. In this paper our proposed approach is a mix of a number of already existing techniques. Our approach works as follows: first, we deal with colors Red, Green, and Blue separately, what comes out of the first step is forward to the second step where the zigzag operation is to rearrange values to be more suitable for preprocessing. At the final, the output from the zigzag enters to the shift coding. The experimental results show that the proposed algorithm could achieve an excellent result in lossless type of compression losing data.
Lossless Image Compression using Shift coding

References


Index Terms

Computer Science

Image Processing

Keywords

Lossless Compression, Shift Coding, Zigzag Operation.