

Abstract

JPEG image compression technology can be classified into four steps: DCT, Quantization, Zig-Zag scanning, and Run-Length Encoding. First, the image data are clipped into each grid cell with a block of 8×8 . Because people are not sensitive to part of the high-frequency image, the matrix can be reduced by a quantization matrix. The amount of picture information reduced significantly after Zig-Zag to rewrite a new one-dimensional matrix. DCT data are concentrated on the top left of the matrix. Run-Length Encoding is to encode the number of 0 in one-dimensional matrix. Because the data be quantized in the matrix, there are many high-frequency part of the value is too small to be replaced by 0. Through this code can calculate a large number of 0 in one-dimensional matrix, rewritten for the new one-dimensional matrix to facilitate coding. The results show, in the distortion of people can find, almost picture can be compression to 50%-60%.