

LOSSLESS COMPRESSION OF FLUOROSCOPY MEDICAL IMAGES USING CORRELATION

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ABSTRACT

Medical institutions generate an enormous amount of medical images for examinations such as fluoroscopy, where each examination of a patient consists of a collection of images. This takes up a large amount of valuable storage space, in addition to the amount of time and cost incurred during transmission. Although lossy compression provides for better compression, lossless compression is usually required and expected for medical diagnosis. This paper proposes a new method for a lossless compression on oesophagus fluoroscopy images using correlation. The differences of pairs or sequence of images are classified based on correlation. From the experimental results obtained, the proposed method achieved improved performance with a compression ratio of 7.97 as compared to standard Huffman coding (HM) loss less compression.

Key Words: Fluoroscopy; ROI; Loss less image compression; Huffman Coding; Correlation.