

Abstract

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Quadtree-Based Centroid Technique for Compressing Sets of Similar Medical Images

the need for lossless data compression in medical imaging is becoming essential. medical image database often store large collection of similar images. traditional compression techniques focused on exploiting redundancy presented in individual images ignoring the set redundancy, which is the inter-image redundancy. previous research has introduced the centroid method, which gets benefit from the set redundancy. in this paper a new algorithm is proposed as an extension of the centroid method combined with the quadtree structure widely used before to represent binary images. experimental results with two sets of ct/mri brain images demonstrate the efficiency/superiority of the proposed algorithm in respect to compression ratio.