Generation of Photo-Mosaic Images through Block Matching and Color Adjustment

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Abstract : Mosaic refers to a technique that makes image by gathering lots of small materials in various colours. This paper presents an automatic algorithm that makes the photomosaic image using photos. The algorithm is composed of four steps: Partition and feature extraction, block matching, redundancy removal and colour adjustment. The input image is partitioned in the small block to extract feature. Each block is matched to find similar photo in database by comparing similarity with Euclidean difference between blocks. The intensity of the block is adjusted to enhance the similarity of image by replacing the value of light and darkness with that of relevant block. Further, the quality of image is improved by minimizing the redundancy of tiles in the adjacent blocks. Experimental results support that the proposed algorithm is excellent in quantitative analysis and qualitative analysis.