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Image Compression Based on Color Morphological Pyramidal Decomposition

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Abstract: In this work, a pyramidal technique designed for color image compression is introduced, and, is based on a combination of a modified morphological pyramid and adaptive Vector Quantizer. This hierarchical structure gives an ability to produce high color image quality (35- 48 dB) at low bit rates (0.1-0.9 bpp). The proposed scheme contains a multi-level pyramid based on modified morphological filters; then, the resulting pyramid levels are applied to a suitable 3D VQ encoder.