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CEDD: Color and Edge Directivity Descriptor: A Compact Descriptor for Image Indexing and Retrieval

Chatzichristofis, Savvas A.

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CEDD: Color and Edge Directivity Descriptor:

A Compact Descriptor for Image Indexing and Retrieval

Savvas A. Chatzichristofis and Yiannis S. Boutalis

Department of Electrical and Computer Engineering

Democritus University of Thrace

12. Vas. Sofias, 67100 – Xanthi, Greece

{schatzic,ybout}@ee.duth.gr

Abstract. This paper deals with a new low level feature that is extracted from the images and can be used for indexing and retrieval. This feature is called “Color and Edge Directivity Descriptor” and incorporates color and texture information in a histogram. CEDD size is limited to 54 bytes per image, rendering this descriptor suitable for use in large image databases. One of the most important attribute of the CEDD is the low computational power needed for its extraction, in comparison with the needs of the most MPEG-7 descriptors. The objective measure called ANMRR is used to evaluate the performance of the proposed feature. An online demo that implements the proposed feature in an image retrieval system is available at: http://orpheus.ee.duth.gr/image_retrieval.

Keywords: Image Retrieval, Image Indexing, Compact Descriptors, Low Level

Features, Color and Texture Histogram.