

Object Decomposition and Classification from Photos¹

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Abstract

This paper presents an automatic definition of the objects dominant landmarks and an estimation of the objects surfaces curvature in order to define invariant shape descriptions. The deduced descriptors are necessary for efficient building and analyzing of 3D objects models and recognition processes. The a priori knowledge of the human face structure is used. We used a new way to represent objects, we called Variable Pulse Width Form *VPWF*, not only suitable for recognition but also for hardware implementation, communication, compression techniques, synchronization, and animation.

Keywords: Dominant landmarks, Surface curvature, A priori knowledge of the human face structure, 3D model construction, Pattern recognition.

¹ For the paper in Arabic see pages (55-76).

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