

The Noisy Object in the Shape Understanding Systems

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Abstract

In this paper a method of understanding of the noisy object is presented. The term the noisy object is referred to a 2-D object that possesses the small irregularities. These irregularities can be interpreted as the useful information or as a noise that is the result of the processing stage. The noisy object is also an object for which an exemplar has a distortion caused by the perceptual limitation of the generated tools. The noisy object refers to the objects that are represented by the phantom concept and whose visual representative differs due to the distortion caused by a movement, or the affine distortion of movements of the parts. In understanding process of shape understanding system (SUS) the “noise” of the noisy object is interpreted in the context of the concept of the object. Our approach has a big advantage by relating the perceptual data into conceptual structure of the knowledge about the visual object. In this approach the conceptual similarity make it possible to find the different interpretation for the same visual object. The shape understanding system (SUS) is an implementation of the method of shape understanding. The system of shape understanding operates based on the knowledge of the image processing, decision making and the search strategies as well as the knowledge of shape description and representation distributed among the specialized experts.

KEYWORDS: visual understanding, shape understanding, a noisy class, the visual concept