A New Feature Integration Approach and Its Application to 3D Model Retrieval

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Abstract

In recent years, advanced techniques on digitization and visualization of 3D models have made 3D models as plentiful as images and video. The rapid generation of 3D models has made the development of efficient 3D model retrieval systems become urgently. In this paper, we will propose a feature integration approach in which a weighted distance method is developed to combine the distance evaluated by each individual one of the descriptors. The weight associated with each feature descriptor can be automatically determined according to the retrieval result using each individual feature descriptor. Experiments conducted on the Princeton Shape Benchmark (PSB) database have shown that the proposed feature integration approach provides a promising retrieval result.

Keyword：3D model retrieval; feature integration