具有相關性回饋演算法之智慧型3D模型搜尋引擎

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摘要

Due to recent developments, the 3D model databases will become popular and the applications of 3D shape analysis and matching will expand into a wide variety. How to build an efficient 3D model search engine become urgent. Determining the similarity between 3D shapes is a fundamental task in shape-based recognition and retrieval. 3D models have several characteristics that significantly affect shape-based matching algorithms. In this paper, we investigate a new shape-based search method. The key challenges are to develop a simple query interface for users and design a robust matching algorithm for arbitrary polygonal models. We present a shape-based 3D search engine with relevance feedback algorithm that supports queries based on 3D models. A relevant feedback algorithm is used to automatically adjust the weights among features interactively with users.
However, in the 3D model retrieval, sometimes only using the most appropriate feature vector can achieve better retrieval result than combining several feature vectors. Hence, in our system, a relevance feedback algorithm is used to automatically determine an appropriate method according to the user’s response.

關鍵字：feature extraction, interactive 3D model retrieval, relevance feedback