Abstract

Motivated by the needs of semantic search and retrieval of multimedia contents, operating directly on the video based annotations can be thought as a reasonable way for meeting these needs as video is a common standard providing a wide multimedia content description schema. Raw data and low-level features alone are not satisfactory to fulfil the user’s requirements; that means, a deeper understanding of the content at the semantic level is necessary. A semantic content extraction system that allows the user to query and regain objects, events, and concepts that are extracted automatically is proposed. In automatic extraction process, starts with object and define class for each process in video data. Objects extracted from consecutive representative frames are processed to extract temporal relations. In addition to that, additional rule to lower spatial relation computation cost and to be able to define some difficult situations more successfully is used. Event extraction process uses objects. Similarly, objects and events are used in concept extraction process.

Index Terms

Computer Science
Algorithms

Keywords

Content-based retrieval, fuzziness, ontology, Semantic content extraction, video content modeling.