MPEG-7 integration scheme for multimedia content

Improved digital infrastructure and the Internet have given rise to information stored as multimedia content, which may contain a combination of audio, video, still images, and/or text. However, multimedia content is more difficult to categorize and search compared to single-media content since there is no established standard to describe and integrate the various aspects of multimedia. This technology provides a system and methods to describe and categorize multimedia content that fits the requirements of the MPEG-7 description standard. Using this system, a multimedia object is separated into individual media streams and segmented in time to form a collection of temporal objects. Within each temporal object, descriptions of the content are generated and indexed into a hierarchical structure.

Integration scheme allows for efficient storage and searching of multimedia

This integration scheme can be applied universally to any form of multimedia content. As such, a standardized set of objects and descriptions can exist for a collection of multimedia objects, providing a basis for classification and structured data storage. Furthermore, these descriptors can be accessed by external software to enable searching functionality across several multimedia objects. Within a large database, a user can view, organize, and retrieve multimedia content based on the generated content descriptions. This scheme is defined using Extensible Markup Language (XML) to fulfill the flexibility and extensibility requirements of the MPEG-7 standard. This technology is therefore well-suited for many high-level data management applications involving extensive collections of multimedia content.

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Applications:

• Classification and storage system for multimedia content
• Software for filtering and searching multimedia content
• Standardized multimedia description for improved I/O to other software

Advantages:

• Can be used with all multimedia formats
• Is compatible with MPEG-7 standards
• Provides the basis for a universal classification and storage system
• Enables efficient searching of multimedia content
• Constructed using XML formatting

**Patent information:**

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**Related Publications:**


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