

Capturing the Record of Human Experience in Video



APEC 2000
Asia-Pacific Economic Cooperation Workshop on Technology with Digital Museum
Academic Sinica, Taipei, R.O.C.
December 8-9, 2000.

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ABSTRACT

The Informedia Digital Video Library system provides full-content search and retrieval from within video content. It implements a fully automated process to enable content capture, information extraction and storage in on-line archives by applying artificial intelligence and advanced systems technology. The Informedia approach uniquely combines speech recognition, image understanding and natural language processing technology to automatically transcribe, segment and index the linear video. The current library consists of 2,000 hours (1.5 terabytes) of daily news and documentaries. This prototype database allows for rapid retrieval of individual video paragraphs which satisfy an arbitrary spoken or typed subject area query based on the words in the soundtrack and images in the video. There is also a capability for matching of similar faces and images. Multilingual versions of the system enable cross-lingual video information retrieval.

The newest phase of this work is developing tools, techniques, and systems that allow users to capture complete records of personal experience and to share them in collaborative settings. The project is also developing techniques for managing vast quantities of multimedia data and for searching, summarizing, and visualizing content from multiple perspectives. Indexed and summarized experience will enable "remembering" analogous past events and "projecting" future, simulated ones.