

CueVideo™

Enabling Rich Media
in the Real World

IBM® Almaden Research Center

CueVideo is a modular system of highly automated, robust technologies that convert media-rich content into fully searchable and browsable data. CueVideo enables effective use of video assets, including fast access to audio, video, text and presentations in the user's database upon cue.

Diverse multimedia applications have flourished with recent advances in hardware and network technology, the proliferation of inexpensive video-capture devices, and widespread adoption of the worldwide web. Yet a simple way to manage specific multimedia data accurately and efficiently had not been realized, until CueVideo.

CueVideo is the result of ongoing IBM research dedicated to solving the issues that arise in the creation, indexing and use of media-rich content.

Licensing of CueVideo for enterprise and OEM applications is now available.
Licensing Contact: IBM Research, Business Development Manager, Patty Kim at (408) 927-1207.

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CueVideo™ - Enabled Rich Media

Video content significantly enhances the learning and communication experience. When properly linked to text, charts and images, video provides the realism, interest and detail not available in other media. These attributes are critical in many commercial areas including medical training, technical maintenance, product demonstrations and various types of remote learning applications.

Two bottlenecks prevent video from being an integral part of today's computing experience:

- ▶ the cost and time to index and hyperlink the video; and
- ▶ the difficulty of searching, browsing and accessing video content.

CueVideo removes these bottlenecks. CueVideo fully automates the indexing and hyperlinking process. Then it combines video and audio analysis, speech recognition, a sophisticated information retrieval engine and artificial intelligence to deliver usable media-rich content in an easy-to-access format.

CueVideo offers unique and novel functions not available elsewhere: moving storyboards, and smart, fast browsing of both video and audio data.

CueVideo is highly modular. It can be easily productized into a standalone application, or incorporated as a set of tools in existing applications.

CueVideo is ideal for:

- ▶ distributed learning
- ▶ just-in-time training
- ▶ video proceedings of conferences or meetings,
- ▶ management of large video libraries

CueVideo is now available for licensing and commercialization.

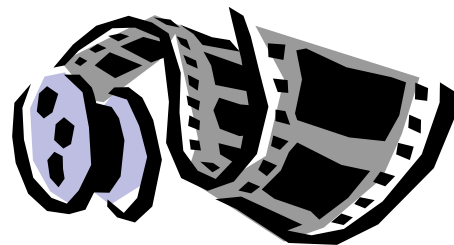
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CueVideo Features:

- **Automatic Indexing and Retrieval:** CueVideo processes the video and audio track and automatically generates indexed metadata. IBM's state-of-the-art speech recognition technology with Broadcast News models are combined with word morphology technologies to deliver highly accurate text transcription. Information retrieval techniques are applied for efficient word indexing, allowing direct, targeted access to any point in a video collection.
- **Natural-Sounding Time-Scale Modification:** CueVideo can speed up or slow down the playback of video content while maintaining natural sounding audio pitch and tone. Accelerated playback enables users to review presentations in a fraction of the time normally required.
- **Variety of Viewing Modes:** CueVideo gives viewers access to- and instantaneous switching between- multiple automatic viewing or browsing modes including storyboards, fast animation and full video.
- **Multi-mode Hyperlink:** CueVideo cross-indexes data across a variety of media types such as from video-to-text and from audio-to-video.
- **Multiple Input Formats:** CueVideo accepts a variety of formats including MPEG-1, QuickTime and AVI.