Informix Video Foundation DataBlade Module

Video is everywhere—from Web retail sites to corporate Intranet training to studio production suites. Although customers have unique requirements, they share a common need to locate, retrieve, and manage video assets within an open and secure architecture that will keep pace with rapidly changing technologies and markets. And if they could, they'd like to do more than "pick and play" video clips. They'd like to take full advantage of their valuable video assets across multiple channels such as the Web, broadcasting, and publishing.

The Informix Video Foundation DataBlade® module opens up new possibilities. Its backbone is an open and scalable software architecture that allows strategic third-party development partners to incorporate specific video technologies—such as video servers, external control devices, compression codecs, and cataloging tools—into complete database management applications with Informix® Dynamic Server™. Plus, the innovative video datatypes and data model—derived from research at the MIT Media Lab—allow customers to "get beyond the blob" and explore new ways to manipulate video and associated metadata, or information about the video. What this means is that customers have more opportunities to reuse, redeploy, repurpose, and redistribute their video assets.

Features and Benefits

The Informix Video Foundation DataBlade module extends the capabilities of Informix database server to manage video content and metadata, or information about the content. With the Video Foundation DataBlade module, metadata elements are stored in the database while the actual video content can be maintained on disk, video tape, video server, or other external storage devices.

This capability addresses the "analog reality" of many video production facilities: valuable video inventory must be efficiently managed, even if the majority of the content has not yet been digitized.

Open and Extensible

The Informix Video Foundation DataBlade module includes a Virtual Storage Interface (VSI) that links the Informix database server with a video server of the user's choice. This feature, endorsed by numerous video server vendors, offers more than the ability to save into and play from a video server. Video data elements in the video server are secure and their integrity is preserved, as it is for any data in the database. Bypassing any middleware detours and interacting dynamically with the database server, the Informix Video Foundation DataBlade module delivers optimized performance while providing a single point of administration for user data, video data, and the metadata. This reduces overhead, eliminates error, and minimizes the need for continuous application maintenance.

More than "Pick and Play"

A simple video option allows a user to pick a video clip and play it as easily as they would with a VCR. The Informix Video Foundation DataBlade module, however, enables advanced video applications. Unlimited "views" of a particular video—from the director's viewpoint to the teacher's viewpoint to the consumer's viewpoint—are just a query away. Primed for the Internet and its interactive possibilities, the Informix Video Foundation DataBlade module can easily present a seemingly new video to each user, similar to customized database views. This is achieved while enforcing intellectual property rights that can be managed for the entire video segment or for each frame if necessary.

Reuse, Redeploy, and Repurpose

Video content exists in many forms and formats: D-1 tape, Beta-SP, MPEG-1, MPEG-2, and QuickTime are just a few of the ever-expanding choices. Handling, translating, and reusing content with these multiple formats poses a challenge (and often a headache!) to video production facilities. Because it is independent of any particular video format, the Informix Video Foundation DataBlade module provides great flexibility. This DataBlade module allows applications to reuse existing metadata derived from any format or all other formats, making the repurposing of video content simple, accurate, and fast. Thus, time-consuming obstacles are removed from the application, freeing the user to be creative.

To support repurposing and advanced applications, video metadata is added in layers, or strata; this process, derived from work at the MIT Media Laboratory, is called video stratification. Stratification allows new information about the content to be added at any time, without requiring a change in application, regardless of the video's format. When new information is created in the workflow, or when more information becomes available, it can be added to the database using the Informix Video Foundation DataBlade—while existing queries on existing applications continue to work, retrieving the newly added information.

Integration with Informix

Combining Informix Dynamic Server, Universal Data Option, and DataBlade technology, Informix provides the foundation for the integration, management, and deployment of all data, including rich-media datatypes like video. Recognizing that each industry works with established vendors, Informix is partnering with the best of class in those industries: SGI, Sun, IBM, Starlight, EMC, Avid, VXtreme, Vivo, Excalibur, and Virage. And, to keep pace with the quickly advancing video world, Informix's architecture invites new partnerships with specialty technologies that enable video in "ways yet undreamed of." Most important, Informix allows all DataBlade modules to work together to create a "DataBlade synergy," establishing a dynamic foundation for total solutions. For a complete video management solution, customers can combine a number of DataBlade modules, such as audio-recognition, image-retrieval, text-search and management, and video scene detection.

Typical Applications

Video Production Sites

Video production sites can use the technology of Informix and its partners in their video production workflow. For example, a corporate video producer may want to search and retrieve portions of a video sequence to export into a high-quality editing system. In this case, the video assets might be stored in low bit-rate video suitable for transmission on the standard intranet, minimizing storage requirements and eliminating the need for expensive networking equipment. By submitting queries, the user can select a subset of the video assets, reviewing them on the desktop with a standard Web interface such as Netscape. Pieces of video are then tagged for use in the production. The tagged portions are then automatically referenced in the D-1 tape version of the video and used as a digitization list for importing into the editing system. Information such as names and actions, generated during the editing process, is then easily added to the existing database's store of metadata in the database for later use.

Television News Room

Another example is television news room with an external Web site. In this case, various video programs might be available for playback. Unlike current Web applications where only a few 20-second video clips are available, the visitor can access a "tailored" video, which is edited dynamically according to his or her needs and interests.

Using these needs and interests, views of the videos are set up in the database using the metadata generated during video editing, any closed-captioned information, and any other additional information entered during video logging. If the visitor requests more in-depth information on the topic, a new view of the same video is dynamically created. This customized content enables dynamic video advertising and broadcasting on the Web. Overall, this news room Web page engages the visitor to create an interactive experience that is more than a passive viewing of a short video clip, a guaranteed strategy approach for frequent visits. This dynamic approach to "customer intimacy" easily extends to Internet commerce applications as well. The Informix Video Foundation DataBlade module lays the groundwork for database applications that include video— both existing and yet-to-be imagined. And if it can be imagined, Informix Dynamic Server with Universal Data Option can manage it.

About Informix

Informix Software is the technology leader in software infrastructure solutions for the Internet-providing a fast, simple and complete way to bring businesses to the Web. Based in Menlo Park, Calif., Informix is the first and only company to integrate e-commerce and business intelligence on a true Internet infrastructure. The company's highly scalable Web engines, together with its personalized content management, real-time analytics and media asset management capabilities, offer customers a unique competitive advantage. For more information, contact the nearest sales office or visit the Web site at www.informix.com.

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