



Video and Audiovisual Content Managers

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Introduction

Digital video has traditionally been present in television and production environments only. However, the last few years we have witnessed its expansion towards the consumer market, and more recently towards Internet, especially with the generalization of broadband technologies like cable or DSL.

Video is a very rich medium, perfect to make web pages more attractive, and it will shortly become the perfect complement, or even the substitute, of the text and images that have been so successful in the internet. Ideally, in the future no special skills should be required to integrate it with other kinds of documents that we are used to managing, such as text, music or images.

Digital video offers several advantages, some of which are the following:

- Adding video to a web site means that an enormous number of people can have immediate access to its contents.
- Distributing the right video can be the best way to explain the operation and functionalities of a product to clients or suppliers.
- Integrating video in a corporative network a company can be an excellent way to train its employees.
- Digitization is the best way to preserve our historical heritage, which includes video images.

Video as just another document

Video on its own only contains audiovisual information, that is, what the audience sees and hears when it is being played. Video in its original format does not allow user interaction either, and its use is limited to a passive activity of the viewer's part. Also, the features that have made the internet the useful, dynamic tool it is today, such as hyperlinks and being able to access information from any place at any time, have not been transferred to video, which pretty much remains in its original format.

Since its invention, the amount of video content generated every year has not stopped to grow. From broadcast and entertainment companies to home users, video is a very popular support. Televisions and production companies have created millions of hours of audiovisual content in the last few decades. In the same way, many other companies and organizations have produced large amounts of video for many different applications, such as sales and marketing, training, education, communication with staff and customers, and many more.

As a result of this frenzied video production, many companies today face the problem of searching, accessing and distributing videos. In most cases, the process of finding a specific video fragment is expensive and does not necessarily end happily, which can result in a waste of time and money, and the unpleasant realization that an opportunity has been missed. With the current trend of content migration towards digital formats, the issue of how to manage large amounts of information, particularly video material, is becoming even more significant.

Given the situation, it is no wonder the increasing interest in content management solutions that integrate video and make it available to users in a simple, effective way. But because of its inherent characteristics, video material needs to be indexed, attached to metadata, and combined with the use of a suitable content manager to be made searchable. In other words, in the same way as a large library with millions of books, an effective management of video requires cataloguing tools that make it searchable and give instant access to specific contents. The key to how to do it is metadata.

Video and metadata

Metadata is all the information associated to a video. There are many different types of metadata, including representative images or key frames, dialogue transcriptions, and the names of the people that appear on screen in a specific moment.



Time code: 14:35:29:11
Id speaker: David Morales
Location: Las Vegas
Description: Shoppers in the Strip

Key frame

Metadata provides a reference for accessing the video, in a very similar way as a book index does. In other words, to make audiovisual material more manageable we need to extract its metadata, as it acts as a reference to access a video document, making it possible to localize, navigate, preview and manage specific audiovisual fragments.

Content Management Systems

Content Managers, closely linked to digitization processes, allow the management and distribution of contents and also help to:

- **Protect the commercial value of digital contents:** A digital content manager gives access to authorized users only, thus preventing the illicit use of intellectual property.
- **Guarantee the proper maintenance of metadata:** Digital material contains metadata describing its properties and attributes. Metadata is particularly valuable when copyrights or royalties are involved.
- **Reuse contents and reduce costs:** Companies dealing with large amounts of digital documents can easily and efficiently retrieve, reuse and share them, saving time and money.
- **Find what we are looking for:** Sophisticated searching systems ensure that users find what they need when they need it.
- **Facilitate cooperative work:** With content management solutions users can co-operate and electronically distribute contents, reducing transportation and distribution costs.
- **Produce and distribute digital contents through multiple channels:** Flexible metadata storage systems allow distributing content in a number of different ways.

Content Management Systems are increasingly incorporating the tools to effectively deal with rich media, such as video, audio and images. Rich media content, correctly embedded into a Content Management System, becomes as simple, fast and efficient to manipulate as a text document, and gives its owner a clear competitive advantage.

Rich Media Asset Managers

The four successive processes below are necessary for Content Managers to incorporate rich media assets, that is, to include the functions of a Rich Media Asset Manager:

- **Acquisition:** The acquisition process includes the automatic ingestion, analysis and digitization of audiovisual contents and all of its associated metadata. The metadata, in XML format, contains key frames and the time code of all detected events, such as shot changes, presence of text captions or face detection/recognition.
- **Edition/production:** During the edition/production process, the audiovisual content is annotated and new video clips are created using the original video material. Metadata automatically extracted in the acquisition process is manually modified and expanded with additional information, making content much easier to retrieve.
- **Distribution:** The distribution process includes the dissemination of contents, together with its associated metadata, through a variety of distribution channels, such as the Internet, cell phones, or set-top boxes. The distribution of digital products must be flexible enough to adapt to new publication channels as soon as they appear. XML language, used to store metadata, provides this flexibility.
- **Archiving:** Archiving is the process of storing all audiovisual content and its metadata, considering their potential applications. The actual video is stored in a video repository and metadata is saved in an appropriate database.

In order to add value to digital video, audio and images, an effective Rich Media Asset Management system must provide a high degree of synergy and interoperability between the above processes, and must seamlessly integrate with the main Content Manager.

Benefits

Some of the benefits of incorporating a Rich Media Asset Management solution are:

- **Increased ROI through the reuse of rich media content.**
- **Reduced costs by serving multiple channels from a single media source.**
- **Reduced work duplication by supporting the effective sharing of knowledge.**
- **Increased productivity by clearly organizing the location of media content.**
- **Smoother workflows and increased team collaboration.**
- **New revenue opportunities for intellectual property.**
- **Improved communication through rich, high-impact media.**

Visual Century offers excellent rich-media asset management solutions, such as ViA2 Platform, tailored to fit the needs of different industries. To know more, visit www.visualcentury.com/solutons.