

The Need for a Meta-Tag Standard for Audio and Visual Materials

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Abstract

In Canada, as elsewhere around the world, government is trying to move into the Internet Age, to communicate more and more interactively with an ever-increasing portion of the electorate and to increase the interoperability of digitized media.

The Canadian Government Online Initiative, of which we are a part, is an example of this trend.

To facilitate access to our materials, we need metatags, metatags that, by and large were originally set up to deal with print media. Thus, we have been struggling in recent years to apply metadata to a test database of Canadian cultural audio and visual clips that we call "Heritage Line".

We have followed many avenues for making our data searchable and accessible. We have used the Dublin Core schema, both with the qualified set of elements as well as the unqualified set. Our problems arose specifically with respect to the elements 'type' and 'format'.

Mpeg-7 currently appears to offer a solution to our problem.

What Is Mpeg-7 and Why Is It Important?

Mpeg-7 is the new standard for multimedia description approved by the International Standards Organization (ISO #15938) in 2001.

It is important because it is a standard aimed at furthering the use of metadata, such as that contained within Dublin Core, in the description and retrieval of audio and video materials. Mpeg-7 is an enabling standard, in that it facilitates the incorporation of any form of metadata, whether proprietary or public, into its structure, in order to expand its capability for searching and sharing data.

The fundamental approach of Mpeg-7 is to describe and search digitized materials by means of sampling, as well as by using lexical search terms. As the amount of data grows, and newer technologies

get implemented, the requirements for metadata usage and searching capabilities will grow proportionately.

Understanding the value of the Mpeg-7 standard and being involved at its conception will prove invaluable to any organization trying to send and search audio and video material in a web environment.

In addition, the use of XML would be beneficial for presenting audio and video via various channels of delivery.

Canadian Cultural Heritage Metadata Project Involving Mpeg-7

The Mpeg-7 Working Group within the Department of Canadian Heritage has three projects currently under way that relate to possible applications of this standard. The group comprises representatives from the Department of Canadian Heritage and such portfolio agencies as the National Archives, the National Film Board of Canada and the Canadian Broadcasting Corporation.

These projects are:

- Running Mpeg-7 tools on audiovisual databases from National Archives, National Film Board, Canadian Heritage and the CBC so that interoperability of materials using disparate metadata schemes (RAD, MEDOC and Dublin Core) can be tested in a web based environment.
- We are also working on demonstrating the search functionality of Mpeg-7 by running its incorporated extractor tools on "Heritage Line", the Canadian Heritage database of audio and video clips.

The Process

The first step is to collect database samples from working group partners to best represent all the dis-

parate metadata schemes. These samples will then be tagged using MPEG-7 metadata tools and inserted into the index of Heritage Line. The metadata will be mapped from MPEG-7 to Dublin Core elements, and a chart will be created to show the relationship between MPEG-7, Dublin Core and the individual schemas of each database. Finally, search testing will be conducted to verify the accuracy of the tools in mapping and functionality.

Concluding Remarks

By 2005, the Government of Canada intends to offer all services online. The Dept. of Canadian

Heritage, the custodian of the largest inventory of cultural media in the country will be well positioned to index, search and exchange multimedia across the web. The groundwork being laid through working with the Mpeg-7 standard and tools will be the glue that brings together multi-format databases and media. The metadata embedded within the Mpeg-7 standard already maps to the Dublin Core metadata element set. This built-in interoperability will result in the convergence of the library metadata and the multimedia resource communities for the betterment of end users requiring access.