

Metadata Forum : National Library of Canada, Sept. 19th 2003
Multimedia Metadata Panel Discussion
Speaker's notes for Alexander Eykelhof, The Bibliocentre, Centennial College

Topic 1:

What is MPEG and its various forms?

MPEG-1

- ISO Number IS-11172 (1993)
- An AV compression standard
- Removes spatially redundant data
- Discrete -Cosine Transform or DCT and Huffman encoding
- Removes temporally redundant data
- Motion Compensated Prediction or MCP
- Uses audio compression
- Subband encoding
- Bandwidth = 1.5 Mbits/sec
- Intended for CD-ROM and VCD use

MPEG-2

- ISO Number IS-13818 (1998)
- An AV compression standard
- Extension of the MPEG-1 standard
- Uses same compression standards but...
- Also supports Interlaced frames for greater detail has better sound
- Higher bandwidth - 2 to 8 Mbits/sec
- Used for DVD's

MPEG-4

- ISO Number IS-14496 (1999)
- An AV compression standard using newer technology
- Object-based approach, multiple profiles
- Designed for a range of multimedia applications
- Especially streaming over the Web
- Lower bandwidth - 8kbit/sec to 1 Mbit/sec

MPEG-7

- ISO Number IS-15938 (2002)
- A multimedia content description interface
- XML-based metadata tool
- Describes -
- Audio characteristics
- Motion characteristics
- Colour characteristics

- Texture characteristics
- Shape characteristics
- Semantic characteristics

MPEG-21

- ISO Number IS-21000 (2003)
- A multimedia framework to enable portability of multimedia resources
- An XML-based metadata tool
- Supports
- Content creation
- Content usage
- Content packaging
- Intellectual property & protection
- Financial management
- Primarily oriented toward rights management

References

- ISO (www.iso.org)
- MPEG group (www.chiariglione.org/mpeg/index.htm)
- Cover Pages (<http://xml.coverpages.org/>)
- Hyperdictionary (www.hyperdictionary.com)
- Diffuse (www.diffuse.org/meta.html)

Topic 2:**What value, if any, does metadata provide for multimedia?**

- Video content
- Metadata takes us past the “Black Box” we can see into the video as well all around it
- Books have indexes, table of contents and random access to the guts of the book
- Who would buy a book that could only be opened to the front page It's normal to think of books as having multiple access points
- This level of access is critical for multimedia objects as well
- It has begun with DVD's – many popular DVD's have chapter listings on the inside cover and scene access available online.
- But there's a potential for much more.
- Detailed access to any point in inside the video
- And more – access to multiple segments on the same topic

Topic 3:**What methodology has each panel member followed in the implementation of metadata?**

- Our work with video metadata did not start out as a metadata project.
- It started with as a result of the experience of AV staff in libraries and media centres
- Video tapes kept behind counters, often no way to look them up in a catalogue
- TV's, VCR's on carts wheeled around from classroom to classroom
- Single copies of the tapes
- Some can't be taken out of the library and so must be watched in the library
- This was a practical problem in the real world. Use metadata to solve a practical problem
- It took visionary to realize there had to be a better way to deal with this
- Janice Hayes director of the Centennial college library at that time initiated a project to bring the library video collection into an on demand form
- This started the Video on Demand project
- But access meant metadata
- Half a dozen Educational videos
- Small 5 of colleges and a school board
- Markup with CanCore and MPEG-7
- MPEG-1 master
- Transcode to Quicktime

Topic 4**Metadata and Multimedia. Where are we? Where are we going? Where do we need to be?****Where are we?**

- Pilot project has completed now and we are in the analysis phase
- We have tried a number of different MAM's
- Pilot was a success evaluation is most important to us now

What's next?

- Expanded Pilot
- Refining the metadata
- Rights management
- More funding

Where do we need to be?

- 1000 videos digitized
- Efficient markup system
- Better use of standards such as MPEG-7
- Collaboration with other institutions
- Rights clearing house