

Hitachi Position Paper: Video on the Web

Bob Freund, November 28 2007

What is the atomic unit of a work of video authorship?

- More than a collection of frames and sound
- Assertion: there an artistic right to include other aspects such as inseparable metadata into the work or composition.
- Interactivity may introduce the need for clickable artifacts which need definition during authorship.
- Can we protect the integrity of the work but permit the quotability of a passage?

How can the video web be as author-able as the text web?

- Must have a low price of entry.
- Must have a low tool requirement.
- Equal access to all potential features to all.

Video evolution to peer technology to text:

- Searchable (scene description? content description?)
- Linkable (how is a video anchor represented?)
- Separation of data representation from User Agent.
- Anybody without prior agreement must be able to create a User Agent.

A whole bunch of other issues (just a mind dump):

- Melding of animation, perhaps locally rendered, with video
- Flat square screen evolution to video in the round or sphere. Is it possible to do this without limiting evolution of the technology?
- Content identification and audience matching either for search or control
- of course, many more depending on one's orientation.

Some of the above may utilize metadata that may be keyed or embedded into the video itself.

Copyright mechanisms today employ watermarking techniques to reduce the separability of embedded metadata during post production.

Watermarking provides a potentially large auxiliary bandwidth that scales with the length of the video.

What is needed: Lots of stuff as well as:

- Low overhead watermarking technology
- Standards for the definition and access of embedded metadata
- Standards for the correlation of external metadata with embedded metadata

Reference:

Evaluation of Real-Time Video Watermarking System
on a Commodity PC http://www.dzi.tu-darmstadt.de/fileadmin/content/veranstaltungen/20060606-09_etrics/yamada_echizen_tezuka_yoshiura_komoda.pdf