

Keeping the Context: An Investigation in Preserving Collections of Digital Video

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ABSTRACT

There has been a recent dramatic shift from analog to digital creation, management and use of video, creating unprecedented opportunities to develop rich, interactive collections, but without proper care, much of this digital video could be inaccessible or incomprehensible in the future. Several projects have explored technical challenges and potential strategies for ensuring long-term access to digital video collections. A number of initiatives have also generated sets of proposed metadata for digital video. Most of the above activities have focused on ensuring that videos can be discovered, accessed and rendered over time.

Another active stream of research has examined how users can best navigate, understand, view, interact with and annotate collections of digital video. This research has generated valuable lessons, tools and observations to support current users. However, it has generally not investigated how the components of a digital video collection might support or fail to support future users of videos.

The Preserving Video Objects and Context (VidArch) project -- NSF Grant # IIS 0455970, involving the authors, Gary Marchionini and Gary Geisler -- lies at the intersection between the two streams of research described above. We are developing a preservation framework for digital video context. Among other issues, we are considering: Are there interface elements from current collections (e.g. surrogates, navigation aids, behaviors) that should be retained over time, in order to support long-term use and understanding of the videos? How might curators of digital video collections decide which contextual elements are important and then devise strategies for preserving them?

According to the glossary of the Society of American Archivists, context is the "organizational, functional, and operational circumstances surrounding materials' creation, receipt, storage, or use, and its relationship to other materials." Documents derive value and meaning from relationships with other documents within the same collection. Rather than treating each item as a discrete entity, archival theory and practice suggests that digital videos should be managed, preserved and presented to users in a way that reflects the social and documentary context in which they were originally embedded.

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Access systems for text-based collections often rely on surrogates, such as indices, catalogs, and abstracts. In addition to facilitating information navigation, discovery and retrieval, surrogates also provide valuable contextual information about the documents. In archival descriptive practices, attention to context is expressed through the creation of finding aids, which include not only inventories of the contents of collections, but also background information about the actors and activities that generated the materials, and the ways they were organized by their original creators or recipients. Recent research has produced and investigated an analogous set of surrogates for digital video collections. These include textual descriptions, title, captions, and annotations, but they also include surrogates that are themselves still or moving images: video segments, keyframes, slide shows, and fast forwards.

VidArch is focused on two collections within the Open Video repository: the complete set of videos that National Aeronautic and Space Administration (NASA) produces and broadcasts to advance learning and appreciation for science; and a set of videos of juried presentations to various annual Association for Computing Machinery (ACM) conferences. The two collections reflect several forms of documentation that may be valuable to preserve in order to convey the context of the videos: text-based surrogates, image-based surrogates (story boards and fast forwards), links to related videos, use history data, and supporting documents (e.g. lesson plans). We have generated archival finding aids to the two collections in order to reflect contextual information that is not readily available within Open Video. Such documentary elements should not simply be treated as part of the current interface to the collection but should also be considered as potential targets of long-term preservation in their own right.

This poster presents an information model for digital video context and places the information model within the context of recent guidance on metadata for digital video, metadata for digital preservation, and the Reference Model for an Open Archival Information System (OAIS).

Categories and Subject Descriptors

H.3.7 [Digital Libraries]: Collection, Dissemination, User issues

H.1 [Models and Principles]

General Terms

Management, Documentation, Design, Standardization

Keywords

Digital Preservation, Video Archives