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## **FROM INFANCY TO ADOLESCENCE: GROWING AN ELECTRONIC MEDIA CONSERVATION PROGRAM AT THE DENVER ART MUSEUM**

**KATE MOOMAW AND SARAH MELCHING**

### **ABSTRACT**

Since 2006, the staff at the Denver Art Museum have been working towards establishing a comprehensive program for the care of its variable media collections. This paper will focus on electronic media (video, audio, digital image, and software-based artworks), the initiatives and accomplishments to date, and future goals, as well as how institutional support for the program was garnered.

The Denver Art Museum holds electronic media in both its fine arts and design collections, with 64 works in its fine arts collections and an additional 700 works in its design collection, all dating from the 1980s to the present.

Rigorous steps towards establishing protocols began in 2010 for *Blink!*, an exhibition in which 55 electric and electronic media artworks were on display. The experience of preparing the works for *Blink!* reinforced the need for a systematic preservation program for this class of artworks.

Since *Blink!*, the museum has dedicated space and equipment to an electronic media preservation lab and a systematic migration program for video works in the fine arts collections has begun. Collaboration with a range of colleagues of varying expertise has been crucial in establishing protocols for documentation and preservation, includ-

ing Non-Exclusive Licensing Agreements, review of media and determining formats for preservation and display, as well as developing relationships with outside vendors.

### **INTRODUCTION: HISTORY OF COLLECTION**

The Denver Art Museum (DAM) holds electronic media in both its fine arts and design collections. The holdings consist of video, audio, digital image, software-based, and photographic-based artworks and are spread across several curatorial departments: Modern and Contemporary, Architecture Design and Graphics, Native Arts, and the Institute of Western American Art. The majority of the works among the fine arts holdings have been given to the museum by collectors, and only a relative few have been acquired directly from galleries or artists.

Holdings also include those from the American Institute for Graphic Arts (AIGA), a professional association for design located in New York City. Through an agreement made with the AIGA in 2007, the DAM became the repository for the award-winning entries made to the organization's annual competitions. The competitions date back to 1984. The first group of award winners was received by the museum in 2007. The vast majority of these pieces were paper-based, along with some plastic objects, t-shirts, and hundreds of food and toiletry items, noted for their packaging.

The competition entries have evolved from traditional materials to an increasing number of electronic-based media that require some form of migration or related preservation measures. At present, roughly 700 of these objects are flagged for migration and include CDs, DVDs, videocassettes, flash drives, 35 mm slides, etc.

### **ELECTRONIC MEDIA PRESERVATION INITIATIVES AT THE DAM**

Inspired by the complexity of the works themselves and resources such as Matters in Media Art (a consortium of curators, conservators, registrars, and media technical managers from the New Art Trust, the Museum of Modern Art, the San Francisco Museum of Modern Art and Tate) along with other emerging publications and

conferences, staff members from conservation, collection management, and registration formed a time-based media discussion group. The periodic meetings culled information and provided a basis of reference for creating guidelines related to processing. Approaches to preserving object formats and dedicated components, artist's interviews, and installation parameters were also being synthesized. This effort—in its infancy—began in 2008.

In late 2009, planning for the exhibition, *Blink! Light, Sound and the Moving Image* began. *Blink!* would be the first exhibition exclusively dedicated to electronic media from the DAM's collection, along with a few loans from local private collectors.

In 2010, the time-based media discussion group officially morphed into the Variable Media Task Force. Representatives from conservation, registration, collection management, curatorial, technology, and installations departments began to convene on a monthly basis. Not surprisingly, the discussions of individual objects began to inform broader policies and procedures that in the future would be adopted as a matter of routine.

In spring 2011, *Blink!* opened and 55 works were exhibited for seven weeks. In conjunction with the exhibit, the museum published a companion guide of the entire DAM holdings.

### **INSTITUTIONAL SUPPORT**

Planning and execution of *Blink!* was intense, and the adolescent phase of our conservation program emerged. There were multiple transitions involving education and training, as well as navigating one unanticipated circumstance after another—all in a very compressed timeline. At times, it was frustrating and the process misunderstood. Yes, it built character. We were nonetheless fortunate to have had the experience guided by the task force. Ultimately, the institution recognized the task force's value and presence, and has since supported it as the variable media working group.

Successive trips to New York City were made by the authors with the objective of learning first-hand about various facilities, equipment, and the kinds of expertise that would be necessary to activate and ensure current and future preservation needs. Being able to communicate what other institutions were doing was important.

A vital and informative resource has been the TechFocus workshops, sponsored by AIC's Electronic Media Group. The dissemination of shared expertise from these workshops has been indispensable in unraveling and effectively communicating the inherent complexities and long-term needs of electronic media to museum administrators. In the case of the DAM, the argument was made that a relatively small number of holdings—in the fine arts collections at least—made establishing a program to make future conservation efforts that much more viable.

The variable media working group, collegial interface, and TechFocus have all given credence to and thereby enabled implementation of strategic planning and fiscal support.

Fiscal needs were based on what we learned from *Blink!*. Expenses related to migration were itemized and as a result, we have been able to strategically budget based on real costs. Since *Blink!*, we have been working with national and local expertise for playback and migration purposes.

In fiscal year 2012, the conservation department was given a budget to purchase a range of playback and display equipment as well as dedicated furniture, as detailed below. Since fiscal year 2012, we have had a budget line specifically for the conservation of variable media. It supports expenses related to migration, equipment and supplies, and contract labor.

### CURRENT APPROACH

Since 2009, working methods and protocols surrounding the conservation of electronic media works have developed and solidified at the DAM. The variable media work-

ing group now meets every other month to discuss new and ongoing projects. The group includes representatives from two curatorial departments (Modern and Contemporary and Native Arts), conservation, registration, collections management, and technology. Recent topics of discussion have included questions from the curatorial departments about status and rights over editioned video works, budgeting for migration work, logistics of sending video works to outside vendors for migration, contracts for acquisitions, and status of display equipment.

Here is a summary of the departments involved with the working group and their roles:

- *Conservation*: oversees migration work, manages media lab, documentation.
- *Registration*: contracts, rights and non-exclusive licensing agreements, cataloguing.
- *Collection Management*: storage and space resources, inventories collection server.
- *Curatorial*: communicates with artists and galleries (with conservation), programming.
- *Technology*: installs electronic media artworks, advises on digital storage, provides knowledge related to computer based artworks.

Outside the working group meetings, the conservation department has been mainly responsible for migration work, establishment of a media lab, and documentation of electronic media artworks, with assistance from curatorial assistants, registrars, and technology staff. The conservation department at the DAM is comprised of five staff conservators, a mountmaker, and two assistants. In addition, interns and fellows develop their specialized expertise. Beginning in 2011, approximately one-third of one full-time conservator's time has been dedicated to electronic media, with administrative support from the director of the department. Prior to 2011, the director of conservation, one part-time paintings conservator, and one conservation assistant devoted time to these activities as other duties allowed.

Electronic media works make up only a small portion of the collection, less than 1%, but a far greater amount of conservation time, in tandem with other museum departments, is needed to support its preservation, including time to establish and uphold new protocols and for ongoing education of participating museum staff. While the specializations of the conservators are not specifically in media conservation, they have worked earnestly to gain education through a course in collection management at the New York University Moving Image Archiving and Preservation Program and the TechFocus I and II workshops conducted by the Electronic Media Group of AIC.

Conservation work has focused to date on video works within the fine arts collections, mainly within the Modern and Contemporary and Native Arts departments. In addition, migration was carried out of a few video works from the AIGA collection that were considered for display. The focus on video works has been due to better familiarity with this medium on the part of the conservators, as well as momentum in this area after the work done for the *Blink!* exhibition.

### ACCOMPLISHMENTS

Two of the early accomplishments of the variable media working group were the establishment of a cataloguing approach for electronic media works and drafting of a Non-Exclusive Licensing Agreement (NELA). The latter was specifically for electronic media and gives the museum limited rights to copy electronic media materials for exhibition and preservation purposes. The NELA is a key part of the preservation plan for electronic media. The working group seeks to obtain these from artists at the time of acquisition, though there is a backlog of works that are without NELAs. These are actively being sought from artists or their estates.

Electronic media works are fully catalogued using the museum's collection management system, ARGUS.net. The working group is seeking to consolidate as much information as possible about electronic media works in the database. A numbering system is employed that allows

quick differentiation between original elements provided by the artist or gallery and later exhibition copies or archival masters created by the museum or other parties. Detailed information for each element is recorded in individual part records. Location information for digital files includes file names and paths on the collection server. The overall whole record for the artwork includes an Installation Notes field where specifications and a log of each installation of the work are kept. The ARGUS.net platform allows for installation instructions in digital file formats to be easily attached to the records. At this time, most of the electronic media-specific data is stored in just one field on the database. The working group aims to add more electronic media fields to the database to ease data entry and retrieval.

In preparation for *Blink!*, the majority of the video works in the collection were evaluated for possible display in the exhibition. Some works were migrated at that time with the main intent of making them displayable once again. However, a systematic survey of formats was not completed at that time, and cataloguing was found to be incomplete in many cases. In 2011-2012, the video works in the fine arts collection were surveyed. All tapes were inspected for physical condition, and videotape formats were identified. Formats of digital files on the collection server were likewise identified. Then the works were given priority codes based on the quality and risk of obsolescence of the masters. The survey was crucial in identifying which works were most at risk of obsolescence or degradation and also for identifying which works were ready for migration. For many of the video works in the collection, the master format is DVD or VHS. For these works, the artists or galleries are being actively contacted to determine if a higher quality master is available.

The first round of systematic video migration work was completed in 2013, with funding allocated from the museum's general budget. Eight video works were identified for migration. To increase the conservators' familiarity and experience with migration work, the video restora-

tion department at DuArt Film and Video in New York was selected as the vendor. Maurice Schechter, an engineer specialist at DuArt, has worked regularly with museums to carry out migrations and establish media labs. In addition, Maurice was a key contractor for migration work in preparation for *Blink!* This round of migrations was successful and enlightening for the conservators. However, transport of valuable masters to and from New York proved to be complex and further reinforced advice from colleagues to seek out a local vendor.

With the experience of working with DuArt in hand, the working group began looking for a local vendor. In addition to simplifying transport logistics, collaboration with a local vendor allows museum staff increased oversight of migration processes and questions of interpretation that might arise. For screening and evaluation of acquisitions, a local vendor provides an accessible resource when outside expertise is needed. The Modern and Contemporary curatorial department suggested Denver-based Postmodern Company, which specializes in post-production work. The company's president, David Emrich, is the brother of Denver-based video artist Gary Emrich, and has deep ties with the Denver artistic community. Representatives from the conservation and curatorial departments visited Postmodern Co. and interviewed David Emrich about the possibility of working together. With more than 25 years experience in video postproduction, a love for and collection of vintage equipment, and an understanding of both artistic and commercial approaches to content, Emrich and Postmodern Co. seemed a good fit. Emrich's forthrightness about his limitations in working with degraded tapes was also a positive. Since then Postmodern Co. has successfully carried out migration of 6 public service announcements from the AIGA collection.

For working with vendors—either local or afar—a migration report was drafted to assist in documenting the process, cataloguing the new elements, and improving cataloguing of the source elements. The completed migration report is logged in the collection management system as a conservation report under the whole record

for the artwork, so that the preservation history of the work can be easily tracked.

Finally, a media lab has been outfitted at the museum to support migration efforts, evaluation and preparation of works for display, and access to and organization of the collections server (figs. 1–2). Initial research to de-

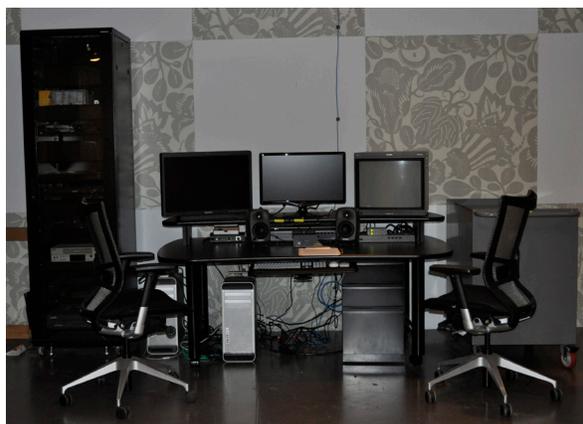


Fig. 1. Denver Art Museum media lab.



Fig. 2. Storage rack and playback decks obtained from the museum's audiovisual department.

velop the lab comprised visits to the media labs at the Guggenheim Museum and the Museum of Modern Art in New York, as well as DuArt. Advice was sought from conservators, archivists, and outside video specialists. It was first necessary to determine what could realistically be expected to be accomplished with a media lab, given limited video technology expertise in-house. It was concluded that the first goal should be to establish the capability to screen video files in a manner that would allow effective quality control and determination of correct appearance and sound. It is anticipated that as expertise grows, the capability to screen tapes can also be established. To these ends, CRT and LCD broadcast quality monitors were purchased to allow screening of works in our collection ranging from a 1982 piece by Gary Emrich up to new acquisitions in full HD. The monitors both offer a “blue gun” mode for calibration and features such as underscan and varying color systems to aid in screening and examination of a wide range of formats and standards. High quality active sound monitors were also obtained, as well as a Blu-ray and DVD player with multi-standard capabilities. Other key acquisitions were a Mac Pro tower and a Blackmagic video card that allows video and sound signal input and output. A RAID 5 storage array functions as the collections server, which is backed up to the museum’s network. In addition, U-matic, Laserdisc, and VHS decks were collected from the museum’s AV department for possible future reconditioning and use.

### **FUTURE GOALS**

Addressing the conservation needs of works already in the fine arts collection will be ongoing. In 2014, efforts are underway to contact artists and galleries in order to obtain missing NELAs and investigate if better quality masters are available for works that are only on DVD. At the same time, questionnaires are being sent out to establish information such as the production history and display specifications. It is uncertain how effective these efforts will be, and the results of this process may help to inform our collecting policies in the future.

Software-based works are a highly vulnerable area of the collection. A survey of the eight software-based works in the collection, seven in the Modern and Contemporary department and one in Native Arts, will be taking place within the next year or two. Current state of functioning will be established as well as vulnerabilities and needs. Artists will be contacted and interviewed. Software files will be backed up and preservation timelines and plans established for each work.

Finally, it is anticipated that work on the AIGA collection will begin within the next year. The registration department completed basic cataloguing and storage of the electronic media items in the collection between 2007 and 2013. In-depth cataloguing and rights assessments need to be addressed next. This collection poses many interesting questions, such as the role of the museum in the collection of commercial electronic media objects and the locus of meaning/significance for electronic graphic design. Rights assessment and licensing has proven a challenge for even the non-electronic holdings of the Architecture, Design, and Graphics department, due to the commercial nature of many of the materials. Contract or on-call assistance will likely be needed with in-depth cataloguing of the various formats in the collection and with rights assessment. Then the difficult task of determining what to preserve and how, will be able to commence.

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