

A RACE AGAINST TIME: PRESERVING AV MEDIA

A PROGRAM OF THE CONSERVATION CENTER FOR ART & HISTORIC ARTIFACTS



PROJECT OVERVIEW

Many of the machine-dependent audiovisual collections held by our cultural institutions are in peril. Therefore, it is crucial to have knowledge about the life expectancy and unique needs of our legacy media in order to make good preservation decisions. From wax cylinders, 78s, motion picture film, magnetic wire, and magnetic audiotapes, to LPs & 45s, audiocassettes, videotapes, and videocassettes, each format has a critical point at which information will begin to be lost.

The challenge of long-term preservation for these formats is that they often require intervention, including cleaning and reformatting. To maximize the life of these materials, one must understand the nature of the media, causes of deterioration, storage and handling practices, and the various types of playback equipment.

In response to an increasing need, CCAHA traveled to 8 U.S. cities over the course of several years presenting the program entitled *A Race Against Time: Preserving Our Audiovisual Media*. This series of videos was developed based on the content from those programs.

This online tutorial was developed for curators, librarians, archivists, collections managers and other staff who are involved in managing machine-based media collections in cultural institutions. Viewers will learn basic principles and concepts for managing audiovisual collections and will be provided with information and strategies for preservation, contracting for reformatting, and finding funding opportunities.

We would like to thank the experts that appear in these videos, Alan Lewis, George Blood, and Sarah Stauderman, for their commitment to this project and for generously sharing their time and expertise. Special thanks to Colorlab Corp, Safe Sound Archive, and the Smithsonian Institution for making their facilities available during filming.

Finally, this project would not have been possible without the generous support of The Gladys Krieble Delmas Foundation, the Institute of Museum and Library Services and The Andrew W. Mellon Foundation. We are most grateful to them for their funding and assistance.

1. INTRODUCTION



VIEW THE VIDEO HERE: [HTTPS://VIMEO.COM/89405874](https://vimeo.com/89405874)

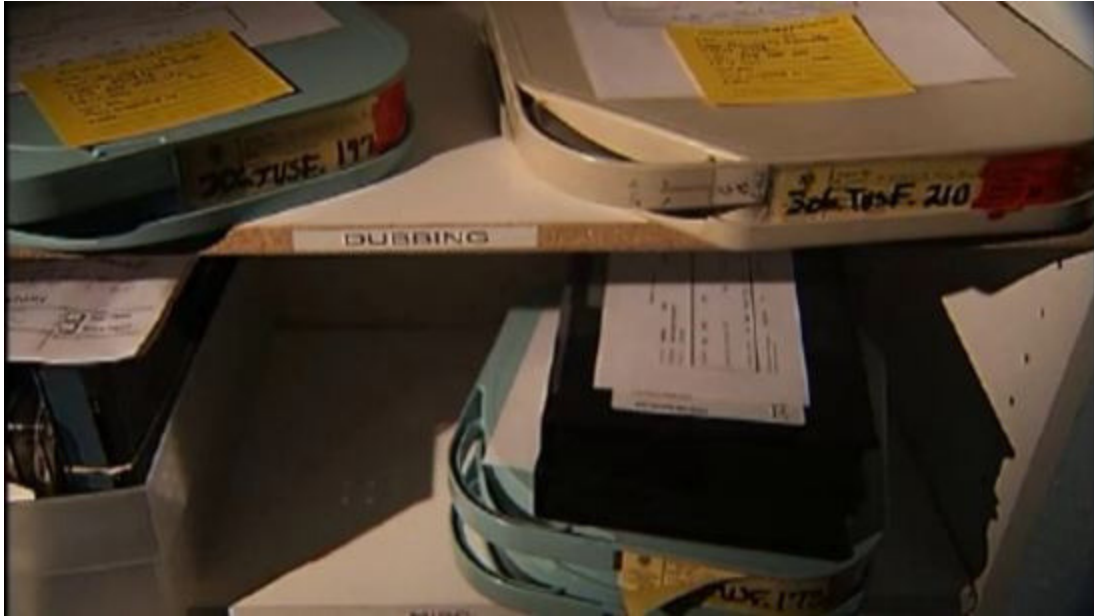
Length: 3 minutes, 4 seconds

Ingrid Bogel, then Executive Director of CCAHA, provides an introduction to the series of videos and explains the ever-growing need for cultural institutions to properly preserve their audiovisual media.

ASSOCIATED RESOURCES

- Conservation Center for Art & Historic Artifacts. “Glossary of Selected Audiovisual Terminology.” 2009. *This glossary includes definitions of the terminology that is used throughout the series of videos.*
- Conservation Center for Art & Historic Artifacts. “Funding Opportunities for Audiovisual Materials.” 2009.

2. AUDIOVISUAL PRESERVATION BASICS



VIEW THE VIDEO HERE: [HTTPS://VIMEO.COM/89405875](https://vimeo.com/89405875)

Length: 8 minutes, 11 seconds

Ingrid Bogel, then Executive Director of CCAHA, discusses the challenges of preserving audiovisual media, the many facets of long-term care, the definitions of audiovisual preservation terminology, and the multiple copies associated with audiovisual media archives.

Alan Lewis, Audiovisual Archivist & Consultant, discusses some fundamental principles common to the care of audiovisual collections. He describes the archival set, which includes a preservation copy, a reference copy, an intermediate copy and a replacement preservation copy. Mr. Lewis also explains what an institution should consider before accepting audiovisual media into their collections. Considerations for reformatting and reformatting priorities are also discussed.

ASSOCIATED RESOURCES

- Columbia University Libraries Preservation Division. "Survey Instrument for Audio and Moving Image Collections." In 2005, Columbia University Libraries was given a grant to develop and test a survey instrument to inventory and assess the physical condition and intellectual control of audio and moving image materials. The survey instrument and instruction manual are available for free download at the above website.
- Lewis, Alan. "Risk Reduction through Preventive Care, Handling, and Storage." Proceedings from the Symposium: Sound Savings: Preserving Audio Collections. July 24-26, 2003. Alan Lewis, Audiovisual Archivist & Consultant, provides an in-depth discussion of his "19 Conservation Concerns" for audiovisual media, which range from physical security and cleanliness to item identification and inventory control.
- New York University Libraries. "Visual & Playback Inspection Ratings System." In 2006 New York University Libraries embarked on a three-year grant funded project to develop a rationale for and strategic approach to operational library preservation services for moving image and audio materials, and to devise methodologies for assessing the condition of archival magnetic media in order to prioritize the need of preservation. The website offers a free downloadable database to serve as a comprehensive archival audiovisual inventory, assessment, and preservation priority tool.
- The National Archives. "Managing Audiovisual Records: An Instructional Guide." Web version based on Managing Audiovisual Records, Second Edition, National Archives and Records Administration Instructional Guide Series. 1999. The National Archives has compiled an instructional manual which provides basic guidelines for the creation, maintenance, preservation, and use of audiovisual records. The guide also contains appendix materials pertinent to audiovisual media which include an inventory form, a self-evaluation checklist, a records schedule, and a code of regulations.

3. AUDIO PRESERVATION



VIEW THE VIDEO HERE: [HTTPS://VIMEO.COM/89505079](https://vimeo.com/89505079)

Length: 20 minutes, 30 seconds

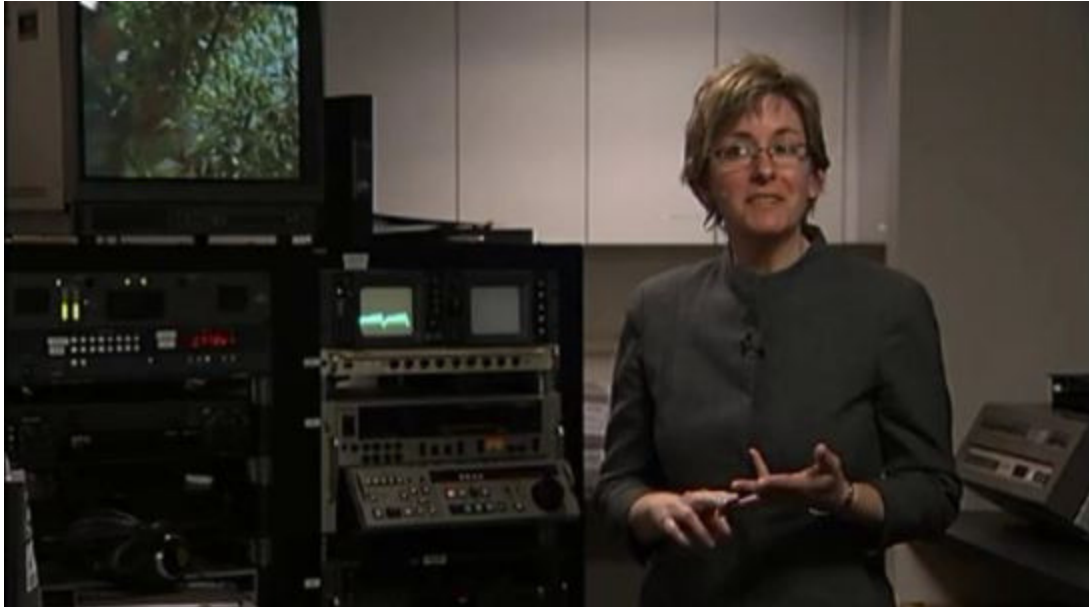
George Blood, President of George Blood, L.P., discusses the basics of audio preservation, including reformatting options for small and large collections, playback options, and the recovery of machine-based sound recordings. Mr. Blood also explains the different types of analog sound recordings and shows examples of each type. The ways to properly clean and store sound recordings are also discussed.

ASSOCIATED RESOURCES

- Frost, Hannah. "Surveying Sound Recording Collections." Proceedings from the Symposium: Sound Savings: Preserving Audio Collections. July 24-26, 2003. *Hannah Frost, Media Preservation Librarian, discusses the planning and design that is involved in surveying audio collections. She explains why it is important to conduct surveys, how audio surveys are different, what type of information to collect, and how to take action based on survey results. The appendix, which is available in a Portable Document Format (PDF) at the end of the article, provides a list of Survey Data Elements for Sound Recordings.*

- Library of Congress. "Cylinder, Disc and Tape Care in a Nutshell." Revised December, 1998. *The Library of Congress outlines the proper handling, storage, cleaning, packaging, and playback equipment maintenance for audio recordings. There is also a detailed bibliography and list of suppliers provided.*
- PARS Recording and Photographic Media Committee of the American Library Association. Contributing Editor Hannah Frost. "Audio Preservation." *This website includes a wide range of audio preservation resources, including how to conduct collection assessments; the history and formats of sound recording; standards, guidelines and best practices, bibliographic resources; as well as digital audio guides, formats, books and articles, projects and standards, organizations concerned with audio preservation.*

4. VIDEO PRESERVATION



VIEW THE VIDEO HERE: [HTTPS://VIMEO.COM/89406115](https://vimeo.com/89406115)

Length: 10 minutes, 14 seconds

Sarah Stauderman, Preservation Manager at the Smithsonian Institution Archives, discusses preservation and reformatting options for videotapes. Ms. Stauderman comments on the history of video recordings, the different videotape formats, the life expectancy of videotape, the obsolescence ratings for videotape formats, and the different pigment components of videotapes. Compression, storage standards, and cleaning of videotapes are also discussed.

ASSOCIATED RESOURCES

- Messier, Paul and Timothy Vitale. "Video Format Identification Guide." *Paul Messier and Timothy Vitale provide an identification guide for approximately 50 different formats which are represented chronologically from the year 1956 to 1995. Each format is accompanied with a thumbnail image, a descriptive essay, and an obsolescence rating.*

- Pearson, Glenn and Michael Gill. "An Evaluation of Motion JPEG 2000 for Video Archiving", Proc. Archiving 2005 (April 26-29, Washington, D.C.), IS & T (www.imaging.org), pp. 237-243. *Glenn Pearson and Michael Gill evaluate Motion JPEG 2000 as a potential format for long-term video preservation. They discuss all the implementations for this software, as well as practical limitations.*
- Stauderman, Sarah. "General Notes on Caring for Videotapes." November, 2001. *Sarah Stauderman, Preservation Manager at the Smithsonian Institution Archives, provides notes best practices for videotape preservation. Topics include storage, deterioration, reformatting and preservation management.*
- Wheeler, Jim. "Videotape Preservation Handbook." 2002. *In this handbook, Jim Wheeler covers a wide variety of videotape preservation topics, including the appropriate storage environment, cleaning and handling techniques, risk management, reformatting, and emergency preparedness. Wheeler also includes a brief history of videotape recording, videotape formats and tape types.*
- "World Video Formats and Standards Conversions." *This website discusses the three main video standards used in the world: PAL, SECAM and NTSC. There is a color-coded map and a listing of which countries use which format.*

5. FILM, PART 1



VIEW THE VIDEO HERE: [HTTPS://VIMEO.COM/89505078](https://vimeo.com/89505078)

Length: 12 minutes

Alan Lewis, Audiovisual Archivist & Consultant, and Russ Suniewick, President of Colorlab Corp, discuss intervention of films as they come into the laboratory, treatment of distressed film, and maintaining a film collection. Components of film, film gauges, determining the age of film stock, and ways to slow deterioration are also addressed.

ASSOCIATED RESOURCES

- Association of Moving Image Archivists (AMIA). "Identifying and Handling Nitrate Film." December 2008. *This handout contains information, compiled by AMIA's Nitrate Film Interest Group, on ways to identify nitrate film, the possible hazards of nitrate film, and how to house nitrate film.*
- Library of Congress. "Care, Handling and Storage of Motion Picture Film." Revised December, 1998. *The Library of Congress outlines the proper storage conditions and handling procedures for several types of motion picture film, including nitrate, acetate, and polyester.*

- Nicholson, Catherine and Elissa O'Loughlin. "Screening Conservation, Storage and Exhibit Materials Using Acid-Detection Strips." *Collections Caretaker*, Vol. 1 No. 4 Indoor Generated Pollutants. *Catherine Nicholson and Elissa O'Loughlin, conservators at the National Archives and Records Administration in Washington, D.C., conduct research using acid detector strips and provide information on the general results of the tests.*
- Williams, Robin. "Kodak Edge Codes." *Robin Williams, of the East Anglian Film Archive, has compiled a table of manufacturer symbols to determine the age of film stock.*

6. FILM, PART 2



VIEW THE VIDEO HERE: [HTTPS://VIMEO.COM/89505705](https://vimeo.com/89505705)

Length: 12 minutes, 34 seconds

Alan Lewis, Audiovisual Archivist & Consultant, and Julia Nicoll, Head of the Optical Department at Colorlab, discuss preservation options for film. Film-to-film preservation using an optical printer is shown in great detail. Ways to record film sound are also discussed.

7. CONTRACTING FOR REFORMATTING



VIEW THE VIDEO HERE: [HTTPS://VIMEO.COM/89505706](https://vimeo.com/89505706)

Length: 9 minutes, 34 seconds

Alan Lewis, Audiovisual Archivist & Consultant, and George Blood, President of George Blood, L.P., discuss contracting for reformatting from the perspective of the institution, as well as the perspective of the vendor. Mr. Lewis and Mr. Blood provide tips on the institutional process, how an institution can approach vendors, and what needs to be included in a statement of work.

ASSOCIATED RESOURCES

- Blood, George and Alan Lewis. "Contracting for Reformatting Services." *George Blood, President of George Blood, L.P. and Alan Lewis, Audiovisual Archivist & Consultant, provide a step-by-step process of contracting for reformatting services, including the procurement process, writing a statement of work, and selecting a vendor.*

- Lewis, Alan. "Audiovisual and Archival Products, Services, Repairs, and Information Suppliers." Updated February, 2009. *Alan Lewis, Audiovisual Archivist & Consultant, compiled a list of contact information for companies that provide equipment and/or supplies for audiovisual and archival media.*
- Stauderman, Sarah. "Preservation Priority Worksheet for Videotape Collections." Developed 1997-2007. *Sarah Stauderman, Preservation Manager at the Smithsonian Institution Archives, created a worksheet in order to assess the preservation priorities for videotape collections.*