

PRELIMINARY PROGRAM

Archiving 2006

May 23-26, 2006
Ottawa, Canada

General Chairs:

Stephen Chapman, Harvard University Library

Scott Stovall, US Government Printing Office



Sponsored by the
Society for Imaging Science and Technology

In cooperation with

AIC American Institute for Conservation of Historic & Artistic Works
ALA ALCTS Association for Library Collections and Technical Services
CAC Canadian Association for Conservation of Cultural Property
Canadian Museum of Civilization
Canadiana.org
CNI Coalition for Networked Information
DLF Digital Library Federation
DPC Digital Preservation Coalition
ECPA European Commission on Preservation and Access
ISCC Inter-Society Color Council
Library and Archives Canada
MCN Museum Computer Network
OCLC Online Computer Library Center
RLG
SAA Society of American Archivists

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Conference Overview

We are pleased to announce the program for the third IS&T Archiving Conference. Archiving 2006 continues the tradition of assembling diverse groups from industry, academia, government institutions, not-for-profit organizations, libraries, museums, and research labs who share a commitment to addressing the challenges of archiving modern and historic materials.

Some features of Archiving 2006 will be familiar to those who attended in previous years. The technical papers program is again arranged in a single-track format to promote the interchange of information across specialties in the field and each day begins with a keynote address. This year's speakers are:

- Ian Wilson, librarian and archivist of Canada, Library and Archives Canada, on "The View of Archiving from the Library and Archives Canada;"
- Douglas E. Van Houweling, president and CEO, Internet2, on "The State of Emerging Internet Technologies and the Impact on Digital Archiving;" and
- Lou Reich, Computer Sciences Corporation/Goddard Space Flight Center, on "Velocity and Impacts of Technology Upon Archiving."

There are more than 30 oral presentations to be given over the course of three days, and 23 Interactive Papers will be presented Thursday afternoon (see page 13). As with all IS&T conferences, the Interactive Paper Session is a key feature, providing the opportunity for presenters and attendees to mingle and discuss results presented using a variety of media formats. All technical sessions will take place at Library and Archives Canada, a short walk from the conference hotel.

Archiving 2006 also features a comprehensive tutorials program (see page 5) organized into four tracks: Scanning, Hardcopy Images, Digital Imaging, and Moving Images. Courses are offered on the Tuesday, the day before the conference technical program begins. You may follow a single track all day or personalize a course program to meet your needs.

Special events are planned as well, including a Late Breaking News report from the Open Content Alliance, to close the technical sessions, and "Behind the Scenes" tours of Ottawa museums and the Gatineau Preservation Centre on Friday afternoon following the conclusion of the conference. A highlight of the meeting is sure to be the Conference Reception, held Wednesday evening in the Grand Hall of the Canadian Museum of Civilization. The Grand Hall houses the world's largest indoor collection of totem poles, and portrays the rich cultural history of the Native peoples of the Northwest coast.

An excellent tutorial program, outstanding keynote speakers, a papers program with high-level, international speakers, and a variety of special events await you in Ottawa. Please plan to join us for the Third IS&T Archiving Conference.

—Steve Chapman and Scott Stovall,
Archiving 2006 General Chairs

About Ottawa

Canada's capital, Ottawa, is best known as the home of the federal government, but behind that facade lies an architecturally stunning city that sits on the border between the provinces of Ontario and Quebec in central Canada.

Ottawa was made the capital of the British colonial Province of Canada in 1857. During the 20th century, a much-larger Capital region was created, and since 1969, Ottawa and Gatineau—two cities that face each other across the broad Ottawa River—and the surrounding urban and rural communities have been formally recognized as Canada's Capital Region.

The result is a truly cosmopolitan city that celebrates its heritage in many colorful,

multicultural festivals and events throughout the year.

Ottawa is located in one of the most beautiful settings in Canada and is easily accessible from many international destinations. From cultural performances at the National Arts Centre to street performers in the Market, the ambiance in Ottawa is ever changing.

We invite you to bring your family along and make time for the more than three million tulips that will be in bloom in Spring—you may want to come a bit early to take advantage of the annual Tulip festival that ends on May 22nd or stay later to enjoy a long weekend in the city. Please note that the Monday prior to the conference is Victoria Day, a Canadian National Holiday.

Useful Websites

About Ottawa

city.ottawa.on.ca/index_en.html
www.canadascapital.gc.ca/bins/index.asp

These two sites are chock full of information about Ottawa and the adventures it has to offer.

Canadian Tulip Festival

www.tulipfestival.ca/
 The world's largest annual tulip festival with 3 million tulips takes place May 3-22 in 2006, just prior to Archiving 2006. Come enjoy this annual celebration!

Tour Ottawa

www.ottawatourism.ca/
 The official tourism Website of Ottawa, this site can help you learn what the region has to offer and plan your trip.

The adventurous may want to explore Ottawa's majestic wilderness. Cycle along the many recreational pathways or challenge the whitewater rapids of the Ottawa River. Other key destinations include the:

- ByWard Market (www.byward-market.com/), Canada's oldest, continuously operating farmers' market
- Canadian Museum of Civilization (www.civilization.ca/cmcc/cmce.asp)—the setting for this year's special conference reception
- Sparks Street Mall (www.ottawakiosk.com/SparksStreet/), Canada's oldest pedestrian mall—perfect for shopping, strolling or taking a break in a café
- National Gallery of Canada (<http://national.gallery.ca/>)
- Casino Du Lac-Leamy, the region's most glamorous entertainment spot

So come to Ottawa and explore this culturally-rich city, that's full of old-world charm and modern excitement!

Conference At-a-Glance

Registration:

Delta Foyer, Delta Ottawa Hotel and Suite
Tues., May 23, 7:00 am – 6 pm

Library and Archives Canada:
Wednesday, May 24 and Thursday, May 25: 7:30 am – 5:00 pm
Friday, May 26: 7:30 am – 1:00 pm

Tuesday, May 23

- Tutorials Program held at the Delta Ottawa Hotel and Suites
 - T1A: Scanning, Document Image Processing, OCR, and Document Understanding
 - T1B: Evaluating Digital Scanner and Camera Imaging Performance
 - T2A: Digital Images: Working with Historical Negative Collections
 - T2B: When Good Images Go Bad: Understanding Image Permanence
 - T3A: JPEG 2000 for Image Archiving and Access
 - T3B: Digital Imaging Architecture for Archiving Applications
 - T3C: Digital Reconstruction of Faded Color Photographs
 - T3D: Archiving of Digital Data: A Low-tech Procedure for Manual Migration in Four Steps
 - T4A: Moving Images on Rolls: The Basics of Motion Picture Film and Magnetic Tape Preservation
- Welcome Icebreaker Reception, Victoria Room, Delta Ottawa Hotel

Wednesday, May 24

- Keynote: The View of Archiving from the Library and Archives Canada
 - Models for Managing Digital Archives and Content
 - Case Studies: From Personal Archives to National Collections
- Conference Reception at the Canadian Museum of Civilization featuring local cuisine.

Thursday, May 25

- Keynote: The State of Emerging Internet Technologies and the Impact on Digital Archiving
- Technical Sessions
 - Digital Archiving Systems
 - Digital Archiving Vocabularies and Frameworks
 - Digital Archiving Processes
- Interactive Papers

Friday, May 26

- Keynote: Velocity and Impacts of Technology Upon Archiving
- Technical Sessions
 - Leveraging Metadata for Archiving and Access
 - Imaging Processes
- Late Breaking News: A Report from the Open Content Alliance Project

Please note:

All Technical Sessions, Wednesday–Friday, will take place at the Library and Archives Canada, which is near the Delta Ottawa Hotel and Suites.

The Conference Reception will be held in the Grand Hall of the Canadian Museum of Civilization. Select galleries will be open during this time. The reception will feature traditional Canadian cuisine.

Special Conference Tours

Friday, May 26, 2006, 1:00-4:00 pm exact times TBA

Library and Archives Canada, Gatineau Preservation Centre

The Gatineau Preservation Centre houses all of the Library and Archives Canada (LAC) preservation laboratories, as well as records storage vaults that accommodate a significant portion of Canada's archival heritage. This unique purpose-built facility is a key component of the institution's long-term accommodation strategy.

Conference participants will experience a building-within-a-building concept and tour the outer shell of glass and steel, which creates an environmental buffer zone for the interior concrete structure that contains the preservation laboratories, records storage vaults, and other operations. Included in the tour will be individual laboratories for conservation treatment and copying of records, and digital imaging workplaces that are constructed in a village-like setting on the top floor of the building, directly over the three-story vault structure.

Location: The Gatineau Preservation Centre is a short 15 minute drive from LAC's downtown Ottawa headquarters.

Transportation and Notes: An arranged bus will provide transportation directly to the Gatineau Preservation Centre. The bus will pick up participants at the main LAC entrance, at 395 Wellington Street. A nominal fee will be collected to offset transportation costs.

All bags and luggage, except purses, must be checked at the Coat Room. We suggest you make arrangements to leave items at your hotel. Participants will be required to sign in and receive a temporary badge.

Special Note on Tours

Advance registration is required for all tours and the number of participants will be limited and reserved on a first come/first served basis.

Further information and details will be sent via e-mail to all registered participants approximately one month prior to the start of the conference.

Canadian Museum of Civilization

Join other conference delegates on a behind-the-scenes tour of the Canadian Museum of Civilization (CMC). The tour will include a visit of the digitization display in the CMC Library, followed by a tour of the Collections and Conservation areas—a special tour not normally offered to museum visitors, given by CMC's Collections and Conservation Managers.

Other tours are yet to be determined in detail, but may include guided tours of CMC's permanent exhibitions including the Grand Hall, Canada Hall, and the First Peoples Hall. The Grand Hall houses the world's largest indoor collection of totem poles, and portrays the rich cultural history of the Native peoples of the Northwest coast. The Canada Hall takes visitors on a fascinating journey through 1,000 years of Canadian history, as they travel from the East Coast of Canada to the West. And, the First Peoples Hall highlights the cultural, artistic and historical achievements of Canada's First Peoples. With more than 2,000 artifacts, the First Peoples Hall allows visitors to appreciate various aspects of Native identity, from earliest origins to the present day, from traditional ways to current topics.

Tutorial Program

Tuesday, May 23, 2006

TRACK 1: SCANNING

T1A: Scanning, Document Image Processing, OCR, and Document Understanding

8:00 am – 12 noon (4 hours)

Instructor: John Handley, Xerox Corporation

This course covers the technology of text-based document capture, from scanning to extracting content for storage and retrieval. The presentation will focus on each element of the capture chain and will describe the basics of the technology including performance limitations and pitfalls. No image processing or computer science knowledge is assumed.

Benefits

This course will enable the attendee to:

- Identify how optical scanning systems work and how to evaluate their quality
- Apply image quality improvement by deskewing, dry cleaning, and thresholding
- Explain image segmentation and mixed raster content encoding for creating highly compressed images
- Use optical character recognition to convert images to text, OCR accuracy metrics, voting methods to boost accuracy
- Examine document image analysis methods for separating photos, graphics and text
- Understand automated of document content—extracting metadata for indexing and retrieval

Intended Audience

The course will be of use to technical managers, those involved in system procurement, and archival system designers.

John C. Handley is a member of the research staff at Xerox Corporation. He has 20 years experience in all aspects of document capture as a scientist at Online Computer Library Center, Xerox, and as a consultant to Lexis/Nexis and Bellcore. He has authored many papers on OCR, document recognition, and image processing and holds 19 US patents in these areas. Handley has taught short courses at Xerox, Cornell, and IS&T conferences.

T1B: Evaluating Digital Scanner and Camera Imaging Performance

1:15 pm - 5:15 pm (4 hours)

Instructors: Peter D. Burns and Don Williams,
Eastman Kodak Company

Today's standards for characterizing imaging performance are based on image science architecture. We begin by introducing this perspective and then describe its application to scanner and digital camera performance in an archiving environment. The standards and accompanying tools will help the user control tone reproduction and evaluate manufacturer's claims of resolution, dynamic range, and noise. In addition, we will identify several common image artifacts associated with digital image capture. Our concentration will be on grayscale and color imaging, but bi-tonal image acquisition will also be covered.

Benefits

This course will enable the attendee to:

- Understand image science principles for digital image conversion
- Describe existing standards to characterize scanner and camera capability and performance
- Connect today's vernacular performance terms (e.g., dpi, bit depth, gamma,

etc.) to science based performance metrics

- Benchmark or audit manufacturer's scanner performance with the above metrics using publicly available standards, compliant software and targets
- Identify several digital imaging distortion sources from image data

Intended Audience

This course is intended for managers, engineers, and technicians charged with evaluating and monitoring scanner performance and understanding how performance metrics connect to other imaging system components such as display, print, and processing.

Don Williams is an imaging scientist at Kodak's Imaging Science Division where he works on quantitative performance metrics for digital capture devices and systems. He frequently consults and writes for the museum and library community on scanner imaging performance metrics and associated standards. He currently co-leads several ISO/TC42 standardization efforts in this area.

Peter Burns is also a member of Eastman Kodak's Research and Development Labs. His published articles and patent activities have been in the areas of detector performance and image noise modeling, image quality evaluation, color-error propagation, and digital image processing. He has taught imaging courses for many years, as an adjunct faculty member at RIT, at Kodak, and at several technical conferences.

TRACK 2: HARDCOPY IMAGES

T2A: Digital Images: Working with Historical Negative Collections

8:00 am – 12:00 (4 hours)

Instructor: Stephanie Ogeneski, consultant

This course is designed to give those working with historical negative collections a fundamental understanding of the relationships between analog and digital

images. Participants will explore concepts and methods for creating accurate reproductions of their collections in a digital work environment within the framework of industry standards.

Topics will include: basics of densitometry, techniques for calibrating systems, image data and appropriate metadata collection. Issues relating to handling and special applications due to deterioration of the collections will be addressed. Participants will begin to get an understanding of how an image is conceived, captured, and translated by computers and CCD sensors, just like they have been in the past through cameras and film.

Benefits

This course will enable the attendee to:

- Identify and interpret working parameters of the NARA digitization guidelines
- Examine concepts of densitometry applied in a digital environment for tone reproduction
- Identify, analyze, and evaluate image characteristics of glass plate, nitrate, or acetate film bases to image data of the digital file
- Design and integrate specialized imaging applications when dealing with deteriorations on film-based materials
- Assess calibration, color spaces, and profiles throughout the life of the digital file
- Formulate a digital imaging workflow

Intended Audience

This course is designed for collection care persons, managers, technicians, conservators, and anyone wishing to gain a broader understanding of the digital image.

Stephanie Ogeneski was instrumental in the establishment of the digital imaging facility at the Chicago Albumen Works, a firm specializing in the preservation of historical negative collections and vintage media photographic printing processes. Prior to that, she worked in

film duplication and vintage media printing. Traditionally trained as a photographer with a specialization in historical processes, she continues to research digital image file output: film and inkjet as it relates to 19th century photographic processes. In 2004 and in 2005, Ogeneski was the recipient of Academic Specialist Grants through the US Embassy of Mexico Cultural and Academic Exchange Program in which she gave a series of workshops on photographic preservation and new imaging technologies to participants from Mexican cultural institutions. She also worked for the Netherlands FotoMuseum and holds a Certification in Photograph Preservation and Archival Practice from the George Eastman House. She is an adjunct faculty member at Simon's Rock College. Her personal photographic work has been exhibited both nationally and internationally.

T2B: When Good Images Go Bad: Understanding Image Permanence

1:15 – 5:15 pm (4 hours)

Instructor: John Kapecki, imaging consultant

All images change with time, and modern imaging systems are no different. Rather, they bring with them new challenges for understanding and predicting those changes. This tutorial will take a data-driven approach to the four major factors that influence the permanence of hard copy images and how those factors interact. Because people, not machines, perceive images, we'll examine how people use their images in the real world and why human factors and psychophysics are important in understanding how people perceive change.

We'll take a look at how we measure change and try to predict the future state of our images, along with the pitfalls that are inevitable in this endeavor, as well as discuss why a holistic approach to image permanence is mandatory.

We'll take a look at real world systems, how they've improved over the years, how hidden factors can result in unexpected re-

Tutorial Fees

if you register:	by	after
	April 22	April 22
4-hour Member	\$190	\$230
4-hour Non-member	\$220	\$260
2-hour Member	\$140	\$180
2-hour Non-member	\$170	\$210

Students may register for tutorials at half-price.

We are in search of a monitor for each class. Monitors assist instructors, collect admission tickets, distribute class notes, and collect course evaluations in exchange for class attendance. If you'd like to be a monitor, please contact Felecia Marsh (archiving@imaging.org).

IS&T reserves the right to cancel classes in the event of insufficient advance registration. Please indicate your interest early.

sults, and why state-of-the-art imaging systems require new approaches to dealing with image permanence issues.

Finally, we'll take a look at standards, their importance and their pitfalls, and how we use measurements and standards to communicate to the customer what people really want to know. We'll conclude with a brief look to the future: new technologies for image stability and new uses and expectations for imaging systems.

I want you to reach your own conclusions, so I'll try to provide you with the data you need to apply these concepts to your particular environment and needs. I'll give you class notes and reference materials you can take home and use.

Benefits

This course will enable the attendee to:

- Describe how images are used in real-world environments

- Identify the causes of image degradation and how they interact
- Know the four questions you should always ask about image preservation
- Recognize how we measure both objective and subjective change in images
- Appreciate the pitfalls involved in predicting image permanence
- Recognize the value and the limitations of image permanence standards
- Understand the arguments for a holistic approach to image permanence

Intended Audience

This course will be of value to anyone who creates, uses, sells, or preserves photographic-quality images and who wants to understand how these images change over time under the influence of environmental factors. Examples will be drawn from a variety of imaging technologies to understand both their differences and common attributes.

Jon Kapecki is an imaging consultant who was a senior researcher for more than 30 years with Eastman Kodak Company, where he studied image formation and degradation processes and new photofinishing technologies. He holds a PhD from the University of Illinois and has taught courses at Kodak, the University of Rochester, and state universities. He has authored several review articles and encyclopedia entries on imaging systems and is a member of an ISO task group on image permanence standards.

TRACK 3: DIGITAL IMAGING

T3A: JPEG 2000 for Image Archiving and Access

8:00 am – 10:00 am (2 hours)

Instructor: Robert Buckley, Xerox Corporation

JPEG 2000 is a state-of-the-art standard for image compression with features and capabilities that make it attractive for image archiving and access. It simplifies

image management by reducing the need to maintain multiple image derivatives and enables preservation by providing generous metadata support. JPEG 2000 can handle a wide range of applications, including gigabyte and high-dynamic range images, spectral imaging, digital cinema, and on-line image collections. This tutorial will describe the key parts of the JPEG 2000 standard, demonstrate its capabilities, and show how it is used in image archiving and access.

Benefits

This course will enable the attendee to:

- Describe the benefits and advantages of JPEG 2000 for image archiving
- Understand how to relate JPEG 2000 features and options to the requirements for image archiving and access
- List the members of the JPEG 2000 file format family and their applicability
- Explain how JPEG 2000 works

Intended Audience

This tutorial is intended for those in the archive, library and museum communities who work with images and image collections, and who want to know what JPEG 2000 has to offer and how their application may benefit from it.

Robert Buckley, research fellow with the Xerox Imaging & Services Technology Center in Webster, NY, is the Xerox representative on the US JPEG 2000 committee. He was the project editor for Part 6 of the JPEG 2000 standard, which defines the JPEG 2000 file format for compound and document images. Buckley currently chairs the CIE Technical Committee on Archival Color Imaging. He has given several invited talks on JPEG 2000 to the cultural heritage community and has consulted on its use in archiving applications.

T3B: Digital Imaging Architecture for Archiving Applications

10:15 am – 12:15 pm (2 hours)

Instructor: Sabine Süssstrunk, EPFL

Images optimized for archiving, images optimized for viewing, and images optimized for printing usually do not contain the same digital values, nor should they. Depending on the intended usage of a digital image, its image state—color encoding, resolution, compression, processing, and rendering—needs to be adjusted. In this course, we will cover the workflow from image capture to visualization to archiving, and discuss the appropriate color image parameters for each step.

Benefits

This course will enable the attendee to:

- Understand different image states and their relevancy in image archiving environments
- Identify the correct image capture parameters (scanners and digital cameras) and image processing workflow for your image archiving and visualization needs
- Define color image encodings, resolution, file formats, and compression requirements for image files
- Basic understanding of colorimetry and color management

Intended Audience

This tutorial is intended for imaging managers and technicians in an image archive or library who are involved in the digitization, processing, and maintenance of digital images, and for engineers who develop hardware and software applications for the archival community. Basic knowledge of digital imaging is assumed.

Sabine Süssstrunk is professor for Images and Visual Representation at the Swiss Federal Institute of Technology (EPFL) in Lausanne, Switzerland. Prior to that, she was

the principle imaging researcher for Corbis Corp. She is the Swiss representative to ISO TC42 WG18, and JWG20/22/23, the ISO committees defining digital photography and color imaging standards. She has lectured and published several articles in the area of color imaging for archiving, and has also consulted with several museums, archives, and companies.

T3C: Digital Reconstruction of Faded Color Photographs

1:15 pm – 3:15 pm (2 hours)

Instructors: Franziska Frey,
Rochester Institute of Technology, and
Rudolf Gschwind, University of Basel

A method to restore faded color materials by digital image processing is presented. A short introduction to the principles of color photography will help understanding the mechanisms of the fading process. Issues related to scanning the faded photographs and the subsequent reconstruction process using digital image processing will be explained. Various examples of reconstructed photographs will be shown.

Benefits

This course will enable the attendee to:

- Describe the color photographic process
- Explain the fading mechanisms and predict the outcome in term of color change
- Apply color reconstruction methods by digital image processing
- Analyze faded color photographs and differentiate various film types
- Judge the results of the digital reconstruction

Intended Audience

This course is intended for anyone who is interested in color photography. No special prerequisites.

Franziska Frey, professor in the School of Print Media at Rochester Institute of Technology, teaches courses in ma-

terials and processes for printing, image database design, and digital asset management. Her work has primarily focused on establishing guidelines for viewing, scanning, quality control, and archiving digital images. Frey publishes, consults, and teaches worldwide on various issues related to establishing digital image databases and digital libraries. She is also actively involved in several international standards groups.

R. Gschwind teaches imaging technology and photography at the Imaging and Media Lab, University of Basel. His research topics are: image processing and analysis, color photography, color imaging, digital archiving, and preservation of the photographic cultural heritage.

T3D: Archiving of Digital Data: A Low-tech Procedure for Manual Migration in Four Steps

3:30 pm – 5:30 pm (2 hours)

Instructors: Lukas Rosenthaler and David Gubler,
University of Basel

Due to rapidly changing data formats and hardware instability, digital data is doomed to undergo periodical migration. Most in-

stitutions neither have the appropriate technical nor the financial resources to sustain an IT-system for automatic data migration. A short introduction to the sources of data loss will help understand the key success factors for periodical data migration.

A procedure to manually migrate any digital data with standard computer hard- and software is demonstrated. The practical experience of this four-step method will be shared and the strengths and weaknesses of this particular method as well as the economical aspects (cost per Terabyte/ year) of the approach will be critically discussed.

Benefits

This course will enable the attendee to:

- Understand the sources of data loss
- Explain the four phases of manual migration (prepare, copy, check, manage)
- Apply standard software (e.g. md5summer) for data consistency check
- Describe the management guidelines that are necessary to enable continuous
- Outline the economics and key figures for a five-year migration cycle

Intended Audience

Anyone handling valuable data files as well as managers responsible for the budgeting of data archives. No special needs.

David Gubler is a research assistant at the Imaging & Media Lab of the University of Basel, Switzerland. He is a member of the advisory board for the MicroArchive Systems and the Fraunhofer IPM Joint Project "NOAH." He is a founding member of the Swiss Mikrosave® Fachlabor Gubler AG, a service company for digital imaging and archiving.

Lukas Rosenthaler is a full-time staff member of the Imaging & Media Lab of the University of Basel, Switzerland. His main research topics are the long-term preservation of digital data and the restoration of movies. He also leads the project team of Distarnet, a P2P based archival system for long-term archiving.

Special Conference Reception

Join colleagues on Wednesday evening for this year's exciting event, held in the Grand Hall of the Canadian Museum of Civilization. The Grand Hall houses the world's largest indoor collection of totem poles, and portrays the rich cultural history of the Native peoples of the Northwest coast. The reception will feature traditional native Canadian cuisine. Extra tickets are available for guests accompanying attendees. See the registration form for details.

TRACK 4: MOVING IMAGES

**T4A: Moving Images on Rolls:
The Basics of Motion Picture Film and
Magnetic Tape Preservation**

8:00 am – 12 noon (4 hours)

Instructor: Alan F. Lewis, consultant

This intense, four-hour course was developed initially for the Association of Moving Image Archivists (AMIA) as a pre-conference, basic-training session covering film and video recording. The course is designed for those who find themselves involved with some or all of the “legacy” machine-based video media: mechanical and magnetic tape sound recordings, motion picture films, separate film sound tracks and videotapes. The focus is on the fundamental nature of these various media and the application of archival principles and procedures to them. The course deals with concepts, terminology, technologies, basic conservation and preservation methods, storage considerations, description, equipment needs, and more. The course gives attendees an opportunity to network with others working in the field and to learn about other institutions that are facing similar challenges. Attendees are encouraged to bring in examples (or pictures) of problem recording media or unusual equipment that they are challenged by.

Benefits

This course will enable the attendee to:

- Define general concepts and standards for machine-based audio visual records
- Discuss the problems associated with capturing motion picture film images photographically, including those associated with cameras, projectors, and photochemical film
- Understand the principles and history of motion photography

- Explain the principles and history of magnetic video recordings
- Discuss the equipment, recording media, and standards associated with magnetic video recordings
- Identify the 19 conservation concerns for video media

Intended Audience

This course is intended for archive, library, and historical society administrators; archivists; broadcasting and media librarians; conservators; stock footage collections staff; and preservation managers. Film and video laboratory managers and sales persons seeking information about providing services to the media archives community would also benefit.

Alan Lewis has been involved in audiovisual media since 1950. He was an “AV kid” who set-up the microphones in the auditorium, ran the movie, lantern slide projectors (in the days before 35mm carousel projectors!), and the then newly available 1/4-inch audiotape recorders. Since his brief post-college career as a stagehand in New York, he has worked as a director of programming at WEDU-TV, Tampa; director of the Public Television Library and Public Television Archives for PBS; director of the Film and Videotape Archives at CBS News; a self-employed AV archives consultant with clients as diverse and widespread as New York’s MoMA and Oregon’s State Historical Society; and an expert in AV preservation in the Special Media Archives Services Division of the US National Archives and Records Administration. Currently he is a private preservation management consultant, doing AV preservation surveys, and training staff in film inspection and related matters. Lewis has taught this course since the early 1980s and estimates that more than 700 people have received this first level of instruction from him.

JOIN IS&T NOW
and take advantage of
member registration rates

Technical Program*

Wednesday March 24, 2006

8:30 to 9:30 am

Keynote

Session Chairs: Stephen Chapman,
Harvard University Library, and Scott Stovall,
US Government Printing Office (USA)

The View of Archiving from the Library and Archives Canada, *Ian Wilson, Librarian and Archivist of Canada, Library and Archives Canada*

9:30 am to 12:10 pm

Models for Managing Digital Archives and Content

Session Chairs: Tim Au Yeung,
University of Calgary, and Bruce Walton,
Library and Archives Canada (Canada)

An Innovative Hybrid Preservation Service - The Sherpa-DP Project, *Andrew C. Wilson, Arts and Humanities Data Service (UK)*
Beyond OAIS, *Geoffrey Adams, Elsevier (USA)*
Turning Silos Into Bridges: Optimizing Local Digital Library Programs, *Charles F. Thomas and Robert H. McDonald, Florida State Univ. (USA)*

**Make your plans early
and save!**

**Advance Conference and
Tutorial Registration
and Hotel Reservation
Deadline:
April 22, 2006**

Digital Procrastination as a Preservation Strategy, *Andreas Stanescu, Judith Cobb, and Taylor Surface, Online Computer Library Center, Inc. (USA)*

Managing Containers, Content, and Context in Digital Preservation: Towards a 2020 Vision, *Simon Tanner, Kings College London (UK)*
Web 2.0 and Access to Digital Archives, *Peter Van Garderen, Univ. of Amsterdam (The Netherlands)*

1:30 to 5:00 pm

Case Studies: From Personal Archives to National Collections

Session Chair: Kit Peterson,
US Library of Congress (USA)

The Long Term Fate of Our Personal Digital Belongings: Toward a Service Model for Personal Archives (Focal), *Catherine C. Marshall, Microsoft Corp.; Sara Bly, Sara Bly Consulting; and Francoise Brun-Cottan, Veri-Phi Consulting (USA)*

Alma-DL, the Digital Library of the University of Bologna: A Case Study, *Marialaura Vignocchi, Simone Sacchi, and Fabrizio Morroia, Univ. of Bologna (Italy)*

The Historic American Buildings Survey Drafts a Collections Management Strategy for the 21st Century, *Martin Perschler, National Park Service (USA)*

National Digital Repository for Digital Still Images in the Netherlands, *Astrid Verheusen and Caroline van Wijk, National Library of the Netherlands (The Netherlands)*

Archiving David Edelberg's Handel LP Collection: Production Workflow and Issues in Data Acquisition, *Catherine Lai, Beinan Li, and Ichiro Fujinaga, McGill Univ. (Canada)*
Preservation of State and Local Government Digital Geospatial Data: The North Carolina Geospatial Data Archiving Project, *Steven P.*

***Note: All papers are oral unless otherwise indicated; Interactive Papers are presented in poster format.**

Morris and James Tuttle, North Carolina State Univ. Libraries (USA)

Czech Digital Library, Bohdana Stoklasova, National Library of the Czech Republic (Czech Republic)

Building the Electronic Records Archives: A Progress Report, Fynnette Eaton, National Archives and Records Administration (USA)

Thursday, May 25, 2006

8:30 to 9:10 am

Keynote

Session Chairs: Stephen Chapman, Harvard University Library, and Scott Stovall, US Government Printing Office (USA)

The State of Emerging Internet Technologies and the Impact on Digital Archiving, Douglas E. Van Houweling, President and CEO, Internet2

9:10 to 10:10 am

Digital Archiving Systems

Session Chair: Andrew Leung

The (Short) History of Digital Archiving, Lukas Rosenthaler, Univ. of Basel (Switzerland)
Hardware Emulation: To Be or Not To Be, Remco Verdegem and Jeffrey van der Hoeven, Nationaal Archief of the Netherlands (The Netherlands)

A System for Long-Term Document Preservation, Larry Masinter and Michael Welch, Adobe Systems (USA)

10:40 am to 12:00 pm

Digital Archiving Vocabularies and Frameworks

Session Chair: Andrew Wilson, King's College London (UK)

Digital Preservation as an Albatross, James Curall, Claire Johnson, and Peter McKinney, Univ. of Glasgow (UK)

Digital Repositories: Definition and Scope, Andrew Boyko and Babak Hamidzadeh, Library of Congress (USA)

Metadata Creation for Digital Humanities Projects, Martyn W. Jessop, King's College London (UK)

Long-Term Preservation of Large-Scale Multimedia Collections: A Digital Preservation Workflow Approach, Richard Marciano, Chien-Yi Hou, Lynn Burnstan, Reagan Moore, and Arcot Rajasekar, San Diego Supercomputer Center (USA)

1:30 to 3:30 pm

Digital Archiving Processes

Session Chair: Rudolf Gschwind, University of Basel (Switzerland)

Using Scalable and Secure Web Technologies to Design a Global Digital Format Registry Prototype: Architecture, Implementation, and Testing, Muluwork Geremew, Sangchul Song, and Joseph Jaja, Univ. of Maryland (USA)
Refining High Quality Digitization Practice in Cultural Heritage Institutions: Statistical Quality Control Tools and Techniques, Ronald J. Murray, Library of Congress (USA)

Efficient Ingest of Datasets in a Two-Stage Archival Process: Easy-Store, Rutger Kramer and Laurents Sesink, Data Archiving and Networked Services (The Netherlands)
Automated Workflow for the Ingest and Preservation of Electronic Journals, Evan Owens, Portico (USA)

Automated Migration for Image Preservation, Stephen L. Abrams, Harvard Univ. Library (USA)

3:45 to 5:30 pm

Interactive Papers

Session Chair: George Barnum, US Govt. Printing Office (USA)

A Case Study of Digital Archive and Value-Added Application: The Plant Dyeing,

Weaving, and Knitting Arts Digital Learning and Value-Added Center, *Yung-Cheng Hsieh, Yu-Ju Wu, and Peisan Lee, National Taiwan Univ. of Arts (Taiwan)*

Photo CD - PCD to Tiff Migration Case Study Abstract, *Louise Renaud, Canadian Museum of Civilization, and Jacqueline Vincent, Brechin Imaging Services (Canada)*

Fulfilling Electronic Record Requirements by Using Quality: A Grounded Theory Based Study at a Large Swedish Public Organization, *Erik Borglund, Mid Sweden Univ. (Sweden)*

Data Description and Archives for Scientific Research in the Future, *Simon Margulies, Ivan Subotic, and Lukas Rosenthaler, Univ. of Basel (Switzerland)*

Distributed Archiving Network - DISTARNET, *Ivan Subotic, Simon Margulies, and Lukas Rosenthaler, Univ. of Basel (Switzerland)*

The Obsolescence of Migration: Long-Term Storage, *David Gubler and Lukas Rosenthaler, Abteilung für Bild- und Medientechnologie (Switzerland)*

Conceptual Framework of a New Secure Storage System for Medical Data Archiving, *Sos S. Agaian and Okan Caglayan, Univ. of Texas at San Antonio (USA)*

Personal Photo Archives, *Osmo Palonen, Mikkeli Polytechnic (Finland)*

Network Access to Parts of Archived Document Image Files, *Martin Boliek and Michael Gormish, Ricoh Innovations, Inc. (USA)*

Technical Issues in Digitization of Large On-Line Collections of Phonograph Records, *Beinan Li, Catherine Lai, and Ichiro Fujinaga, McGill Univ. (Canada)*

Restoration of Aging Images Using Morphological Filters for Archiving, *Eric Wharton, Karen Panetta, and Sos Agaian, Tufts Univ. (USA)*

Content Integrity Service for Long-Term Digital Archives, *Stuart Haber and Pandurang Kamat, Princeton (USA)*

Are the Processes Visible in Municipal Archives?, *Lena-Maria Öberg, Mid Sweden Univ. (Sweden)*

Retaining Color Fidelity in Photo CD Image Migration, *Thomas E. Madden and Peter D. Burns, Eastman Kodak Company (USA)*

Stabilizing Treatment of Decaying Cellulose Acetate Film Base Attacked by Vinegar Syndrome, *Karin Bonde Johansen, Danish Film Institute, and Jesper Stub Johnsen, National Museum of Denmark (Denmark)*

Case Studies of Color Microfilm Recording of Archival and Librarian Stocks with Archive-Laser by the Use of an Optimized Workflow, *A. Hofmann and W. J. Riedel, Fraunhofer Institut für Physikalische Messtechnik (Germany)*

The Digitisation of the Slide Collection from the Saint Catherine Library, *Athanasios Velios and Nicholas Pickwood, Camberwell College of Arts (UK)*

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IPEA: The Digital Archives Use Case, *Robbie De Sutter and Rik Van de Walle, Ghent Univ. (Belgium)*

NOAA's Ocean Exploration Digital Video and Image Data: Archiving, Preservation, and Online Access to the Oceanographic Information, *Anna Fiolek, Dottie Anderson, and Janice Beattie, NOAA Central Library; and Donald Collins, National Oceanographic Data Center (USA)*

Designing E-Catalogues for Archival Institutions: Overcoming the Skepticism of Scholars, *Andy White and Graham Jackson, Univ. of Ulster (UK)*

The Digitalization and Resources Sharing of Archives in Taiwan, *Li-Kuei Hsueh, National Chengchi Univ. (Taiwan)*

Archiving Engineering Design Process, History, and Rationale, *William C. Regli, Joseph B. Kopena, David Wilkie, and Joshua Shaffer, Drexel Univ. (USA)*

Long-Term Storage of Digital Data on Color Microfilm, *Carsten J. Angersbach, MicroArchive Systems GmbH (Germany)*

Friday, May 26, 2006

8:30 to 9:10 am

Keynote

Session Chairs: Stephen Chapman, Harvard University Library, and Scott Stovall, US Government Printing Office (USA)

Velocity and Impacts of Technology Upon Archiving, *Lou Reich, Computer Sciences Corporation/Goddard Space Flight Center*

9:10 to 10:10 am

Leveraging Metadata for Archiving and Access

Session Chair: George Barnum, US Government Printing Office

VidArch: Preserving Meaning Over Time Through the Video-Enhanced Finding Aid, *Helen R. Tibbo and Christopher A. Lee, Univ. of North Carolina at Chapel Hill (USA)*

MADRAS: A Metadata and Archival Description Registration and Analysis System for the Analysis of the Recordkeeping Capabilities of Metadata Sets, *Lori Lindberg, Monique Leahy-Sugimoto, Nadav Rouche, and Holly Wang, Univ. of California, Los Angeles and the U.S. InterPARES Project (USA)*

DIGARCH at Sea: Multi-Institution Preservation Testbed, *Eleanor Uhlinger, Margaret Rioux, and Catherine Norton, MBLWHOI Library; Robert Detrick, Woods Hole Oceanographic Institution; John Helly, San Diego Supercomputer Center; and Stephen Miller, Scripps Institution of Oceanography (USA)*

10:40 am to 12:00 pm

Imaging Processes

Session Chair: Jacqueline Vincent, Brechin Imaging Services (Canada)

Achieving Quality in Digitization Workflow, *Rob Mildren, National Archives of Scotland (UK)*

Multispectral Photography of the Famous Mona Lisa Painting, *Pascal Cotte, Lumiere Technology (France)*

"The Long and the Short" of Copying Panorama Negatives at Library and Archives Canada, *Gregory J. Hill, Janet Kepkiewicz, and Tania Passafiume, Library and Archives Canada (Canada)*

When Good Scanning Goes Bad: A Case for Enabling Statistical Quality Control in Image Digitizing Workflows, *Michael Stelmach, Library of Congress, and Don Williams, Eastman Kodak Co. (USA)*

12:00 to 12:30 pm

Late Breaking News

Stephen Chapman, Harvard University Library and Scott Stovall, US Government Printing Office (USA)

Invited Paper: A Report from the Open Content Alliance Project, *Jonathan Bengtson, Univ. of Toronto (Canada) and James Michalko, RLG (USA)*

Archiving 2006 Hotel Registration

Name _____
 Title/Position _____
 Company _____
 Mailing Address _____

 Telephone _____ Fax _____ Email _____
 Arrival Date and Time _____ Departure Date _____

reservation code GRISIST (Reservations Deadline: April 22, 2006)

A special block of rooms at a discounted rate is being held at The Delta Ottawa Hotel and Suites (www.deltahotels.com) for Archiving 2006 conference attendees for the nights of May 22–26. The discounted rate will be extended for 3 days prior to and after these dates on a space available basis. Reservations will be assigned on a priority basis to our group provided they are received by April 22, 2006. To guarantee your room, a deposit equal to one night's housing must accompany your reservation request. Be sure to mention reservation code GRISIST if making arrangements via phone.

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 361 Queen Street
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Transportation Notes: Airport shuttle service from Ottawa International Airport (www.ottawa-airport.ca), is available from YOW Airporter (613/247-1779; www.yowshuttle.com), which is located outside the baggage area. A one-way trip to the hotel is \$14.00; round trip is \$22.00. YOW Airporter runs 7 days a week from 5:00 am to midnight. There is also taxi service available. Blue Line Taxis (613/238-1111) charges approximately \$25.00 each way. Fares are quoted in Canadian Dollars.

Archiving 2006 Conference Registration

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Conference registration includes admission to all technical sessions, coffee breaks, and ticketed receptions. Separate registration fees are required for tutorials. Register online at www.imaging.org/conferences/archiving2006/. All fees noted are in US dollars.

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<input type="checkbox"/> IS&T or Cooperating Society Member	\$500	\$550	\$ _____
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<input type="checkbox"/> One-day (select below)	\$300	\$330	\$ _____
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Tutorial Registration (be sure to multiply number of classes by per course fee and place on total line)

*Students may register for tutorials at half-price.

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**Please note: To cover bank charges and processing fees, there is a cancellation fee of \$75 dollars until May 22, 2006. After that date, the cancellation fee is 50% of the total plus \$75.
No refunds will be given after June 5, 2006. All requests for refund must be made in writing.**



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