Archiving *2008*

June 24–27, 2008
Bern, Switzerland

www.imaging.org/conferences/archiving2008

General Chair:
Rudolf Gschwind, University of Basel

Cooperating Societies
AIC American Institute for Conservation of Historic & Artistic Works
ALA ALCTS Association for Library Collections and Technical Services
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
IOP Institute of Physics
MCN Museum Computer Network
OCLC Online Computer Library Center
RPS Royal Photographic Society

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We thank the **University of Bern,
Burgerbibliothek Bern,** and the **Zentrum Paul
Klee** for their support of Archiving 2008.

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Conference Overview

We are pleased to announce the program for the fifth IS&T Archiving Conference.

The Archiving Conference brings together an international gathering of experts from industry, academia, governmental institutions, non-profit organizations, archives, libraries, museums, and research labs who share a commitment to addressing the challenges of archiving modern and historic materials in an increasingly digital world.

The center-piece of Archiving 2008 is a stellar program of technical papers, arranged in a single-track format to promote the interchange of information across specialties in the field. Each day begins with a keynote address as follows:

- Wednesday: Jean-Frederic Jauslin, Swiss Federal Office of Culture, "Preserving the Nation's Collective Memory: Challenges, Problems, and Solutions"
- Thursday: Richard Wright, BBC, "Archivists of the World: You Have Nothing to Lose but Your Shelves!"
- Laura Campbell, US Library of Congress, "Doing More with Less: The Future of Digital Preservation in a Constrained Fiscal Environment"

The technical program includes 34 oral presentations complemented by more than 30 interactive papers, which will be presented on Thursday afternoon. The Interactive Paper Session—held on Thursday afternoon—is a key feature of the conference, providing the opportunity for authors and attendees to mingle and discuss results using a variety of media formats. All technical sessions will take place at the University of Bern, which is in the center of the Swiss capital city, overlooking the heart of the city.

In addition to a strong technical program, this year's meeting features a comprehensive short course program (see page 10) and includes ample time for networking and socializing with peers. We are excited to be hosting the welcome reception at the Burgerbibliothek and the conference reception at the famous Zentrum Paul Klee.

Archiving 2008 attendees will also have the opportunity to visit and tour Bern digital preservation operations at the Swiss National Library. All tours will take place Friday afternoon; details are found on page 4.

Join us in Switzerland's capital for this unique gathering of international know-how in digital archiving, imaging, and digital preservation.

—Rudolf Gschwind
Archiving 2008 General Chair

Venue, Accommodations, and Transport

Please refer to map on page 9

About Bern

A UNESCO World Heritage Site since 1983, the vibrant Swiss capital of Bern, with its charming covered arcades, cobbled streets, and historic buildings, will host Archiving's first conference in Europe.

Conference locations

Technical sessions will take place in Hauptgebäude Building at the University of Bern. The university is located on a hill overlooking the historic downtown center and is easily accessed via an elevator located next to the main train station.

The welcome reception will take place at Burgerbibliothek Bern (www.burgerbib. ch/e/index.html), a short tram ride or 10-minute walk from the main train station. The Burgerbibliothek houses a treasure trove of Bern history and culture, as well as many important international documents and ancient codices.

Special Note on Travel and Lodging

Please note that the EuroCup is being held throughout the month of June in various cities throughout Europe, including Bern. While the last game held in Bern will be on June 17, numerous soccer/football fans may descend on the city during the rest of the Cup to watch games on a big screen in the city center.

Travel to/from various parts of Europe may also be busy and security is likely to be higher. Likewise, hotel accommodations will be tighter. Please plan your trip early and accordingly.

The EuroCup schedule can be found at www.uefa.com/competitions/euro/index.html.

www.berninfo.com

An excellent place to start to plan your visit. Provides detailed information on getting to/from Bern via air, train, and car, as well as maps of the city, lodging options, and a listing of events. We suggest you start your exploration of the city at this site.

The conference reception will take place at the Zentrum Paul Klee (www.zpk.org/ww/en /pub/web_root.cfm), a museum dedicated to the world-famous artist and a short tram ride from downtown.

To/from Bern

Bern is served by train and air. While the Bern-Belp airport offers a number of flights, the airports in Geneva and Zurich may provide better options. There is direct rail service from/to the international airports in Geneva (100 minutes) and Zurich (70 minutes). By train, Bern connects directly to the international railway network. Details on transportation options can be found at www.berninfo.com.

Information on visa requirements can be found at www.bfm.admin.ch/bfm/en/home/themen/einreise/Ausweis-_und_Visumvorschriften.html and downloaded from the conference website.

Accommodations

IS&T has arranged for a limited number of hotel rooms within the city of Bern. All reservations for these rooms will be made through IS&T using the form on page 20. Reservations will be processed on a first come/first served basis until all lodging is reserved or until the lodging registration deadline. It is recommended that you get your requests in early. (Due to problems with the hotel, if you make your own booking we suggest you avoid Hotel Isola Bern.)

Conference At-a-Glance

All technical sessions will take place in the Hauptgebäude Building, Universität Bern, Hochschulstrasse 4

Registration Hours

Tuesday June 24, 7:00 – 18:00   Wednesday June 25, 7:00 – 17:15
Thursday June 26, 8:00 – 17:15   Friday June 27, 8:00 – 11:15

Tuesday, June 24
- Short Course Program (see below)
- Welcome Reception: Burgerbibliothek Bern

Wednesday, June 25
- Keynote: Preserving the Nation's Collective Memory—Challenges, Problems, and Solutions
- Technical Session: Creating and Managing Digital Collection, Formats, and Metadata
- Conference Reception: Zentrum Paul Klee

Thursday, June 26
- Keynote: Archivists of the World: You Have Nothing to Lose But Your Shelves
- Technical Session: Imaging, Microfilm, and Digital Preservation
- Interactive Session
- Conference Exhibition

Friday, June 27
- Keynote: Doing More with Less: The Future of Digital Preservation in a Constrained Fiscal Environment
- Technical Session: Economics, Strategies, and Projects

Short Courses At-a-Glance

Track 1: Case Studies

8:00–10:00 T1A	10:15–12:15 T1B	13:45–15:45 T1C	16:00–18:00 T1D

Track 2: Technology

8:00–12:15 T2A	13:45–15:45 T2B	16:00–18:00 T2C

Track 3: Hard Copy Issues

8:00–12:15 T3A	13:45–15:45 T3B

Track 4: Preservation Formats

8:00–12:15 T4A	13:45–18:00 T4B

Track 5: Cameras and Scanners

8:00–12:15 T5A	13:45–18:00 T5B

T1A: Making Digital Preservation Affordable: Values and Business Models

T1B: How to Save Audiovisual Archive Content by Digitization—and then How to Save the Digits (in Archives Great and Small)

T1C: Significant Properties and Their Role in Digital Preservation

T1D: SIARD—A File Format for Archival of Relational Databases

T2A: Color Image Workflows and Architecture for Archiving Applications

T2B: Colour Display Holography

T2C: Image Science for the Archiving Community

T3A: Contemporary Photography: Digital Prints

T3B: Digitizing Historical Negative Collections

T4A: A Look Inside of the Portable Document Format (PDF)

T4B: JPEG 2000 and other Formats for Image Preservation

T5A: Evaluating Digital Scanner and Camera Imaging Performance

T5B: Scanner and Camera Imaging Performance Workshop

Conference Tours: Swiss National Library

Friday, June 27, 2006, 14:30-16:00

There is no cost, but advance registration is required for all tours; see Hotel/Tour registration form on page 20. As the number of participants is limited, registration is on a first come/first served basis and dependent on conference registration. Participants are responsible for getting themselves to the tour site on time. The Swiss National Library can be accessed via Bus no. 19 (direction Elefenau), Aegertenstrasse stop.

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

Print Collection and Swiss Archive for Cultural Heritage

The classic collection departments of the print collection contains printed graphics from the 17th thru 21st century; photography from the 19th thru 21st century; art books, editions and portfolios from the 20th and 21st century; and a post card collection. In addition, the department contains a large poster collection from the 19th thru 21st century and the archives of Daniel Spoerri, Karl Gerstner, and Johannes Gachnang. The photographic collection mainly focuses on landscapes and portraits of famous Swiss citizens. In 2007, the Swiss Archive for Preservation of the Graphic Collection became part of the institution. The Archive is in charge of finding new exemplars from the subject areas of archeology, preservation of ancient monuments, landscape and city photography, architectural and art history, and folk culture.

The tour will focus on two large digitization projects. The Swiss Catalog for Posters has been established for 10 years. Linked to that is an archive database being

Special Note on Tours

Advance registration is required. The number of participants is limited and reserved on a first come/first served basis. To register see page 20.

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

organized to complete the Swiss Archive for Preservation and the Swiss Literary Archive. The project's aim is to manage all archived goods of the National Library and to make these available to clients via the Internet. The physical repositories of the collection will be the last stop on the tour.

Center of Excellence (Paper Preservation)

Since the mid-1990s, the Swiss National Library has increasingly developed as a center of excellence for paper preservation. The construction of a new and modern subsurface storage room, the purchase of a high-capacity paper neutralizing machine, and the development of a catastrophe plan has made the Swiss National Library not only a national, but an international, leader in the consideration of preservation issues. As part of its mandate, the Swiss National Library offers its knowledge and services to other institutions.

Tour attendees will be given a guided tour of the whole department, including the subsurface store room and the preservation studios.

Meeting Point for both tours:
Reception area of the Swiss National Library, Hallwylstrasse 15.

Technical Program

Wednesday June 25, 2008

8:30 – 9:20
Keynote Session
Session Chair: Rudolf Gschwind,
University of Basel (Switzerland)

Preserving the Nation's Collective Memory: Challenges, Problems and Solutions, *J.-F. Jauslin, Federal Office of Culture (Switzerland)*

9:20 – 12:10
Creating and Managing Digital Collections, Formats, and Metadata
Session Chair: Christoph Graf,
University of Bern (Switzerland)

Ingest Workflow for Electronic Publications at the Swiss National Library, *Hansueli Locher, Swiss National Library (Switzerland)*

From Digitization to Repository—A Case Study on Creating a Managed Environment, *Kevin Devorsey, Steven Puglia, and Erin Rhodes, US National Archives and Records Administration (USA)*

Bringing Self Assessment Home: Repository Profiling and Key Lines of Inquiry Within DRAMBORA (Focal), *Andrew McHugh, Seamus Ross, and Perla Innocenti, University of Glasgow (UK); and Raivo Ruusalepp and Hans Hofman, National Archives of the Netherlands (The Netherlands)*

Archival Structures, Workflows, and Distributed Systems, *Jürgen Enge, Zurich University of the Arts (Switzerland)*

Challenges of Long-Term Archiving in the Pharmaceutical Industry, *Jurg Hagmann and Anita Paul, Novartis (Switzerland)*

Make your plans early and save! Early Conference and Short Course Registration Fees Available until May 15

Bit Mountain: Software for Storing Petabytes Inexpensively, *Shane Hathaway, The Church of Jesus Christ of Latter-day Saints (USA)*

13:40 – 17:10
Creating and Managing Digital Collections, Formats, and Metadata (continued)
Session Chairs: Bill le Furgy, US Library of Congress, (USA), and Maria Guercio, University of Urbino (Italy)

The PLANETS Approach Towards Migration Tools, *Eld Zierau and Caroline van Wijk, Royal Library Denmark (Denmark)*

Testing the Scalability of a DSpace-Based Archive, *Dharitri Misra, James Seamans, and George R. Thoma, National Library of Medicine (USA)*

Managing the Ingest of Heterogeneous Content Streams: A Case Study in Variability and Quality Control, *Evan Owens, Amy Kirchhoff, and Catherine Anico, Portico (USA)*

Preservation of Databases—Normalized Object Model, *Mårten Stenius and Osmo Palonen, Mikkeli University of Applied Sciences (Finland)*

Analysing the Impact of File Formats on Data Integrity, *Volker Heydegger, University of Cologne, (Germany)*

Document Formats for Archiving, *James King, Leonard Rosenthol, and Diana Helander, Adobe Systems Inc.(USA)*

Standardization in the Area of Digital Long-Term Preservation, *Sabine Schrimpf, German National Library (Germany)*

PDF/A: ISO Standard for Long Term Archiving, *Klaus Jung and Thomas Zellmann, LuraTech Imaging GmbH (Germany)*

Requirements for Applying Emulation as a Preservation Strategy, *Jeffrey van der Hoeven, National Library of the Netherlands (The Netherlands); Bram Lohman, Tessella Support Service, plc (UK); and Remco Verdegem, Nationaal Archief of the Netherlands (The Netherlands)*

Thursday June 26, 2008

8:30 – 9:15
Keynote Session

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

Archivists of the World: You Have Nothing to Lose but your Shelves!, *Richard Wright, BBC (UK)*

9:20 – 10:20
Imaging, Microfilm and Digital Preservation

Session Chair: Lukas Rosenthaler,
University of Basel (Switzerland)

Optical Soundtrack Restoration: The Image Processing Approach, *Bernard Besserer, Abdelali Hassaine, and Etienne Decenciere, Universite de La Rochelle (France)*
Color Accurate Photography Using Unmodified Digital Cameras and Theatrical Filters, *John Redman, Hewlett-Packard Company, and Mark Mudge, Cultural Heritage Imaging, (USA)*
Best Practices for Digitizing Photographs: A Network Analysis of Influences, *Paul Conway, University of Michigan (USA)*

10:20 – 10:40
Interactive Paper Previews

Digital Maps of Historical Buildings: Preservation Issues and Solutions, *Christoph Schlieder and Peter Wullinger, University of Bamberg (Germany)*
Digital Collection of Moving Images: A Use Case Scenario from the World of Broadcast Television, *Unni Pillai and Kara Van Malssen, New York University (USA)*
A Holistic Approach for Establishing Content Authenticity and Maintaining Content Integrity in a Large OAIS Repository, *Katherine Zwaard and Lisa LaPlant, US Government Printing Office (USA)*
Canadian Forces Image Collection Digitization Plan, *Serge Tremblay and Marc Comeau, National Defense Image Library and Archives (Canada)*

Evaluation of the Digilab Archive System, *Hugo Quisbert, Luleå University of Technology (Sweden)*
Permanent Public Access and GPO's Content Life Cycle Strategies and Solutions, *Gil Baldwin and Robin Haun-Mohammed, US Government Printing Office (USA)*
International Polar Year 2007 – 2008: Resources on Polar Research in the NOAA Central Library Network, *Anna Fiolek, NOAA Central Library (USA)*
Applying Artists' Methodologies to Archiving: A Case Study of John Latham's Archive, *Athanasios Velios and Simon Gould, University of the Arts, (UK)*
Digital Image Preservation—A Consumer Focus, *James A. Peyton, International Imaging Industry Association (I3A) (USA)*
The Significance of Quality in Mass Book Digitization Projects, *Lotfi Belkhir, Kirtas Technologies (USA)*

11:10 – 12:10
Imaging, Microfilm, and Digital Preservation continues

Metamorfoze Preservation Imaging Guidelines, *Hans van Dormolen, Koninklijke Bibliotheek (The Netherlands)*
Digitizing Simplified: Large-scale Digitizing at the Customer's Request, *Marc Holtman and Ellen Fleurbaay, Stadsarchief Amsterdam (The Netherlands)*
An Exploratory Study of Scanning Exposure Variability, *F. Barry Wheeler, US Library of Congress, (USA)*

12:10 – 12:30
Interactive Paper Previews

An Inexpensive Web-Based Finding— Identification Aid for Nitrate Negatives, Employer User-Supplied Information, *Andrew Rodger, Library and Archives Canada (Canada)*
Life Beyond Uncompressed TIFF: Alternative File Formats for Storage of Master Image Files, *Robèrt Gillesse, Judith Rog, and Astrid Verheusen, National Library of the Netherlands/ Koninklijke Bibliotheek (The Netherlands)*

Practical Applications to Adobe's eXtensible Metadata Platform on the Web, *Hyung J. Park and Dong H. Har, Chung-Ang University (Korea)*
The Study on Web Archive: The Description and the Format Approach, *Li-Chiao Wang and Shien-Chiang Yu, Academia Sinica (Taiwan)*
Open Horizons: Archiving Perspectives for Services and Frameworks, *Stefan Bürer, Historisches Museum Basel (Switzerland)*
Digitization: Advancement in the Study and Preservation of Coins, *Ethan Gruber, University of Virginia (USA)*
Spectral Image Acquisition of Icons, *Markku Hauta-Kasari, Jukka Antikainen, Muskan Regmi, Mitwa Kaemba, Timo Jaaskelainen, and Jussi Parkkinen, University of Joensuu (Finland)*
Measuring and Managing Digital Image Sharpening, *Don Williams, Image Science Associates, and Peter Burns, Carestream Health, Inc. (USA)*
A New Proposal for the Accurate Recovery of Spectral Reflectances of Imaged Objects Without Prior Knowledge, *Noriyuki Shimano and Mikiya Hironaga, Kinki University (Japan)*
"Diasec"—and Other Finishing Techniques— Investigation of Light Induced Aging, *Sebastian Dobrusskin, Stefan Wülfert, and Sabine Zorn, University of the Arts Berne (Switzerland)*

14:00 – 15:20
Imaging, Microfilm and Digital Preservation (continues)

Session Chair: Bernard Besserer,
University La Rochelle (France)

Preservation Copying of Endangered Negative Collections, *Ulla Bøgvad Kejser, The Royal Library of Denmark (Denmark)*
On the Economics of Microfilm—Does Film Outpace Today's Electronic Storage Systems?, *David Gubler, Fachlabor Gubler AG (Switzerland)*
Storage of Audio Data on Microfilm for Long Term Storage: Presentation of the Project

DANOK, *Andreas Hofmann and Dominik Giel, Fraunhofer Institute of Physical Measurement Techniques (Germany)*
Predicting the Archival Life of Removable Hard Disk Drives, *Paul Williams, ProStor Systems, Inc.; David S. H. Rosenthal, Stanford University Libraries; Mema Roussopoulos, Harvard University; and Steve Georgis, ProStor Systems, Inc. (USA)*

15:20 – 15:50
Interactive Paper Previews

Algorithms for Optimization of Accurate Color HDR Image Archiving, *Sergey Bezryadin, KWE International Inc. (USA)*
Representation of Digitized Documents Using Document Specific Alphabets and Fonts, *Stefan Pletschacher and Arved C. Hübler, Chemnitz University of Technology (Germany)*

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*Non-US address membership; based on Feb. 28, 2008 exchange rate.

Scanning Preservation Microfilms: Key Issues, *Hans van Dormolen, Koninklijke Bibliotheek (The Netherlands)*

Digitization Workflow for Color Transparency Collections, *Melville R.V. Sahyun and Irene M. N. Sahyun, consultants (USA)*

Toward the Computation of the Channel Capacity of Microfilms, *Ariel Amir,[1] Florian Müller,[2] Peter Fornaro,[2] Rudolf Gschwind,[2] Joachim Rosenthal,[1] and Lukas Rosenthaler[2]; [1]University of Zurich and [2]University of Basel (Switzerland)*

Digital Data Storage on Microfilm—Error Correction and Storage Capacity Issues, *Christoph Voges, Volker Märgner, and Tim Fingscheidt, Braunschweig Technical University (Germany)*

RGB Laser COM System for Recording Digital Image Data on Color Microfilm Offers New Perspectives for Long-term Archiving, *Daniel Fluck, Pro Archive, Ltd. (Switzerland)*

Virtualisation as Conservation Measure, *Tabea Lurk, AktiveArchive, (Switzerland)*

A Data Quality Approach to Support Email Preservation, *Cinzia Cappiello and Barbara Pernici, Politecnico di Milano (Italy)*

A FC/AL-Based P2P Network for Personal Archive and Sharing, *S.W. Chung and Jonathan C.L. Liu, University of Florida (USA)*

Reliable Long Term Archiving Storage Architecture, *Keith Rajecki, Brian Parks, and Mike Selway, Sun Microsystems Inc. (USA)*

Challenges, Curricula, and Competencies:

Conference Reception

Join colleagues on Wednesday evening for this year's exciting event, held at the Zentrum Paul Klee.

Exra tickets are available for guests accompanying attendees.

See registration form for details.

Researcher and Practitioner Perspectives for Informing the Development of a Digital Curation Curriculum, *Helen R. Tibbo, Carolyn Hank, and Christopher (Cal) Lee, University of North Carolina at Chapel Hill (USA)*

Colour Holography and Its Use in Display and Archiving Applications, *H.I. Bjelkhagen and P.G. Crosby, NEWI/OpTIC (UK)*

The Construction of the Chinese Gazetteer Information System, *I-Mei Hung, Pi-Ling Pai, and Hsiung-Ming Liao, Academia Sinica (Taiwan)*

Long-Term Preservation of Photographic Originals and Digital Image Files in the Corbis Sygma Collection in France, *Henry Wilhelm, Wilhlelm Imaging Research, Inc. (USA); Cedric Gressent, Corbis Sygma (France); and Drew Maclean, Corbis (USA)*

15:50 – 18:00
Interactive Paper Session

Friday June 27, 2008

8:30 - 9:15
Keynote Session
Session Chair: Rudolf Gschwind, University of Basel (Switzerland)

Doing More with Less: The Future of Digital Preservation in a Constrained Fiscal Environment, *Laura E. Campbell, US Library of Congress (USA)*

9:15 – 12:50
Economics, Strategies, and Projects
Session Chair: Evi Honegger, Novartis Pharma AG (Switzerland), and Manfred Thaller, University Cologne (Germany)

400,000 Pages and Counting: Strategic Directions for Historic Newspaper Digitization, *Jim Duncan, Colorado State Library (USA)*

Cultural, Educational, and Commercial Applications of Digital Archives, *Yung-Cheng Hsieh,*

Hui-Wen Cheng, and Chao-Chen Chen, National Taiwan University of Arts (Taiwan)

How to Cope with 300,000 Scans a Day, *Bernd Reiner, Leibniz Supercomputing Centre, and Thomas Wolf-Klostermann, Bavarian State Library (Germany)*

Building a Swiss National Memory Policy in a Digital World: An Utopian Project? (Focal), *Peter Knoepfel and Mirta Olgiati, Swiss Graduate School of Public Administration (Switzerland)*

Considerations to Manage and Access 500 Million Digital Objects Forever, *Michael Selway, Brian Parks, and Keith Rajecki, Sun Microsystems Inc. (USA)*
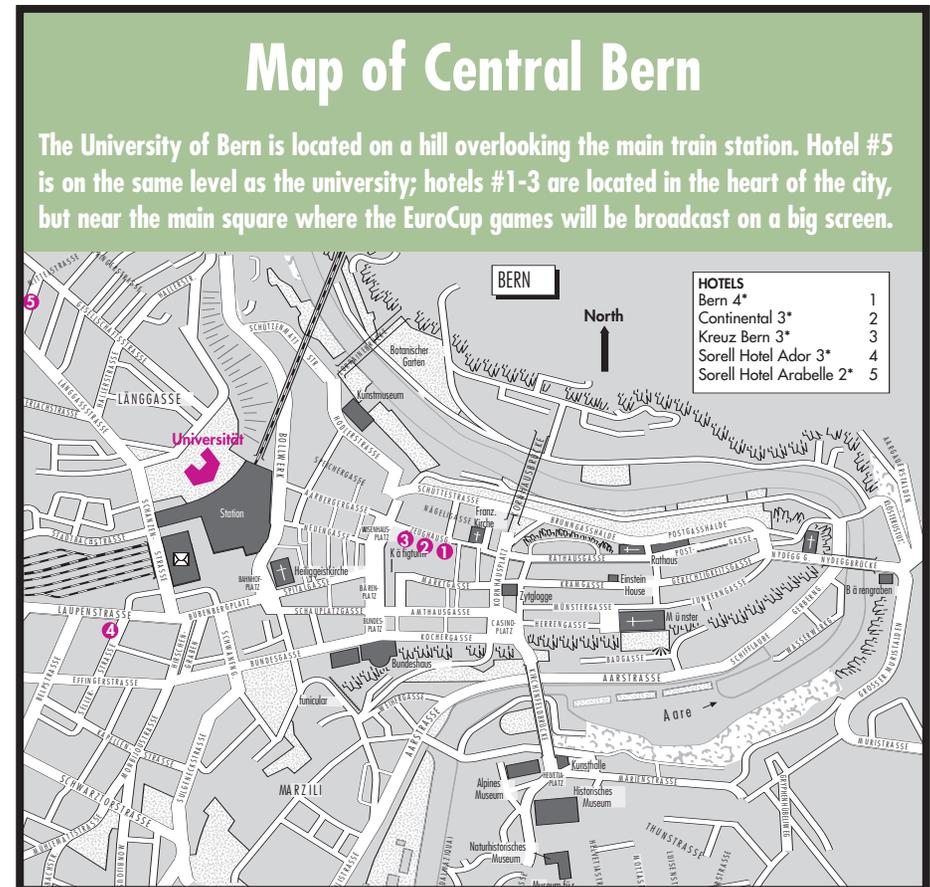
Filipiniana Materials and the Philippine e-Lib:

The Philippine Perspective of Digitizing Printed Heritage Materials, *Salvacion M. Arlante and Eimee Rhea C. Lagrama, University of the Philippines Diliman (Philippines)*

The Value Added Application of Taiwan's National Digital Archives Program (NDAP), *Li-Kuei Hsueh, National Chengchi University, and Li-Chiao Wang, Academia Sinica (Taiwan)*

Library & Archives: Canada's Virtual Loading Dock, *Pam Armstrong and Marie-Claude Renaud, Library and Archives Canada (Canada)*

Capturing the Moment: Strategies for Selection and Collection of Web-based Resources to Document Important Social Phenomena, *Christopher A. Lee and Helen R. Tibbo, University of North Carolina at Chapel Hill (USA)*

Map of Central Bern

The University of Bern is located on a hill overlooking the main train station. Hotel #5 is on the same level as the university; hotels #1-3 are located in the heart of the city, but near the main square where the EuroCup games will be broadcast on a big screen.

HOTELS	
Bern 4*	1
Continental 3*	2
Kreuz Bern 3*	3
Sorell Hotel Ador 3*	4
Sorell Hotel Arabelle 2*	5

Short Course Program: Tuesday, June 24, 2008

TRACK 1: CASE STUDIES

T1A: Making Digital Preservation Affordable: Values and Business Models

8:00 – 10:00 (2 hours)
Instructor: Simon Tanner, King's College London

Users and other stakeholders define the economic factors by which digital information is valued, used, and ultimately retained. In looking to finance digital preservation there are a number of different issues to consider, including business planning, risk management, possible revenue streams, and a clear cost/benefit relationship. This short course discusses strategic considerations related to the effective financing of digital preservation and offers a means of developing a cost/benefit justification to help secure the financial underpinning needed to make institutional digital preservation a realistic proposition. The course covers models for monetizing content; the role of public repositories; costs, business models, and OAIS; balancing costs with benefits and institutional mission; risks and consequences; and justifying and building a case for digital preservation.

Benefits

This course will enable the attendee to:
- Understand different cost and business models associated with digital preservation
- Determine how to build and justify a plan for digital preservation that benefits an institution's mission

Intended Audience

Managers in the archive, library, and museum communities who work with digital preservation or on conservation strategies.

Simon Tanner is the Director of King's Digital Consultancy

Services (KDCS) at King's College London. KDCS provides research and consulting services specializing in the information and digital domain for the cultural, heritage, and information sectors. Tanner is also co-director of the Desmond Tutu Digital Archive project with two South African partner institutions. He is an independent member of the UK Legal Deposit Advisory Panel, chair of its Web Archiving sub-committee, and a member of the JISC Digitisation Advisory Group. Tanner authored the book Digital Futures: Strategies for the Information Age *with Marilyn Deegan; they co-edited the book* Digital Preservation. *He leads the committee deciding how to digitize the complete Dead Sea Scrolls in Israel.*

T1B: How to Save Audiovisual Archive Content by Digitization—And then How to Save the Digits (in Archives Great and Small)

10:15 – 12:15 (2 hours)
Instructor: Richard Wright, BBC

This course reviews audiovisual preservation/digitization projects across Europe, beginning with major broadcast archives, but also including the requirements and general possibilities for smaller collections. A particular issue is addressing the many audiovisual collections that are part of institutions that have little or no audiovisual technical expertise. Are these collections doomed? How can non-specialists get the information and the services—not to mention budgets—they need to preserve this material and make it accessible? Audiovisual archives are at the start of a revolution: Content hitherto inaccessible can now be put on YouTube; digital storage costs are 99% cheaper than 15 years ago; and there is a groundswell of support for public domain and Creative Commons repositories. Audiovisual "preservation and access" success stories are presented and the question of what happens after digitization—and a future roadmap for this material—is discussed.

Benefits

This course will enable the attendee to:
- Understand audiovisual preservation/digitization requirements for large and small collections
- Determine the budget needed to preserve collections
- Discover how to protect archival materials with little or no expertise
- Explore the future of digitization

Intended Audience

Anyone responsible for collections that include audiovisual materials, or anyone interested in their preservation and related access issues.

Richard Wright has been working on audiovisual preservation for the BBC since 1974. He headed the EC project Presto (2000-2002), which developed the idea of efficient broadcast archive digitization using a Preservation Factory. A group of European archives extended this work to all audiovisual collections in the PrestoSpace project (2003-2007). Wright's "Preservation Guide" (wiki.prestospace.org) is the top result in Google when one searches 'audiovisual preservation'. His background is acoustics, speech, and signal processing research. He holds a PhD from Southampton University.

T1C: Significant Properties and Their Role in Digital Preservation

13:45 – 15:45 (2 hours)
Instructors: Stephen Grace, Centre for e-Research; Neil Grindley, Joint Information Systems Committee; and Grant Young, The Technical Advisory Service for Images

To enable digital images and other objects to remain both accessible and meaningful over time, it is critical to understand what aspects of them need to be preserved. Recent work in this area has looked at this issue using the concept of 'significant properties,' as well as a variety of digital

object types, including raster images, vector images, moving images, structured text, audio, and software. Three significant properties of a vector graphic, for example, might include line width, opacity, and color, the primitives and associated attributes that may be described differently by different graphics systems (*e.g.,* PDF/A, SVG 1.1, WebCGM 2.0).

An organization with curatorial responsibility for digital objects cannot assert or demonstrate the continued authenticity of those objects over time, nor across transformation processes, unless it can identify, measure, and declare the specific properties on which that authenticity depends. Nor can it undertake the preservation actions required to maintain access to those objects unless it can characterize their current technical representations with sufficient detail. Confidence at the object level is also informed by the trust placed in the organization curating the files.

The purpose of this course is to look at the nature and extent of recent work in the area of 'significant properties;' to give a

more detailed view of the ongoing work being carried out by the InSPECT Project; and to then consider the wider potential impact of this work on creators and users of digital images.

Benefits
This course will enable the attendee to:
- More clearly understand the scope and extent of recent work in the identification and exploitation of the 'significant properties' of digital objects
- Identify the component features of digital objects in relation to preservation procedures
- Employ a more rigorous approach to preservation planning of digital image collections
- More effectively advocate best-practice preservation techniques to the communities in which they operate
- Consider the impact of usage and context in determinations of significance

Intended Audience
Image collection managers, digital repository managers, preservation practitioners, and digitization project staff.

Stephen Grace is Preservation Manager for the Centre for e-Research at King's College London (CeRch), which builds on the success of AHDS in managing and advising on digital preservation. He leads activity on the long-term curation of digital materials, including active research projects on significant properties and building preservation services on existing institutional repositories. Grace has previously managed the digitization program in a national museum and been the project manager for a website featuring digitized materials from library, archive, and museum sources.

Neil Grindley is the Digital Preservation Programme Manager at JISC (Joint Information Systems Committee), an organization that funds and supports technology-related projects and services for the UK Higher and Further Education sectors. The Digital Preservation Programme supports a number of projects, studies, and other initiatives, the overall objective of which is to raise

awareness and increase the capacity of relevant communities to engage with digital preservation as part of a life-cycle management approach to the creation and exploitation of digital resources. Grindley previously worked on a program to promote the advanced use of ICT methods for research; prior to that he was involved with IT management and image cataloging and database work at the Courtauld Institute of Art.

Grant Young is a Technical Research Officer with Technical Advisory Service for Images (TASI). TASI, a national JISC service, provides support for those creating, managing, using, and preserving multimedia resources. Grant has a background in library, archive, and digitization project management. In addition to his work with TASI, he is managing a project within the JISC's Digitisation Programme.

T1D: SIARD—A File Format for Archival of Relational Databases
16:00 – 18:00 (2 hours)
Instructors: Krystyna W. Ohnesorge and Hartwig Thomas, Swiss Federal Archives

As central information about today's administrative activities is often stored in databases, it is important to archive database content. The Swiss Federal Archives (SFA)—and other archives—are obliged to archive these types of administrative "documents" in a way that ensures accessibility of database content for at least 50 years. Unfortunately no standardized format exists for archiving database content over several decades.

Although the concept of relational databases in the 1970s was based on the assumption that data have a longer life expectancy than software or hardware, only the query language SQL has been weakly standardized. Oracle table spaces, MS Access MDB-files, and most other database file formats are proprietary and therefore not suited for archival needs. SFA has developed a storage format for relational databases and SIARD software (software-independent archival of relational databases)

for handling database content archived in this format. The SIARD format is an open format based on the standards SQL: 1999 and XML and therefore it is appropriate for archiving database content.

This course explains how SIARD was developed and will be used by SFA beginning in the second quarter of 2008. The SIARD format contains all the base tables of the database and its meta data in XML files that are contained in a single ZIP file. The database metadata describing schemas, tables, columns, and other database content is discussed during the course, as is the structure of the SIARD XML file published by SFA and automatic verification abilities. The SIARD software permits examining database data, as well as loading archived data into a commercial database system. Practical examples of how this can be done and how SIARD is used by SFA is also presented in this course.

Benefits
This course will enable the attendee to:
- Understand the problem of archiving relational databases
- Evaluate the decisions leading to the SIARD format
- Learn the basic structure of the SIARD format
- Explore the possibilities of using SIARD software for archiving relational databases and searching in them

Intended Audience
Archivists, librarians, project managers, and others concerned with long-term preservation of relational databases.

Krystyna W. Ohnesorge, head of the "Unit Innovation and Preservation" of the Swiss Federal Archives, Bern (www.bar.admin.ch), received her PhD in lossless image compression at the University of Zurich. At SFA, her unit is responsible for record management, digital archiving, and preservation. The Unit is responsible for establishing and setting Federal Government standards—as well as advises government agencies—in these three areas

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Hartwig Thomas, CEO Enter AG in Zurich (www.enter-ag.ch/hartwig/cv.html) is an implementer of SIARD 2.0. He received his PhD on image half-toning algorithms at the IBM Research Laboratory in Zurich.

TRACK 2: TECHNOLOGY

T2A: Color Image Workflows and Architecture for Archiving Applications
8:00 – 12:15 (4 hours)
Instructor: Sabine Süsstrunk, Ecole Polytechnique Fédérale de Lausanne (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. This course covers workflow—from image capture to visualization to archiving—and discusses the appropriate image parameters for each step.

Benefits

This course will enable the attendee to:

- Understanding image formation, colorimetry, and color management
- Apply ICC color management to imaging workflow
- Recognize different image states and their relevancy in image archiving environments
- Identify the correct image capture parameters (scanners and digital cameras) and color management workflow for image archiving and visualization needs
- Define color image encodings, resolution, file formats, and compression requirements for image files

Intended Audience

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

Sabine Süsstrunk is Professor for Images and Visual Representation at the Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland. Prior to that she was the principle imaging researcher for Corbis Corp. in Seattle, WA. Süsstrunk is a member of ISO TC42 WG18 and JWG20/22/23, the ISO committees defining digital photography and color imaging standards, and the director of CIE Division 8 (Imaging Technologies). She has lectured and published extensively in the area of color imaging, and is a consultant to museums, archives, and companies.

T2B: Color Display Holography
13:45 – 15:45 (2 hours)
Instructor: Hans I. Bjelkhagen,
Centre for Modern Optics

While holography has been around since the mid-1960s, so far interest in using holography to display objects has been rather limited mainly because of the monochrome nature of the image. Recent development in improved imaging techniques and recording materials—the most important being the possibility of recording 3D images in full color—have caused an increased interest in display holograms.

Color holographic imaging technology has many potential applications and markets. For example, 3D imaging can be used for the display of expensive or unique art pieces, museum artifacts, advertising, etc. The virtual color image behind a holographic plate represents the most realistic-looking image of an object that can be recorded today. The extensive field of view adds to the illusion of beholding a real object rather than an image of it. By choosing the optimum recording laser wavelengths within the spectrum, good color rendering can be achieved. It may sound strange, but color holography may become an important reproduction technique for 2D objects, such as oil paintings, as well. Holographic reproductions provide extremely realistic-looking images, showing texture details such as brush strokes and the painter's signature. In addition, holographic reproductions do not fade nor change color even if continuously on display. This fact is of importance from an archival point of view as well.

This short course introduces attendees to this technology and its applications.

Benefits

This course will enable the attendee to:

- Understand how color holograms are produced and prepared for display
- Discover potential application for and uses of color holography in museum and other collections
- Learn about the benefits of holography for collectors, archivists, and researchers.
- Understand analog vs. digital holograms
- Clarify color fidelity issues
- Review holograms and image permanence, including care of holograms

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- Explore display techniques and lighting
- Learn about the holographic recordings of paintings

Intended Audience

Curators, archivists, conservators, researchers, and those who work in the commercial and promotional side of museums and collections.

Hans I. Bjelkhagen is Professor of Interferential Imaging Sciences at the North East Institute for Higher Education, Wrexham at the Centre for Modern Optics in North Wales. During the past 10 years, Bjelkhagen has been most recognized for his work in color holography, holographic recording materials, and Lippmann photography. At the Centre for Modern Optics, he conducts research on 3D imaging, color holography, color HOEs, holographic recording materials, and Lippmann photography. Bjelkhagen has recorded many holograms for museums, published more than 100 papers in refereed journals and conference proceedings, and holds nine international patents. His most important academic contribution is Silver-Halide Recording Materials for Holography and Their Processing, *considered to be the standard textbook on the subject.*

T2C: Image Science for the Archiving Community
16:00 – 18:00 (2 hours)
Instructor: Alan Hodgson,
Alan Hodgson Consulting

Image Science is a broad topic covering parameters that can be used to describe an image. This course gives a concise overview of what image science can offer the Archiving community. It is equally applicable to images in the digital or analog domain. It is therefore pertinent to any hard copy technology such as paint, traditional photo, or new recording media such as inkjet as well as digital images. The course covers issues such as image content, noise, tonal range, and digitization as a brief overview.

The course also covers the image science considerations of digitization by whatever means, display, and any subsequent printing. The course is illustrated with case studies from printed and digitized images.

Benefits

This course will enable the attendee to:

- Understand the basic principles of image science as applied to the Archiving community in the widest sense
- Have the knowledge to access resources available to investigate the elements of this presentation to a greater depth, including books, periodicals, shows, and conferences
- Summarize the tools of image science and how these can be best used in projects
- Understand image science terminology used in product literature in order to better evaluate research papers and proposals
- Be aware how new technology from various disciplines is finding application in image science and look out for the opportunities this presents

Intended Audience

Intended to provide an overview of the topic to archivists, curators, conservators, and all those who have an interest in what makes an image, this course requires no previous knowledge of the topic. Although many works on this subject delve deep into the mathematics of the discipline, this course avoids all this by using visual imagery to describe and explain the topic.

Alan Hodgson is an independent consultant based in the UK with more than 20 years experience in image science. A degree in colorant chemistry took him into the photographic industry and scientific imaging and inkjet printing. He currently works on projects involving imagery from astronomic to microscopic dimensions for a range of clients, including the archiving community. Because of his wide technical background, Hodgson gives imaging issues a broader perspective with real examples. In addition to IS&T, he is active in the Royal Photographic Society and the Institute of Physics.

TRACK 3: HARD COPY ISSUES

T3A: Contemporary Photography: Digital Prints
8:00 – 12:15 (4 hours)
Instructors: Franziska Frey, Rochester Institute of Technology, and Martin Jürgens, conservator

This course focuses on the materials, identification, and stability of digital prints used by contemporary artists. The aim of the course is to provide attendees with the knowledge and tools needed to handle the issues surrounding the acquisition and preservation of prints made from digital files, as well as to provide an understanding the trends in imaging technology and artists' use of modern photographic printing techniques.

Benefits
This course will enable the attendee to:
- Describe various digital printing processes used by photographers today
- Understand the materials used for the different processes
- Describe the permanence issues associated with the different processes
- Assess storage requirements for digital prints
- Explain some of the digital preservation issues connected to digital photography

Intended Audience
This course is intended for those in the archive, library, and museum communities who are creating, using, or preserving digital prints, and for technologists who want a better understanding of the issues surrounding digital prints in contemporary art collections.

Franziska Frey, professor in the School of Print Media at Rochester Institute of Technology, received her PhD in Natural Sciences (Concentration: Imaging Science) from the Swiss Federal Institute of Technology in Zurich (1994). Before joining the faculty of the School of Print Media, she worked as a research scientist at the Image Permanence Institute at RIT. Frey publishes, consults, and

teaches worldwide on various issues related to establishing digital image databases and digital libraries. She is also involved in several international standards groups dealing with technical metadata and digital photography and is a member of the IS&T Board of Directors.

Martin Jürgens studied photography and design at the Technical University in Dortmund, Germany. He holds an MS from Rochester Institute of Technology and a Master of Art Conservation from Queen's University in Kingston, specializing in paper conservation. Since 2001, he has been working as a photograph conservator in private practice in Hamburg, Germany. Jürgens areas of research and teaching include historic and contemporary photography, and the materials, chemistry, and preservation of digital prints.

T3B: Digitizing Historical Negative Collections
13:45 – 15:45 (2 hours)
Instructor: Stephanie Ogeneski, National Anthropological Archives, Smithsonian Institution

This course gives those working with historical negative collections a fundamental understanding of the relationship between analog and digital images, and explores the approaches to consider when embarking on a digitization project to ensure accuracy in reproduction. Participants are given an overview of the historical material and how that material is conceived, captured, and translated from analog to digital within a digital environment. Digital guidelines and tone reproduction are also discussed.

Benefits
This course will enable the attendee to:
- Identify and evaluate image characteristics of analog materials: glass plate, nitrate, acetate, and polyester film base materials
- Learn about issues related to handling and special applications used in a digital environment related to the deterioration of these materials
- Identify and interpret digitization guidelines
- Assess workflow and quality control routines

Intended Audience
This course is designed for archivists, technicians, and anyone working with negative collections.

Stephanie Ogeneski is a Digital Imaging Specialist at the National Anthropological Archives, Smithsonian Institution. Prior, she served as the manager of the digital imaging facility at the Chicago Albumen Works. She received a Certification in Photographic Preservation and Archival Practice from the George Eastman House and was the recipient of Academic Specialist Grants through the US Embassy of Mexico Cultural and Academic Exchange Program. She has taught at Indiana and Purdue Universities and Simon's Rock College of Bard.

TRACK 4: PRESERVATION FORMATS

T4A: A Look Inside the Portable Document Format (PDF)
8:00 – 12:15 (4 hours)
Instructor: Leonard Rosenthol, Adobe Systems, Inc.

This course provides a peek inside the various aspects of the portable document format (PDF) including such areas as fonts, graphics, color, interactive elements, and security. Special attention will be paid to the use of PDF for "long-term archival storage of digital documents," as spelled out in ISO 19005 (PDF/A-1).

Benefits
This course will enable the attendee to:
- Understand the various types of content that can be present in a PDF
- Explore features of PDF unsuitable for long-term archival storage
- Describe the goals and decisions embodied in the PDF/A standard
- Use common industry tools to create and validate PDF/A-conforming documents

Intended Audience
This course is suitable for anyone who currently works with or may work with PDF documents in the future. No prior knowledge of any specific area is assumed and everyone is welcome.

Leonard Rosenthal recently returned to Adobe Systems, Inc., as the PDF Standards Evangelist and a senior member of the Acrobat engineering staff. following almost 10 years of involvement in the PDF world having worked as the director of Software Development for Appligent, the chief innovation officer for Apago, and running the successful consulting business of PDF Sages.

T4B: JPEG 2000 and other Formats for Image Preservation
13:45 – 18:00 (4 hours)
Instructor: Robert Buckley, Xerox Corporation

This course begins with an introduction to commonly used digital image formats and image compression methods, which lays the groundwork for discussing and comparing formats for image preservation, with an emphasis on TIFF and JPEG 2000. TIFF is typically used to store uncompressed images; JPEG 2000 is a still image compression standard based on wavelet technology. JPEG 2000 is attractive for image preservation and access because it can handle a wide range of applications, including gigabyte and high-dynamic range images, spectral imaging, digital cinema, and on-line image collections. This course explains the key parts of the JPEG2000 standard, explores its features, demonstrates its capabilities, and discusses who is using it and why.

Benefits
This course will enable the attendee to:
- Describe the basics of commonly used digital image formats
- Understand the different approaches to image compression
- Compare and contrast TIFF and JPEG2000 as formats for image preservation

- Relate JPEG 2000 features and options to the requirements for image reservation
- Explain the value of JPEG2000 for image preservation

Intended Audience

This course is intended for those in the archive, library, and museum communities who work with images and image collections and who want to understand the tradeoffs between different image formats, what JPEG2000 has to offer, and how their archiving application may benefit from it.

Robert Buckley is a Research Fellow with the Xerox Innovation Group in Webster, NY. He is the Xerox representative on the US JPEG 2000 committee and was the Project Editor for Part 6 of the JPEG2000 standard, which defines the JPEG2000 file format for compound and document images. He was also the lead author for TIFF-FX, the IETF standard file format for Internet fax, and currently chairs the CIE Technical Committee on Archival Color Imaging. Buckley is President of the Inter-Society Color Council and an IS&T Fellow and member of the Board. He is the Xerox Principal in the JPEG 2000 Collaboration with the US Library of Congress and is the author of the DPC Technology Watch Report on JPEG 2000.

TRACK 5: CAMERAS AND SCANNERS

T5A: Evaluating Digital Scanner and Camera Imaging Performance

8:00 – 12:15 (4 hours)
Instructors: Peter Burns, Carestream Health, Inc., and Don Williams, consultant

Many of today's standards for characterizing imaging performance are based on image science principles. We begin by introducing this perspective and then describe its application to scanner and digital camera performance in an archiving environment. These standards and accompanying tools help the user control tone reproduction and evaluate manufacturers' claims of resolution, dynamic range, and noise. We then identify several common image artifacts associated with digital image capture. Through examples, we describe how performance parameters can be monitored by summary measures acquired automatically as part of a quality assurance process.

Benefits

This course will enable the attendee to:
- Recognize 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 a manufacturer's scanner performance with the above metrics using publicly available standards, compliant software, and targets
- Understand summary measures for monitoring performance in workflows
- Identify several digital imaging distortion sources from image data

Intended Audience

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.

Peter Burns works on image evaluation, modeling, and image processing for medical imaging systems at Carestream Health, Inc. He previously worked for Eastman Kodak Company and Xerox Corporation. Burns has taught imaging courses for many years, as an adjunct faculty member at RIT, at Kodak, and at previous Archiving conferences.

Donald Williams, a consultant formerly with Kodak Research Laboratories, focuses on quantitative performance metrics for digital capture imaging devices and imaging fidelity issues for the cultural heritage community. He has taught short courses for many years and contributes to several imaging standards activities.

T5B: Scanner and Camera Imaging Performance Workshop

13:45 – 18:00 (4 hours)
Instructors: Peter Burns, Carestream Health, Inc., and Don Williams, consultant

This workshop, new for 2008, is aimed at those interested in the practical application of imaging performance evaluation and control for collections. Following a brief review of current practice and standard methods, the course addresses several common problems faced by those providing imaging services, or seeking to improve image content. In each of the cases addressed, the selection and development of test plans, performance measurements, and simple analysis are discussed. Attendees have the opportunity to perform evaluations using analysis software provided, illustrating the uses and limitations for the methods described. This workshop complements T5A: Evaluating Digital Scanner and Camera Imaging Performance, but is also useful to those who do not attend the course or who have attended the course in the past.

Benefits

This workshop will enable the attendee to:
- Identify sources of performance variation in digital image conversion
- Describe several existing standards to characterize scanner and camera performance
- Understand user requirements for analysis software tools
- Develop test plans for performance investigation
- Apply summary measures to monitoring of performance

Intended Audience

Managers, engineers, and technicians interested in evaluating and monitoring scanner and camera performance. A general knowledge of digital scanner and camera operation will be assumed.

See instructor bios under T5A: Evaluating Digital Scanner and Camera Imaging Performance.

Archiving 2008 Hotel Registration

Name_____

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All requests for reservations must be received by May 19th.

IS&T has arranged for a limited number of rooms at the following hotels at the noted rates. Detailed information on each hotel can be downloaded from www.imaging.org/conferences/archiving2008. Please note that we will make every effort to get you the hotel of your choice, but cannot guarantee it. Also note that all prices are quoted in Swiss Francs (CHF). Current exchange rates can be calculated at www.xe.com/ucc/.

Please prioritize your hotel preference in the following list:

Hotels	Dates Available
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___ Hotel Continental double room with twin beds CHF150	June 24-26
___ Hotel Kreuz Bern single room CHF140	June 23-27
___ Hotel Kreuz Bern double room/single occupancy CHF160	June 23-27
___ Hotel Kreuz Bern double room CHF180	June 23-27
___ Sorell Hotel Ador single room CHF155	June 24-26
___ Sorell Hotel Arabelle single room CHF135	June 24-26

A major credit card is need to hold your reservation: ___ MasterCard   ___ VISA

Card# _____ Exp. Date _____

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Archiving 2008 Tour Registration

Special Tours: "Behind the Scenes" at the Swiss National Library

Please see details on page 4 for tour descriptions, times, and location. There is no cost, but advance registration is required. As the number of participants is limited, registration is on a first come/first served basis **and dependent on conference registration.** Participants are responsible for getting themselves to the tour site on time. Further information and details will be sent via e-mail to all registered participants approximately one month prior to the start of the conference.

Name_____

I have registered for Archiving 2008 and would like to participate in the following tour (please indicate order of preference if you're open to either tour):

___ Print Collection and Swiss Archive for Cultural Heritage

___ Center of Excellence (Paper Preservation) in the Swiss National Library

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Conference registration includes admission to all technical sessions, coffee breaks, and the Welcome and Conference Receptions. Separate registration fees are required for short courses. There is no online registration for this event; fax form to +1-703-642-9094. All fees charged in Euros. You must register by June 8, 2008 to use this form; after that date, registration must be done in person at the conference venue.

Conference Registration (CHECK ONE)	until May 15	after May 15	TOTAL
___ IS&T Member	€370	€440	€ _____
___ Non-member	€450	€520	€ _____
___ Speaker/Session Chair Member	€280	€350	€ _____
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___ Student (ID required) Member	€85	€100	€ _____
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❑ Wednesday ❑ Thursday ❑ Friday			

Short Course Registration (be sure to multiply number of classes by per course fee and place on total line)
*Students may register for any short course at €35 until May 15; €50 after May 15.

	until May 15	after May 15	TOTAL
___ 4-hour Member (per class)	€150	€185	€ _____
___ 4-hour Non-member (per class)	€170	€205	€ _____
Check all that apply: ❑ T2A ❑ T3A ❑ T4A ❑ T4B ❑ T5A ❑ T5B			
___ 2-hour Member (per class)	€100	€135	€ _____
___ 2-hour Non-member (per class)	€125	€150	€ _____
Check all that apply: ❑ T1A ❑ T1B ❑ T1C ❑ T1D ❑ T2B ❑ T2C ❑ T3B ❑ T3C			

❑ I've taken 8 hours of classes. (Put "–€40" on line to right.) Does not apply to students rates.   € _____

Other

___ Extra Archiving 2008 Proceedings (special advance purchase/on-site rate)	€60		€ _____
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		GRAND TOTAL	€ _____

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