Archival Elements

Newsletter of the Society of American Archivists Science, Technology, and Health Care Roundtable

Contents

Summer 2010

Message From the Co-Chairs

Stephen E. Novak
Columbia University Health Sciences Library

Judith Wiener
Ohio State University Prior Health Sciences Library

We wish to invite all of you to attend the annual meeting of the Science, Technology and Health Care Roundtable to be held this year on Wednesday, August 11th from 5:30 to 7:30 p.m. at the Marriott Wardman Park Hotel, the main SAA conference hotel. As we went to press, we were *tentatively* scheduled to be in Room "Maryland C." However, SAA has warned us that room assignments may change at the last minute: **please be sure to check the final on-site program for the meeting location.**

The mission of the STHC Roundtable is to provide a forum for those working at institutions or those holding collections in the natural and social sciences, technology, and the health sciences. The Roundtable provides opportunities for members to discuss projects, share success stories, and explore methods to address common problems. However, all archivists are welcome!

After the usual Roundtable business meeting – which includes the election of a new co-chair – our program will feature two talks on varied subjects. First, we'll hear about a new finding aids consortium developed by the National Library of Medicine. Following that, a panel of NASA archivists will discuss their collections and their experiences at three different NASA facilities. It promises to be an out-of-this-world presentation! For more details, read the accompanying article.

One STHC-endorsed session made it onto the program this year. Session 203, "Providing Web Access to Medical and Health-Related Visual

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Materials for Diverse Users" on August 12th from 10:30 to 12:00, promises to illuminate how "archivists are adapting traditional archival practices such as collection development and description to make health related visual materials collections accessible to diverse groups of users via the Internet." We hope to see a big turnout of STHC members in support of the speakers, Timothy Wisniewski, Ginny Roth, and Polina Ilieva (who is also our incoming webmaster).

Besides this session, SAA features dozens of programs on incredibly diverse topics of interest, interesting plenary speakers, and plenty of opportunities for socializing with your colleagues. We hope that neither institutional budget cuts nor Washington's invariably steamy summer weather deter you from attending.

STHC Roundtable 2010 Meeting

**Wednesday, August 11, 2010, 5:30-7:30 p.m.
Marriott Wardman Park Hotel, Maryland C**

Agenda

Welcome and Introductions

Approval of Minutes

Old Business:

   Reports:
- *Archival Elements:* Liz Phillips
- STHC Website: Rose Roberto and Polina Ilieva
- STHC listserv
- Steering Committee Membership
- STHC Co-Chair Candidate Report: Steve Novak
- SAA 2010 Annual Meeting Sessions Proposal Report: Judy Wiener

Program

This year's program will feature two presentations that will be of great interest to our members. First, we will learn more about a topical finding aids consortium in the history of medicine that is being developed at the National Library of Medicine by John Rees.

John Rees:
John was recently appointed Archivist and Digital Resources Manager for NLM's History of Medicine Division, Archives and Modern Manuscripts Program. John has led the Program under a variety of titles since 2000. His new position reflects the dual nature of his existing duties managing the manuscripts program and working on NLM's intra-library digital repository architecture development team. John received his MA in Southern Studies in 1992 from the University of Mississippi and his MLIS in 1997 from the University of Texas-Austin with a concentration in Archival Enterprise.

Next, the program will feature a panel highlighting the perspectives and experiences at three separate NASA facilities: the Ames Research Center in Mountain View, California; NASA Headquarters in Washington, DC; and the Johnson Space Center in Houston, Texas. While they are all part of one agency, each center has a unique focus and the panelists will briefly describe their physical and digital materials, reference services, clientele, and challenges. Each participant will also discuss colorful and interesting reference requests made during her tenure with the organization.

Jane Odom:
Jane is Chief Archivist at NASA Headquarters. She has worked in the NASA History Office since 1999, maintaining a reference collection of historical documents and occasionally assisting the records management staff with the transfer of official records to NARA. She has undergraduate and graduate degrees in History from Winthrop University in South Carolina and nearly thirty years of experience in the archival profession.

Jennifer Ross-Nazzal:
Jennifer is the Historian for the NASA Johnson Space Center in Houston, Texas. She spends a good portion of her time combing through the JSC History Collection at the University of Houston-Clear Lake, in response to public and agency requests. She holds a Ph.D. in History from Washington State University, and next year her

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book, *Winning the West for Women: The Life of Emma Smith DeVoe*, will be published by the University of Washington Press.

April Gage:
April is archivist for the NASA Ames Research Center History Office, where her she maintains a reference collection of historical documents and curates the office's internal and external Web sites. She is a certified archivist who earned her MLIS from San Jose State University, which honored her with its outstanding thesis award for her oral and narrative history of the Freedom to Read Foundation. She received her BA in English from the University of California at Berkeley.

New Business

SAA 2011 Chicago Sessions Proposal Discussion

Adjournment

Our chief concern is to ensure that the STHC Roundtable reflects the interests of its participants. We welcome all suggestions relating to the above topics or concerning any other issues members might like to see addressed at our meetings. Please do not hesitate to get in touch with either of us:

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Around and About Archives

New Health Subject Guide at University of Mississippi Archives

Leigh McWhite
University of Mississippi

To assist researchers in locating holdings with health-related content, the Archives and Special Collections at the University of Mississippi recently posted a Health Subject Guide on its website at http://apollo.lib.olemiss.edu/center/archives_subject _guide/health. The material identified in the guide dates from the nineteenth century to the present and covers a variety of topics including epidemics, mental illness, physicians, and dentists. As the collecting focus of the repository is Mississippi, most of the items concern the Magnolia State.

Four sections comprise the subject guide: manuscript collections; primary source publications (catalogued holdings with first-hand accounts, data, or contemporary publications); secondary source publications (histories and other disciplinary

approaches to health subjects); and media. The manuscript collections page provides brief descriptions and links to online finding aids, while the pages featuring catalogued items offer citations and a PURL link to the library catalog record. Sidebars offer contact information as well as links to other related resources at the archives, library, or university.

The Health Subject Guide is just one of a number of thematic guides the department has constructed in the past six months using a Drupal web application. A primary virtue of this system is that archivists can revise the online pages without the third-party assistance of Web Services staff. Direct access encourages updates to correct errors, share descriptions of new collections, or add references to recently discovered material in older holdings. Researchers appreciate the subject guides as a tool that facilitates the discovery process and directs them to more expansive accounts of the noted resources.

HoPE is Alive and Well at the American Institute of Physics

Orville Butler and Joe Anderson
American Institute of Physics

The American Institute of Physics' NSF-funded study of physics entrepreneurs got off to a fast start in May 2009. We've now completed more than fifty interviews with founders and other physicists at over thirty startups in a wide range of specialties. The interviews average about two hours each and are based on a set of questions that were developed by staff and consultants with input from working scientists. The History of Physics Entrepreneurship (HoPE) Study is a groundbreaking investigation of the role of entrepreneurial physicists in developing new technologies. While we are including a small sample of companies founded before 1990, most of the enterprises were started in the last two decades, all by physicists.

HoPE historian Orville Butler (right) interviews Dr. Shibin Jiang, CEO of AdValue Photonics in Tucson, AZ

During the first year we've focused on both coasts, conducting site visits and interviews at startups in Boston, the Bay Area, the Research Triangle, and the Pacific Northwest, along with Tucson and Phoenix in the Southwest. We plan to focus our next series of site visits on the middle of the country, starting in the Chicago area. Before then, however, project staff will concentrate on having the completed interviews transcribed and coding them in NVivo, the qualitative software that we're using to analyze the responses. This will give us an opportunity to assess our initial results, fine-tune the question sets, and adjust strategies for the remainder of the study.

Some tentative findings include:

The importance of lab notebooks:
Most of the companies require the use of hard copy lab notebooks in their research, which is in sharp contrast with the large companies in our earlier study of the History of Physics in Industry (see http://www.aip.org/history/pubs/HOPI_Final_report.pdf for the final report or request a print copy from nbl@aip.org), where fewer than fifty percent of scientists use lab notebooks. For some of the companies, failure to use a lab notebook is an offense that can result in termination.

Entrepreneurial background varies:
While a few interviewees talked about being raised in an entrepreneurial family environment, most did not, and even those that did varied significantly on what they considered "entrepreneurial." Most saw entrepreneurship defined in some way as to suggest openness to taking risks, but entrepreneurial backgrounds do not appear to be a factor encouraging most to go into business.

Patents versus trade secrets:
While each company had its own measure of determining when to patent, most discussed patent costs as an impediment. Costs of a patent ranged from $10,000 to $60,000. Many interviewees who hold academic appointments were happy to have the university patent the results of their research and then license the intellectual property from the university.

Startups are low risk for academics:
Several professors who were founders suggested that starting a company was low risk for them. They were not dependent upon the company for their job, and the company, once they were tenured, did not put their academic career at risk. However, some said they had to weave their way through ethics issues relating to a financial relationship with a company that conflicted with their interests as an employee of the university.

Research and Development (R&D) cycle:
One of the issues we will want to track carefully in

future interviews is the appearance of an apparent R&D cycle. Most interviewees suggested that when they began, they initially did only research, slowly shifting to development with research almost or completely disappearing as they brought a product to market

Absence of siloing; or importance of networking: Another intriguing contrast with our HoPI study was the clear absence of intellectual siloing in the startups. While physicists in large corporations were hard-put to name important scientists outside their own company, this came easily to the R&D staff and founders of startups. Part of this undoubtedly reflects the importance of networking for startups.

Funding: Startup funding takes a number of forms. Some began with venture capital ranging from a few million dollars to over one hundred million. Other startups saw venture capital as a danger to be avoided and relied heavily on SBIR (Small Business Innovation Research) contracts to start, and in some cases continue, their business. A third mode is contracts with larger companies or federal science agencies. Debt financing appears to be less common but also occurs occasionally.

We welcome questions and comments, including suggestions of companies to include in the study. Please contact us at obutler@aip.org or janderso@aip.org .

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Joint Environmental History Grant Awarded to California Repositories

Liz Phillips
University of California, Davis

This winter, the Council on Library Information and Resources (CLIR) awarded a joint grant to nine California repositories. The project, entitled "Uncovering California's Environmental Collections," will make available thirty-three previously unprocessed collections related to California environmental history and science. The grantee institutions, working in collaboration with the California Digital Library (CDL), include five University of California campuses (Berkeley, Davis, Irvine, Los Angeles, and Riverside); two California State University campuses (Chico and Fresno); Humboldt State University; and the University of Southern California. The aim of the grant is to present a broad picture of Californians' perceptions and uses of the state's natural resources. Some of the topics covered in the collections include hydraulic mining; irrigation; oil drilling; conservation and related activism; land use studies; agriculture; and forestry. We hope that the wide range of topics will present a well-rounded view of the state's natural history and encourage researchers to take a holistic approach to studying environmental issues in the West.

The project runs through January 2012. Finding aids for the collections will be available on the Online Archive of California (http://www.oac.cdlib.org/).

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500+ Oral Histories Now Online at Niels Bohr Library & Archives

Julie Gass
American Institute of Physics

Accessing major resources in the Niels Bohr Library & Archives of the American Institute of Physics has recently become much easier. Researchers can read many of our oral history interviews, the most used collection in the library, from their own workspaces. We now have over 500 oral history transcripts mounted on the Web, including most of the most used and significant. We've reached this major milestone with a grant from the National Endowment for the Humanities and thanks to the hard work of the project team. The grant-funded work ended in December 2009, and we're continuing to digitize additional oral histories, albeit at a slower pace.

The oral history collection at NBL&A is rich in the history of modern physics, astronomy, geophysics, and allied sciences. Interviewing projects done by the Center for History of Physics have concentrated on multiple aspects of physics. Therefore, the oral history collection in its entirety covers a wide

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breadth of physics-related sciences, while the projects that compose the collection provide in-depth knowledge of the individual disciplines themselves.

We concentrated on digitizing these projects so that users have a broad range of materials to access and because they include a number of the most important physicists in modern history. For instance, some of the oldest oral histories belong to the Archive for the History of Quantum Physics project. These interviews include many of the most well-known names of 20th century physics. Niels Bohr, Hans Bethe and Werner Heisenberg are just a few of the physicists that researchers can find in this collection. We also digitized many of the oral histories included in the Sources for the History of Modern Astrophysics, which features interviews with leading astronomers and astrophysicists. Also digitized are projects based on history of the laser, solid state physics and industrial physics.

Researchers can access the oral history interviews several ways. You can go to our digitization project's home page and read about the project as well as listen to provocative excerpts from twenty-four interviews. There, you can also find a link to an alphabetical list of physicists whose interviews are online. A click on the name will take you directly to the interview. Links are also provided in results from searches done in the library's International Catalog of Sources. The library's catalog records

are also indexed in major search engines such as Google and Yahoo, so performing a search on a physicist will often yield results from our catalog.

The digital oral histories will facilitate research around the world since researchers are only several clicks of a mouse away from reading these materials. In fact, they already have. In 2009 the digital oral histories received over 37,000 web hits, and we expect that the number will increase as we to mount the entire collection online. We look forward to hearing feedback from our users. If you have any questions or comments please contact us at nbl@aip.org.

NBL&A staff celebrate placing over 500 oral histories online. L-R: Julie Gass, Amanda Nelson, Nancy Honeyford, and Barbara Allen.

Conferences, Meetings, and Workshops

The Science, Technology, and Health Care Roundtable will be meeting on Wednesday, August 11, 2010 from 5:30 - 7:30 p.m. in the Marriott Wardman Park Hotel, Maryland C. STHC will host two presentations, the first by John Rees of the National Library of Medicine; and the second by Jane Odom, Jennifer Ross-Nazzal, and April Gage, all of whom are affiliated with NASA. For the full agenda see "Message from the Co-Chairs".

Pre-Conference Tours/Open Houses:

For information on pre-conference tours see: http://www2.archivists.org/conference/2010/washington/tours

For the full SAA program, please see the following: http://www2.archivists.org/conference/2010/washington

STHC-Themed Programs:

Please be sure to read the abstracts for other sessions, because we might have missed some.

STHC Roundtable Meeting
5:30 – 7:30 p.m., Wednesday, August 11th, 2010
Maryland C

203. Providing Web Access to Medical and Health-Related Visual Materials for Diverse Users
10:30 a.m. – 12:30 p.m., Thursday, August 12, 2010
Room TBA

Articles

Born-Digital Material at Stanford

Glynn Edwards
Stanford University

Collections with born-digital material present some unique challenges. Due to rapidly evolving technology, old formats are constantly becoming obsolete and illegible to new technology. This complicates both the accessibility of obsolete formats and the inevitable future obsolescence of state-of-the-art storage devices we currently use to create and store data. How will we reliably capture, review, and preserve the data? Where will we create descriptive metadata that will aid in the search and discovery of the collections? And how will we deliver data and allow users the ability to add their own metadata? The following is an overview of how Stanford University Libraries & Academic Information Resources (SULAIR) is starting to deal with its large volume of born-digital and hybrid collections.

Sitting in the middle of Silicon Valley, Stanford has an aggressive collecting initiative in the History of Science and Technology and therefore has a lot of born-digital material. During this past year the Special Collections Manuscripts Division has begun a multipronged effort to deal with our born-digital material. It's an exciting time at this transition from primarily analog collections to those that are hybrid or completely born-digital. It will likely impact how and where we describe digital material, where the archival copy of certain data is kept, and how they all link together. In this time of development,

testing, and flux, we all need to keep an open mind and allow open debate on these issues. At Stanford, we are a mixed group: archivists and librarians in Special Collections; digital and technical staff from the Digital Libraries Systems & Services Department (DLSS); and SUL curators.

Regarding preservation, an archival copy of the original binary code will be stored in the Stanford Digital Repository (SDR) and we are working with the SDR team in packaging these bits for ingestion into the repository. What we on the archival side are perhaps more immediately concerned with are some other traditional archival tasks such as organizing, describing, and delivering collections. With born-digital material these tasks are exacerbated by the complexity, opacity, and volume of the data. Using a working copy of the captured files, we need to create metadata that adds intellectual or organizational structure and technical details. The process differs from traditional finding aids in that this metadata is integral to the data and imbedded within it.

Last summer SULAIR purchased and installed a Forensic Recovery Evidence Device, (FRED for short). Housed in the Special Collections department, it is also actively used by DLSS and some of our curatorial staff. It allows us to capture

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and validate logical disk images from most modern external drives, 3.5 inch diskettes, and optical disks. The elusive 5.25 inch diskettes still prove problematic and we are trying to build out a system for capturing these more reliably. What has been the most useful tool in conjunction with FRED has been FTK Toolkit. This allows us to create descriptive metadata as part of its bookmarking feature (technical metadata is generated by the processing engine). We also use the Toolkit's label function to specify administrative metadata such as access rights. How digital material will be described in EAD finding aids (we use Archivists' Toolkit – AT) or in FTK Toolkit and packaged with the data itself as it is ingested into the digital repository and the delivery platform is still up for discussion. In Manuscripts we are now inclined to view EAD description in hybrid collections as scope and content notes about the digital material, including its extent, the type of data acquired, and the restrictions, coupled with a URL linking to digital objects in the delivery environment.

Over the past year, DLSS, working with MediaShelf and staff in Special Collections, have been developing a new delivery platform using Stanford faculty member Ed Feigenbaum's papers as a test collection. The Self-Archiving Legacy Toolkit (SALT) allows us to attach to each digital object tags or longer descriptions created by donor, creator, archivists, or users. SALT also allows faceted browsing created by extracting entities from full-text OCR and descriptive metadata using Open Calais. We are also exploring the creation of ontologies with WebProtégé, a open-source software developed by the Stanford Center for Biomedical Informatics Research at the Stanford University School of Medicine. These ontologies will allow us to link entities extracted with Open Calais to authorized headings. Access privileges may also be set or changed in the SALT environment. After about a year of development, a prototype using this test collection has just been completed and plans are now underway to begin testing import of born-digital material in the fall. We have designed some useful tools that will be further developed as we go forward.

In addition to these projects, SULAIR joined the University of Virginia, the University of Hull (U.K.), and Yale University on a two-year project funded by the Andrew W. Mellon Foundation called the AIMS Project (AIMS Born-Digital Collections: An Inter-Institutional Model for Stewardship). The four institutions are working together to research and test current digital archive practices and develop tools and workflows that are not institution specific.

Each of the four institutions hired a Digital Archivist dedicated to this effort. At Stanford, Peter Chan, who had worked on the SALT project and processed various born-digital collections for Special Collections & University Archives, began as our Digital Archivist in January of this year. We are now about nine months into the AIMS project and are still modifying and expanding our digital materials workflow. It seems a constantly moving target and has evolved radically over the past six months. While realizing that each institution will end up with their own unique workflow conditioned on each institution's infrastructure and resources, we believe that the lessons we learn and the tools we develop will be generally applicable – in whole or in part – to other archival repositories dealing with born-digital and hybrid collections.

In planning for the grant, Stanford highlighted four collections that would stand as examples of legacy digital material: diskettes; CDs and zip drives from poet Robert Creeley; a myriad of physical formats from paleontologist Stephen Jay Gould (including punch cards, back-up tapes and diskettes); hard drives from the Xanadu Project (an early hypertext project); and files copied from the hard drive of fine press printer and book designer Peter R. Koch. We also researched our current holdings of legacy digital material and were somewhat surprised to discover that they numbered over 24,000 items of legacy computer media, covering every conceivable physical format from punch cards to modern external drives. We were fortunate to receive assistance from our colleagues at the nearby Computer History Museum in reading the punch cards, and are now using the FRED to capture data from our other legacy formats. Some formats still need to be resolved, such as the 5.25" floppies mentioned above or my new favorite: 8" floppies.

As part of our born-digital workflow, we are developing a survey specific to digital materials and

their creation based initially on the **P**ersonal **Ar**chives **A**ccessible in **Dig**ital **M**edia (Paradigm) project. After comments from SULAIR curators, in-house AIMS project staff, and our AIMS partners, our survey has been modified into a two part tool that allows us to record decisions about digital materials that will be appended to the deed of gift for hybrid collections, which is also currently being revised. The first part of the survey is meant to be filled in by the digital archivist or curator during an interview with the donor. The questions are designed to identify what we will capture; determine how they create and organize their work; identify types of software or hardware; note what email and calendaring software they use; identify web pages or social networking sites; highlight any security or privacy issues; and note their storage and backup habits and file transfer arrangements. Based on part one, the Digital Archivist will record technical details of the tools the creator/donor used in the course of their work.

Work on born-digital materials is ongoing and will undoubtedly change over the next year or two as new tools are developed. For more information on some of the projects and software mentioned, please see the following websites:

Digital Forensics @ Stanford University Libraries: https://lib.stanford.edu/digital-forensics

FTK Toolkit, a product of AccessData: http://www.accessdata.com/forensictoolkit.html

MediaShelf: http://yourmediashelf.com/blog/

Open Calais: http://www.opencalais.com/

Protégé: http://protege.stanford.edu

AIMS Born-Digital Collections: An Inter-Institutional Model for Stewardship: http://www2.lib.virginia.edu/aims/

Born Digital Archives – blog by AIMS Project's Digital Archivists: http://born-digital-archives.blogspot.com/

Personal **Ar**chives **A**ccessible in **Dig**ital **M**edia (Paradigm) project: http://www.paradigm.ac.uk/workbook/appendices/records-survey.html

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About the Author

Glynn Edwards is the head of the Manuscripts Division in the Department of Special Collections & University Archives at Stanford University, where she is currently managing several large processing and digitization projects, development of Archivists Toolkit, and creation of a campus-wide finding aid site at Stanford (XTF). She is also part of the AIMS Born-Digital Collections grant awarded by the Andrew W. Mellon Foundation: a four-institution collaboration with the University of Virginia, Yale University, and the University of Hull. Previously, Glynn worked at the Schlesinger Library for the History of Women, Radcliffe Institute, Harvard University. She received an MLIS and an MA in History from Simmons College and her undergraduate degree in Classics from Brown University.

SAA Science, Technology Health Care Roundtable
Steering Committee Members (2009-2010)

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Ewa M. Basinska, Institute Archives, Massachusetts Institute of Technology, Cambridge, MA

Danielle Castronovo, California Academy of Sciences, San Francisco, CA

Janice F. Goldblum (Past Chair), The National Academies, Washington, DC

Polina Ilieva (Web Liaison), Library and Center for Knowledge Management, University of California, San Francisco

Joan Echtenkamp Klein, Health Sciences Library, University of Virginia Health System, Charlottesville, VA

Jodi Koste, Tompkins-McCaw Library, Virginia Commonwealth University, Richmond, VA

Nancy McCall, The John Hopkins Medical Institutions, Baltimore, MD

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Archival Elements is produced annually each summer. It is the official newsletter of the Science, Technology, and Health Care Roundtable of the Society of American Archivists. Please consider submitting an article to *Archival Elements*. For more information on submitting information or an article, please contact Liz Phillips (UC Davis).

Join the Society of American Archivists

Founded in 1936, the Society of American Archivists is North America's oldest and largest national archival professional association. SAA's mission is to serve the education and information needs of more than 5,500 individual and institutional members and to provide leadership to ensure the identification, preservation, and use of records of historical value. Membership includes those serving in government agencies, academic institutions, historical societies, businesses, museums, libraries, religious organizations, professional associations, and numerous other institutions in more than 60 countries. Through its publications, workshops, annual conference, and programs, SAA provides a means for contact, communication, and cooperation among archivists and archival institutions.

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