

Digital Collection Development Plan Task Force
Final Report
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Executive Summary

The Task Force was charged to “Develop a strategic plan to assist the Berkeley Library in transitioning to an integrated digital collection serving the research and teaching needs of the campus community.” We were to “. . . identify key selection, acquisition, content management and preservation principles that can provide guidance . . .” and provide specific recommendations in the areas of Collection Development, Collection Management, and Preservation and Sustainability.

This report identifies principles and key actions (Appendix H) to:

- update policies and guidelines that will aid in the transition to a digital library,
- move the Library towards building its digital collections in an efficiently-managed and sustainable manner,
- re-engineer and integrate services supporting acquisition, discovery, access and curation of all digital and print collections, and
- promote the development of new services that will make all collections accessible now and in the future

As the Task Force’s discussions moved forward, several transformative themes and ideas arose:

Theme No. 1: The Library will continue to build its collections in support of the teaching and research mission of the University, with a preference for digital materials.

Theme No. 2: The Library supports research and scholarship within and beyond the UC Berkeley campus. To the extent possible, and without violating intellectual property rights, the Library will make its e-content widely accessible.

Theme No. 3: The Library will adopt a lifecycle curation approach to managing its digital collections in conjunction with its non-digital collections.

Transformative ideas:

1. Stating explicitly a preference for acquiring digital materials when available
2. Adopting a lifecycle curation approach to managing collections
3. Engaging the entire staff in learning and performing the activities involved in lifecycle management
4. Distributing responsibility for the creation of metadata and rethinking the elements of metadata
5. Developing procedures and workflows so that digital materials receive the same priority for acquisition and cataloging as other materials
6. Preserving information in digital form only whenever possible

7. Developing a new budget model that will fund an ongoing program of digital acquisition, digitization and preservation

The Collection Development Policy Statement from 1980¹ stated, "Our goal is to articulate a collecting policy which expresses the current needs of the Berkeley academic community. Because academic programs grow and change, the policy statement must be reviewed and revised at regular intervals." The directive to review and revise is perhaps more urgent now than in 1980, as it is expected that all aspects of acquiring and managing e-content will undergo continuous, and possibly rapid, change. We propose that this report form the beginning of a new collection development policy and that it be continuously reviewed and updated as the Library responds to changes in academic programs, teaching and research activities, modes of scholarly communication, and new technologies.

¹ Collection Development Policy Statement. The General Library, University of California, Berkeley. January 1980 (reprinted December 1982). D. Koenig, S. Dowd

Introduction

In 2007-2008, for the first time in history, more than one-half of the Library's total collection budget was spent on digital materials, a trend that is expected to continue. During the same year the Library undertook a New Directions process that culminated in several initiatives being chosen for development. One was to "Create a Digital

One hundred percent of selectors said they expected to spend the same or more on digital collections in the next few years.

Library Program that addresses Library roles and responsibilities for the full lifecycle requirements of digital assets managed or licensed by the Library."²

Drivers

There are many external drivers for this shift to a digital focus, the major ones being,

- a prodigious number of digital technologies have arisen since the first home computers in the 1970s, profoundly transforming the world of information
- users' expectations and behaviors have changed in seeking, evaluating and using information
- users' express an overwhelming preference for digital materials
- digital publishing continues to expand, and
- new technologies offer opportunities for more effective and efficient acquisition, description, management and preservation of collections.

Over 80% of question respondents said that e-journals were moderately or very important to their users; Over 60% said that digital images and statistical or numeric data were similarly important.

Research and publishing, teaching and scholarship are all evolving as a result of digital technologies. Whole new areas of research, new multidisciplinary collaborations, and new multi-organizational partnerships between universities, industry and non-profit organizations have developed. The University has been very successful in funding institutes and centers combining the expertise of researchers from multiple fields and institutions in arts and humanities, social sciences and science and technology.

UC Berkeley researchers are increasingly engaged as creators of digital content that requires ongoing management and long-term stewardship. The curation and stewardship of these materials will be achieved by library staff working with faculty and researchers to make it broadly accessible to the scholarly community.

For the Library, the question is how best to collect, organize, deliver and preserve this information, and make it accessible to the dispersed campus community and more broadly to the world.

Theme No. 1: The Library will continue to build its collections in support of the teaching and research mission of the University, with a preference for digital materials.

² New Directions Themes and Initiatives Summary. Revised September 16, 2008.

<http://sunsite3.berkeley.edu/wikis/NewDirections/index.php?n=Main.NewDirectionsThemesAndInitiativesSummary?action=download&upname=NDT%20initiatives.pdf>

Key actions

- develop, preserve and make accessible the scholarly resources that the Library has been collecting since the late nineteenth century
- continue to build on the Library's broad and deep print collections
- acquire important digital resources
- formalize the Library's ad hoc digitization projects into an ongoing digitization program
- develop management, organizational and technical infrastructures to manage all collection assets in an integrated manner

To meet user demand for digital and to make the most effective use of the University's financial resources, the Library increasingly chooses to acquire only the digital version of materials that are available in multiple formats. This Task Force recognizes that the availability of and preference for digital materials varies by discipline and there will be instances where non-digital formats are more effective, of higher quality, or a better value: the UC Berkeley Library will continue to acquire materials in the format that best serves the needs of our faculty, staff and students.

Theme No. 2: The Library supports research and scholarship within and beyond the UC Berkeley campus. To the extent possible, and without violating intellectual property rights, the Library will make its e-content widely accessible.

Key actions

- increase the Library's knowledge of intellectual property law

Theme No. 3: The Library will adopt a lifecycle curation approach to managing its digital collections in conjunction with its non-digital collections.

Key actions

- Bring together all the Library's digital projects under one management program.
- Task a group from appropriate units, including Systems, Collections, Acquisitions, and Public and Technical Services, to develop the program structure

Effects of Adopting a Lifecycle Management Approach

Undertaking a lifecycle management approach to its digital collections has implications for all areas of the Library's work.

- While the initial reason for selection of any material remains that of supporting research and teaching activities, the character and work performed by the selectors will broaden beyond traditional selection to include decisions and involvement in digital lifecycle curation functions.

- Selectors will have an increased role in engaging with faculty and researchers on campus in order to identify and select born-digital research content that the Library should collect and preserve.
- As the proportion of digital materials in our collection increases through acquisition and digitization activities, opportunities for selectors to manage the print collections differently will emerge.
- Managing these materials throughout their lifecycle will impact technical services and systems, and possibly require new organizational subunits, staff and skills to handle the materials effectively.
- Preservation activities will need to change as materials have to be re-appraised and migrated to new technologies.

Principle No. 1: The Library makes an organizational commitment that staff will have opportunities to contribute to essential changes, including opportunities to assume new or different roles. To that end, the Library is committed to ensuring that staff have the training, knowledge, tools and support to help achieve the Library’s strategic goals.

Key actions

- develop a communications plan to inform staff of the digital collections development plan and solicit their input
- define training required for new or different roles, then provide it
- coordinate a program of Selector discussions and workshops on acquiring and managing e-content, including:
 - lifecycle curation stages and activities associated with them
 - costs and benefits of lifecycle management
 - selection and curation decisions for born digital materials
 - licensing and copyright issues
 - role with faculty and researchers
 - Portico, LOCKSS, Web Archiving Service, and HathiTrust - what are they, how does the Library benefit, what tasks does The Library need to take in support of these?

Budget

Principle No 2.: The Library must use its financial resources in the most responsible and effective way to deepen the collections available to faculty and students on and off campus, including providing ongoing access and long-term preservation of digital collections.

Key Actions

- Minimize redundant expenses by a) buying materials in only one format; b) preserving just one format, and c) working with other campus libraries to avoid duplication in the acquisition of new e-content.

74% of respondents indicated that they buy the same content in duplicate formats.

- Continue to extend budget dollars by strategies such as a) consortial purchasing with UC Libraries, the Center for Research Libraries and other appropriate partners, b) resource sharing via interlibrary borrowing services, and c) mass digitization projects to make titles from UC Berkeley's collection accessible online.

- Actively seek grants and develop opportunities to collaborate with partners to digitize materials of shared interest.

18% of respondents say they frequently negotiate prices directly with a provider.

Respondents report that faculty are self-archiving articles they author; modifying publisher contracts to retain copyright; and asking library help to identify open access publishers for upcoming submissions.

- Rethink the budget to cover new expenses for ongoing access and long-term preservation needs of digital collections.

- Actively work with publishers to cap or reduce prices, and to find new, sustainable models for scholarly communication.

- Partner with faculty, and assist them as requested, to create a more sustainable model of scholarly communication.

Charge, Membership, Process

The Charge and List of Members of the Task Force is found in Appendix A. In the course of several meetings, members discussed digital activities in their fields of expertise, and identified areas in the Library's policies and workflow that lack principles or guidelines for digital collections.

To map the current digital terrain, Task Force members:

- consulted literature on the topic of digital collections, finding helpful Strategic Plans from the libraries at UC San Diego and Columbia University
- consulted with Jan Eklund about the emerging UC Shared Images (USCI) program³
- conducted a survey of Berkeley selectors to learn of digital initiatives on campus and barriers to developing digital collections (Appendix B), and
- asked collection development officers from nine large research Libraries about their institutions' digital collection development plans. (One responded with information on using a lifecycle management approach for digital preservation, but no one provided a digital collection development plan or best practices document.)

Current Digital Snapshot – UCB Selector Survey Results

A survey was sent to Library and Affiliated Library selectors asking 32 questions grouped into these topics: how important are existing digital resources to our users and how much do we spend; selection and acquisition; discovery and access; preservation; digitizing existing content; licensing; current and future digital projects on campus; and staff development needs.

³ UCSI uses ARTstor as its infrastructure to aggregate, organize and provide access to UC images. Ms. Eklund is the ARTstor collection liaison for Berkeley appointed by the AUL-CD.

Thirty-five selectors from The Library responded (70% of total selector list). Three responses came from Affiliated Librarians. Responders self-identified in these broad groupings: Area Studies (28%), Arts & Humanities (31%), Sciences (22%) and Social Sciences (19%).

Survey results are attached as Appendix B, and cited throughout the body of his report.

Several themes in survey responses are worth noting:

- confirmation that we do indeed need to plan for and fund increased creation, acquisition, support for and preservation of digital resources
- there are counterbalancing concerns about buying digital
- general concern about preservation, with a desire for clarification on several issues including our willingness to rely on third-party agreements
- hesitation to completely forego print in lieu of digital because of missing content or concerns about image quality
- hesitation to forego print for digital because of a preference to own rather than lease content
- reports that digital can be more difficult to acquire, can take longer to make accessible and may not be available when needed (e.g., broken urls)
- desire for clear procedures on how to propose and carry out digital projects
- conflict between wanting to increase investment in digital resources of all kinds, at the same time that funds and staffing are not available
- widespread desire to preserve data that are only now available on CD ROMs, suggesting that we establish policies and procedures soon in this regard.

Marketing e-content and services to our user community

Remote access to information resources changes the kinds of interactions faculty and students have with library staff. The Library needs to undertake new activities in order to successfully fulfill our traditional responsibilities: acquire content that matches user need, advise users about the best resources for their needs, and advocate with administrators to build and maintain the rich information environment essential to the breadth and depth of campus endeavors.

Principle No. 3: The UC Berkeley Library is committed to enhancing the user experience of our collections.

Key actions

- develop a plan of ongoing faculty and department liaison activities that will solicit feedback regarding users' information needs and experiences using our collections
- develop a plan (survey or interview questions) that liaisons can use with faculty and research groups to identify important campus created e-content that the Library may want to acquire and curate

Principle No. 4: The Library is committed to branding and promoting its digital assets effectively to our user community.

Key actions

- develop a single recognizable brand that says UC Berkeley and place it prominently on all the Library's digital assets

- develop plans that make it easy for library units to continuously push out news about digital resources and services, including, for example, RSS feeds, news blogs, exhibits

- explore ways to make it easier to link digital content into the campus course management system so students find it at their point of need

- find out how researchers would like to use e-content and then provide the technologies that enable both the discovery and creation of information through our services, for example, adding productivity software to our public computers to permit people to research a topic and write a paper or make a presentation at the same time

Assessment

Principle: 5: The Library is committed to building and making accessible a collection that keeps pace with changes in research, teaching, information technology and scholarly communication. We will assess our programs and modify our practices on a regular basis.

Key actions

- establish metrics and scheduled assessments that allow us to answer these questions:
 1. Do our collections satisfy current user needs?
 2. Do we deliver content using the technology that our users find most useful?
 3. Do we see evolving patterns of use that suggest ways we should change content or delivery of content?
 4. Do our collections help preserve the intellectual record for future generations?
 5. How do our collections aid larger campus / university goals?
 6. Do our collection-related practices foster scholarly communications?
 7. Are library appropriations mapped well to the hierarchy of subjects supported by the campus?

- routinely review and modify this document in response to changes in research, teaching, information technology and scholarly communication.

Lifecycle of Digital Content

Digital curation is a comprehensive set of lifecycle management and appraisal activities to ensure current and future use of digital assets⁴. The lifecycle stages for digital content, identified in the New Directions document and addressed below, include “selection, creation/acquisition, management, access & preservation⁵”.

The Task Force identified three streams of e-content, each with a different set of issues.

- Licensed Digital Content – purchased or leased (e.g. e-journal packages, databases)
- Locally Digitized Content – local content already in possession of the various university libraries and departments that has been or can be digitized in order to enhance access and ensure preservation (e.g., Japanese American Relocation Digital Archive, Mark Twain Papers)
- Born Digital Content: created on campus or elsewhere on the web (e.g. Blue Sky Blog: <http://ideas.berkeleylawblogs.org/tag/tn-narasimhan/>; Dept. of Energy Basic Energy Sciences Workshop Reports: <http://www.er.doe.gov/bes/reports/list>)

Selection and Licensing of E-Content

Principles and key actions for each of the three types of digital content may differ.

Selectors will need to consider how each acquisition will be managed throughout its lifecycle beginning with the time an item is selected or created. Decisions include how long an item will be kept and whether it will be disposed of, re-appraised at a later specified time, or be designated for long-term preservation. Rights and permissions are a significant part of selection and licensing. See the section below on Copyright.

Decisions made by the selector will overlap with acquisition and licensing activities for digital materials in ways they do not for print materials. “General Guidelines for Selecting Digital Content” are found in Appendix D.

Principle No. 6: The selection criteria for all types of e-content are consistent with selection criteria that have been in place for all library materials, the primary one being its usefulness in serving the current and future informational needs of the University community in its teaching, learning and research activities. E-content includes (but is not limited to) e-journals, e-books, online databases, web sites, compact disks, digital video disks,

50% of question respondents said they have not acquired a resource due to unacceptable terms in the license. 50% said they had acquired resources despite problematic licenses. Concerns involve ILL, perpetual access, access vs. ownership, password requirements and/or provider inability to support IP authentication, simultaneous access, and no walk-in use.

⁴ For documents on lifecycle management, see JISC DCC Curation Lifecycle Model:

<http://www.dcc.ac.uk/docs/publications/DCCLifecycle.pdf> (accessed July 6, 2009) and “Harnessing the Power of Digital Data for Science and Society”. Report of the Interagency Working Group on Digital Data to the Committee on Science of the National Science and Technology Council, January 2009. Appendix B:

http://www.ostp.gov/galleries/opengov_inbox/harnessing_power_web.pdf. CDL defines digital curation activities in an internal document entitled “CDL – Digital Preservation Program Curation Services”.

⁵<http://sunsite3.berkeley.edu/wikis/NewDirections/index.php?n=MainDigLibLifeCycle>

emerging formats (blogs, wikis, etc.), and locally-created content; it may be free or fee-based, licensed, owned or ingested locally; and it may be audio, visual, data and/or text files.

Principle No. 7: Selection/Licensing – Prospective: When acquiring licensed e-content, the license should meet current standards, which may change over time.

Key actions

- Use the "Checklist of Points to be Addressed in a CDL License Agreement"⁶, and "Standard License Agreement"⁷

- Selectors will strongly negotiate for licenses to include the right to an archival copy of the data, right to perpetual access, right to interlibrary loan services, right to use the product in accordance with fair use guidelines, access by IP address, right to provide remote access to authorized users, right to provide access to walk-in users, provision of timely usage statistics that comply with current practice, provision of MARC or other appropriate records that can be easily loaded into UCB's discovery systems, and a robust delivery platform that meets usability and accessibility standards.

- In some cases, publishers and the Library agree to follow the "Shared Electronic Resource Understanding" (SERU) framework⁸, or other mutually acceptable business practices. It is understood that the license agreement for some locally acquired resources (Tier 3's) may not meet all of the above licensing criteria and that immediate user needs may, at times, trump licensing ideals.

- Develop criteria for acquiring licensed materials that do not meet the above standards.

- Evaluate the demand for e-books, then purchase following the guidelines and best practices now under development by the UC Systemwide E-Book Advisory Group.

Principle No. 8: Selection/Licensing – Retrospective: The Library will purchase digitized versions of legacy collections as they become available and are needed to meet the Library's mission.

The Library will rely on its participation in various partnerships (JSTOR, Portico, LOCKSS) for long-term access to backfiles, and may, in some cases, choose to take ownership of other backfiles.

Digital journal backfiles are a high priority in journal-driven subject areas (life, physical and engineering sciences), and are becoming so in other areas. They are needed to

⁶ Checklist of Points to be Addressed in a CDL License Agreement: <http://www.cdlib.org/vendors/checklist.html>. Accessed July 7, 2009

⁷ Standard License Agreement: http://www.cdlib.org/vendors/Model_License_LATEST_Revised_10-08.rtf. Accessed July 7, 2009

⁸ Shared E-Resource Understanding (SERU): <http://www.niso.org/workrooms/seru>. Accessed July 7, 2009

maximize users' access and to manage collections in optimal ways. Some libraries require backfiles urgently in order to respond to space pressures and consolidations. Journals digitized in the Google mass digitization project are neither adequately complete nor accessible to meet this need.

Key actions

- Evaluate the most cost-effective ways to acquire backfiles. In some cases, this will be through the CDL negotiation process, and in others it will be via individual campuses. In either case, the cost should be one-time, without annual maintenance fees if possible, and the backfiles should conform to the "Standard License Agreement" conditions.

Principle No. 9: Digital Format Preferred: For journals that are available in both online and print, the Library purchases the online version, with exceptions made when print is necessary. Several of our peer institutions – UC San Diego, Cornell, Duke and Pennsylvania, - now follow this policy. (For Criteria to Purchase Print Journals, see Appendix E.)

Key actions

- The Electronic Resources Librarian and a small group should carefully look at the "CDL Checklist" and "Standard License Agreement" to see if language needs to be strengthened to better address lifecycle management needs, for example:
 - does vendor/provider indicate a basic long-term preservation strategy, such as participating in a digital preservation program (LOCKSS, Portico)?
 - does vendor/provider agree to follow best practices if ownership of material is transferred at some later time? (See, for example, "Transfer Code of Practice: Version 2.0" and its "Supplement" at http://www.uksg.org/sites/uksg.org/files/TRANSFER_Code_of_%20Practice_2_0.pdf and http://www.uksg.org/sites/uksg.org/files/TRANSFER_supplementary_2.pdf)
- Ask CDL/CDC to provide guidance on which digital preservation programs are acceptable for long-term preservation of licensed e-content and which are not, and establish what action, if any, to take if vendor/provider is not participating in an acceptable program.
- Develop criteria to decide when UC Berkeley Library should download digital files of a publisher and commit to managing access and long-term preservation
- Develop an inventory of all Tier 1, Tier 2 and Tier 3 licensed resources including how each resource meets CDL standard; and its digital preservation plan. Also include other information needed for the ERMS (electronic resources management system).

Principle No. 10: Selection of local content for digitization: Selection priority will be given to materials that primarily support teaching and scholarship at UC Berkeley and secondarily enhance CDL or other virtual scholarly initiatives.

Key actions

- Establish criteria to select materials for digitization to increase their accessibility, without duplicating digital materials that are readily available. Criteria may include potential for broad utility (e.g. useful in core undergraduate courses), faculty request for materials used in teaching/research, unique value of materials, value of material in building on the Library's core strengths, condition of materials (e.g. material is deemed valuable and needs to be reformatted in order to continue to exist).
- Coordinate UC Berkeley's digitization program with those of the other UC Libraries in order to avoid duplicating the work of other digitization programs.
- Develop an inventory of unique collections in all libraries to be digitized and criteria to prioritize them.
- Work with other campus libraries and departments to support their digitization projects whenever possible and to ensure that independent digitization projects are discoverable and accessible.

76% of question respondents say they have unique collections that would benefit our users if digitized.

Principle No. 11: The Library will use strategies to digitize the highest quantity of Special Collections materials at the lowest cost.

Key Actions

- Develop policies and guidelines to find the most cost-effective balance between the quality of the digitized reproduction and the amount of material that can be processed.
- Use strategies to reduce workloads, such as scan once, then re-use; repackage according to users' needs; use minimum description levels to maximize product output (e.g. collection level rather than item level description)

Principle No. 12: For out-of-copyright books, the Library will rely on the copy created by various partnerships, including the Google and OCA mass digitization projects, and HathiTrust to make these accessible.

Key actions

- Assign responsibility to someone to follow mass digitization projects and evaluate the best way to have their item records become visible in UC Berkeley's discovery services.
- Develop procedures to identify reproductions that are incomplete or otherwise unusable. Reach agreement within UC and with commercial partners who digitized the item originally about how these will be re-scanned

Principle No. 13: Selection of Born Digital materials should also focus on how well the content meets the Library Mission in serving the informational needs of the UC Berkeley community. Born digital materials may be created by faculty and

researchers on campus, or be gathered from various web sources, including research institutes, government agencies, or other educational organizations, etc. Important University documents are also born digital, and the Library will continue to fulfill its archiving and preservation roles with respect to these documents.

Key actions for UCB-created e-content

- Establish an inventory list and procedures for selectors to submit titles and descriptions of e-content created by faculty and researchers that the Library should preserve, or consider preserving. Establish a checklist of information that selectors should collect for this kind of content. (e.g. data sets, blogs, emerging formats of e-content).

- Establish procedures and a timeline for evaluating and approving suggested titles to be ingested and managed by the Library.

Key actions for e-content from other sources

- Establish procedures that enable selectors to have materials ingested, tagged with quality metadata, and made available quickly.

When asked what faculty-produced digital content the Library should begin to collect and preserve,

- > 80% mentioned datasets, multimedia materials, and electronic dissertations
- >70% mentioned databases, images, and born digital electronic papers
- >50% mentioned individual documents (pdf), online podcasts of classroom instruction
- >30% mentioned blogs, web pages/sites, and email

Acquisition and Processing

The dissemination of knowledge is increasingly achieved through a digital and networked infrastructure that is not well served by a technical services infrastructure that is highly developed to support the paper-based flow of information. The Library must evaluate the human resources and technical systems required to support our digital and networked resources, while continuing to support print and other non-digital collections. Whether downloaded to local servers, digitized locally, or available as licensed or free resources on the internet, this e-content should be easily discoverable and rapidly accessible. The values and principles set forth in the "Next Generation Technical Services" Scope Statement of April 10, 2009⁹ are excellent and the Library should actively advocate and work to achieve its vision.

Principle No. 14: Digital materials should receive the same priority for acquisition, cataloging, and processing as other materials. The quantity of digital materials being created and acquired has risen and will continue to rise. Digital material presents different challenges for acquisition, processing, and cataloging workflows. The Library needs new workflows that respond to these challenges so that digital materials become visible and available in a timely manner.

⁹ "Next Generation Technical Services: Changing How We Provide Technical Services for the University of California Libraries." Scope Statement, April 10, 2009.
http://uclib-s10.cdlib.org/about/uls/ngts/docs/NGTS_scope_10april2009.pdf

Key actions

- Design and implement processes and workflows that recognize the importance of e-content, speed its processing and maximize its discovery, including

- Create a core integrated workflow that addresses the processing of materials in all formats

- Develop the capacity to handle digital materials expeditiously in acquisitions and cataloging, including (a) providing training and development opportunities for staff to acquire new skills and knowledge and (b) identifying and acquiring any new hardware and software that will automate processes as much as possible

Only 15% of question respondents report that digital resources "quickly become available to users."

- Broadly distribute responsibility for processing e-resources

- Analyze where delays occur in the licensing/ordering/cataloging/access workflow, then build automatic mechanisms to flag delays and notify the appropriate unit to take follow-up action

Principle No. 15: Shorten the time span between information acquisition and discovery. Priority is to make records available quickly in our discovery tools.

Key actions

- Use approved minimal level records to make records available quickly

- Leverage cooperative cataloging, such as the Shared Cataloging Program at UC San Diego, as much as possible and load these records in a timely manner

- Expand cooperative and shared cataloging activities with other appropriate partners

- Ingest existing cataloging and metadata from all sources in order to achieve efficiencies and avoid redundant work whenever possible

- Set expected standards for acquisitions and processing to be completed, for example¹⁰:

- Electronic Resources Librarian will review licenses with five working days
- Acquisitions will place e-mono and e-serials orders within five working days
- Individual e-mono titles and e-packages with fewer than 50 titles will be cataloged within one week
- e-packages with more than 50 titles will be cataloged within two weeks

Principle No. 16: Metadata is an information resource

Key actions

¹⁰ University of Minnesota. Private Communication. March 2009

- to the extent that we own copyright, provide open access to our metadata as either raw data or web services.

Discovery & Access

Principle 17: Digital collections and digital objects within those collections

should be easily discoverable by users. Users are doing the majority of their own searching and the nature of professional mediation is changing. We need metadata and searching techniques that work within the information-finding skills of our users.

Key actions

- Minimize the number of search mechanisms required to discover objects and collections of objects

Selectors report user complaints on discovery:

- too many places to look
- crazy quilt paths to content
- inaccurate URLs in cataloging record
- can't find digital books
- incorrect holdings in catalog records and SFX
- missing from catalog and/or SFX

- Describe digital objects so that a user quickly and easily can identify objects of interest. Design search mechanisms to enable users to apply variations in terminology to search the same concept.

- Leverage the power of social networking applications to promote our digital collections (e.g., use Twitter to announce collection updates, add "post to Facebook/Delicious/etc." to our e-resource pages, etc.)

- Think of the users' workflow and the best places for our records and metadata to intersect with that workflow; then aggregate metadata to the highest level that makes sense, such as WorldCat, Google Scholar and Google Books

- Investigate new and emerging technologies to enhance search

Selectors report these user complaints about access:

- periodic lapses in access
- broken e-links
- change in URLs not reflected in catalog; url no longer working;
- missing or unreadable pages
- providers are slow in fixing outages
- download too slow

Principle 18: The creation of metadata should be limited to elements essential for discovery, use, administration, and preservation of digital objects. Creating metadata costs money that otherwise could be used to develop the collections.

Key actions:

- Assign to appropriate Library staff ongoing responsibility for identifying key actions to implement this principle.

Principle 19: The creation of metadata is a shared responsibility of collection development, public service, and technical service staff involved in the acquisition and creation of digital collections.

In the current environment, descriptive information development is seen as the responsibility of the Technical Services units. However, when selectors and public

service staff acquire digital materials or convert paper-based objects to digital form, they often have knowledge of the metadata needed to make these objects discoverable by users. These metadata could be contributed to the catalog records at much lower cost to the institution than continuing to assign the work to Tech Services. The work to coordinate the various aspects of metadata creation will require the re-organization of staff and functions to support those necessary services.

Key Actions

- Develop simple Web-based data entry interfaces for use by Library staff.

- Explore procedures that would allow selectors and other library staff with subject knowledge to enter basic metadata. Determine:
 - where this makes sense (e.g., downloading resources off the web?, archiving websites?, digitization projects?, data files? access to supplementary materials - CDs in books?)
 - when it provides added value (e.g., makes metadata available sooner in our discovery systems)
 - in what cases this metadata should be enhanced by technical service units.

- Use Technical Services units to continue to offer support for metadata input, authentication of descriptive metadata, the application of standardized vocabularies and content standards, data review and approval, and tool expertise.

- Investigate benefits and costs for deriving metadata from other sources (e.g., outsourcing descriptive metadata, capturing technical metadata from files headers)

66% of question respondents rejected the idea of discontinuing MARC cataloging of e-journals and redirecting users to the A-Z list.

- Use sanctioned tools to create metadata. At Berkeley, there exists three tools for the creation of metadata: OCLC, the ILS catalog (both based on MARC) and WebGenDB. In order to effect a more efficient process, these tools must be the only authorized tools for metadata creation. Provide appropriate training and instructions on these tools (preferably an online web-accessible training site).

Principle No. 20: New organizational models will provide greater efficiency and effectiveness in metadata creation.

The consolidation and centralization of staff to provide core support services is a viable approach in facing the challenges of a digital world and a reduction of human resources in the Library. Although information about a collection can and must be culled from a variety of sources, the work to coordinate the various aspects of metadata creation will require the consolidation, centralization, and re-organization of staff and functions to support those necessary services. As identified above, this work includes, but is not limited to, metadata input, authentication of descriptive metadata, the application of standardized vocabularies and content standards, data review and approval, and tool expertise.

Principle No. 21: Connection to e-content should be reliable.

Key actions

- Expedite resolution of access problems by establishing procedures for reporting problems to a continuously monitored mailbox, and setting guidelines for triage and resolution

- Run an automated URL checker on the catalog and repair or update incorrect URLs. If material is truly gone, delete all access information, including the catalog record.

Principle No. 22: E-content should be complete and legible

Key actions

- Establish infrastructure for users to easily report and for staff to resolve incomplete or otherwise unusable digital facsimiles

Preservation

Principle No. 23: Maintain commercially acquired and locally created digital collections in serviceable condition for as long as needed at the lowest possible cost.

This principle consists of three elements. The first is that digital objects may be able to be maintained in serviceable condition without being maintained in original condition; if essential data and behaviors of digital objects can be maintained, digital objects can be preserved satisfactorily even when non-essential data and behaviors are lost. Second, the value of digital collections is determined by organizational needs; titles need to be reviewed periodically to determine continuing value to the Library and preserved only as long as needed. Third, the cost of preservation should be kept as low as possible to enable finite resources to emphasize collection development rather than preservation.

41% of question respondents indicated that they download content to a local pc that they consider part of their collection. Berkeley has no programmatic approach to stewarding this content.

79% report that concerns about preservation stop them from buying digital; 82% said these concerns stop them from discontinuing print.

Key Actions

- **Prepare** digital objects for preservation using Library Systems Office platforms and services.

- **Contract** for digital preservation services that offer the following elements:
 - o Means to **identify** digital objects uniquely and persistently.
 - o **Storage and management** of the files comprising the digital objects to enable them to be reassembled and delivered on demand.

64% of respondents reported being concerned about preserving CD's.

71% of question respondents indicated they have at-risk material that needs to be digitized (with 23 examples)

- **Protection** of the files from loss and corruption through replication in a dark archive environment.
- **Verification** of the bit-level integrity of managed files and, when necessary, repair any damage that is discovered.
- **Characterization** of digital objects to enable automatic determination of essential data and behaviors.
- **Transformation** of digital content in response to changing user requirements and expectations as well as in response to forces of change in the technical environment.

- **Monitor and evaluate** digital preservation services to ensure satisfactory performance and cost effectiveness.

- **Justify** the investment of preservation resources by reviewing the continuing value of digital objects when they need to be transformed.

Principle 24: Preserve information in digital, rather than analog, form whenever feasible.

The goal of preservation is to facilitate continuing access to information; consequently, this principle adheres to user preferences for access. When the technical or economic limitations of digitization result in a loss of data or behaviors from the information object, curators and selectors will determine the feasibility of digitization as a preservation action. To conserve resources, information objects whose essential data and behaviors can be captured digitally will be preserved only as digital objects.

Key Actions

- **Identify** analog objects feasible for digitization, i.e. those whose essential data and behaviors are able to be captured and used digitally.

- **Set priorities** among analog materials feasible for digitization using three criteria: 1) demand for the material in digital form; 2) risk of loss in analog form; and 3) availability of funding.

- **Contract** for digitization services (in house and commercial) to match the technical capability of services to collection digitization needs.

- **Monitor and evaluate** digitization services to ensure satisfactory performance and cost effectiveness.

- **Preserve the** digitized information objects using the key actions associated with Principle No. 23 above.

Copyright

Principle 25: The Library will make a good faith effort to comply with all applicable copyright law while striving to make the greatest amount of resources available to the greatest number of people, including the public and the scholarly community, for purposes of teaching, research and publication.

Key Actions

- Include copyright permission verification in the work flow for posting on all non-licensed digital materials
- Ensure that a copyright statement (read "disclaimer") be attached to these digital materials, especially those digitized in-house
- Develop a statement delegating the responsibilities for ensuring compliance with copyright to the user, wherever they are and in whatever way special aspects of the work might require. For example, see Cornell University statement at <http://cdl.library.edu/guidelines.html>
- For e-content created at UC Berkeley, either by virtue of digitizing material already in our collections or for material that is collected from the web, the Library will need to ascertain the level of rights and permissions that will control access to the object, future use of the object and whether or not the Library will be responsible for its long-term preservation. Work with new campus copyright advisor (who will have partial library appointment beginning November 2009) to increase levels of library staff and faculty knowledge regarding copyright as it pertains to digital content.

Digital Library Services and Infrastructure

Principle 26: A successful Digital Collections Program requires the provision of a set of services that supports the creation, maintenance, management, dissemination and preservation of digital collections.

Key Actions

- Provide the following services:

- **Electronic Resources Management Service** to track contract and business terms for licensed materials
 - Primarily used for licensed e-journals and databases.
 - **Requires** Electronic Resources Management software, staffing, etc.
- **Digitization Service** to create digital artifacts from analog sources
 - Convert text, images, audio, video, etc. from analog to digital
 - **Requires** digital cameras, devices to convert audio/video to digital form, outsourcing agreements, software to manage the digitization process for large collections, staffing, etc.
- **Digital Object Creation and Maintenance Service** to support the creation and maintenance of metadata, and to associate metadata with the appropriate set of digital content files inside a digital object or collection
 - **Requires** staffing and a Digital Asset Management system that delivers the following functionality:
 - Inventory control that tracks the location of all our digital objects and to the collections in which they belong
 - Support for appropriate library standards (e.g., METS, EAD)
 - Digital object creation and maintenance tools to:
 - ✓ Create and maintain metadata
 - ✓ Support complex objects by allowing the association of metadata segments with appropriate digital content files in a single digital object or collection
 - Ingest services to load previously created metadata and digital content from outside sources
 - Export services to send digital objects and collections to other systems for access, preservation, etc.
- **Discovery, Display and Delivery Services** to provide indexing, display and delivery services, as appropriate for locally held digital collections
 - **Requires** configurable “search engine” software, databases, proxy services, staffing, etc.
- **Preservation Service**
 - Prepare documentation and offer procedures to export digital objects and collections to preservation repositories (see Preservation Section)

When asked “what has kept you from pursuing digitization projects”, question respondents stated that in addition to funding, they need staffing to create metadata (62%), assistance with project management (58%), tools like WebGEN (54%) and training (46%). Comments included the need for clear procedures, forms and documentation.

- **Project Management Services**
 - Expertise in managing projects that create digital collections, including steps such as digitization, metadata mapping and creation, discovery system configuration, investigating preservation strategies, documentation and procedures, etc.

Principle 27: Digital collections support services are provided by staff and based on software applications that utilize the local technology infrastructure.

This infrastructure must be robust, well supported by the Library and sized to accommodate the digital content it must store and manage (i.e., locally digitized materials, licensed materials where the library takes the digital files and digital materials that come to us via the exercise of a perpetual rights clause)

Key Actions:

- Provide the following technology infrastructure components
 - Software applications (e.g., OskiCat, the Digital Asset Management System)
 - Public and staff desktop workstations that run local software applications
 - Servers for data storage and the running of centralized software applications (e.g., the Digital Asset Management System, search engines, proxy server, etc.)
 - A fast, reliable data network that connects the desktop workstations and servers both together and to the wider Internet
 - Staffing to support the software, servers and networks.
 - High quality, fast, cheap color printing/scanning services for users to make their own copies as needed

Sustainability

The Task Force charge asked the group to consider the following:

- What are the sources of potential funding/partnerships for digitization efforts? How can these best be identified, solicited and managed?
- Explore the relative importance of investing in acquisition of general and unique content in light of developments favoring a more “open” environment.

59% of question respondents indicated a willingness to redirect some of their existing funds in order to digitize content.

Assuming, at a future time, a more “open” environment in which most published materials will be accessible to all, Libraries will be distinguished by their unique holdings, including the intellectual output of the campus faculty and researchers, as well as unique collections held by the Library and other campus departments. Mass digitization projects have contributed to openness by making a huge body of digital copies available for searching; however, it is far from clear how such materials will be made truly accessible. The question to what extent the Library should divert its human and budgetary resources to finding, curating and managing its unique content was not fully explored by this Task Force. The activities recommended in the report regarding new roles for selectors in finding and taking under management newly-created campus information and in promoting/advocating for open access methods of publishing will take us in a direction to begin to understand this issue and it should be the subject of regular discussion. In addition, it behooves the Library to maximize its benefit from mass digitization projects by carefully evaluating opportunities to contribute its materials and negotiating for the digitized content to be quickly discoverable by our faculty, students and staff.

- How should preservation funds be allocated to ensure adequate support for both analog and digital preservation needs?

Principle No. 28: The Library will identify funds for an ongoing program to digitize our holdings according to the priority established by the key actions of Principle No. 10: Selection of local content for digitization. Two strategies are evident: re-direct money already available or find new money.

Key actions

- Re-direct money already available, for example:
 - Take an off-the-top percentage of collections funds and allocate it for digitization of materials
 - Re-direct binding savings that accrue as print journals are canceled; these savings could be substantial in journal-driven subject areas
 - Re-direct savings from technical processing that may result by using minimal level and externally-created records and metadata

- Enable selectors to redirect their existing funds to digitize content
- Find new sources of money, for example:
 - Allocate a percentage of the funds brought in under the current Capital Campaign to be used for digitization of materials
 - Appoint a small group of the appropriate people to keep up with grants and awards opportunities and make a call for proposals for funding digitization; this may be more project oriented, rather than a steady stream, but should be pursued
 - Make it part of the Library's Budget Request to the Campus in next year's budget; this would have to be presented as an efficient economic strategy, with well-defined benefits for the Campus community in support of the University's mission
 - Seek campus partners that may fund digitization of materials when there is a mutually beneficial goal, for example, a department may fund the digitization of departmental reports or master's papers, or perhaps fund digitization of materials that are important to large undergraduate classes in their subjects
 - Leverage partnerships with other UCs and outside institutions that have a mutual interest in digitizing content

Principle No. 29: The Library will identify funds to digitize items specifically in order to preserve them.

Principle No. 30: The Library will apportion funds and staff resources for digitization with an eye to balancing current access; preservation; unique and special collections; and subject area needs.

Key Actions

- Discuss and determine principles and procedures for how to prioritize competing requests for funds or staff resources to digitize materials

Principle No. 31: The Library will stay at the forefront of developments regarding scholarly communication and seek to influence the publishing market with a view to decreasing the costs of obtaining high quality information in the future.

Key actions

- Support transformative, sustainable publishing models that will help address ongoing and future the economic challenges

Next Steps

The AUL / Director for Collections will review the principles, key actions and next steps in this report and will work with Library ADMIN to identify what can be done now and what later, and to create pilot projects, discussion/working groups and staff development and training to move The Library forward. Below are some thoughts about where we might begin.

1. **Staff Development:** Create a regular program of staff updates/training relative to the issues of digital content creation and management, including sessions on Lifecycle Management (general); elements of Lifecycle Management (in particular); copyright; and policies and procedures as our digital infrastructure is updated or changed. Questions 22, 25, and 31 of the survey supply selector thoughts on training/discussions. Selectors indicated on the survey considerable interest in learning more about the digital library. Interest ranged from policy (e.g., what should be the role of liaisons in scholarly communication; should the library or campus departments be responsible for faculty-created digital products, etc.) to the very practical (e.g., scan resolutions).
2. **Document what's already working:** Ask Systems Office to create an overview of existing services available to selectors for digitizing content; include roles and responsibilities for selectors and systems office project managers. Ask that they update this documentation as pilot projects clarify needs.
3. **Address immediately the barrier to metadata creation:** Charge a group to investigate and make recommendations on rules for acceptable levels of metadata and the roles and procedures needed to create metadata, with special focus on distributing creation of metadata beyond traditional cataloging staff.
4. **Run several pilot projects to further understanding of digital collection management:**

Preserve CD Rom content

CD's ROMs currently held in units, with no program for their preservation. CD ROM collections of conferences, books, and journals are becoming unreadable, sometimes within a few years of being issued. Problems include CDs where display of content is tied to an early version of the Adobe Acrobat reader that is no longer available, CDs where content is no longer searchable, and some that no longer open at all. Can they be migrated to a standard digital format for long term usability?

Ingest electronic documents into the collection

Over the past two years, Bancroft Library has acquired through purchase an increasing number of titles from vendors. These titles are usually delivered via email as attachments. These items create significant problems as their number has grown. They have raised questions of policy and procedure relating to persistent storage, cataloging and access. How should the Library retain these electronic files and where should they be stored to guarantee their continued existence: should they be stored in PDF-A with appropriate metadata on a local server or be placed in the DPR? What are the procedures for cataloging them:

should we create a MARC record and link to the file or place them on AOC as METS objects? How should they be made available: should they be printed off on paper or retained as electronic files accessible in OAC or OskiCat? Other selectors also download purchased or free material and need guidance and procedures for having it ingested and processed.

Investigate means to accept and manage content for purposes of perpetual access

Downloaded digital files of journals in ENGI: Following a publisher/distributor transfer of journals, the new distributor notified us that we had to download 5 volumes of 4 titles, as they were no longer being made available by either party to subscribers. Systems staff has downloaded them. How do we make them seamlessly available through the catalog, sfx, indexes, etc?

5. **Charge a group to document, analyze and make recommendations on changes in the digital materials workflow to reflect the full lifecycle of digital objects, paying special attention to the new roles and interfaces needed between selectors, systems office and technical services staff.** Suggest the goals and metrics needed to monitor these processes and improve them as needed.

Appendices

APPENDIX A: Digital Collection Development Plan Task Force Membership and Charge

January 20, 2009

Membership:

Jean McKenzie, Chair (Head, Kresge Engineering Library)
Harrison Dekker (Data Librarian)
Jan Eklund (Visual Resources Curator, Art History)
Gail Ford (Collection Development Office)
Bernie Hurley (Director for Library Technology)
David de Lorenzo (Associate Director, The Bancroft Library)
Barclay Ogden (Head of Preservation)
Margaret Phillips (Electronic Resources Librarian, The Library)
Teresa Stanton (Affiliated Libraries/Law Library)
Susan Xue (Electronic Resources Librarian, East Asia Library)

Background: The UC Berkeley Library collections budget is at a mid-way point in transitioning from a print-based to a digital collection. The challenges (budgetary, staffing, selection, etc.) in getting to this point have been significant, requiring the development of parallel processes for print and digital collections, balancing Library needs with publisher expectations regarding long-term access to licensed content, and a quickly evolving digital preservation environment. One of the “Themes and Initiatives” starting points arising out of the Library’s yearlong New Directions process is “Build a full range of digital library collections and services.” As a result, the Library has undertaken an initiative to address the needs of digital assets in all primary digital formats, including both life-cycle and program needs. This is an ideal opportunity for the Library to make explicit the principles that will guide further development of Berkeley’s digital collection, assessing priorities for further investments in licensed content, establishing principles and procedures for content that is either acquired or created in digital form, as well as considering key infrastructure requirements for the digital future, with a focus on development, management and preservation of digital content.

Charge: Develop a strategic plan to assist the Berkeley Library in transitioning to an integrated digital collection serving the research and teaching needs of the campus community. The Task Force should begin its work with an inventory of digital initiatives across the campus and an environmental scan of digital collection development strategic planning, guidelines and best practice documents among peer institutions. The Task Force should take into consideration the efforts already underway as part of the “New Directions” Digital Library Program initiative. The strategic plan developed by the Task Force should identify key selection, acquisition, content management and preservation principles that can provide guidance. The Task Force should address a range of salient issues raised during its deliberations, but the final product should provide specific recommendations and guidance in the following three issue areas:

Collection development

- Establish guidelines and relative priorities for selection of content across a range of categories, including but not limited to the following: electronic books and journals; traditional indexing and abstracting services; portals and alerting services; locally created and free web content including for example Electronic Theses and Dissertations; bibliographic/research software; and specialized search engines that interrogate bibliographic, full text, and scientific content.
- Identify principles for investing in “leased” resources in contrast to those which are either “purchased” or created in digital form. When licensing external resources, what are the principles that should govern content from the perspective of ensuring perpetual access (for example, in what cases should the capacity for local hosting of the content be developed to ensure long-term access).
- When digitizing resources, what should be the appropriate criteria used in selecting content.
- Relate the Berkeley digital collection to the broader UC digital library including Online Archive of California, eScholarship, and the content that has been created by the mass digitization initiative (Google, OCA).
- How does open access content fit within Berkeley’s overall collection development plan (OA journals, open data, web-based content in general)

Collection management and preservation

- What hosting capacity is required by the Library in order to assure effective, long-term stewardship of the resources acquired on the basis of the Library’s collection budget?
- How should Library collections funds be allocated in a future digital collection environment. Should the existing highly granular array of subject funds be modified in any way?
- How should the Library handle payment of digital access infrastructure costs (described by vendors and providers such as SDSC variously as “hosting”, “access”, “maintenance” or “service” charges).
- What new collection building tools and processes are required by the new digital collection (e.g., CDL’s Web Archiving Service, OCLC’s CONTENTdm, etc.).
- How can the Library best leverage its current digital preservation strategies (Portico membership, LOCKSS membership, Digital Preservation Repository, and the HathiTrust).
- Should additional services be subscribed or memberships established in addition to or in place of the above (e.g., CLOCKSS, OCLC CONTENTdm, etc.)
- Consider the impacts of this collection management plan on management of print collections.

Sustainability

- What are the sources of potential funding/partnerships for digitization efforts? How can these best be identified, solicited and managed?
- Explore the relative importance of investing in acquisition of general and unique content in light of developments favoring a more “open” environment.
- How should preservation funds be allocated to ensure adequate support for both analog and digital preservation needs

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(see also UCSD Library strategic plan at

<http://www.ucsd.edu/portal/site/Libraries/menuitem.346352c02aac0c82b9ba4310d34b01ca/?vgnnextoid=238a2b3401904110VgnVCM10000045b410acRCRD>)

APPENDIX B: Survey of Selectors

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Appendix D: General Guidelines for Selecting & Licensing Digital Materials

1. Usefulness in serving the current and future informational needs of the UC Berkeley community
2. Scholarly, intellectual level of material
3. Reputation and authority of producer or vendor
4. Added-value and advantages over other formats, e.g. searchable, 24/7 access
5. Uniqueness and completeness of information
6. Currency and validity of information and updates
7. Technical ease of use and accessibility
8. Adherence to fair use and copyright guidelines
9. Vendor's customer support, help and training programs
10. Ask UC colleagues if this resource is of interest to them and, if so, follow Tier 1 or Tier 2 procedures to purchase jointly
11. License in accordance with CDL Checklist and Standard License Agreement, or acceptable alternative (e.g. SERU)
12. The cost, both current and ongoing is within the funding capacity

Appendix E: Criteria to Purchase Print Journals

Selector's Name: _____

Journal Title: _____

Publisher: _____

_____ This form applies to all journals from this publisher

Print is required or needs to be retained because: (check all that apply)

_____ 1) Title is available only in print format

_____ 2) Digital is _____% more expensive than print

_____ 3) License does not provide sufficient assurances of continuing access to content if subscription were to be cancelled in the future.

_____ 4) A print/digital combination is the only option offered by the publisher. If this option is checked, please decide how print issues should be handled:

_____ Bind & retain

_____ Retain, but do not bind

_____ Retain print for _____ years

_____ Discard print upon arrival

_____ Other, please specify

_____ 5) Print edition contains content or feature not available in the digital version, such as letters to the editor, announcement or color figures

_____ 6) Quality/resolution of the digital version does not compare favorably with the print edition, especially in regards to photographs, finely drawn graphics, etc.

_____ 7) Title is retained as part of a small, core group of print materials available for a browsing/reading collection for on-site readers

_____ 8) Other (please specify): _____

APPENDIX F: Appropriate Forms of Metadata

Administrative metadata should be used in managing and administering collections and information resources. Examples include:

- Acquisition information
- Rights and reproduction tracking
- Documentation of legal access requirements
- Location information
- Selection criteria for digitization

Descriptive metadata should be used to identify and describe collections and related information resources. Examples include:

- Cataloging records
- Finding aids
- Differentiations between versions
- Specialized indexes
- Curatorial information
- Hyperlinked relationships between resources
- Annotations by creators and users

Preservation metadata related to the preservation management of collections and information resources. Examples include:

- Documentation of physical condition of resources
- Documentation of actions taken to preserve physical and digital versions of resources, e.g., data refreshing and migration
- Documentation of any changes occurring during digitization or preservation

Technical metadata should be used to document how a system functions or metadata behaves. Examples include:

- Hardware and software documentation
- Technical digitization information, e.g.,
formats, compression ratios, scaling routines
- Tracking of system response times
- Authentication and security data, e.g., encryption keys, passwords

Use metadata should be used to describe the activity level and type of use of collections and information resources. Examples include:

- Circulation records
- Physical and digital exhibition records
- Use and user tracking
- Content reuse and multiversioning information
- Search logs
- Rights metadata

APPENDIX G: Notes on Copyright

Regarding non-licensed materials, there are three broad areas of library activity that are affected by copyright:

- The right to digitize materials
- The right to make digital materials available
- The right to use the digital materials, including republishing them, whether in snippets or in whole

The last item may be the easiest to handle and the library might satisfy its legal requirements by posting a copyright statement with the digital content being made available to the scholarly community and the public. See, for example, statements used by the Library of Congress shifting the responsibility for getting copyright permission to the user posted at <http://memory.loc.gov/ammem/coolhtml/ccres.html> and reproduced in Appendix I. See also Cornell University Library's Digital Collections Guidelines posted at <http://cdl.library.cornell.edu/guidelines.html>

Issues surrounding whether the library can digitize materials and make them available are quite complex and are governed by international law, U.S. federal legislation and U.S. federal case law. Copyright legislation is found in title 17 of the United States Code. Copyright protection automatically attaches to

“... original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced or otherwise communicated, either directly or with the aid of a machine or device.”
17 U.S.C 102(a)

No registration, copyright statement or publication is required. Exceptions to this blanket right include:

- Works that have fallen into the public domain
- Fair use (17 U.S.C. 107)
- Library copying (17 U.S.C. 108)
- Exception for public displays (17 U.S.C. 109)
- Displays and performances in face-to-face teaching (17 U.S.C. 110(1))
- Displays and performances in distance learning (17 U.S.C. 110(2))
- Computer software (17 U.S.C. 117)
- Special formats for persons with disabilities ((17 U.S.C. 121)

For a decision about whether particular materials may be digitized and made available to scholars and the general public, the issues are:

- 1) Whether the item is in the public domain.

If the answer is yes, then the materials can be both digitized and posted on the Web.

Copyright law is quite complicated, in part because it has been modified several times. Applicable rules vary depending on when materials were originally published. A simple chart by Prof. Laura Gasaway, from the University of North Carolina, Chapel Hill, and Cornell's more detailed chart based on her work, are available on the web. Both charts may be useful in making this determination. Cornell's version is reproduced in Appendix II.

Public Domain Charts:

<http://www.unc.edu/~unc1ng/public-d.htm>

http://www.copyright.cornell.edu/public_domain/

2) Whether section 108, library copying, applies.

If the answer is yes, materials may be digitized but permissible access will be restricted and the materials may not be posted on the Web.

Section 108 allows copying for purposes of preservation, security and replacement, copying for research and study, and copying for ILL. It also allows libraries and archives to digitize works in the last twenty years of their copyright term as a preservation measure.

3) Whether section 107, fair use, applies.

If the answer is yes, materials may be digitized and they may be made publicly available, within certain guidelines.

The burden-shifting copyright disclaimer noted above comes into play here. Fair use is neither simple nor straightforward and is ultimately determined in a court of law should a complaint be brought. Decisions of the courts are based on balancing the four factors articulated in section 107 for fair use. These factors are:

- The purpose of the use, including a nonprofit educational purpose
- The nature of a copyrighted work
- The amount of the work that is used
- The effect of the use on the potential market for, or value of, the original work

It is important to note that unpublished materials are more strictly protected than published ones. Both the nature of the work and the effect on the potential value of the work come into play. There is a presumption that letters, diaries, manuscripts and personal papers contain private information which merit stronger protection. (Under the common law, unpublished works had perpetual copyright. The 1976 Copyright Act rescinded this right.)

4) Whether the owner of the copyright has granted permission.

If the library is unable to identify or contact the holder of copyright, fair use provisions may be sufficient to allow digitizing and posting the materials.

The copyright disclaimer used by the Library of Congress and other institutions specifically states that copyright permission has either been granted or that the

institution has made a good faith effort to find the holder of copyright for posted materials. Documentation of the good faith search is highly recommended.

Two simple and practical resources to aid in understanding and identifying copyright issues are:

Copyright Law for Librarians and Educators: Creative Strategies and Practical Solutions. Kenneth D. Crews. American Library Association: Chicago (2006)

Library Digitization Rights and Copyright. Mary Minnow.
<http://www.llrx.com/features/digitization.htm> (June 2002)

APPENDIX H: Summary of Themes, Principles and Key Actions

Principle No. 1: The Library makes an organizational commitment that staff will have opportunities to contribute to essential changes, including opportunities to assume new or different roles.

Key actions

- develop a communications plan to inform staff of the digital collections development plan and solicit their input
- define training required for new or different roles, then provide it
- The AUL for Collections will coordinate a program of Selector discussions and workshops on acquiring and managing e-content, including:
 - lifecycle curation stages and activities associated with them
 - costs and benefits of lifecycle management
 - selection and curation decisions for born digital materials
 - licensing and copyright issues
 - role with faculty and researchers
 - Portico, LOCKSS, Web Archiving Service, and HathiTrust - what are they, how does the Library benefit, what tasks does The Library need to take in support of these?

Principle No. 2: The Library must use its financial resources in the most responsible and effective way to deepen the collections available to faculty and students on and off campus, including providing ongoing access and long-term preservation of digital collections.

Key Actions

- Minimize redundant expenses by a) buying materials in only one format; b) preserving just one format, and c) working with other campus libraries to avoid duplication in the acquisition of new e-content.

- Continue to extend budget dollars by strategies such as a) consortial purchasing with UC Libraries, the Center for Research Libraries and other appropriate partners, b) resource sharing via interlibrary borrowing services, and c) mass digitization projects to make titles from UC Berkeley's collection accessible online.

- Actively seek grants and develop opportunities to collaborate with partners to digitize materials of shared interest.

- Rethink the budget to cover new expenses for ongoing access and long-term preservation needs of digital collections.

- Actively work with publishers to cap or reduce prices, and to find new, sustainable models for scholarly communication.

- Partner with faculty, and assist them as requested, to create a more sustainable model of scholarly communication.

Principle No. 3: The UC Berkeley Library is committed to enhancing the user experience of our collections.

Key actions

- develop a plan of ongoing faculty and department liaison activities that will solicit feedback regarding users' information needs and experiences using our collections
- develop a plan (survey or interview questions) that liaisons can use with faculty and research groups to identify important campus created e-content that the Library may want to acquire and curate

Principle No. 4: The Library is committed to branding and promoting its digital assets effectively to our user community.

Key actions

- develop a single recognizable brand that says UC Berkeley and place it prominently on all the Library's digital assets
- develop plans that make it easy for library units to continuously push out news about digital resources and services, including, for example, RSS feeds, news blogs, exhibits
- explore ways to make it easier to link digital content into the campus course management system so students find it at their point of need
- find out how researchers would like to use e-content and then provide the technologies that enable both the discovery and creation of information through our services, for example, adding productivity software to our public computers to permit people to research a topic and write a paper or make a presentation at the same time

Principle: 5: The Library is committed to building and making accessible a collection that keeps pace with changes in research, teaching, information technology and scholarly communication. We will assess our programs and modify our practices on a regular basis.

Key actions

- establish metrics and scheduled assessments that allow us to answer these questions:
 1. Do our collections satisfy current user needs?
 2. Do we deliver content using the technology that our users find most useful?
 3. Do we see evolving patterns of use that suggest ways we should change content or delivery of content?
 4. Do our collections help preserve the intellectual record for future generations?
 5. How do our collections aid larger campus / university goals?
 6. Do our collection-related practices foster scholarly communications?

7. Are library appropriations mapped well to the hierarchy of subjects supported by the campus?

- routinely review and modify this document in response to changes in research, teaching, information technology and scholarly communication.

Principle No. 6: The selection criteria for all types of e-content are consistent with selection criteria that have been in place for all library materials, the primary one being its usefulness in serving the current and future informational needs of the University community in its teaching, learning and research activities.

Principle No. 7: Selection/Licensing – Prospective: When acquiring licensed e-content, the license should meet current standards, which may change over time.

Key actions

- Use the "Checklist of Points to be Addressed in a CDL License Agreement"¹¹, and "Standard License Agreement"¹²

- Selectors will strongly negotiate for licenses to include the right to an archival copy of the data, right to perpetual access, right to interlibrary loan services, right to use the product in accordance with fair use guidelines, access by IP address, right to provide remote access to authorized users, right to provide access to walk-in users, provision of timely usage statistics that comply with current practice, provision of MARC or other appropriate records that can be easily loaded into UCB's discovery systems, and a robust delivery platform that meets usability and accessibility standards.

- In some cases, publishers and the Library agree to follow the "Shared Electronic Resource Understanding" (SERU) framework¹³, or other mutually acceptable business practices. It is understood that the license agreement for some locally acquired resources (Tier 3's) may not meet all of the above licensing criteria and that immediate user needs may, at times, trump licensing ideals.

- Develop criteria for acquiring licensed materials that do not meet the above standards.

- Evaluate the demand for e-books, then purchase following the guidelines and best practices now under development by the UC Systemwide E-Book Advisory Group.

¹¹ Checklist of Points to be Addressed in a CDL License Agreement: <http://www.cdlib.org/vendors/checklist.html>. Accessed July 7, 2009

¹² Standard License Agreement: http://www.cdlib.org/vendors/Model_License_LATEST_Revised_10-08.rtf. Accessed July 7, 2009

¹³ Shared E-Resource Understanding (SERU): <http://www.niso.org/workrooms/seru>. Accessed July 7, 2009

Principle No. 8: Selection/Licensing – Retrospective: The Library will purchase digitized versions of legacy collections as they become available and are needed to meet the Library’s mission.

Key actions

- Evaluate the most cost-effective ways to acquire backfiles. In some cases, this will be through the CDL negotiation process, and in others it will be via individual campuses. In either case, the cost should be one-time, without annual maintenance fees if possible, and the backfiles should conform to the “Standard License Agreement” conditions.

Principle No. 9: Digital Format Preferred: For journals that are available in both online and print, the Library purchases the online version, with exceptions made when print is necessary.

Key actions

- The Electronic Resources Librarian and a small group should carefully look at the “CDL Checklist” and “Standard License Agreement” to see if language needs to be strengthened to better address lifecycle management needs, for example:
 - does vendor/provider indicate a basic long-term preservation strategy, such as participating in a digital preservation program (LOCKSS, Portico)?
 - does vendor/provider agree to follow best practices if ownership of material is transferred at some later time? (See, for example, “Transfer Code of Practice: Version 2.0” and its “Supplement” at http://www.uksg.org/sites/uksg.org/files/TRANSFER_Code_of_%20Practice_2_0.pdf and http://www.uksg.org/sites/uksg.org/files/TRANSFER_supplementary_2.pdf)
- Ask CDL/CDC to provide guidance on which digital preservation programs are acceptable for long-term preservation of licensed e-content and which are not, and establish what action, if any, to take if vendor/provider is not participating in an acceptable program.
- Develop criteria to decide when UC Berkeley Library should UCB download digital files of a publisher and commit to managing access and long-term preservation
- Develop an inventory of all Tier 1, Tier 2 and Tier 3 licensed resources including how each resource meets CDL standard; and its digital preservation plan. Also include other information needed for the ERMS (electronic resources management system).

Principle No. 10: Selection of local content for digitization: Selection priority will be given to materials that primarily support teaching and scholarship at UC Berkeley and secondarily enhance CDL or other virtual scholarly initiatives.

Key actions

- Establish criteria to select materials for digitization to increase their accessibility, without duplicating digital materials that are readily available. Criteria may include potential for broad utility (e.g. useful in core undergraduate

courses), faculty request for materials used in teaching/research, unique value of materials, value of material in building on the Library's core strengths, condition of materials (e.g. material is deemed valuable and needs to be reformatted in order to continue to exist).

- Coordinate UC Berkeley's digitization program with those of the other UC Libraries in order to avoid duplicating the work of other digitization programs.

- Develop an inventory of unique collections in all libraries to be digitized and criteria to prioritize them.

- Work with other campus libraries and departments to support their digitization projects whenever possible and to ensure that independent digitization projects are discoverable and accessible.

Principle No. 11: The Library will use strategies to digitize the highest quantity of Special Collections materials at the lowest cost.

Key Actions

- Develop policies and guidelines to find the most cost-effective balance between the quality of the digitized reproduction and the amount of material that can be processed.

- Use strategies to reduce workloads, such as scan once, then re-use; repackage according to users' needs; use minimum description levels to maximize product output (e.g. collection level rather than item level description)

Principle No. 12: For out-of-copyright books, the Library will rely on the copy created by various partnerships, including the Google and OCA mass digitization projects, and HathiTrust to make these accessible.

Key actions

- Assign responsibility to someone to follow mass digitization projects and evaluate the best way to have their item records become visible in UC Berkeley's discovery services.

- Develop procedures to identify reproductions that are incomplete or otherwise unusable. Reach agreement within UC and with commercial partners who digitized the item originally about how these will be re-scanned and

Principle No. 13: Selection of Born Digital materials should also focus on how well the content meets the Library Mission in serving the informational needs of the UC Berkeley community

Key actions for UCB-created e-content

- Establish an inventory list and procedures for selectors to submit titles and descriptions of e-content created by faculty and researchers that the Library should preserve, or consider preserving. Establish a checklist of information that selectors should collect for this kind of content. (e.g. data sets, blogs, emerging formats of e-content).

- Establish procedures and a timeline for evaluating and approving suggested titles to be ingested and managed by the Library.

Key actions for e-content from other sources

- Establish procedures that enable selectors to have materials ingested, tagged with quality metadata, and made available quickly.

Principle No. 14: Digital materials should receive the same priority for acquisition, cataloging, and processing as other materials.

Key actions

- Design and implement processes and workflows that recognize the importance of e-content, speed its processing and maximize its discovery, including
 - Create a core integrated workflow that addresses the processing of materials in all formats
 - Develop the capacity to handle digital materials expeditiously in acquisitions and cataloging, including (a) providing training and development opportunities for staff to acquire new skills and knowledge and (b) identifying and acquiring any new hardware and software that will automate processes as much as possible
 - Broadly distribute responsibility for processing e-resources
 - Analyze where delays occur in the licensing/ordering/cataloging/access workflow, then build automatic mechanisms to flag delays and notify the appropriate unit to take follow-up action

Principle No. 15: Shorten the time span between information acquisition and discovery. Priority is to make records available quickly in our discovery tools.

Key actions

- Use approved minimal level records to make records available quickly
- Leverage cooperative cataloging, such as the Shared Cataloging Program at UC San Diego, as much as possible and load these records in a timely manner
- Expand cooperative and shared cataloging activities with other appropriate partners
- Ingest existing cataloging and metadata from all sources in order to achieve efficiencies and avoid redundant work whenever possible
- Set expected standards for acquisitions and processing to be completed, for example¹⁴:
 - Electronic Resources Librarian will review licenses with five working days

¹⁴ University of Minnesota. Private Communication. March 2009

- Acquisitions will place e-mono and e-serials orders within five working days
- Individual e-mono titles and e-packages with fewer than 50 titles will be cataloged within one week
- e-packages with more than 50 titles will be cataloged within two weeks

Principle No. 16: Metadata is an information resource

Key actions

- to the extent that we own copyright, provide open access to our metadata as either raw data or web services.

Principle 17: Digital collections and digital objects within those collections should be easily discoverable by users.

Key actions

- Minimize the number of search mechanisms required to discover objects and collections of objects
- Describe digital objects so that a user quickly and easily can identify objects of interest. Design search mechanisms to enable users to apply variations in terminology to search the same concept.
- Leverage the power of social networking applications to promote our digital collections (e.g., use Twitter to announce collection updates, add "post to Facebook/Delicious/etc." to our e-resource pages, etc.)
- Think of the users' workflow and the best places for our records and metadata to intersect with that workflow; then aggregate metadata to the highest level that makes sense, such as WorldCat, Google Scholar and Google Books
- Investigate new and emerging technologies to enhance search

Principle 18: The creation of metadata should be limited to elements essential for discovery, use, administration, and preservation of digital objects.

Key actions:

- Assign to appropriate Library staff ongoing responsibility for identifying key actions to implement this principle.

Principle 19: The creation of metadata is a shared responsibility of collection development, public service, and technical service staff involved in the acquisition and creation of digital collections.

Key Actions

- Develop simple Web-based data entry interfaces for use by Library staff.
- Explore procedures that would allow selectors and other library staff with subject knowledge to enter basic metadata. Determine:
 - where this makes sense (e.g., downloading resources off the web?,

archiving websites?, digitization projects?, data files? access to supplementary materials - CDs in books?)

- when it provides added value (e.g., makes metadata available sooner in our discovery systems)
- in what cases this metadata should be enhanced by technical service units.

- Use Technical Services units to continue to offer support for metadata input, authentication of descriptive metadata, the application of standardized vocabularies and content standards, data review and approval, and tool expertise.

- Investigate benefits and costs for deriving metadata from other sources (e.g., outsourcing descriptive metadata, capturing technical metadata from files headers)

- Use sanctioned tools to create metadata. At Berkeley, there exists three tools for the creation of metadata: OCLC, the ILS catalog (both based on MARC) and WebGenDB. In order to effect a more efficient process, these tools must be the only authorized tools for metadata creation. Provide appropriate training and instructions on these tools (preferably an online web-accessible training site).

Principle No. 20: New organizational models will provide greater efficiency and effectiveness in metadata creation.

Principle No. 21: Connection to e-content should be reliable.

Key actions

- Expedite resolution of access problems by establishing procedures for reporting problems to a continuously monitored mailbox, and setting guidelines for triage and resolution

- Run an automated URL checker on the catalog and repair or update incorrect URLs. If material is truly gone, delete all access information, including the catalog record.

Principle No. 22: E-content should be complete and legible

Key actions

- Establish infrastructure for users to easily report and for staff to resolve incomplete or otherwise unusable digital facsimiles

Principle No. 23: Maintain commercially acquired and locally created digital collections in serviceable condition for as long as needed at the lowest possible cost.

Key Actions

- **Prepare** digital objects for preservation using Library Systems Office platforms and services.

- **Contract** for digital preservation services that offer the following elements:
 - o Means to **identify** digital objects uniquely and persistently.

- **Storage and management** of the files comprising the digital objects to enable them to be reassembled and delivered on demand.
- **Protection** of the files from loss and corruption through replication in a dark archive environment.
- Verification of the bit-level integrity of managed files and, when necessary, repair any damage that is discovered.
- **Characterization** of digital objects to enable automatic determination of essential data and behaviors.
- **Transformation** of digital content in response to changing user requirements and expectations as well as in response to forces of change in the technical environment.

- **Monitor and evaluate** digital preservation services to ensure satisfactory performance and cost effectiveness.

- **Justify** the investment of preservation resources by reviewing the continuing value of digital objects when they need to be transformed.

Principle 24: Preserve information in digital, rather than analog, form whenever feasible.

Key Actions

- **Identify** analog objects feasible for digitization, i.e. those whose essential data and behaviors are able to be captured and used digitally.

- **Set priorities** among analog materials feasible for digitization using three criteria: 1) demand for the material in digital form; 2) risk of loss in analog form; and 3) availability of funding.

- **Contract** for digitization services (in house and commercial) to match the technical capability of services to collection digitization needs.

- **Monitor and evaluate** digitization services to ensure satisfactory performance and cost effectiveness.

- **Preserve the** digitized information objects using the key actions associated with Principle No. 23 above.

Principle 25: The Library will make a good faith effort to comply with all applicable copyright law while striving to make the greatest amount of resources available to the greatest number of people, including the public and the scholarly community, for purposes of teaching, research and publication.

Key Actions

- Include copyright permission verification in the work flow for posting on all non-licensed digital materials

- Ensure that a copyright statement (read "disclaimer") be attached to these digital materials, especially those digitized in-house

- Develop a statement delegating the responsibilities for ensuring compliance with copyright to the user, wherever they are and in whatever way special aspects of the work might require. For example, see Cornell University statement at <http://cdl.library.edu/guidelines.html>

- For e-content created at UC Berkeley, either by virtue of digitizing material already in our collections or for material that is collected from the web, the Library will need to ascertain the level of rights and permissions that will control access to the object, future use of the object and whether or not the Library will be responsible for its long-term preservation. Work with new campus copyright advisor (who will have partial library appointment beginning November 2009) to increase levels of library staff and faculty knowledge regarding copyright as it pertains to digital content.

Principle 26: A successful Digital Collections Program requires the provision of a set of services that supports the creation, maintenance, management, dissemination and preservation of digital collections.

Key Actions

- Provide the following services:

- **Electronic Resources Management Service** to track contract and business terms for licensed materials
 - Primarily used for licensed e-journals and databases.
 - **Requires** Electronic Resources Management software, staffing, etc.
- **Digitization Service** to create digital artifacts from analog sources
 - Convert text, images, audio, video, etc. from analog to digital
 - **Requires** digital cameras, devices to convert audio/video to digital form, outsourcing agreements, software to manage the digitization process for large collections, staffing, etc.
- **Digital Object Creation and Maintenance Service** to support the creation and maintenance of metadata, and to associate metadata with the appropriate set of digital content files inside a digital object or collection
 - **Requires** staffing and a Digital Asset Management system that delivers the following functionality:
 - Inventory control that tracks the location of all our digital objects and to the collections in which they belong
 - Support for appropriate library standards (e.g., METS, EAD)
 - Digital object creation and maintenance tools to:
 - ✓ Create and maintain metadata
 - ✓ Support complex objects by allowing the association of metadata segments with appropriate digital content files in a single digital object or collection
 - Ingest services to load previously created metadata and digital content from outside sources
 - Export services to send digital objects and collections to other systems for access, preservation, etc.

- **Discovery, Display and Delivery Services** to provide indexing, display and delivery services, as appropriate for locally held digital collections
 - **Requires** configurable “search engine” software, databases, proxy services, staffing, etc.
- **Preservation Service**
 - Prepare documentation and offer procedures to export digital objects and collections to preservation repositories (see Preservation Section)
- **Project Management Services**
 - Expertise in managing projects that create digital collections, including steps such as digitization, metadata mapping and creation, discovery system configuration, investigating preservation strategies, documentation and procedures, etc.

Principle 27: Digital collections support services are provided by staff and based on software applications that utilize the local technology infrastructure.

Key Actions:

- Provide the following technology infrastructure components
 - Software applications (e.g., OskiCat, the Digital Asset Management System)
 - Public and staff desktop workstations that run local software applications
 - Servers for data storage and the running of centralized software applications (e.g., the Digital Asset Management System, search engines, proxy server, etc.)
 - A fast, reliable data network that connects the desktop workstations and servers both together and to the wider Internet
 - Staffing to support the software, servers and networks.
 - High quality, fast, cheap color printing/scanning services for users to make their own copies as needed

Principle No. 28: The Library will identify funds for an ongoing program to digitize our holdings according to the priority established by the key actions of Principle No. 10: Selection of local content for digitization.

Key actions

- Re-direct money already available, for example:
 - Take an off-the-top percentage of collections funds and allocate them for digitization of materials
 - Re-direct binding savings that accrue as print journals are canceled; these savings could be substantial in journal-driven subject areas

- Re-direct savings from technical processing that may result by using minimal level and externally-created records and metadata
- Enable selectors to redirect their existing funds to digitize content
- Find new sources of money, for example:
 - Allocate a percentage of the funds brought in under the current Capital Campaign to be used for digitization of materials
 - Appoint a small group of the appropriate people to keep up with grants and awards opportunities and make a call for proposals for funding digitization; this may be more project oriented, rather than a steady stream, but should be pursued
 - Make it part of the Library's Budget Request to the Campus in next year's budget; this would have to be presented as an efficient economic strategy, with well-defined benefits for the Campus community in support of the University's mission
 - Seek campus partners that may fund digitization of materials when there is a mutually beneficial goal, for example, a department may fund the digitization of departmental reports or master's papers, or perhaps fund digitization of materials that are important to large undergraduate classes in their subjects
 - Leverage partnerships with other UCs and outside institutions that have a mutual interest in digitizing content

Principle No. 29: The Library will identify funds to digitize items specifically in order to preserve them.

Principle No. 30: The Library will apportion funds and staff resources for digitization with an eye to balancing current access; preservation; unique and special collections; and subject area needs.

Key Actions

- Discuss and determine principles and procedures for how to prioritize competing requests for funds or staff resources to digitize materials.

Principle No. 31: The Library will stay at the forefront of developments regarding scholarly communication and seek to influence the publishing market with a view to decreasing the costs of obtaining high quality information in the future.

Key actions

- Support transformative, sustainable publishing models that will help address ongoing and future the economic challenges