

# PRESERVATION PROCEDURES

## *GENERAL PROCEDURES PRESERVATION OF MATERIALS*

University of Iowa  
University of Iowa Libraries  
Iowa City, Iowa

### Mission Statement

The Preservation Department supports the University research mission to acquire, organize and deliver information by maintaining collection resources in useable condition. The Preservation department will respond promptly to any concerns with the physical care of collections.

### Overview

The Conservation Department was established in 1984. The Preservation department was established in 1987, drawing together various preservation activities previously carried out in other departments. In the mid 90's Preservation and Conservation were merged into a single department as a part of a library wide reorganization. The current Preservation Department consists of three units; Conservation, Assessment/Reformatting and Binding/Marking all under the administrative head of the Preservation Librarian.

The Preservation Department is responsible for activities that relate to the care and handling of Library materials, both circulating and non-circulating. Services include commercial and in-house binding, repair, marking, attaching security tapes and in-house and vended reformatting. The Conservation unit provides specialized treatments. The Preservation department also provides services aimed at improving the storage condition of the collections including environmental monitoring, emergency planning and preparedness and staff and user education. In 2003, the department assumed the responsibility of directing the activity of the statewide digital collections initiative and is an integral part of digital initiative planning and production.

University of Texas at Austin  
University of Texas Libraries  
Austin, Texas

### Philosophy

The collections of the University of Texas Libraries, in addition to their intellectual and aesthetic value, represent an enormous economic investment. The University of Texas Libraries is committed to providing a comprehensive preservation program for these collections, consistent with the goals and objective of the Library and the University and with the Library's stature as a major national research collection

A comprehensive preservation program encompasses a system of plans, policies, procedures, and resources required to properly care for and prolong the life of these collection for the use of the educational and research community. An active preservation program encourages respect for the library and its collections, reduces the loss of materials through neglect or carelessness, and conserves resources through the application of preventive and corrective measures. Preservation, in fact, is an essential component in any activity involving introduction of library materials into collections (selection, acquisition, and cataloging) and handling by library staff and users.

## THE ACADEMIC LIBRARY MANAGER'S FORMS, POLICIES, AND PROCEDURES HANDBOOK

The success of the University of Texas Libraries preservation program to a large extent depends on staff understanding and observance of good preservation practices. Because library materials are handled extensively by library staff, and because library users look to staff as exemplars in library matters, the observance of good preservation practice is extremely important. Active participation and leadership in the preservation program is the responsibility of all staff.

### Definitions

"Preservation" is the set of actions taken to prevent, stop or retard deterioration of library materials through the management of: storage environment; housing materials and techniques; security; handling practices; as well as through user and staff education. Replacement is a form of preservation, as is changing the format of materials in order to preserve the intellectual content. "Conservation" implies the actions taken to prevent, stop, or retard deterioration of individual items through treatment level intervention into the physical state of the item. "Preservation" is used here as the broader term encompassing both preservation and conservation.

### Administration

Responsibility for directing the preservation program rests with the Head Librarian, Preservation Services, who, with appropriate consultation, formulates, implements, and coordinates preservation policies and activities on a library-wide basis. The Head Librarian also maintains active liaison with the preservation programs of other campus agencies, such as the Harry Ransom Humanities Research Center, the Tarlton Law Library, the Archer M. Huntington Art Gallery, and the Texas Memorial Museum.

### Program Objectives

Within the limitations imposed by budget and staffing levels, the University of Texas Libraries strives to provide a comprehensive preservation program that includes the following elements:

- Adheres to nationally and professionally accepted preservation standards and techniques. This includes limited conservation treatment of library materials using permanent, nondestructive materials.

- Evaluates and improves the physical care of library materials. This includes handling and storage, environmental conditions, collections security, and up-to-date disaster prevention and preparedness planning.

- Ensures that the most effective preservation options are implemented. Present options include commercial binding and rebinding, in-house repair and binding, protective enclosures, replacement, limited preservation photoduplication and microfilming and, in rare instances, conservation.

- Identifies materials requiring preservation measures. Items in poor condition are identified through general stack maintenance, circulation, and physical surveys of collections. In cases of non-routine treatment, bibliographers recommend preservation options appropriate to the material under review.

- Conducts an on-going program of staff training and awareness. In addition to the use of *Preservation of Library Materials: A Manual for Staff*, this includes an orientation session held each semester for new professional and classified staff, on-going training in minor book repair for public service units, video and slide/tape presentation, demonstrations, and exhibits. The Head Librarian, Preservation Services, and Conservator are available for staff consultation on any preservation concern. All supervisors are responsible for directing staff to appropriate preservation training resources.

- Carries forward a user education program on preservation. Elements included in the program are book flags, posters, exhibits, videotapes, and direct appeals to faculty and students.

*PROCEDURES SPECIFICALLY FOR PRINT RESOURCES*

Southern Illinois University Edwardsville  
Lovejoy Library  
Edwardsville, Illinois

Preservation Policy

The faculty and staff of Lovejoy Library are committed to an ongoing preventive preservation program designed to maximize the natural life cycle of all library materials, equipment, and furnishings. We appreciate the financial investment that the university makes in providing SIUE faculty, students, and staff with an excellent library facility and with authoritative library and information resources essential to the fulfillment of our teaching, research, and service obligations. The faculty and staff of Lovejoy Library invite the understanding and active participation of the university community in the implementation of our preventive preservation program.

We strive to foster an environment conducive to rigorous intellectual inquiry and quiet contemplation. Such a learning environment is characterized by respect—respect for the rights of other researchers, respect for appropriate conduct in the university classroom, and respect for library resources. In their own best interests, patrons are encouraged to become sensitive to preservation issues, to handle library materials carefully, and to behave responsibly within the library facility. Without positive participation by our patrons, our preventive preservation program cannot succeed. The Lovejoy Library Patron Conduct Policy explains to library users their responsibilities with respect to preventive preservation.

All formats of library materials possess inherent limitations in their chemical or physical structures. In addition, a number of external factors such as careless handling of materials, theft, vandalism, light, pests, pollutants, extreme variations in temperature and relative humidity, water, and fire can greatly accelerate the normal process of deterioration. Fortunately, a comprehensive program of preventive preservation can significantly reduce or even prevent premature deterioration. Lovejoy Library's preventive preservation program is primarily concerned with the following interrelated issues. This summary of issues is based upon the document *Assessing Preservation Needs: A Self-Survey Guide* prepared by the Northeast Document Conservation Center.

Environmental Control—providing a moderate, stable temperature and humidity, and controlling exposure to light and pollutants

Disaster Preparedness—preventing and responding to damage from water, fire, or other emergencies

Security—protecting collections from theft and/or vandalism

Storage and Handling—using non-damaging storage enclosures; using proper storage furniture; cleaning materials and storage areas; using care when handling, exhibiting, or reproducing materials

Reformatting—reproducing (microfilming, photocopying, or digital imaging) onto stable media fragile, damaged, valuable, and/or heavily-used materials

Binding and Repair—using library binding for appropriate materials (those that are not valuable as artifacts), performing minor in-house repairs (encapsulation, surface cleaning, minor paper repair)

Conservation Treatment—having valuable items such as manuscripts, journals, maps, and drawings treated by a qualified conservator

1. Building Characteristics and Condition
2. Building Environment
  - A. Climate Control
    - Relative Humidity
    - Temperature
    - Stability

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- Storage Areas
- Monitoring
- B. Control of Pollutants
  - Air Circulation Filtering
  - Vacuuming
- C. Control of Light
  - Intensity and Length of Exposure
  - Filtering of UV Light
- D. Pest Control/Housekeeping
  - Food, Drink, Refuse
  - Systematic Cleaning of Dust/Dirt
  - Integrated Pest Management
  - Economics of Neglect
- 3. Protecting Collections from Loss
  - A. External Threats
    - Acts of Nature
    - Manmade
  - B. Water Protection
    - Roof/Drainage
    - Pipes, Restrooms, HVAC
    - Materials Shelved Off Floor
  - C. Fire Protection
    - Detection Systems
    - Prevention Education
    - Sprinkler Systems
    - Extinguishers
  - D. Disaster Planning
    - Evacuation
    - Disaster Recovery Plan
    - Education for Response
    - Insurance
  - E. Building Security
    - Education for Prevention of Theft, Vandalism, Arson
    - Monitoring
  - F. Controlling Access to Collections
- 4. Individual Storage and Exhibition Areas
- 5. General Storage and Handling Practices
  - A. Storage Furniture
  - B. Archival Enclosures
  - C. Handling and Processing of Collections
  - D. Cleaning Collections
- 6. Storage and Condition of Specific Formats
- 7. Exhibition of Materials
  - A. Light Levels
  - B. Duplicates or Facsimiles
  - C. Exhibit Case Environment

8. Reformatting
  - A. Microfilm
  - B. Photocopy
  - C. Photographs
  - D. Audio
  - E. Digital Imaging
    - Expense
    - Metadata
    - Quality Control
    - Storage
    - Obsolescence
    - Migration/Refreshment
9. Binding
10. Repair and Treatment
  - A. In-house
  - B. Specialist

University of Illinois at Urbana-Champaign  
University Library  
Urbana, Illinois

#### Preservation Policy Statement

Preservation, as it applies to library and archive material, can be defined as: “all managerial and financial considerations including storage and accommodation, provision, staffing levels, policies, techniques and methods involved in preserving library and archive materials and the information contained therein.”

As an institution committed to building collections for the use of students, faculty, scholars, and the public long into the future, the University of Illinois Urbana-Champaign is obligated to ensure long-term access to those materials and their intellectual content. With an estimated replacement value in excess of \$1.5 billion, the Library’s collections represent a significant investment—one that can hardly be reconstructed. The university must care for this investment or risk losing access to significant portions of it. To this end, the Library develops relevant preservation and conservation policies that will address institutional concerns.

As a research institution, the University of Illinois Urbana-Champaign’s Library selects most of its materials on the basis of their permanent value to the individual collections, the scholars and students who use them, and the institution as a whole. Subject specialists are responsible for developing and maintaining collections that will meet the needs of users and the institution long into the future. Consequently, preservation activities are best undertaken by the subject specialists in consultation with their peers, the Preservation and Conservation Offices, and other members of the academic community when necessary.

Through such consultation, the Preservation and Conservation Offices help subject specialists choose the most appropriate treatments for their materials. Using available options, the Preservation and Conservation Offices work to preserve physical and intellectual access through careful consideration of an item’s value to both the institution and the larger research community.

Through cooperative collection management and evaluation of institutional workflow, the Preservation and Conservation Offices also work with other units within the Library as they select, process, and make accessible new acquisitions in the most timely manner possible.

## THE ACADEMIC LIBRARY MANAGER'S FORMS, POLICIES, AND PROCEDURES HANDBOOK

University of North Carolina Wilmington  
William Madison Randall Library  
Wilmington, North Carolina

One of Randall Library's stated goals is:

To identify, select, acquire and preserve informational resources, including print, electronic, visual, and sound formats, relevant to current and anticipated curriculum, scholarly practice, research, and creative activities.

This policy explains how the library operates to meet its preservation goal.

The state of North Carolina has made a significant investment in information resources and it is the obligation of all library staff to steward the resources. Library resources are expensive to acquire. Additional labor and funds must be expended to process, house and preserve the materials for current and future generations. Randall Library takes this charge seriously, and fully endorses the American Library Association Preservation Policy.

Preserving informational resources is a multi-faceted endeavor, requiring both division of labor and collaboration among various library units and outside vendors.

General preservation objectives:

- Training staff and users on proper handling of the materials

- Maintaining proper storage and environmental controls

- Providing security (theft prevention) for the resources

- Repairing, reformatting, or replacing damaged materials

- Responding to disasters that threaten the collection

Specific measures to accomplish these objectives are:

- Training staff and users on proper handling of the materials

Cataloging processes materials to provide uniform labeling, while paying attention to minimize masking useful information on the covers.

Circulation Department trains student assistants in proper handling of materials.

Public Services staff include instruction on handling materials for users at appropriate times, e.g., loading microform. Exhibits are also used to educate the public on preservation issues.

The Circulation staff person responsible for repair is provided additional training. Ideally, this person should be sent to the Fundamentals of Book Repair Workshop, offered by Solinet.

Maintaining proper storage and environmental controls:

- New materials are considered for special protection upon initial processing, and may receive one of the following treatments:

### In-House Binding

Technical Services staff perform in-house binding for most pamphlets, music scores, and materials with accompanying items such as maps and charts. Acid-free pressboard binders are used for most in-house binding.

### Professional Binding

Library materials that require professional binding are sent to one of the professional binderies included on the North Carolina Library Binding State Contract TC-I 30. The products of these binderies conform to binding industry standard ANSI/NISO/LBI/ Z39.78-2000.

Technical Services staff make most binding decisions for books and periodicals, using the following criteria:

## PRESERVATION PROCEDURES

### Books

Paperback books are bound if original binding is poor quality or if high use is predicted.

Rebind if cost of rebinding damaged materials is cheaper than purchasing a new copy.

Custom boxes are made if paper is too brittle to bind and material cannot be replaced.

### Theses

3 copies are bound, 1 for the University Archives, 1 for the General Collection, and 1 for the academic department.

If electronic copies of theses are available, 1 copy will be bound for the University Archives.

### Periodicals

Most periodicals are routinely bound on a schedule based on the frequency of publication.

Periodicals that are available via an electronic subscription may not be bound and are stored in periodical boxes in the Bound Journal Collection.

Newsletters and newspapers that are valuable only for current information are discarded, newsletters after 1 year and newspapers after 1 month.

Newspapers and other periodicals published in formats that aren't suitable for binding are purchased in microform. Print issues are discarded when microform is received.

Newspapers that are not available in microform may be preserved by binding.

### Media

CDs accompanying books will be shelved, if possible, in the book. When this is not feasible, these CDs will be given a separate item record and stored at the Reserve/Media Desk. Security targets will be applied to CDs.

Magnetic media accompanying books (e.g., diskettes) are stored at the Circulation Desk. These items may be checked out, but must not be desensitized.

As videocassettes and audiocassettes need to be replaced, DVD and CD formats will be the preferred format.

Splicing equipment and supplies are used to repair damaged microfilm.

The Stack Maintenance Supervisor and Circulation Department Supervisor have primary responsibility for ensuring there is sufficient stack space for collections and that items are properly shelved or filed. Librarians in charge of specific collections, e.g., Reference, Documents, CMC, Special Collections, manage this effort for their areas of responsibility. The Associate University Librarian for Public Services provides overall, long-range planning for most stack and cabinet acquisitions.

Exhibit cases are equipped with UV filters on lights to minimize damage to materials.

Special Collections takes extra care with rare and fragile materials. Items are housed in a specially climate-controlled environment. The climate control system is separate and distinct from the rest of the building. It has separate humidity and temperature controls that allow for distinct temperature variation from other areas of the library. Materials are kept in low or no light environments, in acid free folders and/or containers. Access is limited. Items are only handled by staff or professionals on an as-needed basis.

Photo copying is not encouraged, to prevent further deterioration of items.

Temperature and humidity is controlled through continuous monitoring by the Physical Plant. Problems detected by library staff are reported to the library administrative office, which forwards requests for service to the Physical Plant.

Providing security theft prevention for the resources:

The Cataloging Department applies labels and security targets to new items added to all open-stack collections.

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The Circulation Department monitors the security gate and complies with written procedures for responding to the alarm.

Special Collections allows for very limited access. Keys are held by department head and assistant only. The rarest and most valuable items are housed in a vault. Within the vault there is a safe for the most valuable smaller items. Access to vault is via a key that is held by the department head and by the library director.

Patrons coming into special collections are required to register and include their names, email address, regular address and purpose of visit. Patrons are given a secure locker to house their personal belongings while they conduct research. Only paper and pencil are allowed in the main reading room. All storage areas and stacks are behind locked doors. Student workers and staff are encouraged to lock and close doors to areas when not in use. Access to Special Collections when it is closed to the public is via a door with a doorbell, so there is ample notice when someone wishes to enter special collections.

Repairing, reformatting, or replacing damaged materials:

Items in need of repair are identified in a number of ways, including users bringing damaged items to the staff's attention, items identified upon checkout/check-in, and items identified during shelf-reading and inventory. The Circulation Department provides the initial review and if the repair is minor, it is performed in the department. Items damaged beyond the repair abilities of the Circulation Department are forwarded to Technical Services. Technical Services will decide whether to rebind, box, or replace the material.

The following criteria are used when making replacement decisions:

- Availability of additional copies in the collection
- Material is available for purchase (new or high-quality used copies)
- Cost of rebinding versus replacement
- Circulation statistics
- Availability of newer editions
- Coverage of the subject matter in the collection

During the time materials are unavailable for circulation, their status will be changed in the online system to indicate this, e.g., Damaged, To Bind, Lost, etc.

Items not in hand that have been determined to be lost, either by the user or in inventory will be reviewed by creating a list in the online system. Technical Services will review the list and decide upon replacement or withdrawal. When items are withdrawn, they will be deleted from the online system and from the OCLC database. Some materials are designated to be retained for a specific period, such as newsletters. Notations of the retention period are noted in the catalog record and discards are managed by Technical Services.

Replacements are purchased from a separate line in the budget. When library users lose materials, the replacement costs they pay are deposited in this account.

Responding to disasters that threaten the collection:

The library has a separate Disaster Policy, mainly designed to prepare for and respond to hurricanes, the greatest threat we face.

New York University  
Bobst Library  
New York, New York

### Preservation of Library Books

Books must be returned to the library in the same condition in which they were borrowed. Fees will be assessed for books which are damaged. Replacement costs plus processing fees will be assessed for books which are damaged beyond repair.



## PRESERVATION PROCEDURES

Please avoid the following common sources of damage to library books:

- Moisture (including rain and spilled beverages)

- Using inappropriate materials as bookmarks:

  - Paperclips and post-its cause great damage to pages and should not be used.

  - Pencils (or anything thicker than a piece of paper) wedged between pages causes great damage to the spine.

  - Rubber bands leave damaging residue on pages and should not be used to hold pages back.

  - Animals (especially dogs)

  - Stuffing books into an overfull book drop (if they don't go into the chute easily, return them at the Circulation desk instead).

Please do not ever write in library books, even in pencil. Everyone's cooperation is required in order to keep the collection in the best condition possible.

Columbia University  
Columbia University Libraries  
New York, New York

### Columbia University Libraries Brittle Books Preservation Policy

Columbia University Libraries is strongly committed to the preservation of its books and journals, so that it can continue to provide access to a useful and usable scholarly research collection for the Columbia University community. While it is our good fortune to have such a distinguished, in-depth retrospective collection, it is also true that many of these valuable, often irreplaceable materials are crumbling on our shelves.

It is well known that from the early 1800s paper has been manufactured through processes that leave an acidic content. The acid gradually breaks down the cellulose fibers of which paper is composed. With sufficient time, especially in conditions of high humidity, high temperature, and polluted air, the paper becomes so brittle that it breaks when folded. We in New York City are particularly unfortunate in our environment, and our collections have suffered more than those in many other parts of the country.

Over the past thirty-five years research and academic librarians have worked with conservators, scientists, and imaging experts on technologies to address these problems. At the same time they have developed policies and principles to guide the application of these technologies. No one technology solves all problems. Libraries like Columbia's have adopted a comprehensive approach which carefully matches the appropriate treatment to the damaged book based on the physical nature of the volume and the way it is used by readers.

The preservation of embrittled materials poses a significant challenge because paper that breaks when folded cannot withstand the manipulation needed for rebinding or normal repairs. This means that a book whose pages have begun to break cannot be put back together again except by extremely costly page-by-page conservation treatment—and in many cases even this is not possible. The monetary value of most volumes in the Columbia University collections does not justify spending hundreds of dollars per volume for repair, although we do have rare materials for which such expensive conservation is fully warranted.

New technologies promise a brighter future for our collections. Increasingly, North American and Western European scholarly volumes are being printed on acid-free paper that has a much longer life than the acidic paper to which we have been accustomed. Successful chemical treatments to remove acid from paper after its manufacture now exist and are being employed by a growing number of libraries, including Columbia. Deacidification cannot add strength weakened paper, however, or reverse embrittlement once it has taken place.

For most books that are already too brittle to be deacidified or repaired with routine methods, the most

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appropriate preservation technique is to purchase a reprint. If none is available, the alternative is use of imaging technologies—microfilming, photocopying, or digitization—to preserve at least the text of the volume (its “intellectual content”) if not its physical manifestation.

Preservation microfilm continues to be the best assurance of longevity, since the master negative of the film, properly stored under archival conditions, guarantees a lifespan of several hundred years for the content of the volume. It is a means of disseminating to a wide audience materials which are endangered by or difficult to use in the original, and its simple technology makes it accessible even in underdeveloped areas. New versions can be produced from the negatives on demand, whether positive microfilm, paper printouts, or digital versions made by scanning the film.

Preservation photocopies, created using acid-free paper, are of value in providing paper substitutes for brittle books, especially those which receive heavy use or which are not well suited to microformat. Unlike preservation microfilm, however, a preservation photocopy does not provide a master which can be archivally stored for hundreds of years and used to produce additional copies on demand. It is simply a one-for-one replacement.

Digital versions of brittle materials are desirable for their ease of use and the potential they provide to create searchable, manipulable text through OCR and other techniques. Longevity is not easily nor cheaply assured for digital files, however, since it will require migration to new formats and new software every five to ten years into the future. Recent developments allow for creation preservation-quality microfilm from digital files, and this combination of digital versions for ease of use and microfilm for assured longevity may be a workable solution to the problem.

As for the brittle volumes themselves, the policy of the Libraries mandates that volumes be imaged intact whenever possible, so that they may be returned to the shelf for whatever further use they can sustain before final disintegration. If a volume's pages are in pieces before it is filmed, it is already beyond further use and may be withdrawn from the collection after imaging.

Sometimes imaging alone is not appropriate or sufficient. In the case of volumes with color plates or unusual bindings, more extensive methods of preservation may be employed in addition. Color plates may be manually deacidified and encapsulated in clear, inert plastic film to allow continued use. A volume with a significant binding may be placed in a custom-fitted box after imaging to protect it for as long as possible.

The decision on how to preserve each brittle, unrepairable volume is made by the bibliographer responsible for its subject area in consultation with staff from the Libraries' Preservation Division. When appropriate, the bibliographer also consults with relevant faculty members. Every effort is made to ensure that the most suitable preservation method is applied. In general this means that the preferred treatment for a damaged volume is rebinding or repair. When a volume is structurally unsound and too brittle to repair, the Libraries will try to locate a non-brittle paper copy, reprint, or later edition. Imaging is normally the last alternative.

Identification of brittle volumes involves library staff, faculty, and other library patrons. Public service staff of all the Columbia libraries screen volumes returned by patrons to find endangered items. Library patrons who use damaged volumes should bring them to the attention of the library staff. Concerned faculty are encouraged to discuss endangered parts of the collections with librarians. When special grant funding is available librarians work with the faculty to identify areas of particular importance for concentrated preservation activity, and collaborate with existing or specially-created faculty advisory groups on large preservation projects. The amount of preservation work needed by the collections is almost overwhelming, and requires participation from all of the Columbia community.

Columbia University Libraries will continue its current policy of providing the most suitable treatment for each volume, and looks forward to employing new technologies as they become available.

*PROCEDURES SPECIFICALLY FOR ELECTRONIC RESOURCES*

Columbia University  
Columbia University Libraries  
New York, New York

Statement of CUL policy for preservation of digital resources

According to the Columbia University Libraries' Mission Statement (7/22/93):

The Columbia University Libraries provides Columbia faculty, students, and staff with access to information in all subject areas related to the University's academic mission and its goals. The Libraries embraces its time-honored obligations of collecting, preserving, and providing access to collections, not only for the Columbia community but also for scholars and students from throughout the world who require access to the Libraries' unique materials.

**Policy**

Digital resources are part of the CUL collections and subject to the same criteria for selection and retention decisions as other media. As such, they are included under the central CUL preservation policy: ensuring that the collections remain available over the long term, through prevention of damage and deterioration; reversing damage where possible; and, when necessary, changing the format of materials to preserve their intellectual content.

As with other parts of the collections, decisions about preservation are made by selectors, curators, and bibliographers as experts on the value of the content, in consultation with the relevant technical experts, including Academic Information Systems, the Library Systems Office, and Preservation. Priorities for preservation action are based on this Policy, the CUL Strategic Plan, and available resources. When possible, decisions about the need for long-term retention are made at the time of creation, acquisition, or licensing of digital resources.

For digital resources that are deemed to be of long-term value, preservation can be defined as the actions needed to assure enduring access to the full content of those resources over time. Content has wider implications than simply assuring that a given image can be accessed. Thus, hierarchical and structural relationships among the files (e.g. the pages of a book) and metadata that make the files usable must be preserved as well as the files themselves,

Digital resources may exist in multiple versions. CUL is committed to preserving the archival version: the fullest, highest-quality available version of the resource, whenever possible; and the descriptive, structural, and administrative metadata associated with it.

**Scope of Preservation Responsibility**

Responsibility for internal long-term retention and management by CUL/AcIS of:

- Digital resources created by CUL for which no other versions exist, and deemed to be of long-term value.

- Digital versions of resources reformatted by CUL, and deemed to be of long-term value in digital form.

- Unique digital resources which are acquired by CUL (through donation or purchase) as parts of archival/manuscript collections and which are unlikely to be preserved anywhere else.

- Digital records (e.g. bibliographic records, personnel records) deemed of long-term value and/or essential to CUL's functioning, and not preserved through any other arm of the university.

Responsibility for working externally through consortial action, licensing agreements, etc. to assure that someone (possibly but not necessarily CUL/AcIS) carries out preservation of appropriate commercially available digital resources to assure that CU faculty, staff, and students will have adequate ongoing access to these resources. Particular emphasis should be given to resources which exist in digital form only.

Responsibility for informing, consulting, and as appropriate coordinating with other units of Columbia University in the preservation of administrative and other digital resources to assure that CU faculty, staff,

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and students will have adequate ongoing access to these resources. Included here are digital resources created at CU outside of the Libraries but considered to be part of the digital library (EPIC ventures, others) and of long-term value.

Frequency with which preservation/retention policy for digital materials will be updated:

This policy will be reviewed at the beginning of each academic year to assure timely updates as technology and experience mature, or more often if need arises.

### Statement of CUL's Commitment to Lifecycle Management

CUL is committed to lifecycle management of its digital resources. Guidelines and procedures for each stage have been or are being developed, and are reviewed as technology changes or other need arises. CUL will participate actively where appropriate in research, development, and implementation of new practices for preservation of digital resources.

Development of preservation strategies, including consideration of:

- Degree of integration with storage, backup, and preservation for non-digital library resources.

- Development and use of decision-making tools (e.g., risk analysis, usage monitoring, probability of loss calculations, cost models, etc.).

- Maintenance strategies (backups—online and/or offline, monitoring, refreshing, redundancy through mirror sites or caching, etc.).

- Survival strategies (migration, emulation, archeology, etc.).

- Reliance on outside consulting and archiving services, if any, contract negotiation, etc.

- Selection for long-term retention at time of digitization, acquisition, or licensing; and later reselection for retention if this decision was not made initially:

Primary criteria: based on institutional mission, needs, priorities, and reasons for creating or acquiring the resources (related to long-term institutional mission and linked to conversion guidelines): see Selection Criteria for Digital Imaging Projects, [www.columbia.edu/cu/libraries/digital/criteria.html](http://www.columbia.edu/cu/libraries/digital/criteria.html)

Secondary criteria: based on regional, national, consortial, and international responsibilities.

### Conversion Guidelines

CUL follows relevant standards where they have been established and best practice for digital conversion, as documented by Library of Congress, the Research Libraries Group (RLG), the Digital Library Federation (DLF), and other relevant bodies.

See: Technical Recommendations for Digital Imaging Projects, [www.columbia.edu/acis/dl/imagespec.html](http://www.columbia.edu/acis/dl/imagespec.html)

Metadata Creation and Management (unique IDs and other descriptive, structural and administrative metadata, including ownership/rights management)

CUL follows relevant standards where they have been established and best practice for metadata creation and management, as documented by Library of Congress, RLG, DLF, and other relevant bodies.

Digital resources deemed to be of long-term value are tracked through the Master Metadata File (MMF). See: CU Master Metadata File, [www.columbia.edu/cu/libraries/inside/projects/metadata/](http://www.columbia.edu/cu/libraries/inside/projects/metadata/)

Storage (online, offline, redundancy recommendations, etc.)

CUL follows relevant standards where they have been established and best practice for storage, as documented by Library of Congress, RLG, DLF, and other relevant bodies.

The archival version of the digital resource is preserved in a lossless, non-proprietary format, whenever possible.

### Storage Plan for Primary Responsibility Materials

Resources currently in use: kept online with regular backup, refreshment, and migration.

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Whether online or not, all archival versions (highest resolution, fullest capture, lossless compression) are written to approved storage media and stored off-line in the Library Systems Office (LSO), with a schedule for regular refreshment, and migration.

For archival versions which are not currently online: a duplicate off-line copy is created for storage at a different site.

All versions, online and offline, are tracked through the MMF.

Access Arrangements (database management, Web interface, access reliability, etc.)

CUL follows relevant standards where they have been established and best practice for access arrangements, as documented by Library of Congress, RLG, DLF, and other relevant bodies.

Statement of CUL's Resource Management Policies and Plans

As stated in the Six-Year Plan for the Libraries and AcIS (May 1999), the digital library is the primary on-line information interface for the University, delivering scholarly, instructional, research, administrative and personal information. The University is committed to supporting all of the operations of the digital library, including preservation. Resource management for preservation of digital resources includes:

- Technical infrastructure (equipment purchases, maintenance and upgrades, software/hardware obsolescence monitoring, network connectivity, etc.).

- Financial plan (strategy and methods for financing the digital preservation program, commitment to long-term funding).

- Staffing infrastructure (including hiring and ongoing training).

- Rights management.

Statement Related to Regional, National, Consortial, and International Responsibilities

Whenever it is proposed that digital resources created or acquired by CUL as part of a cooperative or consortial effort, and deemed to be of long-term value, should be preserved by another institution or organization, CUL will evaluate their capacity to provide long-term access to digital files, metadata, and functionality in order to assure that the resources will be preserved at least as well as they would be by CUL. Issues which must be taken into account include:

- Shared obligations and cooperative preservation.

- Information sharing.

- Technology support (e.g., reuse of same migration paths and strategies by others; following emerging common/recommended practice).

- Development of minimal standards for capture, management, and maintenance (to enable efficient strategies).