University of South Carolina Libraries’ Digital Preservation Policy Framework
September 2010

Purpose
This document formalizes the University of South Carolina’s (USC) Libraries and University Technology Services continuing commitment to the long-term preservation of its diverse and extensive range of digital assets. This program contributes to the University’s mission to enrich the intellectual life of the University by fostering information discovery and intellectual growth, nurturing creativity, partnering in the development and dissemination of new knowledge, and ensuring access to this corpus of information over time. USC is committed to realizing the ongoing preservation of its digital assets.

A digital asset at the University of South Carolina can be defined as an electronic resource or digital resource that is only available via an electronic device such as a computer or mobile device.

USC Libraries Policy
Digital Assets are part of the University Libraries collections and subject to the same criteria for selection and retention decisions as other media. As such, they are included under the central mission of the Library: 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 the preservation of electronic resources are made by selectors and curators as experts on the value of the content, in consultation with the relevant technical experts, including the University Libraries’ Digital Collections Department, the Libraries’ Systems Office in conjunction with the University Technology Services Division, and the Libraries’ Conservation Department. Priorities for preservation actions are based on this policy, the University and Libraries Strategic Plan, and available budgetary support. When possible, decisions about the need for long-term retention should be made at the time of creation, acquisition, or licensing of digital assets.

For digital assets 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 file can be accessed. For example, hierarchical and structural relationships among the files (such as 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. USC is committed to preserving the archival version: the fullest, highest-quality available version of the digital asset, whenever possible; and the descriptive, structural, and administrative metadata associated with it.

Mandate:
USC’s mandate for digital preservation is at least five-fold:

• Scholarship: Realizing the University of South Carolina’s mission, the University Libraries support scholarship, teaching, and learning. As more resources and services associated with these functions become digital, USC’s responsibilities must expand to include the identification, stewardship, and preservation of designated digital content.

• Institutional records: The University has charged University Libraries with maintaining the University Archives by collecting and preserving university records, including those in electronic format.

• Legal obligations: The University has mandated responsibilities to preserve and maintain access to certain digital objects. Some legal obligations derived from Federal and State laws require us to maintain files in an archival fashion.

• Organizational commitment: USC’s commitment to preservation is explicitly cited in the Library’s Mission and Blueprint for Academic Excellence, which state that the Libraries will collect, organize, preserve, and share information resources.
• **Consortial and contractual obligations:** USC Libraries have consortial obligations and contractual agreements to assume or share in the responsibility for preserving designated digital content. For example, the Libraries are members of the LOCKSS and the MetaArchive Cooperatives, which preserve access to electronic journals and digital collections. They are also members of ARL, PORTICO, ASERL, CRL and other consortia that assist in making electronic databases available.

**Objectives**
The primary intention of the digital preservation program is to preserve the intellectual and cultural heritage important to the University. The program’s objectives are to:

- identify, through systematic selection, digital assets to be preserved across new generations of technologies
- include in the scope of the program materials that originated in digital form (born digital) and those that were converted to digital form through a digitization process
- protect USC’s digital investments through a fully-implemented digital preservation program
- demonstrate organizational commitment through the identification of sustainable funding
- identify and support the core working team to develop the digital preservation program and provide requisite training and development as needed
- develop a cost-effective program through means such as, system-wide integration, shared responsibilities, and automating human-intensive efforts
- comply with prevailing community standards for digital preservation and access
- seek, expand, and develop digital preservation methods that are appropriate for South Carolina and promote inter-institutional collaboration

**Scope**
The digital preservation program is responsible for identifying, securing, and providing the means to preserve and ensure ongoing access to selected digital assets. Not all of the digital content USC Libraries creates or acquires will be preserved. USC Libraries commits to these classes of objects with associated preservation priorities and levels of commitment:

- **Priority 1: born digital materials** - Rigorous effort will be made to ensure preservation in perpetuity of material selected for preservation, both library resources and institutional records.
- **Priority 2: digitized materials (no available analog)** - Every reasonable step will be taken to preserve materials without a print analog, when re-digitizing is not possible or no analog versions are located elsewhere. Also included are digitized materials that have annotations or other value-added features making them difficult or impossible to recreate.
- **Priority 3: digitized materials (available analog)** – Reasonable measures will be taken to extend the life of the digital objects with a readily available print analog. However, the cost of re-digitizing as needed will be weighed against the cost of preserving the existing digital objects
- **Priority 4: items and other materials** – No preservation steps will be taken for ephemeral materials such as, materials scanned for E-reserve and Document Delivery, odds and ends of collections, portions of text, and content that is deemed unessential to the comprehensiveness of collections.
- **Priority 5: Commercially available digital resources.** USC Libraries have responsibility for working externally through consortial action, licensing agreements, etc. to assure that someone (possibly, but not necessarily USC Libraries) carries out preservation so that USC 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.
- **Priority 6: Administrative, scholarly, and other digital resources created at the University outside of the Libraries.** USC Libraries have responsibility for informing, consulting, and as appropriate coordinating with other units of the University of South Carolina to assure that USC faculty, staff, and students will have adequate ongoing access to these resources. Included here are resources considered to be of long-term value (Electronic Theses and Dissertations, Scholar Commons, and Digital Humanities Center Projects).
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.

**Operating Principles**

USC Libraries, with support from the University Technology Services, avows that the digital preservation program will:

- comply with the Open Archival Information System (OAIS) reference model standard in the development of the digital preservation program where possible, such as with the MetaArchive Cooperative
- adhere to prevailing community-based standards in developing and maintaining its organizational and technological context
- participate in the development of digital preservation standards and their promulgation
- commit to ensuring that the digital preservation program is as interoperable as possible by utilizing open source options whenever feasible and to working with other organizations on core issues to enable interoperability
- define a sustainability plan for the digital preservation program that ensures its cost-effective, transparent, and auditable management over time
- develop the digital preservation program to maximize scalability, flexibility, and reliability
- ensure consistent, documented policies, procedures, and practices for the program and the operation of the digital preservation program within a distributed environment (across the university and beyond)
- employ appropriate storage management for digital content, utilizing on-line, near-line, and off-line storage as appropriate
- manage hardware, software, and storage media containing archival copies of digital content in accordance with environmental, quality control, security, and other standards and requirements
- establish procedures to meet archival requirements pertaining to the provenance, chain of custody, authenticity, and integrity (bit-level and content) of institutional records and assets
- define policies and procedures for the preservation and availability of digital assets respectful of intellectual property ownership and rights

**Roles and Responsibilities**

The traditional role of librarians and archivists has included preserving the intellectual record of the research community in analog formats. The same is true for research materials in digital form. The University Libraries and University Technology Services have a primary responsibility for digital preservation at the University of South Carolina, but digital preservation is a shared responsibility across the University. All responsible officers of the University, content creators, and disseminators with a custodial role for digital content identified for long-term preservation have a responsibility to actively contribute to the intent and priorities necessary to fulfill this policy.
Selection and Acquisition

Selection principles and guidelines for content that enhances the scope of USC Libraries’ collections is well-established for print materials and is being extended to digital content using USC Libraries collection policy. Materials selected for digital preservation carry with them USC Libraries’ commitment to preserve the materials for as long as needed or desired.

Preservation

Digital preservation activities at the USC Libraries and University Technology Services include:

• selecting material for long-term access based on scholarly value and technical capabilities
• securing digital assets through physical custody or other arrangements
• actively monitoring technology
• reviewing licenses for preservation implications
• promulgating good practice
• providing support services
• ensuring quality creation of digital materials
• negotiating for deposits
• responding to technology obsolescence through migration or other strategies
• establishing reliable, comprehensive, archival storage
• providing security for content and systems
• collaborating with other institutions to provide digital preservation services

USC Libraries must continually define and communicate levels of preservation appropriate to each type of format. Rather than limit inclusion in the digital preservation program to those formats with known and feasible preservation approaches, a level of preservation is associated with each format. The preservation level and the priority, as described above under Scope, determine the preservation strategy for materials. As new formats emerge, a level of difficulty required to preserve each type is assigned. The resources required to preserve are balanced against the overall need. This selection process applies to both new and existing content. USC will review existing digital content for preservation as priorities dictate and resources allow.

Access/Use

Access to preserved digital content is provided using the most up to date technology available at the time of use. When retaining the look and feel is deemed necessary, USC will seek to enable the original versions of the digital objects to be rendered over time. USC complies with access restrictions as defined in relevant laws, regulations, licenses, and deposit agreements. Appropriate preservation plans to make rendering the original version possible are devised on a case-by-case basis and revised as needed. Without the preservation of digital materials, access would not be possible and essential cultural heritage materials would be at risk.
Challenges

There are recognized challenges in implementing an effective digital preservation program, such as:

- **Rapid growth and evolution**: Technology that enables the variety of formats and dissemination mechanisms changes rapidly. Establishing a program that is responsive to change is a huge challenge.

- **Sustainability**: The need for good cost models and affordable programs is widely acknowledged, yet still unaddressed. The scale is based on the level of commitment. USC Libraries requires sufficient funding for startup and major improvements, as well as designated library funding to sustain ongoing preservation efforts. The program should reflect reasonable expectations of requisite resources, i.e., USC Libraries should not promise more than can be delivered.

- **Content provider partnerships**: Working with creators and providers of crucial content to employ appropriate maintenance prior to deposit that will facilitate future preservation.

- **Enabling full preservation**: Moving from well-managed digital collections to preserved collections in the true sense of the term requires institutional effort, partnership development, and a financial commitment.

- **Flexibility**: The digital preservation plan must continually revise its abilities to respond to the evolving technological capabilities and changing user expectations without jeopardizing the ongoing care of the digital content.

Cooperation/Collaboration

USC is committed to collaborating within the University and with other institutions to: advance the development of the digital preservation plan, share lessons learned with other digital preservation programs, extend the breadth of our available expertise, and extend the digital content that is available within a broad information community to USC users through cooperative efforts.

Appendix A

University Libraries Digital Assets and where they are currently backed up

USC Libraries Digitized materials
  - Digital Collections in CONTENTdm (print, audio, film) – backed up at UTS on their SAN, DVD, MetaArchive
  - Digitized Audio
  - Digitized Film

Midlands cultural heritage institutions’ digitized materials
  - Backed up at their institutions and on 3TB drive in Digital Collections

USC faculty scholarship
  - Scholar Commons – platform e-hosted by BePress (University of California, Berkeley), backup files at USC Libraries

Electronic Theses and Dissertations
  - Scholar Commons – platform e-hosted by BePress (University of California, Berkeley), backup files at USC Libraries

Electronic Journals and Article Indexes
  - Scholar Commons – platform e-hosted by BePress (University of California, Berkeley), backup files at USC Libraries

University Records – born digital
  - MetaArchive and Scholar Commons