

CITY OF SOMERVILLE, MA

# Digital Preservation Policy

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City of Somerville Archives

6/1/2015

## **Purpose**

This policy guides the scope and management of the City of Somerville’s digital preservation program, in accordance with Massachusetts’s Public Records Law, and guidelines established by the Secretary of State’s Office. The City of Somerville Archives collects and preserves records created by City of Somerville departments, boards and commission regardless of format. The digital preservation policy will assist the Somerville Archives in establishing a digital preservation program, which will preserve permanent and historically valuable born-digital records. The adoption of the digital preservation policy will ensure the integrity and authenticity of the city’s digital assets, and minimizes the risks of technological changes and media instability through active management of digital records.

## **Audience**

The intended audiences for this policy are the City of Somerville staff, who are involved with the creation of records and the transfer of those records to the archive; the staff of the archive; and the IT department who service the infrastructure of the digital repository; as well as the residents of Somerville.

## **Policy Review**

This policy will be reviewed annually to reflect changes in digital preservation best practices and maturing policy.

## **Objectives**

The digital preservation program will preserve and make accessible born-digital records identified as permanent in the local records retention schedule or determined to have historic value when they are created in a digital format. Digital surrogates of records with historic value will also be preserved.

The primary objectives of the program are to

- Preserve digital assets and their bit streams for authenticity and future access
- When necessary, migrate records to preservation formats
- Base decision-making processes on system sustainability and established processes and technologies that support both the Trusted Digital Repository standard (ISO 16363) and the Open Archival Information System (OAIS) reference model (ISO 14721).
- Pursue technical solutions that ensure record authenticity of content.
- Establish operational processes and procedures to meet archival requirements pertaining to provenance, chain of custody, authenticity, and integrity.

- Provide tools that facilitate the discovery of online digital assets
- Work with vendors who support and manage storage media in accordance with environmental, quality control, security, and other standards, and who sustain a storage architecture that provides strategically selected redundancy in the event of technical failure, natural disaster, or human error.

## **Scope**

The digital preservation program will collect, preserve, and provide access to records as described in the collection development policy; records created by City of Somerville employees and elected officials in their official roles; and boards and committees. The digital preservation program will work with City departments to identify born-digital records which are designated permanent by Massachusetts statute, or which are determined to have permanent historical value. The format of these records will include, but are not limited to, Microsoft office documents, presentation slides, digital images, audio and video recordings, application specific files if it is feasible to emulate their original environment.

## **Roles and Responsibilities**

Archives Division – Responsible for acquiring, appraising, preserving, describing and providing access to electronic records.

IT Department – Responsible for the purchase and maintenance of hardware and software for digital preservation.

Records Creators – Responsible for identifying which records are permanent under Massachusetts law, as well as which records reflect actions of the department, official, board or commission that have long lasting significance. Records creators are also responsible for the transfer of these records to the Archives Division. Details on the best way to transfer records can be obtained by contacting the Archives Division.

## **Technical Principles**

### **Authenticity**

The City of Somerville Archives will protect the authenticity of the digital records entrusted to its care. Because it is relatively easy to alter the digital records, ensuring that received records remain unchanged is a critical activity of a digital preservation program. The City of Somerville Archives will use digital preservation tools to prevent, reveal, and repair digital records corruption or loss, whether the cause is inadvertent or malicious. Metadata from record creators will be used to prove the authenticity of records

### **Metadata**

Metadata is a key component to preserving and providing access to digital records. In addition to the metadata provided by records creators, the archive will develop and maintain descriptive, preservation, and structural metadata. The metadata will be created in accordance to local standards, and comply with the requirements of the Digital Commonwealth. The metadata created by the City of Somerville will assist in the dissemination and discoverability of the digital records by complying with OAI-PMH standards for aggregation. Metadata will also be created to record preservation activities.

### **Formats**

Because not all formats are optimal for preservation, records transferred to the Archives will be evaluated for levels of preservation. Where necessary the archive will transfer formats in order to ensure continued access. See the table of *Preferred File Formats* for more information regarding file formatting.

### **Access/Use**

When possible the City of Somerville will work to make digital records available in openly documented formats for which the necessary rendering software is available. If a digital record is viewable only in its originating software environment, the City may attempt to migrate the records to a new format. Evaluation of the new format will be made on the extent to which it emulates the original files. If information is lost, the change in the record will be recorded in the accompanying metadata, and the original bit stream will be maintained.

Information that is restricted due to privacy laws or public record law exceptions will require appropriate restrictions on access and use.

## Glossary

**Archival Information Package (AIP):** An (OAIS) Information Package consisting of the Content Information and the associated Preservation Description Information which is preserved within an Open Archival Information System. [State Archives of North Carolina]

**Access:** The ability, permission (right) and means to locate, display, obtain, determine availability of or make use of a digital resource, or information about that resource. [Yale]

**Authenticity:** A quality of a digital resource to be judged trustworthy and genuine, based on internal and external evidence. [Yale]

**Data Object (OAIS):** Either a Physical Object or a Digital Object [State Archives of North Carolina]

**Digital Preservation:** The managed activities necessary for ensuring both the long-term maintenance of a byte stream and continued accessibility of its contents. [RLG-OCLC: “Trusted Digital Repositories: Attributes and Responsibilities”]

**File Format:** The organization (fixed, byte-serialized encoding) of digital information according to a preset specification. [Yale]

**Fixity:** The quality of being stable and resisting change. Mechanisms such as checksums or cyclical redundancy checks can record a fixity value for a digital object, and can be used as a basis of later comparison to ensure that the digital object has not been altered. [State Archives of North Carolina]

**Dissemination Information Package (DIP):** The (OAIS) Information Package derived from one or more Archival Information Packages (AIPs) received by the Consumer (end user) in response to a request to the Open Archival Information System. [State Archives of North Carolina]

**Life Cycle:** is the framework for understanding the cyclical sequence of activities that all digital resources undergo during their existence. [Yale]

**Maintenance:** (Of digital resources) The action of keeping the components of digital resources in working order or in repair. This includes loading digital resources into storage, managing the storage hierarchy, refreshing the media on which digital resources are stored, performing routine and special error checking, providing disaster recovery capabilities, etc. Maintenance may be differentiated from the broader term Preservation because Maintenance does not include the metadata management, preservation planning, and access controls necessary to ensure intellectual protection and to reproduce authentic copies of the digital resources over time. [Yale]

**Metadata:** Information that describes significant aspects of a resource. Preservation metadata are required to describe, manage and preserve digital resources over time and will assist in ensuring essential contextual, historical, and technical information that are preserved along with the digital resource. [Yale]

**Open Archival Information System (OAIS):** An archive, consisting of an organization of people and systems that has accepted the responsibility to preserve information and make it available for a Designated Community. It meets a set of responsibilities, as defined in 3.1, that allows an OAIS archive to be distinguished from other uses of the term archive. The term Open in OAIS is used to imply that this Recommendation and future related Recommendations and standards are developed in open forums, and it does not imply that access to the archive is unrestricted. [State Archives of North Carolina]

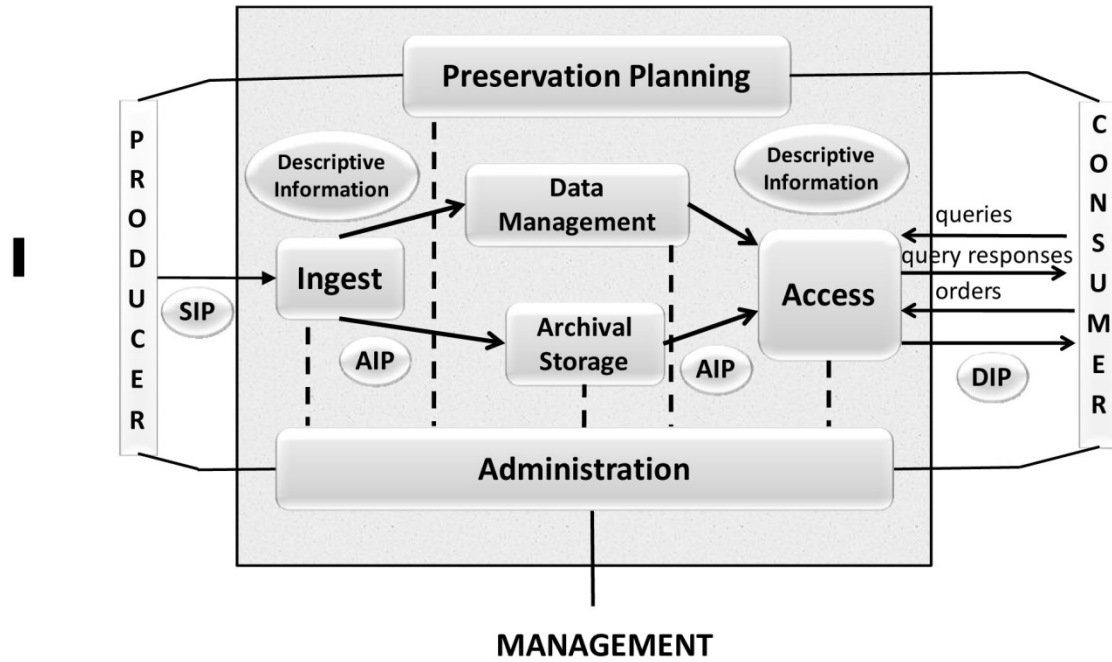
**Preservation:** The whole of the activities and processes involved in the physical and intellectual protection of administrative, legal, fiscal, evidential, historical information and cultural materials. Preservation encompasses a host of policies, procedures, and processes that together sustain access or prevent further deterioration to the materials we choose to save. [Yale]

**Provenance:** The source and ownership history of a (digital) resource. [Yale]

**Representation Information (OAIS):** The information that maps a Data Object into more meaningful concepts. An example is the ASCII definition that describes how a sequence of bits (i.e. a Data Object) is mapped into a symbol. [State Archives of North Carolina]

**Submission Information Package (SIP):** An (OAIS) Information Package that is delivered by the Producer/Contributor for use in the construction of one or more Archival Information Packages (AIPs). [State Archives of North Carolina]

### OAIS Reference Mode



Consultative Committee for Space Data Systems. "Reference Model for an Open Archival Information System (OAIS), CCSDS 650.0-M-2, Magenta Book." June 2012

<http://public.ccsds.org/publications/archive/650x0m2.pdf> accessed 06/11/2015

## Sources

Consultative Committee for Space Data Systems. “Reference Model for an Open Archival Information System (OAIS), CCSDS 650.0-M-2, Magenta Book.” June 2012. Retrieved 06/11/2015 from: <http://public.ccsds.org/publications/archive/650x0m2.pdf>

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