

MetaArchive Cooperative Charter

A charter describing the purposes and aims of the MetaArchive Cooperative, an association dedicated to the preservation of cultural memory materials that are digital in nature and form

November 2010

Last revised 11-04-2010

Table of Contents

| | |
|--|-----------|
| 1. Introduction | 3 |
| 1.1. <i>What is the MetaArchive Cooperative?</i> | 3 |
| 1.2. <i>Mission and Operating Principles</i> | 3 |
| 1.3. <i>Who Should Participate?</i> | 4 |
| 2. Membership | 4 |
| 2.1. <i>Eligibility</i> | 4 |
| 2.2. <i>Types of Membership</i> | 5 |
| 2.2.1. <i>MetaArchive Sustaining Members</i> | 5 |
| 2.2.2. <i>MetaArchive Preservation Members</i> | 5 |
| 2.2.3. <i>MetaArchive Collaborative Members.</i> | 6 |
| 2.3. <i>Costs and Fees</i> | 7 |
| 2.3.1. <i>LOCKSS Alliance Membership</i> | 7 |
| 2.3.2. <i>Systems Administration and Cache Monitoring</i> | 7 |
| 2.3.3. <i>Communications</i> | 8 |
| 2.3.4. <i>Content Provision</i> | 8 |
| 2.3.5. <i>Administration</i> | 8 |
| 2.4. <i>Benefits and Responsibilities</i> | 9 |
| 2.4.1. <i>Benefits</i> | 9 |
| 2.4.2. <i>Responsibilities</i> | 10 |
| 2.4.3. <i>Copyright and Intellectual Property</i> | 12 |
| 2.5. <i>The MetaArchive Membership Agreement</i> | 12 |
| 2.6. <i>Joining the Cooperative</i> | 12 |
| 3. Organization and Governance | 13 |
| 3.1. <i>The MetaArchive Cooperative</i> | 13 |
| 3.2. <i>The MetaArchive Committees</i> | 13 |
| 3.2.1. <i>MetaArchive Steering Committee</i> | 13 |
| 3.2.2. <i>MetaArchive Content Committee</i> | 13 |
| 3.2.3. <i>MetaArchive Preservation Committee</i> | 13 |
| 3.2.4. <i>MetaArchive Technical Committee</i> | 14 |
| 3.2.5. <i>Selection and Terms of Service</i> | 14 |
| 3.3. <i>Communication</i> | 14 |
| 3.4. <i>Annual Meeting</i> | 14 |
| 3.5. <i>Withdrawing from the Cooperative</i> | 15 |
| 3.6. <i>Procedures for Non-Compliance and Material Breach</i> | 15 |
| 4. Services and Operations | 16 |
| 4.1. <i>MetaArchive Cooperative Services</i> | 16 |
| 4.1.1. <i>Digital Preservation Network</i> | 16 |
| 4.1.2. <i>Digital Collection Disaster Recovery</i> | 16 |
| 4.1.3. <i>Digital Preservation Network Assistance</i> | 17 |
| 4.1.4. <i>Security Characteristics of a Preservation Network</i> | 17 |
| 4.2. <i>Staffing Plan for the MetaArchive Cooperative</i> | 17 |
| 4.3. <i>Outreach Activities</i> | 18 |
| 4.4. <i>Use of MetaArchive Cooperative Financial Resources</i> | 18 |

1. Introduction

1.1. What is the MetaArchive Cooperative?

The MetaArchive Cooperative is an independent, international membership association administered by the Educopia Institute, based in Atlanta, Georgia. The Cooperative's purpose is to support, promote, and extend the MetaArchive approach to distributed digital preservation practices (<http://www.metaarchive.org>). This approach relies upon a distributed preservation network infrastructure that is based on the LOCKSS software (<http://www.lockss.org>). The MetaArchive Cooperative began in 2004 as part of the National Digital Information Infrastructure and Preservation Program (NDIIPP)¹ and has accepted new Members at the discretion of the Steering Committee since 2007.

The MetaArchive Cooperative is responsible for preserving Member organizations' content in a decentralized, distributed preservation network comprised of subject- and genre-based archives (e.g., Southern Digital Culture, Electronic Theses and Dissertations, etc.), as well as maintaining and extending its methodology and approach to distributed digital preservation.

1.2. Mission and Operating Principles

The mission of the MetaArchive Cooperative is to foster better understanding of distributed digital preservation methods and to create enduring and stable, geographically dispersed "dark archives" of digital materials that can, if necessary, be drawn upon to restore collections at the contributing organizations. The Cooperative is guided in its work by the following operating principles:

- To encourage and support the long-term preservation of "at-risk" cultural memory content;
- To promote a cooperative, robust, and decentralized approach to digital preservation;
- To encourage archives, libraries, museums, and other such organizations to build their own preservation infrastructures and knowledge rather than outsourcing this core service to external vendors;
- To encourage the growth of Private LOCKSS Networks for preserving copies of replicated content in secure, distributed locations over time;
- To maintain a minimal overhead and straightforward mechanisms for collaboration;

¹ For more information on this Library of Congress initiative, please see <http://www.digitalpreservation.gov>.

- To administer services that have wide applicability to a range of organizations and digital content;
- To utilize and create open standards and systems;
- To ensure that digital materials are stored and maintained in migratable formats and data structures;
- To promote and support high standards for preservation metadata capture; and
- To undertake research and development projects to advance digital preservation best practices.

1.3. Who Should Participate?

Cultural memory organizations such as universities and colleges; government entities; research libraries; archives; museums; library consortia; historical societies; collaborative digitization efforts; electronic text centers; science, social science, and humanities research computing centers; academic and other publishers; publishing associations; scholarly societies; and others that have significant or unique collections of at-risk digital content are encouraged to join the MetaArchive Cooperative.

The Cooperative also works with and recognizes a range of affiliate organizations. MetaArchive Strategic Affiliates are those organizations, consortia, and collaborative groups that we have advised and/or that have collaborated with us on distributed digital preservation topics. Most MetaArchive Strategic Affiliates are either Members or administrators of other Private LOCKSS Networks, or engage in substantive digital preservation activities.

2. Membership

2.1. Eligibility

Any cultural memory organization whose activities and objectives are consistent with the MetaArchive Cooperative's mission and principles may join the Cooperative.

Any organization may be accepted as a new Member upon a simple majority vote of the Steering Committee, electronically or in person (see Section 2.6 below). Upon acceptance, a new Member must sign and submit to the Educopia Institute office a MetaArchive Membership Agreement affirming its acceptance of the conditions listed in this document (see Appendix B: Membership Agreement).

2.2. Types of Membership

The MetaArchive Cooperative has three membership categories: 1) Sustaining Members, 2) Preservation Members, and 3) Collaborative Members.

2.2.1. MetaArchive Sustaining Members

MetaArchive Sustaining Members are responsible for the testing, development, and maintenance of hardware and software, network connectivity, and transmission standards. They are responsible for all of the functions of a preservation site (see 2.2.2 below), as well as technical development and testing of the computer systems that enable the MetaArchive Preservation Network. The major responsibilities of this development activity include: adaptation and maintenance of the LOCKSS software for preservation of relevant digital content and the design and implementation of system features dealing with security, content validation, integrity checking, and metadata tracking. Those Sustaining Members who contribute content to the MetaArchive network bear the responsibility for determining ownership and their right to preserve content prior to submitting it to the MetaArchive network (i.e., intellectual property and copyright issues). Sustaining Members have certain rights of access related to requesting the retrieval of their content from the MetaArchive Preservation Network for their own purposes (e.g., to replace files on their local systems). They receive periodic reports as to the development and operations of the Network and are asked to provide input and feedback regarding the Cooperative's digital preservation services.

2.2.2. MetaArchive Preservation Members

MetaArchive Preservation Members are responsible for the ongoing activity of preserving digital content. Preservation Members are responsible for contributing collections, ingesting collections from Member organizations, maintaining a MetaArchive-LOCKSS cache, and making that cache available for testing new software. At a minimum, a preservation site must include a MetaArchive-LOCKSS cache of the MetaArchive Preservation Network that satisfies particular technical requirements (see Appendix A: MetaArchive Technical Specifications) that from time to time will be revised. Taken together, the MetaArchive preservation sites collectively comprise the distributed MetaArchive Preservation Network. Those Preservation Members who contribute content to the MetaArchive network bear the responsibility for determining ownership and their right to preserve content prior to submitting it to the MetaArchive network (i.e., intellectual property and copyright issues). Preservation Members have certain rights of access related to requesting the retrieval of their content from the MetaArchive Preservation Network for their own purposes (e.g., to replace files on their local systems). They receive periodic reports as to the development and operations of the Network and are asked to provide input and feedback regarding the Cooperative's digital preservation services.

2.2.3. MetaArchive Collaborative Members.

A Collaborative Member is a group of institutions that run a shared, centralized repository and contribute this shared content to the MetaArchive preservation network. They are responsible for all of the functions of a preservation site (see 2.2.2 above). In order to qualify to become a Collaborative Member, a collaborative must meet the following criteria:

- Be a legal entity that acts on behalf of its membership;
- Guarantee sufficient rights, permissions, and license at the collaborative and contributor level to enable contribution to and replication of content in a distributed digital preservation network, including assuming sole responsibility under local and international laws in order to conform with the Cooperative Membership Agreement, warranting the suitability of materials for inclusion in the Cooperative network, and accepting joint and several liability for unlawful contributions from and acts of any and all collaborative members;
- Run a centralized repository within the collaborative through which all content that will be preserved in the MetaArchive network will be prepared, staged, and ingested into the network; and
- Assign technical staff from the Collaborative Member to prepare collections (including developing plugins) that will be staged for ingest into the MetaArchive preservation network.

Collaborative Members occupy a unique role in the MetaArchive Cooperative and therefore further agree that Collaborative Members will assume sole and singular legal and other responsibility for the included content and related actions of users whether Collaborative Member has or has not secured individual agreements or contractual relationship with contributors to the Collaborative. Collaborative Members also acknowledge and agree that the Collaborative Member will set in place appropriate administrative and policy arrangements in order to assess the copyright, intellectual property, and/or other legal implications of contributor's activities relating to the Collaborative arrangement. Collaborative Members have certain rights of access related to requesting the retrieval of their content from the MetaArchive Preservation Network for their own purposes (e.g., to replace files on their local systems). They receive periodic reports as to the development and operations of the Network and are asked to provide input and feedback regarding the Cooperative's digital preservation services.

2.3. Costs and Fees

The MetaArchive Cooperative has intentionally designed a low-cost approach to digital preservation with low barriers to adoption that requires minimal expenditures by collaborating groups of organizations. The Cooperative collaborates with the LOCKSS Program to develop and maintain the freely available, open-source LOCKSS software for the purposes of the MetaArchive Preservation Network and freely shares all software components that it develops with the larger Private LOCKSS Network community.

All Members pay annual membership fees to the Cooperative. The purpose of the membership fees is to support Cooperative activities (e.g., Steering Committee meetings, workshops, communications, administration, and technical processes to support and maintain the preservation of digital materials through the Cooperative; see Section 2.3.5. below), as well as to provide financial support to selected Cooperative Members who need assistance (e.g., to provide upgrading or replacement of MetaArchive-LOCKSS caches that are compromised by catastrophic circumstances where necessary to maintain the overall Preservation Network, as determined by Steering Committee vote).

The membership fees are published in the Membership Agreement and are subject to review at the annual meeting of the Cooperative (see Section 3.4 and Appendix B: Membership Agreement below).

Each Member of the Cooperative should expect to cover its own costs associated with the following activities, as documented below: LOCKSS Alliance Membership, Systems Administration and Cache Monitoring, Communications, and Content Provision.

2.3.1. LOCKSS Alliance Membership

All Members in the MetaArchive Cooperative are required to maintain membership in the LOCKSS Alliance to help promote the development and strength of the LOCKSS system software: For information regarding the LOCKSS Alliance, please visit [http://www.lockss.org/lockss/LOCKSS Alliance](http://www.lockss.org/lockss/LOCKSS_Alliance).

2.3.2. Systems Administration and Cache Monitoring

All Members are required to perform the systems administration and cache-monitoring activities needed to maintain successful MetaArchive-LOCKSS cache operation. Once a cache is established and operational, systems administration and cache monitoring are routine tasks requiring minimal amounts of work time. (Please see Appendix A: MetaArchive Technical Specifications for more details.)

2.3.3. Communications

All Members are expected to participate in collaborative communication activities with the MetaArchive Cooperative and to bear associated local costs. Members are responsible for acquiring and installing any necessary hardware and software associated with these communications methods (see Section 3.3 below).

2.3.4. Content Provision

All Members are required to bear any cost associated with creating or acquiring digital content and preparing it for submission to the MetaArchive Preservation Network. Specifically, all Members are responsible for readying their collections and associated metadata for ingest (e.g., preparing LOCKSS manifest pages and writing plugins for submitted content).

The MetaArchive Cooperative also offers fee-based services to organizations at all membership levels on an individual contract basis, including distributed digital preservation consultation and training services. Please contact the MetaArchive Cooperative to negotiate fees if you are interested in such services.

2.3.5. Administration

All Members in the MetaArchive Cooperative are required to pay an annual membership fee to the Cooperative to support the following administrative functions:

- 1) Central administration of the MetaArchive Cooperative;
- 2) Administering Steering Committee meetings;
- 3) Administering training events for new Members and for the extended community that is interested in distributed digital preservation;
- 4) Administering conference calls and other communications between Members;
- 5) Emergency replacement of servers or equipment, as determined by Steering Committee vote;
- 6) Planning for and undertaking expansion, new functionalities, etc. for the network as needed; and
- 7) Other purposes as deemed appropriate by the MetaArchive Steering Committee in consultation with all Members.

2.4. Benefits and Responsibilities

2.4.1. Benefits

Membership in the MetaArchive Cooperative includes the following benefits.

For all Members:

- Retrieval of the Member's content in case of a catastrophic loss at that Member's organization;
- Use of a web-based tool – the Conspectus – under an appropriate open source license that enables Members to record information about submitted collections;
- Distributed archiving of Members' digital collections across multiple preservation sites;
- Reports and statistical information about Members' submitted content and statistical reports about the overall Preservation Network;
- Service opportunities within Cooperative Working Groups;
- Attendance and participation at Cooperative conferences and workshops at a discounted rate;
- Opportunities to collaborate with and/or learn from experienced digital preservation administrators, librarians, technologists, and others who work with the Cooperative;
- Additional storage space that can be purchased on an as-needed basis;
- Additional preservation services that can be purchased at a contract rate (e.g., consulting and training around preservation issues);
- Assistance with the installation and maintenance of LOCKSS software for private networks and any other improvements and ancillary software developed by the Cooperative, documentation of processes and technical standards, and technical support;
- In the case of catastrophic circumstances, the ability to request technical and financial assistance with the restoration of a Preservation Site's servers, software, and collections by the MetaArchive Cooperative. These requests will be reviewed and, at the discretion of the Steering Committee, either approved or denied; and
- Access to the technical knowledge and expertise of Cooperative Members and technical support to establish and maintain preservation sites in

compliance with the Cooperative's technical standards (as detailed in Appendix A: MetaArchive Technical Specifications).

For Sustaining Members:

- The ability to influence the development of the MetaArchive Cooperative and the development of distributed digital preservation practices more generally; and
- Voting representation on the Steering Committee (see 3.2.1 for more detail).

2.4.2. Responsibilities

Membership in the MetaArchive Cooperative also entails a number of responsibilities.

Each Member agrees to the following conditions in addition to any other obligations specified herein:

- Maintain membership in good standing by fully complying with this Charter and the definition of membership herein and by acknowledging and agreeing to processes, procedures, and standards of governance found in the Charter and with technical requirements identified in the Charter or other technical documents identified in Cooperative publications or notices and incorporated by reference into this Charter (as of November 2010, these consist of Appendix A: MetaArchive Technical Specifications);
- Support at its own expense any and all costs incurred by participating in the Cooperative, including but not limited to paying membership fees, travel to required meetings, and other costs of participating in the Cooperative;
- Implement appropriate standards for addressing copyright and other issues related to contributed content in order to comply with local, state, federal, and international law, including the use of exemptions set forth within U.S. copyright law at Section 107, 108, and elsewhere and permissions through "deeds of gift" or other clearances;
- Represent and warrant that to the best of its knowledge the Member is not contributing content to the Preservation Network that would infringe the rights of others and that the Member holds sufficient rights to License the Cooperative and Members to use the content consistent with the requirements of a multi-site preservation strategy;
- Hold the Cooperative and other Members harmless in the event of infringement, claims of infringement, loss of data, interoperability, and any other technical standards and governance claims by waiving any rights of recovery for any costs or damages associated with its relationships and Agreement with the Cooperative;

- Indemnify the Cooperative to the extent permitted by law for any losses and costs incurred by the Cooperative and Members such as but not limited to legal fees, costs, and damage awards arising from infringement or other claims directly related to its activities in working with the Cooperative and Members;
- Cure any material breaches of the contract within a 90-day period unless the Cooperative agrees in writing to an extension of the cure period;
- Create and begin maintaining a preservation site, comprised of a MetaArchive-LOCKSS cache;
- Make the MetaArchive-LOCKSS cache available for testing new software and other MetaArchive developments as needed;
- Participate actively in the MetaArchive Preservation Network by contributing, ingesting, and monitoring content from the Cooperative;
- Join and maintain membership in good standing with the LOCKSS Alliance to promote the development and strength of the community ([http://www.lockss.org/lockss/LOCKSS Alliance](http://www.lockss.org/lockss/LOCKSS_Alliance));
- Employ an implementation of LOCKSS software that complies with all requirements in the current and subsequent versions of the Private LOCKSS Network software;
- Design and implement system features ensuring compliance with Cooperative security requirements and content validation, including but not limited to integrity checking as well as metadata analysis and tracking (as detailed in Appendix A: MetaArchive Technical Specifications);
- Install and maintain any other software that may be required for participation in the Cooperative (as detailed in Appendix A: MetaArchive Technical Specifications); and
- Provide technical and administrative contact information as necessary to enable communication with other Cooperative participants as needed or upon request by the Cooperative.

All ***Sustaining Members*** further agree to:

- Develop and test hardware and software, network connectivity, and transmission standards; and
- Engage in the technical development and testing of the computer systems that enable the MetaArchive Preservation Network.

It is understood that all digital content contributed to the Network by all Members for preservation purposes may remain in the network indefinitely. The MetaArchive Steering Committee reserves the right to remove content from a MetaArchive Preservation Network, in, but not limited to, such cases as: a) content is deemed unsuitable; b) content was submitted without proper copyright clearance; or c) if the submitting Member fails to fulfill its responsibilities to the Network as stated in this Charter and in the signed Membership Agreement.

2.4.3. Copyright and Intellectual Property

The MetaArchive Cooperative strives diligently to comply with copyright law. The Cooperative includes members from diverse geographical locations and countries of origin in order to provide geographical distribution for long-term preservation, thereby implicating principles of national origin and a multiplicity of differing legal regimes and conditions that might govern contributing and/or hosting content in the MetaArchive but concurrently serving the foundational requirement of safeguarding cultural resources for future generations by geographical distribution. The Cooperative accordingly requires its members to implement and deploy appropriate standards, processes, procedures, and safeguards for resolving copyright and other legal requirements that might arise in contributing and/or hosting content in order to comply with local, state, federal, and international law, including the use of exceptions set forth within U.S. copyright law such as, but not limited to, good faith, reasonable applications of fair use in Section 107, relevant library reproduction and distribution in Section 108, and elsewhere in the statutes or amendments and/or permissions through “deeds of gift” or other instruments, documents, permissions, or clearance arrangements. Other potential governing laws for members may require the application of principles such as, but not limited to, country of national origin governing the inclusion of materials and relevant exceptions and conditions governing the hosting of materials and resulting specifically from the geographical location of the preservation node.

2.5. The MetaArchive Membership Agreement

Member organizations are required to sign and submit a MetaArchive Membership Agreement to the MetaArchive Cooperative. The Membership Agreement is contained in Appendix B.

2.6. Joining the Cooperative

Inquiries about joining the Cooperative should be addressed to the MetaArchive Cooperative Steering Committee (see Sections 3.1 and 3.2.1 below).

3. Organization and Governance

3.1. The MetaArchive Cooperative

The MetaArchive Cooperative (the "Cooperative") is an independent, international membership association administered by the Educopia Institute, a nonprofit corporation based in Atlanta, Georgia. Any organization whose activities and objectives are consistent with the MetaArchive Cooperative's mission and operating principles may join the Cooperative.

The MetaArchive Steering Committee (see 3.2.1) is the governing body of the Cooperative and directs its activities. The address for official correspondence and payments is:

Educopia Institute
1230 Peachtree Street, Suite 1900
Atlanta, Georgia 30309

3.2. The MetaArchive Committees

3.2.1. MetaArchive Steering Committee

The Steering Committee is the governing body of the MetaArchive Cooperative. It is responsible for overall management, coordination, communication, and reporting efforts. The Steering Committee consists of one representative from each Sustaining Member. Steering Committee meetings are also attended by one nonvoting representative chosen collectively by the Preservation Members and by one nonvoting representative chosen collectively by the Collaborative Members. Decisions made by the Steering Committee are made by simple majority vote, either documented via email or at the annual meeting.

3.2.2. MetaArchive Content Committee

The Content Committee is responsible for organizing, developing, and conducting content identification/selection practices, as well as recommending prioritization of new subject- and genre-based archives for the MetaArchive Preservation Network (e.g., the Southern Digital Culture archive, the Electronic Theses and Dissertations archive), and organizational aspects of membership building.

3.2.3. MetaArchive Preservation Committee

The Preservation Committee is responsible for developing and documenting technical and evaluative means for digital preservation, practices for content acquisition, metadata tracking, mechanisms for content retention/transfer, and technical aspects of membership building. Such strategies include those for

regulating and migrating text, image, audio, and video structures to best ensure continued preservation.

3.2.4. MetaArchive Technical Committee

The Technical Committee is responsible for developing and maintaining technical specifications and coming to agreements on hardware, software, and networking protocols, overall server architecture, application development, and software maintenance.

3.2.5. Selection and Terms of Service

Additions to the Steering Committee for new Member organizations and/or to replace outgoing committee members are subject to nomination and vote by Steering Committee members at the annual membership meeting of the MetaArchive Cooperative (see 3.4).

All Member organizations may designate one representative for each of the Content, Preservation, and Technical committees; Sustaining Members may also nominate one representative for the Steering Committee.

The standard term of service for all four MetaArchive committees is two academic years; terms are renewable.

Leadership of the Steering Committee is determined by nomination and simple majority vote by the Steering Committee,

Leadership of the Content Committee, Preservation Committee, and Technical Committee is appointed by the Steering Committee.

3.3. Communication

All Members are expected to participate in collaborative communication activities with the MetaArchive Cooperative and to bear associated local costs. Communication methods include in-person meetings, videoconferencing, telephone conference calls, electronic mail methods, and web-accessible applications that support collaboration. With regard to communications within our communities of practice and the public, members of the Cooperative are encouraged to disseminate information of their work via professional conferences and publications.

3.4. Annual Meeting

The Cooperative administers an annual business meeting during October of each year. The venue and agenda is distributed by e-mail to the Member organizations at least one month in advance. This business meeting is used for discussion and to make decisions for the following academic year, including the election of Steering Committee members to assume office, election of leadership for all

Committees, annual review of membership fees, annual review of the Charter document, annual review of the Technical Specifications, and other needed actions.

3.5. Withdrawing from the Cooperative

All Members, regardless of their classification, share some rights and responsibilities in common, including agreeing to membership terms of no less than a three-year duration with a one-year notice to cancel membership thereafter. This time frame provides some predictability for the Cooperative as it continues to grow and will help improve services to all Members by lessening administrative burdens and thus potentially lessening membership fees. Members may withdraw from the Cooperative at the beginning of each term (as determined by the date they joined the Cooperative), with one year's notice to the Cooperative's office with no further obligation on their part or the part of the Cooperative.

3.6. Procedures for Non-Compliance and Material Breach

The working assumption of the MetaArchive Cooperative is that Member organizations will fulfill their obligations to the Cooperative. These obligations include, but are not limited to:

- Payment of fees and provision of proper notice of cancellation;
- Compliance with technical and communication standards and governance and collaboration obligations identified in the Charter;
- Copying and distributing content via the MetaArchive Preservation Network only in ways permitted by copyright and that comply with all local, state, federal, and international law; and
- Ensuring the security of the MetaArchive Preservation Network and its materials.

Infringement of these or other obligations may constitute a material breach. Members and the Cooperative generally enjoy a 90-day opportunity to cure a material breach by working with the Cooperative to reach and reduce to writing a satisfactory solution to the breach. However, in some instances, the Cooperative may need to immediately terminate a Member's access to the Preservation Network and any interaction with it.

Disruption of the Preservation Network by the activities on or through access points within the direct control of the Member likely could lead to immediate termination at the sole discretion of the Cooperative. The Cooperative would then work with the Member to identify the causes of the breach and provide the Member with opportunity to cure it, subject to the nature and extent of the underlying intrusion or harm. Members work together reasonably with the

Cooperative and provide any additional information necessary to investigate the breach.

4. Services and Operations

4.1. MetaArchive Cooperative Services

The MetaArchive approach to long-term digital preservation of at-risk content is a coordinated effort by a decentralized group of organizations to mutually identify, preserve, and archive digital objects.

4.1.1. Digital Preservation Network

A MetaArchive Preservation Network is a functioning network of servers that use the LOCKSS framework to act collectively for the preservation of digital content. This is achieved through replicating collections and storing them over a distributed geographical area. The MetaArchive Preservation Network is a distributed, mutually administered archive of “at-risk” digital content that has internal mechanisms for data integrity checks and heavy security and fault-tolerance features. All network servers, or MetaArchive-LOCKSS caches (operated by all Members) act as peers for the purpose of long-term preservation. Each Member site’s cache communicates as needed on a per collection basis only with other caches in the network designated for replicating that collection.

All preservation sites serve as joint custodians of ingested and preserved content. However, the modularity of this network ensures that, should a Member withdraw from the network by choice or due to technical dysfunction, no loss of data occurs, as all ingested content is reliably preserved and validated at six or more preservation sites.

The MetaArchive Preservation Network ingests digital objects of any MIME media type using a focused web crawl mechanism. Following ingest, the software uses the LOCKSS protocol to verify the integrity of ingested data.

In order for the MetaArchive Preservation Network to ingest a Member’s materials, the Member must first:

- 1) Complete an entry in the appropriate MetaArchive Conspectus database for each collection to be included; and
- 2) Create functional manifest pages and associated plugins for their collections.

4.1.2. Digital Collection Disaster Recovery

A MetaArchive Preservation Network is not intended as a substitute for a robust local backup and recovery regimen. However, in the event of data loss at any

Member site, that Member may recover its data in full from the MetaArchive network and archive(s) to which it has contributed content. Data available for recovery includes the metadata and the digital objects that the Member has submitted to a MetaArchive preservation network and that the Members have successfully ingested. Recovery time is dependent on the size of the collection to be recovered and restored.

To ensure that all data submitted to the MetaArchive is successfully ingested, and thus is available for extraction and replication by a Member, the MetaArchive Cooperative makes reports available to Members, annually and upon request, through an auto-generated, web-based tool. These reports relay information concerning what content has been ingested and by which caches. It is each Member's responsibility to track and audit the integrity of its own collections using these report tools (e.g., if the report shows that a submitted collection has not yet been ingested by at least six caches, the Member should bring this to the attention of the MetaArchive technical staff).

4.1.3. Digital Preservation Network Assistance

The MetaArchive Preservation Network offers to its Members technical assistance and guidance. The technical staff of MetaArchive currently is comprised of two employees (see Section 4.2. below) and the extended group of technical staff members who are responsible for deploying and maintaining MetaArchive-LOCKSS caches at each Preservation and Sustaining Member site.

The technical staff of MetaArchive provides advice and guidance to Members with regards to the following tasks:

- 1) Setting up a functioning MetaArchive-LOCKSS cache;
- 2) Running Security Compromise Tests; and
- 3) Running Collection Recovery, Disk Recovery, and Vault Recovery Tests.

4.1.4. Security Characteristics of a Preservation Network

The MetaArchive-LOCKSS caches are "vault" servers maintained at each Member site. Each vault server, which contains the preservation copies of digital collections, runs a robust firewall, with ports open for LOCKSS and SSH. Each vault server responds only to specified network addresses and ports. This configuration provides an extremely secure architecture, and is also relatively simple for Members to maintain and monitor. For more details, please see Appendix A: MetaArchive Technical Specifications.

4.2. Staffing Plan for the MetaArchive Cooperative

Currently, MetaArchive employs one program manager, one collaborative services librarian, one half-time software engineer, and one systems

administrator. As the network grows, we will adjust this staff to fit the needs of our Members.

4.3. Outreach Activities

The Cooperative publicizes and promotes its work through the following means:

- Maintaining a dedicated Web site;
- Producing press releases, fact sheets, and brochures;
- Administering workshops;
- Giving conference presentations; and
- Publishing articles.

4.4. Use of MetaArchive Cooperative Financial Resources

The MetaArchive Cooperative's financial resources, obtained through the membership fees paid by all Members, as well as consulting fees and storage space fees, are used exclusively for the following activities:

- 1) Central administration of the MetaArchive Cooperative;
- 2) Administering Steering Committee meetings;
- 3) Hosting workshops and other events to train Members and those interested in joining, administering, or learning about Private LOCKSS Networks;
- 4) Administering conference calls and other communications between Members;
- 5) Adding disks and/or servers to MetaArchive-LOCKSS caches;
- 6) In the case of catastrophic circumstances, technical and financial assistance with the restoration of a Preservation Site's servers, software, and collections by the MetaArchive Cooperative. Requests for assistance will be reviewed by the Steering Committee and, at their discretion, either approved or denied;
- 7) Planning for and undertaking expansion, new functionalities, etc. for the network as needed; and
- 8) Other purposes as deemed appropriate by the Steering Committee in consultation with Members.