

MetaArchive Cooperative Charter

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

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1. Introduction

1.1. What is the MetaArchive Cooperative

The MetaArchive Cooperative is an independent, multi-state membership association hosted by the Educopia Institute, based in Atlanta, Georgia.¹ 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 as a collaborative venture of Emory University, Auburn University, Florida State University, Georgia Institute of Technology, University of Louisville, Virginia Polytechnic Institute and State University, and the Library of Congress. The initiative began in 2004 as part of the National Digital Information Infrastructure and Preservation Program (NDIIPP) supported by the Library of Congress.²

The MetaArchive Cooperative is responsible for maintaining and extending its methodology and approach to distributed digital preservation, as well as the specific MetaArchive networks that it hosts (e.g., the MetaArchive of Southern Digital Culture).

1.2. What is the MetaArchive of Southern Digital Culture

The MetaArchive Cooperative hosts the MetaArchive of Southern Digital Culture. This MetaArchive network preserves digital materials (both born digital and digitized) with a topical focus on southern digital culture and history. The MetaArchive of Southern Digital Culture was formed during the initial NDIIPP project, in which the collaborating institutions jointly developed: 1) a prioritized conspectus of at-risk digital content in this subject domain held at the original member sites;³ 2) a harvested body of the most critical content at these member sites to be preserved; 3) a cooperative charter for ongoing collaboration; and 4) a distributed preservation network infrastructure based on the LOCKSS software. The MetaArchive Cooperative maintains its commitment to preserve and grow this network.

1.3. Mission and Operating Principles

The mission of the MetaArchive Cooperative is to foster better understandings 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 institutions. The Cooperative is guided in its work by the following operating principles:

- Mutual commitment to long-term preservation of corpora of critical cultural heritage content;
- A cooperative, robust, and decentralized peer-to-peer approach to selecting content of shared value, and mutual support of content with a particular (critical) value to individual institutions;

¹ The Educopia Institute is incorporated under the laws of Georgia. It is currently seeking 501c3 status as a non-profit institution. It will act as a mediating and coordinating entity for leaders from academic and cultural institutions such as universities, libraries, archives, museums, and historical associations.

² For more information on this Library of Congress initiative, please see <http://www.digitalpreservation.gov>.

³ For more information about the NDIIPP project and definitions of such terms as "southern," "at risk," and "conspectus," please see <http://www.metaarchive.org/documentation.html>.

- Application of LOCKSS software, as the principal system for distributing copies of replicated content in secure, distributed locations over time;
- Minimal overhead and straightforward mechanisms for collaboration;
- Wide applicability to a range of institutions and digital content;
- Commitment to storage and maintenance in migratable formats and data structures;
- Commitment to high standards for metadata and content; and
- Ongoing exploration of projects to advance digital preservation.

1.4. Who Should Participate?

Cultural memory organizations such as universities and colleges, research libraries, museums, library consortia, electronic text centers 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 participate in the work of the MetaArchive Cooperative.

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. This includes not only universities, libraries, museums and professional societies, but also individual projects as well as consortia of organizations.

Any institution 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 a MetaArchive Membership Agreement affirming their acceptance of the conditions listed in this document to the MetaArchive Cooperative office (see Appendix B: Membership Agreement).

2.2. Types of Membership

The MetaArchive Cooperative has three types of members: 1) Sustaining Members, 2) Preservation Members, and 3) Contributing 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 Preservation Network. The major responsibilities of this development activity includes: adaptation and maintenance of the LOCKSS software for preservation of relevant digital content; design and implementation of system features dealing with security; content validation and integrity checking; and metadata tracking. Those

Sustaining Members who contribute content to the MetaArchive network are also responsible for all of the functions of a Contributing member (see 2.2.3 below).

The current Sustaining Members (as of March 2007) are: Emory University, Auburn University, Florida State University, Georgia Institute of Technology, University of Louisville, and Virginia Polytechnic Institute and State University.

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 institutions, maintaining a network node, and making that node available for testing new software. At a minimum, a preservation site must include a node server of the MetaArchive Preservation Network, satisfying 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 are also responsible for all of the functions of a Contributing member (see 2.2.3 below).

2.2.3. MetaArchive Contributing Members.

MetaArchive Contributing Members are cultural memory institutions that own and possess digital content and wish to preserve it via the MetaArchive Preservation Network. Contributing Members possess content that they wish to preserve by means of the MetaArchive Preservation Network, but do not have any of the technical responsibilities of Sustaining Members or Preservation Members. Specifically, they do not have to maintain any of the server infrastructure associated with the MetaArchive Preservation Network. Contributing Members do 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).

A Contributing Member may work with the MetaArchive Cooperative's technical staff to ready and submit its relevant digital collections and associated metadata for harvest. Contributing Members have certain rights of access related to requesting the retrieval of their content from the Network for their own purposes (e.g. to replace files on a public web site that were damaged, making additional "use files" from a preserved master file, etc.). 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 service.

2.2.4. MetaArchive Sponsorships

The Cooperative will consider overtures from smaller institutions that have materials important to preserve, but which may lack resources to formally join the network. Such institutions should approach the Cooperative through a member of the MetaArchive Steering Committee (see 3.2.1 below). If accepted for provisional membership in the Cooperative, they are assigned the status of MetaArchive Contributing Members on a specified interim basis, with the option of long term renewal at the discretion of the Steering Committee.

2.3. Costs and Fees

The MetaArchive Cooperative's approach to digital preservation is intentionally designed to require minimal expenditures by collaborating groups of institutions. Building on the LOCKSS Program's approach of low cost and low barriers to adoption, the MetaArchive Preservation Network is a model that can be easily implemented by many groups of collaborating institutions. 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. Practice has shown that the LOCKSS software can be run on standard desktop computers and requires a modest degree of systems administration for ongoing maintenance.

Sustaining Members, Preservation Members, and Contributing Members pay annual membership fees to the Cooperative. The purpose of the membership fees is to support centralized Cooperative activities (e.g. “in-person” meetings, conference calls, and the like, plus 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 maintenance or upgrading of computing hardware where necessary to maintain the overall Preservation Network).

The membership fees are published in the Memorandum of Understanding 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 designated by Member type:

2.3.1. LOCKSS Alliance Membership

Sustaining and Preservation Members in the MetaArchive Cooperative are required to maintain membership in the LOCKSS Alliance. For information regarding the LOCKSS Alliance, please visit <http://www.lockss.org>.

2.3.2. Systems Administration and Cache Monitoring

Sustaining and Preservation Members are required to perform the systems administration and cache-monitoring activities needed to maintain successful Network node operation. Once a node is established and operational, systems administration and cache monitoring are expected to become 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 a MetaArchive Preservation Network. Specifically, Members are responsible for readying their collections and associated metadata for harvest, and for preparing LOCKSS manifests and writing plug-ins for submitted content.

The MetaArchive Cooperative offers fee-based services to institutions at all membership levels on an individual contract basis. These services include preparing LOCKSS manifests and writing plug-ins for submitted content.

2.3.5. Administration

Sustaining, Preservation, and Contributing Members in the MetaArchive Cooperative are required to pay an annual fee to the Cooperative to support the following administrative functions:

- 1) Central administration of the MetaArchive Cooperative;
- 2) Hosting Steering Committee meetings;
- 3) Hosting workshops to train new members;
- 4) Hosting conference calls and other communications between members;
- 5) Emergency replacement of nodes or equipment;
- 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 your content in case of a catastrophic loss at your institution;
- Use of a web-based tool – the Metadata Conspectus – under an appropriate open source license that will enable members to record information about submitted collections;
- Distributed archiving of your digital collections across multiple preservation nodes;
- Reports and statistical information about your 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; and
- Collaboration opportunities with experienced digital preservation administrators, librarians, technologists, and others who are members of the Cooperative;

Sustaining and Preservation Members also receive:

- 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 to an extent defined in the Charter of by the Cooperative from time to time;

- In the case of catastrophic circumstances, technical and financial assistance with the restoration of a node's servers, software, and collections by the MetaArchive Cooperative; and
- Access to the technical knowledge and expertise of founding members, provided that founding members maintain their Cooperative membership, and technical support to establish and maintain preservation nodes in compliance with technical standards (as of March, 2007, these are detailed in Appendix A: MetaArchive Technical Specifications) available to members.

For Sustaining Members:

- Opportunities to influence development of the MetaArchive Cooperative and the development of distributed digital preservation practices more generally; and
- Representation on the Steering Committee (for the original six participating Members and each Sustaining Member that joins the Cooperative after March 2007, up to a total of 15 Steering Committee members—see 3.2.1 for more detail).

2.4.2. Responsibilities

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

Each Member (Sustaining, Preservation, and Contributing) agrees to the following conditions in addition to any other obligations specified herein:

- Maintain membership in good standing by fully complying with this Agreement and the definition of 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 Agreement (as of March, 2007, these consist of Appendix A: MetaArchive Technical Specifications);
- Support at your own expense any and all costs incurred by participating in the Cooperative, including but not limited to paying membership fees, digitizing collections, 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, and federal laws including the use of exemptions set forth within U.S. copyright law at Section 107, 108, and elsewhere and permissions through “deed of gifts” or other clearances;
- Represent and warrant that to the best of their 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 sufficient rights to use the content consistent with the requirements of a multi-node 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 your 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 your activities in working with the Cooperative and members; and

- 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.

All Sustaining Members and Preservation Members in the MetaArchive Cooperative further agree to the following conditions in addition to any other obligations specified herein:

- Create and maintain a Preservation Site;
- Make their node available for testing new software and other MetaArchive developments as needed;
- Participate actively in the Preservation Network by contributing and ingesting content from the Cooperative;
- Join and maintain membership in good standing with the LOCKSS Alliance;
- Employ an implementation of LOCKSS software that complies with all requirements in the current and subsequent versions of the private-network LOCKSS 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 of March, 2007, this is detailed in Appendix A: MetaArchive Technical Specifications);
- Install and maintain any other software that may be required for participation in the Cooperative (as of March, 2007, this is 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 Preservation Network.

It is understood that all digital content contributed to a 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, including, 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 strives diligently to comply with the spirit of copyright law. The MetaArchive is a "Dark Archive:"⁴ it is not accessible outside of preservation routines and is only available to the Cooperative's Members for purposes of preservation and to replace the originating institution's local files when necessary. Each originating institution bears responsibility for handling copyright and intellectual property issues locally. All Members agree to 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 their relationships and Agreement with the Cooperative. Likewise, all Members agree to 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 their activities in working with the Cooperative and Members.

2.5. The MetaArchive Membership Agreement

Member institutions 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 network as a Sustaining Member, Preservation Member, or Contributing Member 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, multi-state, membership association hosted 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:

The MetaArchive Cooperative
Educopia Institute
2698 Chimney Springs Drive
Marietta, Georgia 30062

⁴ "Dark Archive" in the MetaArchive context means that access to content is limited to institutional custodians.

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 of the original six participating Members and one representative from each Sustaining Member that joins the Cooperative after March 2007, up to a total of 15 Steering Committee members.⁵ 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 prioritization of content for harvest within a MetaArchive Preservation Network (e.g., the MetaArchive of Southern Digital Culture), and organizational aspects of membership building.

3.2.3. MetaArchive Preservation Committee

The Preservation Committee is responsible for developing 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 institutions and/or to replace outgoing members are subject to nomination and vote by Steering Committee members at the annual membership meeting of the MetaArchive Cooperative (see 3.4).

All Members may designate one representative for each of the Content, Preservation, and Technical committees.

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.

⁵ Once we reach Membership of more than 15 Steering Committee Members, this portion of the Charter will be reconsidered.

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, telephone conference calls, electronic mail methods, and web-accessible applications that support collaboration. The MetaArchive Cooperative is exploring, and may in the future adopt, more advanced Internet-based communications methods (e.g. for web-based videoconferencing or online meetings where documents can be shared over the web). 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 hosts an annual business meeting in Atlanta, Georgia, during August 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. Following the completion of their original term (three years or more), members may withdraw from the Cooperative at the beginning of each year (as determined by the date they joined the Cooperative), with one year's notice to the Cooperative's office. Sustaining and Preservation Members who choose to leave the Cooperative but who would like the Preservation Network to continue hosting their content may undergo a change in status to Contributing Member and be charged accordingly. Members who wish to exit the Cooperative entirely may do so 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 institutions 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 Preservation Network only in ways permitted by copyright and that comply with all local, state, or federal laws; and
- Ensuring the security of the 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 institutions to mutually identify, preserve, and archive digital objects.

4.1.1. Digital Preservation Network

A MetaArchive Network is a functioning network of server nodes which use a LOCKSS framework to act collectively for bit preservation of digital content. This is achieved through replicating collections and storing them over a distributed geographical area. A preservation network is a distributed, mutually administered archive of critical digital content that has internal mechanisms for data integrity checks and heavy security and fault-tolerance features.

A MetaArchive network, built on the LOCKSS software framework, consists of a peer-to-peer (P2P) network architecture with functionality for data maintenance, integrity checking, and other features fundamental to digital preservation. All preservation nodes (operated by Sustaining and Preservation Members) act as peers for the purpose of long term preservation. Each node communicates with all other nodes of the preservation network and only those nodes. (The only exception to this rule is when harvesting operations are underway, when one or more network nodes are ingesting content.)

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

MetaArchive harvests digital objects of any MIME media type using a focused web crawl mechanism. Following harvest, the software uses the LOCKSS protocol to verify the integrity of harvested data subsequent to harvest and replication.

In order to conduct a harvest of a Member's materials, the Member must first:

- 1) Complete an entry in the appropriate MetaArchive Conspectus database for each collection slated for harvest in a MetaArchive network;⁶ and
- 2) Create functional manifest pages and associated plug-ins for their collections.

The MetaArchive Cooperative may provide its Members with full support in creating manifests and plug-ins on a contract basis (see 4.1.3. below).

4.1.2. Digital Collection Disaster Recovery

A MetaArchive 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(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 Sustaining and Preservation Members have successfully harvested. 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 harvested, and thus is available for extraction and replication by a Member, the MetaArchive Sustaining Members make reports available to Members, annually and upon request, through an autogenerated web-based tool. These reports relay information concerning what content has been harvested and by which nodes. It is each Member's responsibility to track and audit the integrity of its own collections using these report tools. If the report shows that a submitted collection has not yet been harvested, 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 the MetaArchive is comprised of one part-time employee of the network (see Section 4.2. below) and the extended group of technical staff members who are responsible for deploying and maintaining MetaArchive nodes at each Preservation and Sustaining Member site.

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

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

The technical staff of MetaArchive may also provide advice and guidance to any Member with regards to the following tasks on a contract basis under the terms of an appropriate Service Agreement:

- 1) Creating manifest pages; and
- 2) Setting up plug-ins.

⁶ To view the metadata specifications included in the conspectus schema, please see: http://www.metaarchive.org/pdfs/conspectus_md_2005.html.

4.1.4. Security Characteristics of a Preservation Network

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

4.2. Staffing Plan for the MetaArchive Cooperative Office

Currently, MetaArchive employs one part-time project coordinator, one part-time administrative assistant, and one part-time systems administrator and programmer. 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;
- Hosting workshops;
- Giving conference presentations; and
- Publishing articles.

4.4. Use of MetaArchive Cooperative Financial Resources

The MetaArchive Cooperative’s financial resources, obtained through the annual fees paid by all Sustaining, Preservation, and Contributing members, are used exclusively for the following activities:

- 1) Central administration of the MetaArchive Cooperative;
- 2) Hosting Steering Committee meetings;
- 3) Hosting workshops to train new Members;
- 4) Hosting conference calls and other communications between members;
- 5) Emergency replacement of nodes or equipment;
- 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.