

Drexel University

From the Selected Works of James Gross

May 28, 2012

Digital preservation policy report: University of Utah Marriot Library Initiative

James Gross, *Drexel University*



Available at: <https://works.bepress.com/jamesgross/33/>

RUNNING HEAD: DIGITAL PRESERVATION POLICY REPORT

Digital Preservation Policy Report:

University of Utah Marriott Library Initiative

James Gross

Drexel University, INFO756

Professor Matienzo

5/28/2012

Initiatives for digitization projects are being conducted by archives and libraries. This has resulted in an increase of digitized and born digital content. Institutions are realizing the need to implement long-term planning and policies to help manage this non-physical content. Preservation planning is an important step in establishing a digital preservation program. In this paper, we will briefly examine four areas of the digital preservation policy initiative as drafted and created by the University of Utah's Marriot Library. These areas include: (1) a description of the initiatives and the institutional context, (2) an overview of the policies and guidelines, (3) addressing the mission and user needs, and (4) ways to strengthen the initiatives policy and practice.

Model summary:

Preservation planning is one of the four lifecycle actions in the Digital Curation Centre Curation Lifecycle Model (Harvey, 2010, p. 83). It is also a functional entity in the OAIS functional model (CCSDS, 2002, p.4-1; see Figures A-C). Preservation planning and Strategies are intrinsic to the OAIS reference model (Harvey, 2010, p.83). The planning process could be referred to as "proactive preservation activities aimed at minimizing risks" (Ibid, p.83).

[1a.] Initiative:

In 2010, the J. Willard Marriot library, part of the University of Utah, initiated steps to establish a trusted digital repository (Keller, 2012, pp. 1,4). As planned, this repository is tasked with "preserving and sustaining long-term access to all digital objects created or collected" throughout the library (Ibid, p.3).

The Marriot library is committed to providing long-term digitized management of these resources. The materials will be taken from existing library holdings, participating institutions, community donations, and from student and faculty submissions. Materials will be selected which support the University's mission and strategic goals.

The Marriott Library has a mandate to preserve its collections in whatever form they exist. "When it comes to digital materials, this can be a challenge because they are inherently fragile and can be difficult to maintain in the present form..." (Marriot, 2012a, n.p.).

The Marriot Library's mission statement states: "The...Library inspires the creation, discovery, and use of knowledge..." (Marriot, 2012a, n.p.). The Digital Preservation Policy Framework supports the Marriot Library's mission and is the highest level digital preservation policy document at the Library" (Marriot, 2012a, n.p.).

The digital initiative is closely tied to the library's mission statement: "The mission... inspires the creation, discovery and use of knowledge [which] encourages and enables the success of all university and scholarly endeavors" (Marriot, 2011, p.1).

[1b.] Institutional context:

The Marriot Library is a component of the University of Utah. It serves the University's needs by collecting and preserving scholarly research and other materials which highlight the university, its faculty, and its student body. It has several departments, including Digital Operations and Digital Ventures. They are jointly involved in this project and will be referred to as the "Digital Preservation" department (Herbert, 2012a).

The mandate for digital preservation at the Marriott library is directly linked to the university's highest level educational policies and goals. This includes institutional responsibility, legal obligations, scholarly commitment, contractual lending obligations, grants, and educational services (Marriot, 2012a, n.p.). The digital preservation initiative is part of the Marriott Library's overall Digital Preservation Program.

The Digital Preservation initiative has a direct contextual relationship to the Marriott library's stated goals and objectives. "The Marriott Library, in keeping with its mission, serves as a trusted caretaker of the library's collections of enduring value, including those in digital format" (Marriot, 2012a, n.p.).

The Marriott Library's digital initiative was initiated to support the University of Utah's mission of being a "trusted caretaker of the library's collections of enduring value" (Keller, 2012, p. 2). This digitization initiative was instituted to help manage and preserve the knowledge base and intellectual assets for the university community (Ibid, p. 2).

[2a.] Overview of the policies and guidelines:

Since 2010, the Marriott Library's Digital Preservation department has been engaged in preservation planning. Preservation planning, the main focus of the Marriott Library's Digital Preservation Policy, uses the OAIS functional entities as a framework (Ibid, p. 9).

The policies of the Digital Preservation Department, are closely linked to the mission of the library. This is an example of departmental integration by common policies or

“contextual links” (Beagrie, 2008, p.18).

The Marriot Preservation Policy report states that: “The overall mission of the digital preservation program is to preserve and sustain long-term accessibility to all digital collections created or collected throughout the library by maintaining a comprehensive digital preservation program” (Keller, 2012, p.3).

The Digital Preservation department, per its mission statement, has the following three core objectives: (1) enable access to digital content over time as technology evolves, (2) collaborate with campus partners and institutions to make the best use of resources and avoid duplication of effort, (3) comply and contribute to the development of standards and best practices of the digital preservation community (Ibid, p.3).

The digital preservation policy was created as an extension of the library’s long-term research commitments (Ibid, p. 18). This policy was developed to enable the university to deliver a reliable and authentic stream of data to its users. This policy includes a high level commitment to retain the original bit-stream (Ibid, p. 18). This is an example of inter-operational linkage of policy standards and agreements to one’s parent organization (Beagrie, 2008, p. 19).

The Digital Preservation department’s policy is to identify, receive, and maintain digital collections which are consistent with the collection policy of the university. Digitization projects will be selected by the Digital Preservation staff and the Technology Services Council (Keller, 2012, p. 8).

The Digital Preservation department will determine which resources are of “enduring value” and which collections should be contracted for long-term preservation and access (Keller, 2012 p.3; see Figure D).

Materials will be assessed based on whether they meet the criteria of the university. Criteria will include budgetary considerations, subject matter, technical issues, and the size of the collection.

The Digital Preservation department actively collaborates with campus partners to facilitate the efficient use of resources. Per its mandate, the Digital Preservation department encourages the processing of collections and materials which satisfy the informational needs of the university.

[2b.] Scope of responsibility:

The library has prime responsibility for two primary areas of preservation: (1) internal library resources of enduring value, and (2) resources from outside sources that the library has contracted to preserve for long-term access (Keller, 2012, p.3).

Scope limitations: The Digital Department will not preserve items which are (1) available elsewhere, or (2) already with another repository (Ibid, p.3). The program will place priorities on materials which are (1) danger of obsolescence in analog form and identified as “critical need” for digital preservation, (2) collections donated by patrons which require long-term access, (3) materials in danger of data loss (Ibid, p. 3).

The scope of responsibility regarding the digital preservation program applies to both born- analog and born-digital collections (Marriot, 2012a, n.p.).

The Preservation Policy states that the university will endeavor to acquire and preserve digital materials which will support the university's fundamental instructional, research, or public service missions (Keller, 2012, p.3). Materials are selected based on their "enduring value" to the university (Ibid, p.3).

The scope of the Marriot Library's Preservation initiative mirrors the main ERPA scope. Per ERPA, it is important to provide access to born digital and digitized material, and ensure that preserved files are authentic (ERPA, 2003, p.4).

[2c.] Types of materials contained:

The Marriot Library's Digital Preservation Policy states that it will provide support for file formats based on three factors: prevalence of the format in the marketplace, availability of tools for migration, and the availability of local resources (Keller, 2012, p.8). Formats are to be evaluated on a yearly basis. The policy also states that they are "re-evaluating all preferred formats" (Ibid, p.19).

An examination of the Marriot library's digital collection website revealed a limited amount of digitized material. In fact, the majority of digital collections listed in the online catalog appear to be placeholders for future content.

Per my telephone interview, current digital content is primarily limited to two large collections of digital materials: State of Utah Mormon records and Utah State newspapers (Herbert, 2012b).

[2d.] Services:

The Marriot Library's Digital Preservation Policy states that it will have the option to handle all levels of preservation services ranging from bit-level to full preservation. A priority will be to maintain the integrity of the records for future dissemination (Keller, 2012, p.18).

Full preservation will include reformatting from obsolete digital formats to migrating the data. Per the Preservation Policy, the digital department is currently limiting its support to a few specific formats (Ibid, p.18).

Most preservation activities will be local activities and will be in-house. Per the Marriot Library website, they are primarily engaged in collaborative digital preservation solutions that have a local Utah component (Ibid, p.18).

[2e.] Roles and responsibilities:

The Marriot Library has primary responsibility for the digital preservation of scholarly resources per the library and university's mission. The library seeks to carry out this task with the cooperation of all stakeholders. A supervisory library committee is responsible for evaluating and approving policies and procedures for the Preservation Department.

The Digital Preservation staff are primarily responsible for: (1) insuring digital stewardship for all digital objects, (2) maintaining current documentation on supported

formats, (3) providing preservation to minimize data loss, and (4) managing the program in a long-term sustainable fashion (Keller, 2012, p.7). The Digital Preservation staff and the Technology Services Council make the decision regarding which collections to preserve (Keller, 2012, p.8). See Figure D.

[2f.] Levels of security:

Within the Digital Preservation policy, security of all files is maintained via the “Storage Attached Network” (Ibid, p.21). There is a 200 tape backup system. Full data backups are made once a week. Copies of the backup are sent to storage and rotated once a year. On-site backup is conducted every month (Ibid, p.21).

Per the RLG report, an institution should monitoring processes that address data integration to avoid loss of data, detect changed in data, and restore lost or corrupted data (RLG, 2002, pp. 14-15).

Within the Marriot Library’s Digital Preservation policy, there is a schedule in place to monitor the digital processes at the program level, and the collection level (Keller, 2012, p.11).

Program level: risks will be assessed for loss of content due to technology variables (Ibid, p.11). Collection level: evaluation will be made every 2 years to review preservation actions (Ibid, p.11).

[2g] Sustainability or viability: There is insufficient data to fully analyze whether this institution can: (1) ensure continuing maintenance of digital objects, (2) ensure adequate

funding and staffing for related projects, and (3) effectively negotiate contractual and legal rights (Harvey, 2010, p.183).

But, based on the Marriot Library Preservation Policy, it appears that the goals of developing an effective policy framework, and developing a strategic program for preservation planning, as suggested by Harvey (2010, p.183) are currently being developed. The OAIS reference model was cited by the Marriot's Preservation Policy (Keller, 2012, p.4) as a guideline to assist with compliance with preservation standards and practices.

This library appears to be is taking concrete steps to sustain the viability of their digital repository. They are using ongoing yearly actions, as well as a multi-year strategy to develop and implement their digital preservation program(Ibid, p.13). Examples include pilot projects with OCLC's Digital Archive, in-house analysis of existing components and infrastructure, and a review of available project resources(Ibid, p.13).

[3] Addressing the mission and use community needs:

In order to gauge success and adequacy of the initiative's mission, internal audits and reviews, and user surveys would be advisable. An information audit was suggested by JISC (2012, n.p.). This would be useful to measure the success of the initiative and verify whether it is addressing user needs.

The purpose of the information audit and departmental review would be to verify that the Preservation Department is making efficient usage of its resources to fulfill its mandate of providing access to the university's designated "records of enduring value" (Keller,

2012, p.2).

The audit and review would help the Digital Preservation department verify that it has the correct processes, framework, and procedures in place to “meet the challenges associated with managing records in the digital age and to take the actions necessary to ensure electronic records are identified, scheduled, preserved, and made accessible for as long as their value dictates” (NARA, 2012, p.2).

A user survey could help determine whether the digital initiative is meeting the needs of the “designated community” (Lavoie, 2000, n.p.). The designated community is an important concept in the OAIS reference model (Harvey, 2010, p.39). The Digital Preservation department has identified students, faculty, contributors, and donors as its designated community (Keller, 2012, p.2).

[4] Ways to strengthen initiatives policy and practice:

Per the RLG report, a trusted digital repository should provide evidence that it has a commitment to “...implement and maintain standards and best practices in its operations” (RLG, 2002, p.13). This includes those standards and practices which “directly influence its viability and sustainability” (Ibid, p.13).

Suggested areas to improve policies and practices:

(1). Develop a model or proposal for budgetary needs (Keller, 2012, p. 14). Assess project and staff needs, provide additional staff, staff training, website development, and funding to help their activities. Clarify financial and staff responsibility (Beagrie, 2008, p. 25). (2) Develop file or collection retention schedules.

(3) Develop planning for digital data backup and access based on emerging technologies.

This would include developing and upgrading the technological systems (Fyffe, 2004, p.6; see also Keller, 2012, p.13).

(4) Publicize initiative and request scholarly materials of “enduring value” (Fyffe, 2004, p. 15). (5). Develop the lifecycle management program for digital assets (Ibid, p. 3).

(6) Further develop and plan the project’s implementation timeframe (Keller, 2012, p. 13).

(7) Further develop policy on bit-stream versus full preservation (Ibid, p.18; see also Beagrie, 2008, p. 32). (8) Further develop plans for data migration (Keller, 2012, p.21).

(9) Develop policy on accepted file formats, especially open access formats (Fyffe, 2004, p.12). Beagrie (2008, p.28) and Harvey (2010, pp. 118-119) suggested that institutions should use open source formats and self-supporting file formats in planning policies.

(10) Conduct an in-house audit or “gap analysis” of the initiative (Ibid, p. 13). The institution can better gauge whether it is meeting its goals. An independent review is useful to determine the efficient allocation of resources (RLG, 2002, pp. 13-15).

Conclusion:

In my brief review of the Marriot Library’s Digital Preservation policy, the policy indicates that this library is striving towards developing and complying with accepted preservation standards and practices.

This repository has the stated goal of creating, preserving, and sharing digital data of “enduring value” for user needs (see Figure D). This institution’s Digital Preservation Policy appears to be working towards addressing the risks and challenges involved with the management of digital records.

I have briefly examined digitized and born-digital policy issues relating to this institution’s Preservation Policy. Based on the policy data, this library appears to be developing a useful framework and processes, per the models of the OCLC’s Trusted Digital Repositories, the Digital Curation Centre Curation Lifecycle Model, and the standards listed in the OAIS functional model.

Based on the development of managerial and departmental processes, this library’s Digital Preservation department appears to be working towards implementing the mission assigned to it. Namely, the task of facilitating the university’s goal of providing long-term digitized management of information and providing user access to this information. Thus, it appears that this institution is working towards achieving its goal of becoming a trusted digital repository.

Figures:

Figure A

OAIS functional model. Illustrates the 7 OAIS functions:

Source: (OAIS, 2012), See also (CCSDS, 2002, p.4-1)

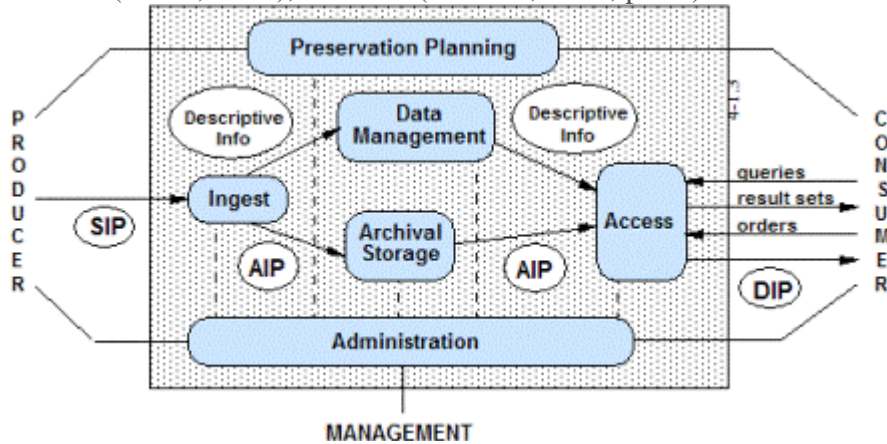


Figure B

OAIS Functional Model. Source: (Lavoie, 2004, p.8). See also (CCSDS, 2002, p.4-1)

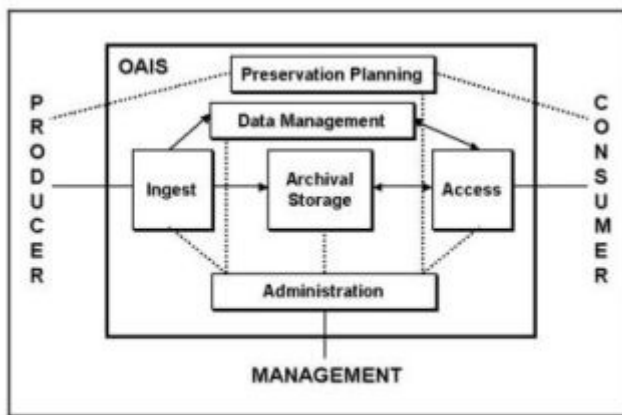


Figure 2: OAIS Functional Model

Figure C

OAIS environment. Source: (Lavoie, 2004, p.5). See also (CCSDS, 2002, p.2-2)

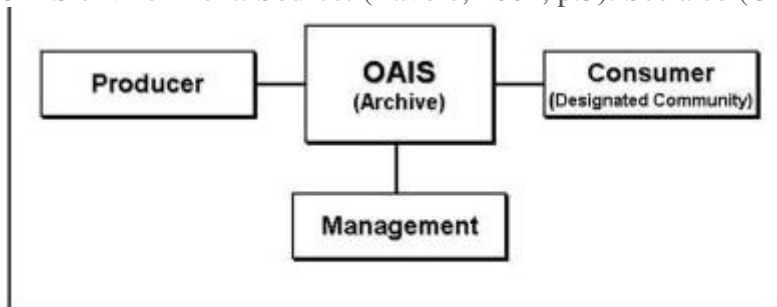
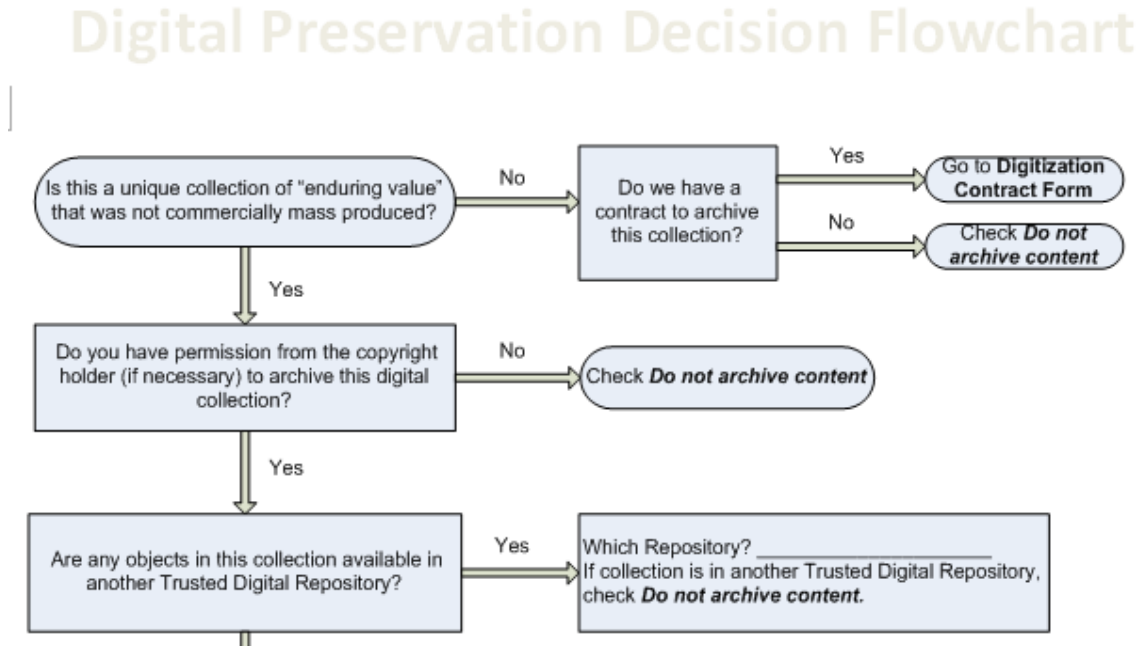


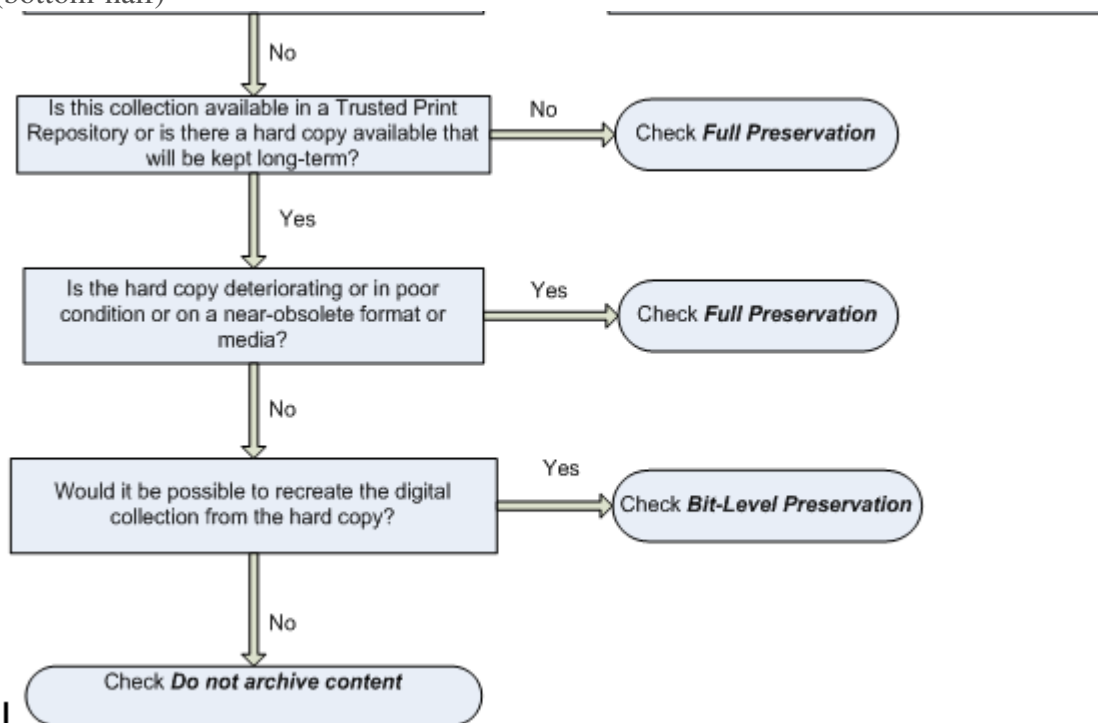
Figure 1: OAIS Environment

Figure D

Digital Preservation Decision Flowchart, Source: (Marriot, 2012b, n.p.)
(Top half)



(bottom-half)



References:

- [CCSDS] Consultative Committee for Space Data Systems. (2002). *Reference model for an Open Archival Information System (OAIS)*, CCSDS 650.0-B-1, Blue Book, January 2002; Issue 1, Washington, D.C: CCSDS Secretariat. Retrieved 5/21/2012 from: <http://public.ccsds.org/publications/archive/650x0b1.pdf>
- ERPA (2003). *ERPA guidance, digital preservation policy tool*, Electronic Resource Preservation and Access Network. Retrieved 5/21/2012 from: <http://www.erpanet.org/guidance/docs/ERPANETPolicyTool.pdf>
- Ex Libris (2012). *University of Utah Selects Ex Libris Rosetta for Long-Term Digital Preservation*, [Press release]. Retrieved 5/19/2012 from: <http://tinyurl.com/7yooxhd>
- Fyffe, R. , et al. (2004) *Preservation planning for digital information: Final report of the HVC2 Digital Preservation Task Force*, University of Kansas, November 11, 2004. Retrieved 5/25/2012 from: <http://tinyurl.com/6oddk28>
- Harvey, D. R., (2010). *Digital Curation: A how-to-do-it manual*, New York: Neil-Schuman Publishers.
- Herbert, J. (2012a). Telephone interview with John Herbert, May 25, 2012, Director of Digital Ventures, University of Utah Library.

Herbert, J. (2012b). Telephone interview with John Herbert, May 17, 2012,
Director of Digital Ventures, University of Utah Library.

Keller, T. (Ed.). (2012). *Digital preservation program: digital preservation policy*,
University of Utah, J. Willard Marriott Library, revised 4/2012, retrieved
5/16/2012 from:
<http://www.lib.utah.edu/collections/digital/DigitalPreservationPolicy2012.docx>

Lavoie, B. F. (2000, January/February). *Meeting the challenges of digital preservation:
The OAIS reference model*. OCLC Newsletter, 243: 26-30, [archived online].
Retrieved 5/26/2012 from:
<http://www.oclc.org/research/publications/archive/2000/lavoie/>

Lavoie, B.F. (2004). *The open archival information system reference model:
Introductory guide*. DPC Technology Watch Series Report, 04-01, January 2004,
Office of Research, OCLC Online Computer Library Center, Inc. and Digital
Preservation Coalition, London. Retrieved 5/24/2012 from:
http://www.dpconline.org/docs/lavoie_OAIS.pdf

Marriot (2011). *A vision for our users, a vision for ourselves*, Strategic plan of the J.
Willard Marriott library, University of Utah, 2011-2013. Retrieved 5/20/2012
from: <http://www.lib.utah.edu/info/Marriott%20Library%20Strategic%20Plan.pdf>

Marriot (2012a). *Marriot library: Digital preservation*, [website] retrieved 5/18/2012
from: <http://www.lib.utah.edu/collections/digital/digital-preservation.php>

Marriot (2012b). *Marriot library: Digital preservation*, Decision Flowchart, [website]

retrieved 5/18/2012 from: <http://tinyurl.com/7ukct2z>. See also:

<http://www.lib.utah.edu/collections/digital/DigitalPreservationDecisionFlowchart.docx>

Marriot (2012c). *Marriot library: Institutional repositories policy*, [website] retrieved

5/18/2012 from: <http://upspace.utah.edu/about.php>

McMillan, G. , et al. (2011). *Digital preservation, SPEC Kit 325*,

Washington, D.C: Association of Research Libraries. Accessed from

Rutgers University. Retrieved 5/26/2012 from:

<http://publications.arl.org/1mn7mo.pdf>

NARA (2010). *Audit of NARA'S oversight of electronic records management in the*

federal government, OIG Audit Report No. 10-04, April 2, 2010. Retrieved

5/26/2012 from: <http://www.archives.gov/oig/pdf/2010/audit-report-10-04.pdf>

OCLC (2006). *OCLC digital archive preservation policy*. Retrieved 20 June 2008

from:

<http://www.oclc.org/support/documentation/digitalarchive/preservationpolicy.pdf>

RLG (2002). *Trusted digital repositories: Attributes and responsibilities: an RLG-OCLC*

report. Research Libraries Group. Mountain View, CA: RLG. Retrieved

5/21/2012 from:

<http://www.oclc.org/research/activities/past/rlg/trustedrep/repositories.pdf>