Digital Preservation Management (DPM) Tools

Heritage organizations that are responsible for the long-term management of digital content are expected to demonstrate good practice by addressing an evolving set of community standards for digital preservation. These standards have been emerging since 1996 report, Preserving Digital Information, was released, providing a roadmap for community developments over the next two decades. The current set of formal and community-based Digital Preservation standards include:

- *Trusted Digital Repositories: Attributes and Responsibilities* [2002]
- *Open Archival Information System (OAIS) Reference Model* (ISO 14721) [2003 and 2012]
- *Producer Archive Interface Method Abstract Standard* (PAIMAS) [2005]
- *NISO Building Good Digital Collections*, 3.0 [2007]
- *Preservation Metadata Implementation Strategies* (PREMIS) [v. 1 in 2005, v. 2.1 in 2011, v.3 pending in 2015]
- Blue Ribbon Task Force on Sustainable Preservation and Access [2010]
- *Audit and Certification of Trustworthy Digital Repositories* (ISO 16363:2012) based on *Trustworthy Repository Audit and Certification* (TRAC) [2007]

Organizations achieve the status of a trusted digital repository (TDR) by demonstrating conformance with these standards.

To assist organizations with their efforts to become a TDR, the Digital Preservation Management (DPM) workshop series made available in March 2015 a set of open source management tools and techniques (http://dpworkshop.org/workshops/management-tools) that are now available for public use:

Digital Preservation Management Tools and Techniques

Scope

Organizations that are responsible for managing digital content across generations of technology are expdected to demonstrate conformance with standards and practice. To assist organizations in becoming a trusted digital repository (TDR), this set of management tools and techniques has been developed and tested by the Digital Preservation Management (DPM) workshops.

To demonstrate organizational readiness, a TDR should address:

- **Principles**: Adopt standards-based principles (**DCP principles**)
- **Policy**: Develop a high-level policy framework (**DP model document**)
- **Scope**: Complete a digital content review to define program scope (**DCR process**)
- **Workflow**: Document workflows to improve and automate (**DCM workflows**)
- **Preparedness**: Extend disaster preparedness to include digital (**disaster planning**)
- **Self-assessment**: Engage in self-assessment to gauge progress (**self-assessment**)

The cumulative results of these activities produces not a single digital preservation plan, but substantial documenation and curation data to guide sustained digital **preservation planning** that is right-sized for an organization.

Each organization is expected to engage in these activities - and each organization should not have to start from scratch. These management tools and techniques are intended to help organizations get started on achieving these objectives - and keep going to sustain their efforts. If we approach achieving good practice for digital preservation with an open source perspective, organizations should be able to benefit from the successes and experiences of other organizations, and contribute back to help other organizations move forward.

This paper will provide a high-level framework to assist organizations in developing a sustainable digital preservation program that is suited to their needs and requirements. The framework is built around ten digital curation and preservation principles, the first of the DPM management tools. The principles address core digital preservation activities that organizations need to engage in, including identifying digital content that falls within their scope of responsibility; selecting the portion of that digital content they need or want to preserve; establishing secure long-term storage that is appropriate to the digital content to be preserved; protecting preserved digital content from day-to-day risks as well as from emergencies; developing comprehensive preservation planning to guide the development of their digital preservation programs; and continually determining optimal means for researchers and others to discover and make use of digital content.

Archivists and other digital content managers who have been involved with the development of sustainable digital preservation programs know that the organizational aspects of digital preservation can be as or more challenging than the technological issues. It is not surprising that the discussions in the community to have largely focused on the technological aspects of digital preservation. In getting started, introductory projects are often built around the development and implementation of one or more tools that enable the management of digital content at various points in the life cycle, e.g., acquisition, processing, access. As digital preservation programs mature, the focus needs to shift to the kinds of preservation planning activities that these Digital Preservation Management tools address.

These tools have been iteratively developed and tested in the course of presenting nearly 50 Digital Preservation Management (DPM) workshops since 2003 for hundreds of digital content managers representing dozens of organizations in many countries from around the world.