

37d – Preservation Repository

Action Item Template Response

General Action Item Information

Lead Division/Office: Digital Library Program
Action Item Number: 37d
Action Item Short Name: Preservation Repository
Dependencies with other EP Action Items:
Implementation leader (name & email): jwd@indiana.edu

I.
II.

DESCRIBE YOUR PLANS FOR IMPLEMENTING THIS ACTION.

Preservation of digitized and "born digital" audio, video, and other multimedia content requires active management. Files must be stored in redundant, reliable storage. Metadata must be stored, describing both the intellectual content and technical characteristics of the files, to support understanding and use of the content by future generations. Services must be in place to check to make sure that files remain intact over time and have not fallen victim to intentional or unintentional loss. File formats, codecs, and metadata formats must be migrated over time as old formats become obsolete and unsupported by current software. Files have to be migrated to new generations of storage media and devices to remain accessible in spite of media degradation and obsolescence.

Best practice for supporting these activities is through the use of a trusted digital repository system based on the [OAIS](#) (Open Archival Information System) model, and audited or certified by an external entity as compliant with best practices for such repositories.

The IU Digital Library Program has been working for several years on implementing a digital repository system based on the [Fedora](#) software platform, with preservation of digital multimedia formats in mind as a key use case. We have also been working with the Fedora development team to ensure that Fedora is capable of being connected to IU's MDSS (Massive Data Storage System) for management of large files. Transforming the Digital Library Program's repository into a trusted digital repository capable of storing IU's digital media assets for the long term will require the following steps:

1. Define file formats and metadata formats required and/or supported for digital audio and video content to be preserved in the repository.
2. Develop a connector from Fedora to MDSS (Massive Data Storage System) for storage of files in MDSS, mirrored between the Bloomington and IUPUI data centers.
3. Develop and implement automated file integrity checking processes for Fedora/MDSS.
4. Develop and implement a plan for monitoring and addressing file format obsolescence.
5. Enter into a "data swap" or other type of agreement with a 3rd party storage provider for storage of an additional redundant copy of preservation repository data.
6. Develop and document all policies and processes (automated and human) involved in the operation of the repository, including Service Level Agreement for contributors
7. Conduct a self-audit of the repository using the [TRAC](#) and/or [DRAMBORA](#) processes.

8. Develop and implement a plan for addressing the results of the self-audit.
9. Engage an outside consultant to conduct an external audit of the repository using TRAC and/or DRAMBORA.
10. Develop and implement a plan for addressing the results of the external audit.
11. Continue management, monitoring, and enhancement of the repository system.

While a digital preservation repository would be used for other content in addition to audio and video (i.e. digitized manuscripts, sheet music, photographs, art images, etc.), it is especially essential for audio and video, given that existing analog formats are rapidly approaching obsolescence, and thus the digital version will likely be the *only* accessible version of an object.

Several units, including the Archives of Traditional Music and Jacobs School of Music, are already creating media preservation packages and have an immediate need for a preservation repository. These packages are currently being stored directly into MDSS on an interim basis.

II. WHAT ARE THE POLICY AND PRACTICE IMPLICATIONS OF YOUR PLANS?

III. IDENTIFY STAKEHOLDERS.

- Libraries, archives, departments, and other holders of audio/video content throughout IU
- Digital Library Program
- UITS Research Technologies: Research Storage group
- UITS Enterprise Infrastructure
- IUScholarWorks institutional repository
- Implementation leaders for EP actions 34 and 36, which may also benefit from preservation repository services