The digital preservation software stack

Heather Yager
Digital Media Archivist
Preservation

Digitization

Access

CURATION!
SOFTWARE

+ 

IT DEPARTMENT

+ 

HARDWARE
Three key documents for developing a digital preservation program:

– ISO OAIS (Open Archival Information System)
– PLATTER (PLanning Tool for Trusted Electronic Repositories)
– TRAC (Trusted Repositories Audit and Certification)
Requirements interviews with a variety of museum staff:
<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2.21</td>
<td>A copy of backups must be stored offsite.</td>
<td>P0</td>
</tr>
<tr>
<td><strong>Preservation management software</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2.22</td>
<td>The system must provide storage for donations-in-process, pre-ingest, which can be retrieved using the registrar-assigned lot number.</td>
<td>P0</td>
</tr>
<tr>
<td>3.2.23</td>
<td>The system must be able to generate and assign unique identifiers (UIDs) to both simple digital objects and complex digital objects (such as a software package, or a collection-level object).</td>
<td>P0</td>
</tr>
<tr>
<td>3.2.24</td>
<td>The system must treat the UID as the primary, unique identifier for digital objects.</td>
<td>P0</td>
</tr>
<tr>
<td>3.2.25</td>
<td>The system must use a naming convention that generates visible, persistent, UIDs for all Archival Information Packages (AIPs), and which accounts for collection growth over time.</td>
<td>P0</td>
</tr>
</tbody>
</table>
Our top 5:
• Archivematica
• DAITSS
• Hydra Fedora (with head options)
• Islandora
• Fedora (for the sake of comparison)
<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td><strong>Does the software support PREMIS for preservation metadata?</strong></td>
<td>yes - metadata stored in METS file with full</td>
<td>PREMIS implementation</td>
<td>requires significant effort</td>
<td></td>
<td>no - PREMIS metadata may be added as a Fedora datastream outside of Islandora.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PREMIS implementation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td><strong>Does the system logically bind the metadata, object, and UID into a package? How?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td><strong>What protection does the system offer against alteration of the object?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>What search capabilities does the software provide?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
THE LINUX COMMAND LINE
A COMPLETE INTRODUCTION

WILLIAM E. SHOTTS, JR.
INGEST TOOLS
• Virus checks, format checks
• Metadata management
• Artifact transfer

PRESERVATION TOOLS
• Fixity checks, more virus checks
• Error log management
• Artifact replication

STORAGE TOOLS
• System-wide replication
• Disaster recovery backups
• Archival backups
The moral?

• Digital preservation is daunting.
• But you can do it.
• Make friends with your IT department.
• Email your colleagues!
  (hyager@computerhistory.org)