



Digital**Preservation**Coalition

Preservation Methodologies

TIMBUS Digital Preservation
Crash Course

Glasgow, 19th July 2011



File Format Selection (1)

- What file formats to preserve?
 - Impossible to create a definitive list
 - Decisions must be repository specific
- Five main criteria:
 - Adoption
 - Technological dependencies
 - Disclosure
 - Transparency
 - Metadata Support



File Format Selection (2)

- Additional common criteria include:
 - Reusability/interoperability
 - Robustness/complexity
 - Stability
 - Intellectual property/ digital rights protection
- Also need to consider:
 - Resources available for preservation activities
 - Institutional IT practices
 - Preferred preservation methodology
- Risk management techniques should be deployed
- Should be part of a clear preservation strategy

Bit Preservation (1)

- Preservation of files at a bit-level
- More than just storage!
- Tasks/issues involved:
 - Refreshing of media
 - Keeping multiple copies
 - Maintaining authenticity (integrity checking)
 - Collection and maintenance of metadata

Bit Preservation (2)

- For:
 - Inexpensive in comparison to other options
- Against:
 - Does not guarantee continued access
- Key Project:
 - LOCKSS (<http://bit.ly/mXC68>)



Migration (1)

- Migration of files from one hardware/software configuration and/or format to another
- Retaining essential characteristics whilst avoiding obsolescence
- Tasks/issues involved:
 - Monitoring file format development
 - Normalisation
 - Preservation formats
 - Significant properties

Migration (2)

- For:
 - Relatively simple technological solution that provides continues access
- Against:
 - Time consuming to plan and potentially difficult to demonstrate continued authenticity
- Key projects:
 - SIARD (<http://bit.ly/nVM09Q>) [Normalisation]
 - InterPARES (<http://bit.ly/oqrFHw>) [Authenticity]

- Development of emulator software to recreate the original computer environment in which the file was created.
- Tasks/issues involved:
 - Building on bit-level preservation
 - Access to the authentic record
 - Sustainability of emulator

Emulation (2)

- For:
 - Maintains authenticity and potentially provides access to full functionality in the file's native environment
- Against:
 - Technologically complex and resource intensive.
- Key Project:
 - Dioscuri (<http://bit.ly/qQtrAL>)

Some Conclusions

- No-one size fits all approach
 - File format selection and preservation methodology chosen should consider both format and repository-specific issues
 - May deploy different methodologies for different file formats/types
 - Each methodology has its strengths and weaknesses
- Important to have a clear preservation strategy