



# Keeping your ducks in a row

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## **Preservation and storage of digital resources**



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# Preservation

► What is meant by preservation?

*To ensure protection of information of enduring value **for access** by past and future generations (Conway, 1990 :206)*

- ❖ In the digital library world this means the adherence to international standards when creating the digital object so that it can be used with any future technology

# File types – archival

- ▶ Images - Uncompressed tif
- ▶ Video – avi
- ▶ Sound - wav
- ▶ XML – text documents – long term visions should include accessibility by disabled persons (DTB – digital talking book)
- ▶ Preservation metadata – a statement of the information believed to be needed to manage preservation of digital collections, such as dimensional data, software data etc.

# Information and data

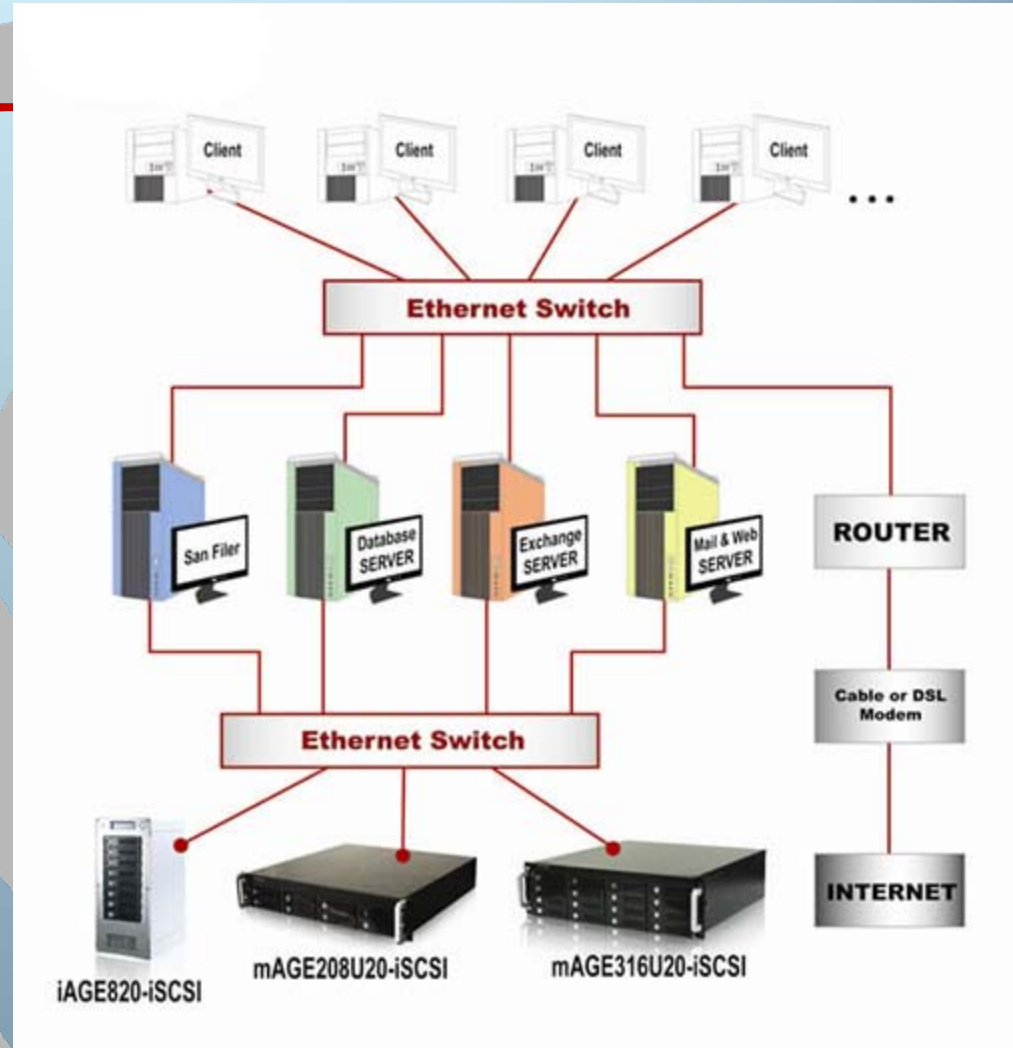
- ▶ Logical name spaces for digital objects
- ▶ **Separate** information management from data storage management

The third force

- Knowledge management

# Storage - physical

- ▶ Many avenues exist for the physical storage of data
- ▶ Ever changing technology
- ▶ Long term feasibility – uncertain
- ▶ Serious implications
- ▶ Outcome over time – not known



# Authenticity

- ▶ Guarantee that the data has not been changed
  - Collection owned data, only accessible through the data handling system
  - Support roles defining access (curation, owner, annotation, read)
  - Support access controls mapping users to roles
- ▶ Audit trails that record all operations on files
- ▶ Digital signatures - cryptographic checksums

# Challenges

- ▶ The effective management of the digital object – no definitive guidelines exist
- ▶ No infallible system exists

# LOCKSS

- ▶ The **LOCKSS** (Lots of Copies Keep Stuff Safe) project, under the auspices of [Stanford University](#), develops and supports an open source system allowing libraries to collect, preserve and provide their readers with access to material published on the Web. The system attempts to replicate the way libraries do this for material published on paper. It was originally designed for scholarly journals, but is now also used for a range of other materials. Examples include the [SOLINET](#) project to preserve theses and dissertations at eight universities, and the [MetaArchive](#) project preserving at-risk digital content about the culture and history of the American South



# Suggested interim solutions

- ▶ While waiting for the future to evolve
- ▶ Utilise the best available physical storage within your budget
- ▶ Keep strictly to international standards – no point in throwing data into your system with no way of being able to read it in a few years time.

# The way forward

- ▶ Remember that digital data is very fragile – physical data you can see and touch and unless someone has ripped a page out of a book is normally intact as a unit.
- ▶ Digital objects can be changed and manipulated and of course corrupted.

# Take a deep breath!!

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- ▶ Follow international guidelines as far as possible and include them in your own policies...
- ▶ Ensure your data is religiously backed up and that at least one copy is kept off site
- ▶ Keep yourself up to date with the latest trends in technology
- ▶ Never stop planning

**Thank you for listening**