Preservation Planning, Institutional Strategies and Policies

Thomas Severiens
Institute for Science Networking
at the Carl von Ossietzky University
Oldenburg, Germany
Severiens@ISN-Oldenburg.de

Overview

- Motivation
- Preservation Planning and Strategies
  - Selection Criteria
  - What will the future know about the 20th century?
  - Where to start?
  - Institutional implementations, Examples
- Requirements for Preservation-Policies
- Conclusions

The Goals of Preservation

"... the goal of preservation is to allow future users to retrieve, access, decipher, view, interpret, understand, and experience documents, data, and records in meaningful and valid ... ways."

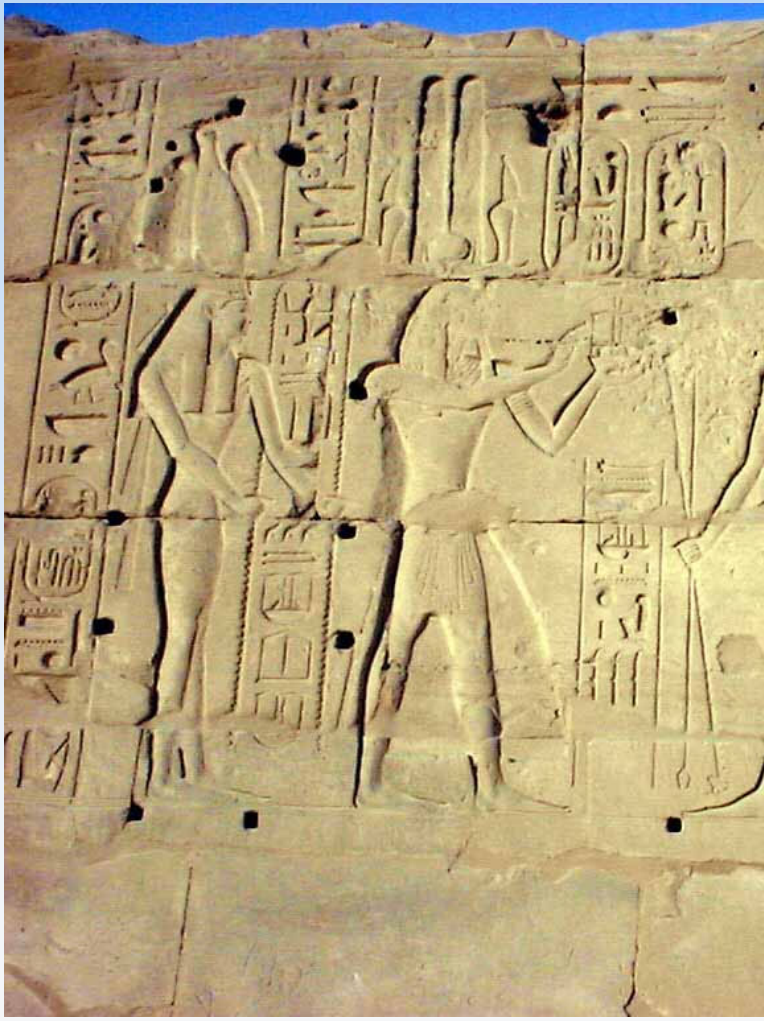
Jeff Rothenberg

Background

- Preservation of the digital bit stream of today's digital objects only would be analogous to saving hieroglyphics without archiving a Rosetta Stone.
- In this light, a digital information entity should consist of a composite bit stream

Composite Preservation Objects

- *Core Content*
- Necessary *contextual* information
- Interpreter capable for rendering the core content form its bit stream into its intended manner of presentation



Organisational Levels

- Bit stream preservation
  - Technical level
- Preservation of the contextual information
  - Metadata level
- Bundling and preservation of information entities
  - Technical and organisational level

Why do we work on all the Problems of Preservation at all?

- Why do we care about the problems of future generations?
- Preservation of the digital heritage should be part of our sustainable operation, like nature conservation and the development aid for the developing world are.
- "Open Archiving" will only emancipate itself against closed printed publishing, if it also will guaranty long term accessibility.

What should be preserved?

- In the analogue world, selection criteria where often simple:
  - "Create *it, Collect it, Forget it, have much Luck, Find it again, Decipher it, be Happy*"
- In the digital world, this technique won't work for the future, because of the complexity of information presentation, the physical fragileness of the media and the key role of an interpreter program.

Preservation selection criteria

- Rothenberg and Bikson (1999): *"In the digital case …, we must choose what to lose" "We can save physical artifact[s of an] … entity …; however, there is no equivalent option for a digital entity".*
- Preserve, what will be linked from future resources.
- Preserve, what ever could become important in the future.
- Do never preserve, what is recoverable from other preserved resources (redundancy in conservation of bit streams, not of content)

A View back from the Future

- What will future generations know about our today's way of life?
- No generation before us produced more media and documentation about itself.
- No generation before us produced it in a more complex context and on more fragile media.
- Will they be able to understand our very quick development and frequent changes?
- Example: When were *Tamagotchi* popular?

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  1997 - 2001

Where (and when) to start?

- Long term preservation is a process, which starts today, not tomorrow!
- Long term preservation is preparing information against getting lost with future transitions in technology.
- Long term preservation is not exclusively a job for archives, museums and libraries, but for all participants in the document value chain from the creator via the publisher, collector, library or archive onto a long term preservation system.

Projects and Implementations 1

- Preservation planning is a task for activities on national or international (regional) co-operating level.
- Projects and Development of standards and prototypical workflow implementation are subject for many projects around the globe.
- Two disjoint strategies:
  - Centralised strategy (one decisive institution)
  - Distributed strategy (network of co-operating stakeholder institutions, offering backup and fall-back services within the network and sharing the content fields).

Projects and Implementations 2

- Examples of running projects and implementations:
  - Australia: PANDORA (NLA & NAA)
  - The Netherlands: "Delta Plan" for printed matter since 1991, since 1997 inclusion of digital born matter stepwise (NPO), since 2000 "DNEP-i" (KB & IBM)
  - UK: Network of Libraries ("NDAD" National Archives)
  - USA: OCLC "PREMIS" + several local activities
  - Swiss
  - Germany: "nestor" (Network of Libraries, Archives, Museums, and Experts)
  - EU: "NEDLIB" (1998 – 2001), "erpanet" (2002 - …)

Aspects of Preservation Policies

- Should be comprehensive:
  - broad scope,
  - not limited to the technical aspects,
  - include organisational and human aspects,
  - legal aspects and rights management,
  - intellectual property issues,
  - access management,
  - embedded in broader policies (national, international, eGovernment, …),
  - include business model,
  - include training for all people involved (including creators),
  - implements an auditing strategy for quality management,
  - …

Conclusions 1

- Preservation planning of digital objects
  - Still needs a lot of attention
  - Little practice experience yet exists
  - Still on a theoretical level in most topics
  - First production implementations are required to prepare the next required steps on a realistic and reasonable basis

Conclusions 2

- Distributed repositories
  - Keep content with its experts
- World-wide co-operation on
  - Development of standards and quality levels
  - Exchange of experience
  - Agreement on exchange policies
  - Retrieval and access practice
- Therefore
  - Open formats
  - Active participation of all world regions in international committees

References

- Nestor project:
  - www.langzeitarchivierung.de
- PANDORA project:
  - pandora.nla.gov.au
- PREMIS project:
  - www.oclc.org/research/projects/pmwg/
- Jeff Rothenberg, Preserving Authentic Digital Information:
  - www.clir.org/pubs/reports/pub92/rothenberg.html
- Kyong-Ho Lee et.al., The State of the Art and Practice in Digital Preservation:
  - nvl.nist.gov/pub/nistpubs/jres/107/1/j71lee.pdf

Thank you for your attention!

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