

Digital preservation of AV-materials in a library context - Challenges, Strategies, Approaches -



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General thoughts about digital preservation

**“Digital objects last forever – or five years,
whichever comes first”**

(Jeff Rothenberg)

or

Students of thermodynamics will recognize these statements as re-phrasings
of the first three laws of thermodynamics as understood by generations of
undergraduates:

You can't win

You can't break even

You can't get out of the game

(Audiovisual Digital Preservation Status Report 2 2010)

or

Digital Preservation – new technology – new problems?



About us

Goportis

- pilot project of 3 German national subject libraries to evaluate institutional, organizational and technological needs in a digital preservation system
- one consortially operated system
- hosted a TIB



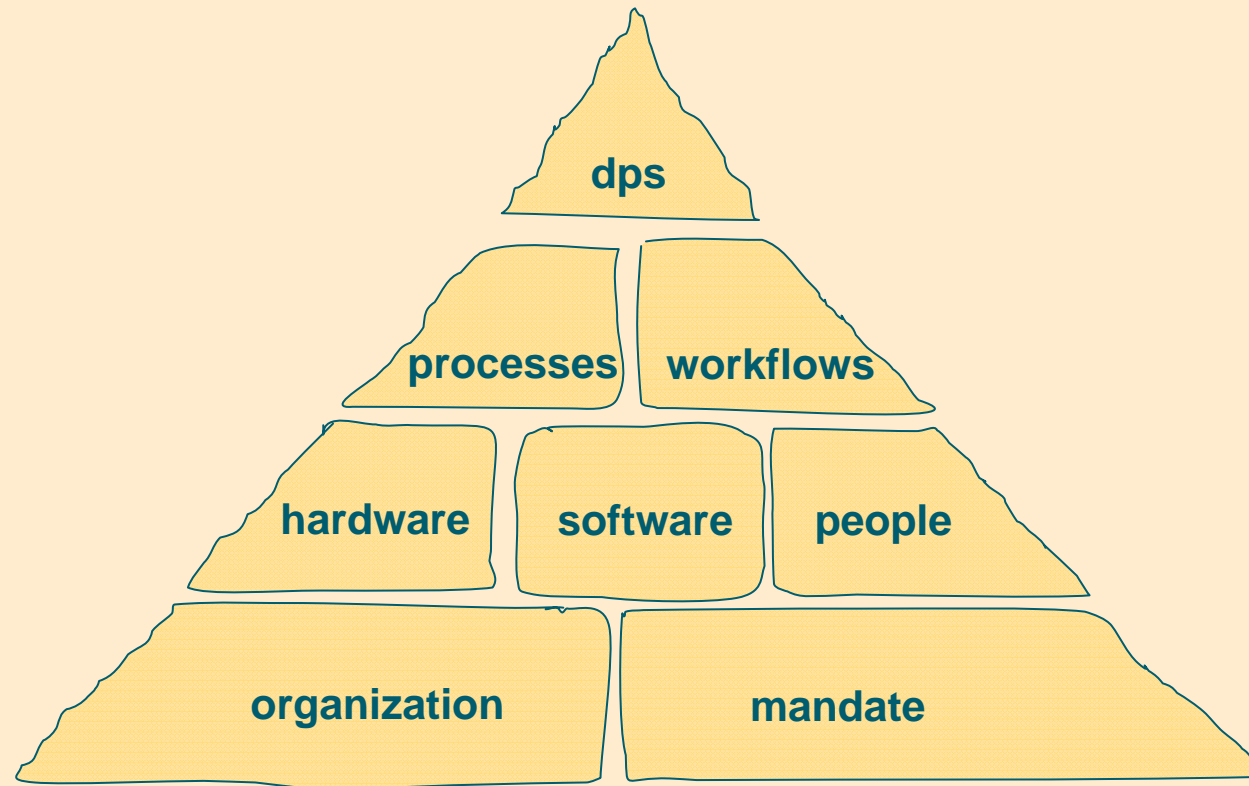
TIB

- 2006-2011 PROBADO
- 2011 establishment of a competence center for non-textual materials
- since 2013 DuraArk
- focus on non-textual materials in our vision and strategy

PROBADO |  3D



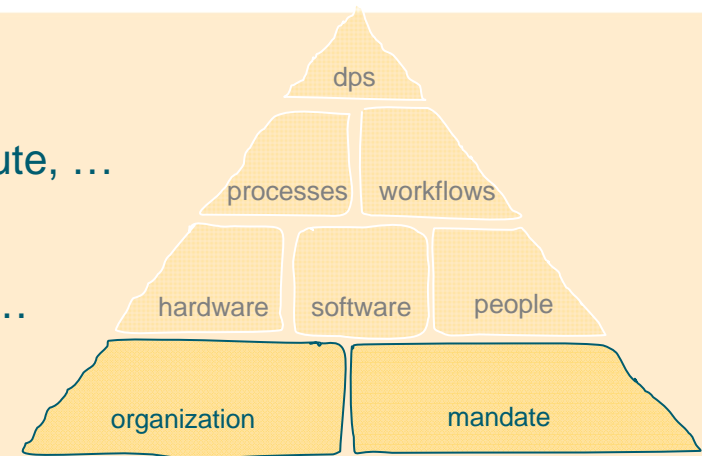
Digital preservation system (dps) build as a pyramid



The basement

Organization

- type: library, archive, research institute, ...
- level: national, state, university, ...
- size: holdings, staff, budget, users, ...
- **defines your (national) position!**



Mandate

- given by: act / law, superordinate organization / institution, self-given, ...
- for content: (sub) collection level, type of content, ...
- including action: collecting, archiving, making available, ...
- **defines your (national) role!**



The 1st level

Hardware / Infrastructure

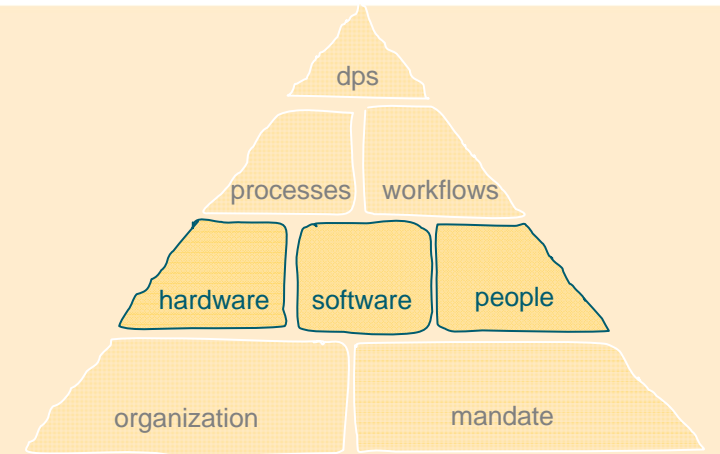
- central or decentralized?
- open infrastructure?
- scalability and reliability

Software

- system or service?
- custom-built or off-the peg
- commercial or open source?

People

- size and structure
- qualifications / knowhow
- outsourcing possible?



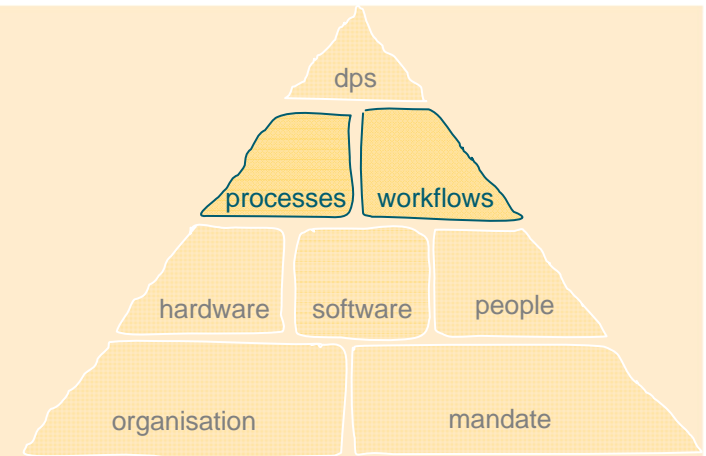
The 2nd level

Processes

- specific tasks within your institution related to preservation
- organizational process
- technological process
- can involve humans and/or systems
- community building

Workflows

- combination of tasks/processes to form a meaningful chain
- can involve humans and/or systems
- find a good balance between traditional and digital workflows

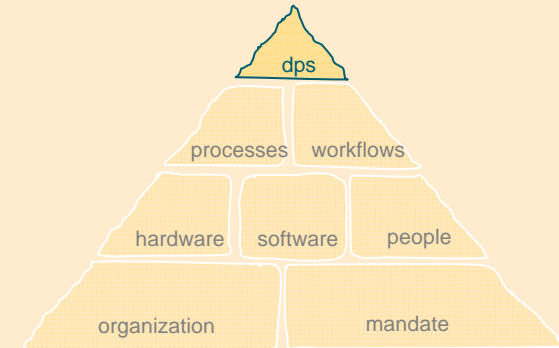
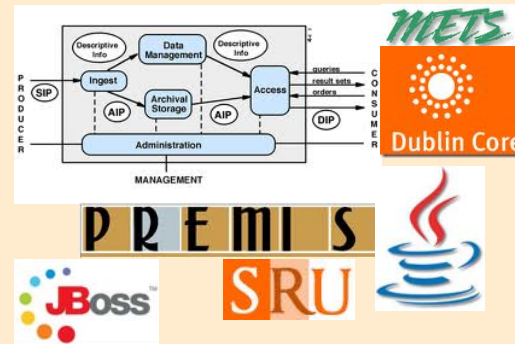


The pyramid top

Requirements



International Standards



Material



Digital Preservation System Integration



Challenges of audiovisual files for digital preservation I

Digitization

- Save the originals
- Digitize at full quality
- Save exactly as digitized = uncompressed
 - or lossless (JPEG2000)
 - or high quality lossy (but only for low quality originals)
- Use an professional wrapper (e.g. MXF)

Complexity

- Range of file format and wrapping many elements
- Many types and qualities of encoding
- Multiple versions have to be managed
- DRM



Challenges of audiovisual files for digital preservation II

Signal

- av content represents a analogue signal
- signal-to-noise ratio

Compression

- audiovisual signals contain redundancy
- people have pumped high-bandwidth signals through low-bandwidth channels

Size

- storage, systems, networks and applications are stressed by large files
- 1 hour sd video at full quality (uncompressed) is about 100 GB



Challenges of audiovisual files for digital preservation III

Time

- Metadata and applications need to understand the time dimension

Resilience

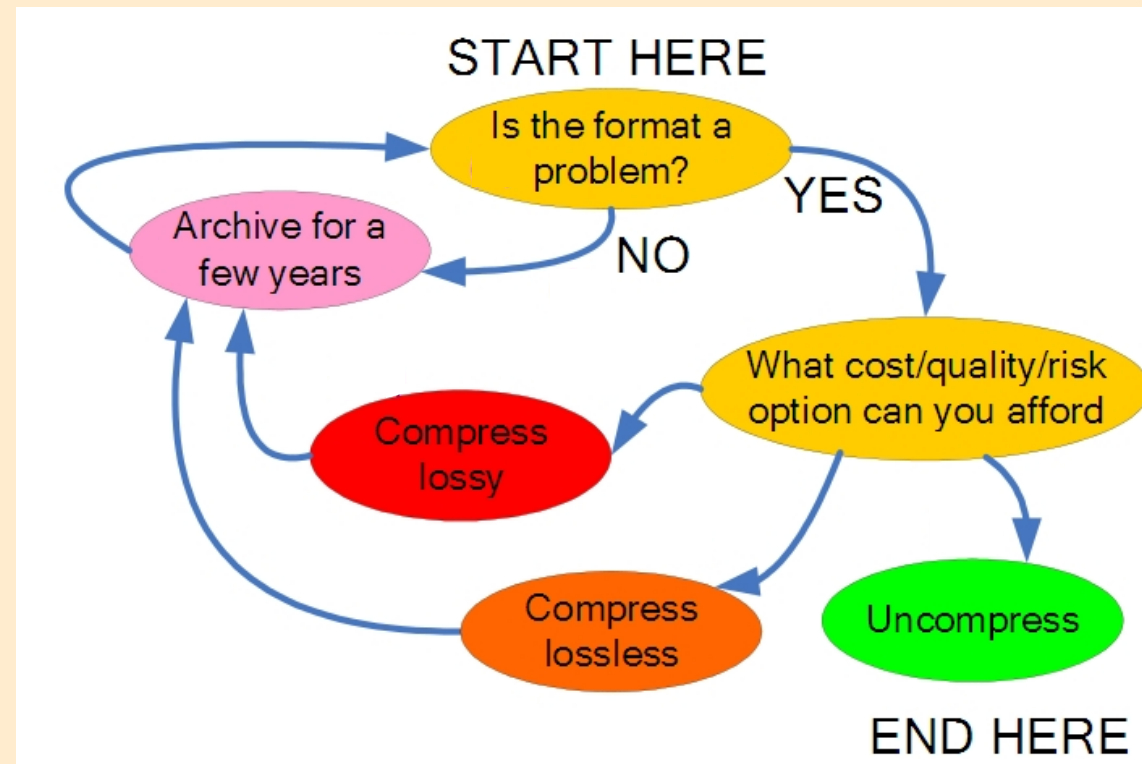
- video is highly structured (into lines and frames)
- potential for playback despite errors

Access

- Granularity
- Click and play
- Citation
- Annotation



Ways to go – workflow for decisions about formats



www.prestoprime.org/docs/training/Vienna-Outcomes.pdf



Your (av material) cruise ship is listing – what's to do?

- keeping the passengers happy
→ business priorities
- getting a new engine
→ format obsolescence
- keeping the hull watertight
→ bitstream preservation
- getting new passengers and going to new ports
→ new business opportunities



Thank you for your attention!

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