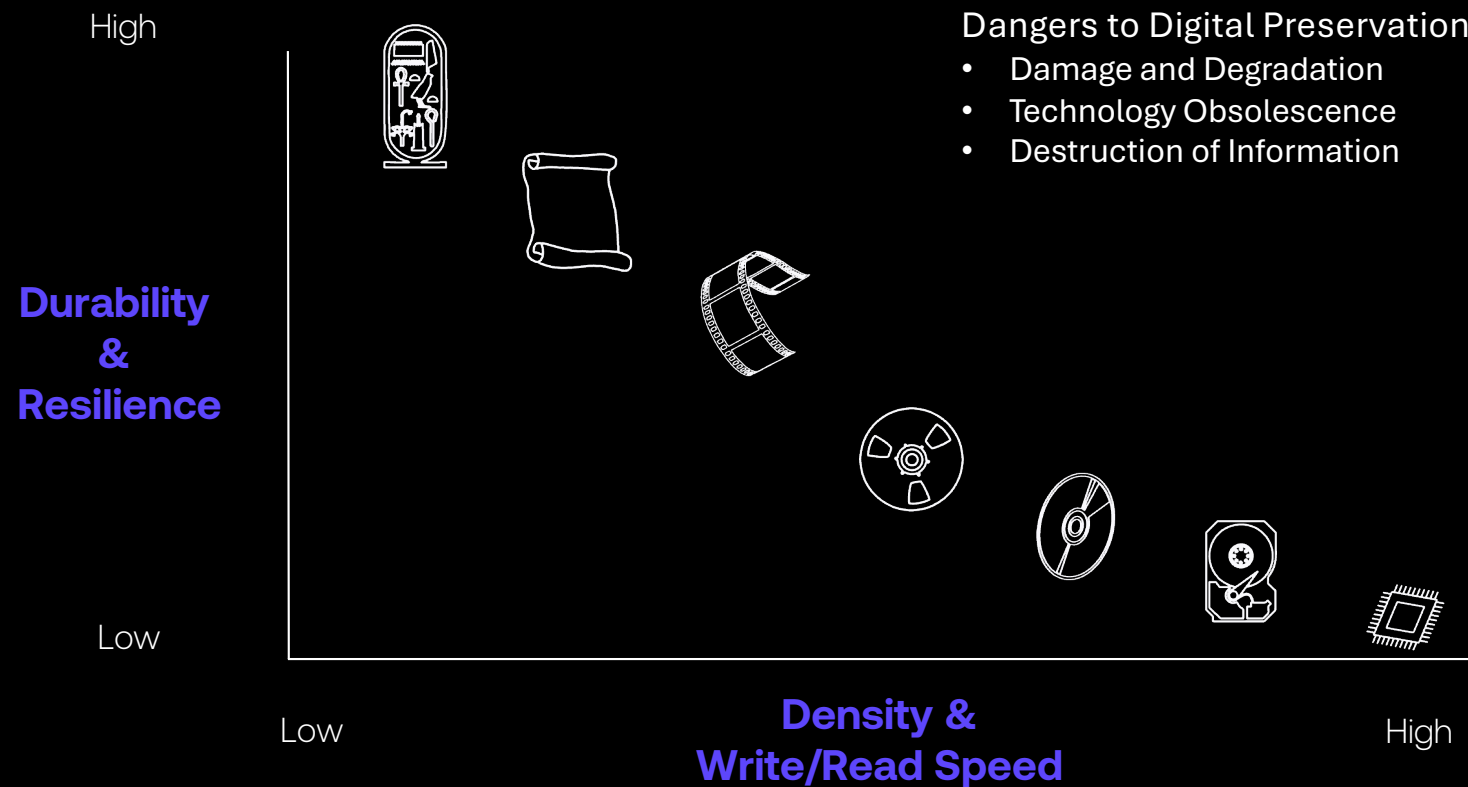


Toward an ISO Standard for an Open Long-Term Storage Framework

Digital Preservation and Digital Data Storage



Dangers to Digital Preservation(*):

- Damage and Degradation
- Technology Obsolescence
- Destruction of Information

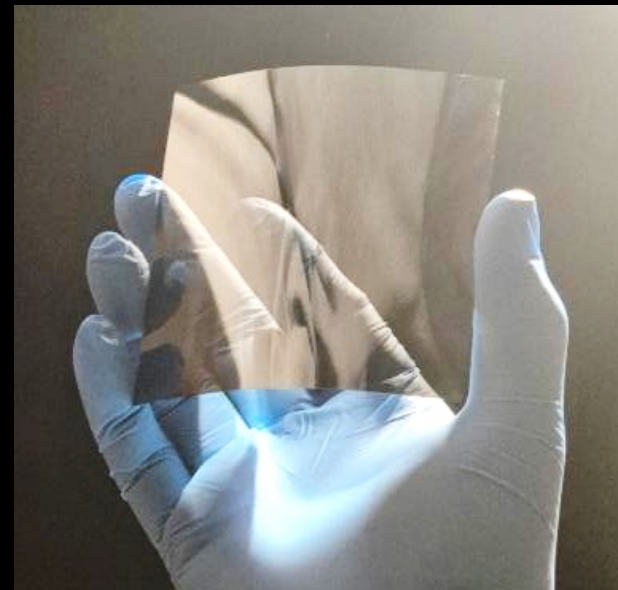
(*). Communicating with the Future, IEEE Computer Magazine, September 2025, <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=11134674>

Century to Millenia-Scale Data Storage is Emerging

Organic Data Storage



Inorganic Data Storage



How to harness long-term media for Digital Preservation?

What does a future IT professional need to know to be able to independently access the information on today's long-term media?



Long-term Access, Storage and Technology

LAST Working Group

LAST Workgroup – Draft Mission statement

- The LAST working group aims to collaboratively establish a resilient, interoperable, and layered architectural framework for the long-term preservation of digital information.
- The framework will ensure that data remains recoverable, readable, and meaningful over millennial timeframes (1,000+ years) regardless of institutional, technological, or geopolitical changes.
- Through multi-disciplinary, cross-organizational collaboration, this Working Group will bring experts and stakeholders, from the storage, preservation and IT ecosystems together to engage in conversation and ultimately the development of the framework.

Preparing a matrix of what standards are needed

Context:

- There are many unknown number of unknown unknowns
- Prior work is/has been done in many areas & aspects already
- We don't want to re-invent the wheel, leverage where possible

Goal(s):

- Develop matrix outlining current work across all levels of preservation
- Identify stakeholders/subject experts across preservation ecosystem
- Identify best practices and best approaches, this is an ongoing effort

Current Matrix - <https://bit.ly/47GZUFz>

Github Wiki - <https://github.com/alblck/LAST-Discussion-Working-Group/wiki>

Past and Ongoing Activities and Outlook

LAST Status

- ~20 members/companies from Data Storage & Digital Preservation
- Monthly meetings and discussions via Zoom sessions
- Ongoing explorative work on open source codecs

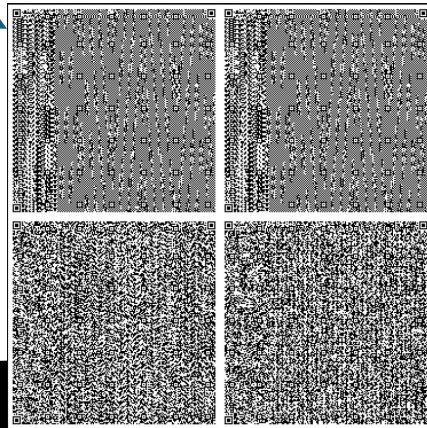
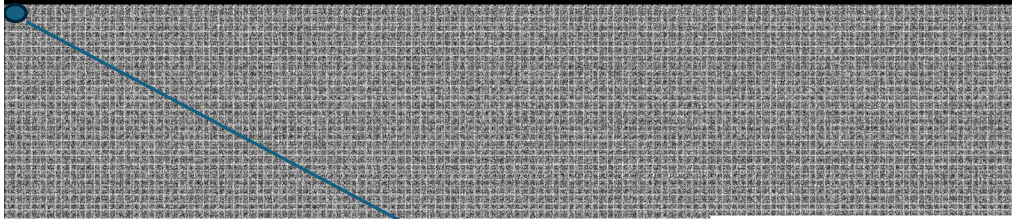
Eco System Engagement:

- SDC 2025 Birds of a Feather Session (Data Storage)
- iPRES 2025 Birds of a Feather Session (Digital Preservation)
- Upcoming 3-day F2F workshop targeted for Spring 2027

Call to Action:

- Sign up for the mailing list (last-discussion@googlegroups.com)
- Join the monthly Zoom meetings and contribute to the discussions
- Participate and help shape the Long-term Storage Framework!

Explorative Work on Open Source Codecs optimized for Longevity



QR Code (v40)
File -> QR -> File



QR Code set to 2560K data
16:4 Erasure code
https://www.github.com/13watts/QR_Code_FS