

Designing Storage Architectures for Digital Collections 2019

Suggested Background Reading

In conjunction with the 2019 DSA meeting at the Library of Congress, here are a few suggested background readings provided by attendees. Please note, these items are not intended as exhaustive or prescriptive; they are merely intended to provide useful context related to the meeting topics.

General

Library of Congress Designing Storage Architecture Meetings: 2007-2018

www.digitalpreservation.gov/meetings/

Datanami.com: The State of Storage, Cloud, IOT and Data Center Trends

<https://www.datanami.com/2019/07/16/the-state-of-storage-cloud-iot-and-data-center-trends/>

Digital Vault Market Size 2018, Opportunity Assessment, Historical Analysis, Future Scope, Business Insights and Regional Forecast 2023

The Verge: Amazon Will Launch Thousands of Satellites to Provide Internet Around the World

<https://www.theverge.com/2019/4/4/18295310/amazon-project-kuiper-satellite-internet-low-earth-orbit-facebook-spacex-starlink>

TwinCities.com: Broadband on the Go – Verizon Turns on Speedy 5G in Parts of St. Paul

<https://www.cnet.com/news/verizon-vs-at-t-vs-t-mobile-vs-sprint-5g-we-compare-their-peak-speeds/>

Blockchain

MIT Center for Information Systems Research: Are You Willing to Deal with the Implications of Blockchain?

<http://cisr.mit.edu/research/research-overview/blockchain/blockchain-checklist/>

ITProToday: Blockchain Use Case: Will All Storage Eventually Be Based on Blockchain?

<https://www.itprotoday.com/blockchain/blockchain-use-case-will-all-storage-eventually-be-based-blockchain>

Storage Technologies and Media

Atlas Obscura: The Strange History of Microfilm Which Will be With Us for Centuries

<https://www.atlasobscura.com/articles/the-strange-history-of-microfilm-which-will-be-with-us-for-centuries>

DOTS and Cybersecurity

<https://vimeo.com/group47/dots-immune-from-cyber-attack>

<https://vimeo.com/335180904>

DOTS – Bit Plane Image preservation

<https://vimeo.com/group47/motion-picture-preservation-with-dots>

<https://vimeo.com/247826314>

Principles of Information Storage in Small-Molecule Mixtures

<https://arxiv.org/abs/1905.02187>

DNA Punch Cards: Encoding Data on Native DNA Sequences via Nicking

<https://www.biorxiv.org/content/10.1101/672394v5>

Encoding Information in Synthetic Metabolomes

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0217364>

Storage of Information Using Small Organic Molecules

<https://gmwgroup.harvard.edu/files/gmwgroup/files/1319.pdf>

New Hard Drive Technology Development: 3D-Acuated Vacuum Drive

<https://blog.dshr.org/2019/09/promising-new-hard-disk-technology.html>

Use Cases

Pacific Standard: A Generation of Hip-Hop Music Was Given Away for Free. Can It Be Archived?

<https://psmag.com/social-justice/a-generation-of-hip-hop-was-given-away-for-free-can-it-be-archived>

BBC: MySpace Admits to Losing 12 Years' Worth of Music Uploads

<https://www.bbc.com/news/technology-47610936>

Brandeis University: AI Meets Public Broadcasting's Archives

<https://www.brandeis.edu/now/2019/march/wgbh-archives-ai.html>

Software Preservation Network (Emulation as a Service Infrastructure)

<https://www.softwarepreservationnetwork.org/eaasi/>

MovieLabs: The Evolution of Media Creation

<https://movielabs.com/news/movielabs-and-hollywood-studios-publish-white-paper-envisioning-the-future-of-media-creation-in-2030/>

Storage Organization and Integrity (Standards and Practices)

ISO/IEC Standard 27040: Information technology — Security techniques — Storage security

<https://www.iso.org/standard/44404.html>

ISO Standard 16363: Space Data and Information Transfer Systems -- Audit and Certification of Trustworthy Digital Repositories

<https://www.iso.org/standard/56510.html>

ISO 14721: Space Data and Information Transfer Systems – Open Archival Information System (OAIS)

<https://www.iso.org/standard/57284.html>

Digital Curation Centre: Digital Curation Standards

<http://www.dcc.ac.uk/resources/standards>

Digital Preservation Coalition: Digital Preservation Handbook

<https://www.dpconline.org/handbook>

FADGI (Federal Agencies Digital Guidelines Initiative)

<http://www.digitizationguidelines.gov/>

**iPRES Meeting 2018 Session on Storage Organization and Integrity:
Checksums on Modern Filesystems, or On the Virtuous Consumption of CPU Cycles
The Oxford Common File Layout**

<https://osf.io/f86gt/>

NASA Earth Science Data: Standards and References

<https://earthdata.nasa.gov/esdis/eso/standards-and-references>

NDSA (National Digital Stewardship Alliance) Levels of Digital Preservation

<https://ndsa.org//activities/levels-of-digital-preservation/>

University of Minnesota Libraries: Checksums

<https://www.lib.umn.edu/dp/checksums>