Designing Storage Architectures for Digital Collections 2018

Suggested Background Reading

In preparation for the 2018 DSA meeting at the Library of Congress, here are a few recommended background readings. Please note, these items are not intended as exhaustive or prescriptive; they are merely intended to provide useful context related to the meeting topics

Why Do We Save Stuff?

NY Times: "What can odd interesting medical case studies teach us?"
www.nytimes.com/2018/07/17/magazine/what-can-odd-interesting-medical-case-studies-teach-us.html

Vint Cerf: "The Prospect of a Digital Dark Age"
www.cbsnews.com/video/vint-cerf-on-the-prospect-of-a-digital-dark-age/

Digital Preservation – General

Library of Congress Designing Storage Architecture Meetings: 2007-2017
www.digitalpreservation.gov/meetings/

Library of Congress: "National Recording Preservation Plan"
www.loc.gov/programs/national-recording-preservation-plan/about-this-program/

International Federation of Library Associations: "Making Digital Durable: IFLA Celebrates First International Digital Preservation Day"
www.ifla.org/node/18583

OAIS Reference Model (ISO 14721): "The fundamental standard for digital preservation"
www.oais.info/

Library of Congress Blog: "What do you mean by archive?"
blogs.loc.gov/thesignal/2014/02/what-do-you-mean-by-archive-genres-of-usage-for-digital-preservers/

ScienceFriday Series: "File Not Found"
www.sciencefriday.com
- Ghosts in the Reels – Part 1
- The Librarians Saving the Internet – Part 2
- Data Reawakening – Part 3

LOCKSS Program: "Keeping Bits Safe: How Hard Can It Be?"
lockss.org/locksswiki/files/ACM2010.pdf

Digital Preservation Coalition: "Digital Preservation Handbook"
www.dpconline.org/handbook/organisational-activities/storage

National Digital Stewardship Alliance: "Fixity Survey Report"
ndsa.org/documents/Report_2017NDSAFixitySurvery.pdf

Digital Preservation Storage Criteria
osf.io/sjc6u/

Digital Media

Robert Fontana and Gary Decad: "Moore's law realities for recording systems and memory storage components: HDD, tape, NAND, and optical"
aip.scitation.org/doi/full/10.1063/1.5007621

DSHR's Blog: "Optical media durability"
blog.dshr.org/2018/08/optical-media-durability.html

DSHR's Blog: "Flash vs Disk – Again"
blog.dshr.org/2018/03/flash-vs-disk-again.html

IARPA: Molecular Information Storage (MIST) Research Program
www.iarpa.gov/index.php/research-programs/mist

Wired: "The Rise of DNA Data Storage"
www.wired.com/story/the-rise-of-dna-data-storage/

Luis Ceze and Karin Strauss: "Storing Data in DNA Brings Nature into the Digital Universe"
https://www.scientificamerican.com/article/storing-data-in-dna-brings-nature-into-the-digital-universe/

Group 47, Inc.: "Future Proof Archiving of Motion Pictures with DOTS"
vimeo.com/group47/motion-picture-preservation-with-dots

Bernard Marr: "What is Quantum computing?"
www.forbes.com/sites/bernardmarr/2017/07/04/what-is-quantum-computing-a-super-easy-explanation-for-anyone/#689e50081d3b

Michael Nielsen: "Quantum Computing for Everyone"
michaelnielsen.org/blog/quantum-computing-for-everyone/

US National Institute of Standards and Technology: "Report on Post-Quantum Cryptography"
https://csrc.nist.gov/publications/detail/nistir/8105/final

Decentralized, Distributed and Peer-to-Peer Storage

DSHR's Blog: "The Four Most Expensive Words in the English Language"
blog.dshr.org/2018/06/the-four-most-expensive-words-in.html

DSHR's Blog: "Why Decentralize?"
blog.dshr.org/2017/12/why-decentralize.html

DSHR's Blog: "Is decentralized storage sustainable?"
blog.dshr.org/2017/07/is-decentralized-storage-sustainable.html

Vitalik Buterin: "The meaning of decentralization"
medium.com/@VitalikButerin/the-meaning-of-decentralization-a0c92b76a274

LOCKSS Program: Tutorial from IEEE Mass Storage Systems & Technologies Workshop 2018
storageconference.us/2018/Presentations/LOCKSS-tutorial-1.pdf