

Digital Preservation in Libraries: Preparing for a Sustainable Future. By Jeremy Mynetti and Jessalyn Zoom. Chicago: ALA Editions, 2019. 392 pp. Softcover. \$84.99.

With the advent of digital technologies, long-term preservation of library holdings has challenged information professionals for the better part of three decades, if not longer. Much has been written on the topic of digital preservation, and this book reflects the perspectives of libraries, archives, and museums (LAMs). While not specifically a “how-to” manual on digital preservation, those seeking a useful overview will find a balanced selection of writings exploring the topic as practiced primarily in the United States, other English-speaking countries, and Europe since the 1990s. Organized into six sections containing a total of 18 chapters, the writings naturally build upon each other in discussing key developments in best practices, workflows, and institutional programs.

The first section, “History and Theories: What Is Digital Preservation?,” reveals the complexity facing LAM professionals when attempting to apply digital preservation standards to unique situations. The first chapter, “A Brief History of Digital Preservation,” covers major milestones and concepts in the development of digital preservation, such as data migration, fixity, authenticity, the Open Archival Information System (OAIS) reference model ISO standard, the Trusted Digital Repositories/Audit and Certification (TRAC) Research Libraries Group-OCLC standard, and preservation metadata standards, along with collaborative preservation projects such as the Digital Preservation Network, International Research on Permanent Authentic Records in Electronic Systems (InterPARES), Electronic Resource Preservation and Access Network (ERPANET), and the National Digital Stewardship Alliance (NDSA). Fairly comprehensive, this history includes mention of online web archiving and preservation initiatives such as the Internet Archive and the Digital Millennium Copyright Act.

Readers overwhelmed by the litany of historical and theoretical foundations of digital preservation detailed in section 1 may find some solace in section 2, “Frameworks, Strategies, and Systems,” which provides policy and strategy frameworks for approaching the task at hand. Christine Madsen and Megan Hurst’s chapter, “Digital Preservation Policy and Strategy: Where Do I Start?,” wisely breaks down the goals and players involved in planning a preservation operation. Rosy Jan’s “Sustaining the Digital Investment” introduces and expands upon concepts regarding migration, emulation, and encapsulation, delving into their codependencies with provenance and context. Jan’s deemphasis of digital archaeology, or the preservation of obsolete software/hardware and data recovery, as a preservation strategy could be seen as a shortcoming considering that many archivists face a glut of obsolete media and formats in need of data recovery. Then again, it can also be argued that preventative approaches provide the best cost-benefit for preservation outcomes.

Still, most LAM professionals involved in digital preservation will find much of use throughout this volume. Somaya Lanley’s chapter, “Digital Preservation Should Be More Holistic,” offers a wealth of resources on born-digital workflows by introducing digital stewardship models that address pre-ingest stages and the importance of

the early phase of the record's life cycle. Although section 3, "Digital Preservation in Individual Institutions," contains only two specific cases, the volume as a whole contains many references to specific practices from different institutions. Lanley, for example, shares some impressive workflows coming out of the University of Cambridge that break down the (14!) "stages" typically followed by digital archivists. Other examples of preservation plans and strategies abound, and later sections examine a handful of repository cooperatives for institutions lacking infrastructure and/or funding. Heavy with references to LOCKSS (Lots of Copies Keep Stuff Safe), the reader will also find suggestions for well-known and possibly not-so-well-known proprietary systems and academic/local consortia. The book ends on the thorny issues specific to copyright of digital and publicly accessible objects at LAM institutions.

The volume is not without its shortcomings. Digital forensics tools, for instance, are largely overlooked. Chapter 12, a 2016 case study at the Library of Congress involving the transfer of oral histories from a mobile phone, provides a glimpse into the problems associated with appraising and acquiring data taken from devices, but this case offers only a cursory mention of preservation applications for imaging and extraction tools such as Forensic Toolkit and Guymager or data package transfer tools such as write-blockers and Bagger. Readers seeking details specific to digital forensics in this book will find them lacking. Furthermore, while the book delves into the myriad aspects of the development and application of digital preservation in libraries, the topic of its subtitle, "Preparing for a Sustainable Future," is slightly neglected. Merriam-Webster online defines "sustainable" as "of, relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged."¹ Obviously, library preservation aims for long-term sustainability, but what are the metrics for determining the sustainability of library workflows, models, software applications, best practices, and standards? Such metrics are not discussed.

In the corporate sector, where "sustainable" often implies the long-term management, storage, and energy requirements needed to maintain the current level or rate of growth, the concept of "degrowth" now pervades discourse in the context of future energy demands.² Relatedly, the "scalability" of digital preservation in LAMs has become a major question, considering the implications of exponential growth of digital content. Camilla Tubbs and Angela Fang Wang's "Defining Your Strategy for Digitizing Materials" touches on this subject in their digitization case study at the University of California Hastings Law Library, stressing that collection development policies must also apply to digital content. However, more attention could have been given throughout the volume to how forecasting can help predict and plan for long-term energy and data storage demands to round out discussions of what a truly sustainable future for LAMs looks like.

As an ALA publication, this work serves as an authoritative reference represented by a variety of authors and provides an accurate overview of the general digital preservation landscape in libraries. Those with a background in digital archives may not find new information, but the plethora of topics offers good jumping-off points for further investigation. As the editors write in the introduction, the field of digital preservation is

fast changing and some of this information may become quickly outdated; still, learning about past technologies helps inform the present. But, given the rapid rate of technological change, with digital preservation, it's the sooner done the better.

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NOTES

1. [Merriam-Webster.com](https://www.merriam-webster.com/dictionary/sustainable) Dictionary, s.v. “sustainable,” <https://www.merriam-webster.com/dictionary/sustainable>.
2. Is anything sustainable when faced with the reports from the Intergovernmental Panel on Climate Change (IPCC), United Nations, which warns of environmental tipping points due to human-generated emissions of greenhouse gases? The 2022 IPCC reported that “Digital technologies can contribute to mitigation of climate change” by increasing energy efficiency, adopting low-emission technologies, and decentralized renewable energy, but may also increase energy use by increasing demand due to the use of digital devices. Policymakers of the IPCC Working Group II report, *Climate Change 2022: Mitigation of Climate Change*, approved Sunday, February 27, 2022, B.4.3 {5.3, 10, 12.6, 16.2, Cross-Chapter Box 11 in Chapter 16, TS.5, Box TS.14}, https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SPM.pdf.