

digital repositories (theory) and how are trustworthy digital repositories implemented (practice). The authors for both theory and practice in each chapter are experts in their fields.

The book is comprehensive, with content structured on the functions of creating a trustworthy repository – establishing policies and management structures, pre-ingest and ingest, capturing and creating metadata, capturing audit trail data, managing retention and disposal, managing access, security and preservation strategy. Each chapter consists of both a theory section and several implementation projects. The context, strategies, challenges, results and outcomes, what worked and what didn't, and lessons learned for each project, are described in each chapter. The implementation projects are from the USA, Europe, Canada and Australia. The last chapter is a discourse on the current status and future directions of trustworthy digital repositories.

Overall, the book meets the editor's aim of describing the functions of a trusted digital repository and providing projects that were implemented to solve specific problems for these functions. There is a great deal of information to absorb and analyse, but as an information manager, digital archiving practitioner and project manager, this reviewer was disappointed that there was not more that could be taken away and practically applied to a digital archiving implementation project. Although the projects described in each chapter are implemented to solve specific problems for the identified function, the legal framework, country, organisation sector (education, private, government, not-for-profit, library or archive) and culture limit how the approach taken and the learning can be applied. Therefore the book is neither a handbook nor a guide, but more a starting point for practitioners to consider how they might approach each trusted digital repository function and how applicable the projects, challenges and lessons are to the environment and the problem that the practitioner is trying to solve.

As a textbook, however, for instructors and students in information and information technology disciplines, the book is outstanding. The matching of theory and practice provides an experience for students that cannot be achieved outside of the work environment. The implementation projects show how theory is applied to each problem and the gap between the theoretical models and what is implemented.

The book would have benefited by additional chapters addressing organisational strategic and change management strategies, issues and challenges, as implementation of any aspect of a trusted digital repository does not occur in isolation of the legal, strategic and cultural environment. In addition, a chapter on the trusted digital repository, its alignment to the OAIS model, and implementation projects of an end-to-end solution would have been useful. Such a chapter could have demonstrated the relationships and dependencies between the model's entities and functions and the practicalities and challenges in implementing an end-to-end solution.

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Data Management for Researchers: Organize, Maintain and Share Your Data for Research Success, Kristen Briney, Exeter, Pelagic Publishing, 2015, 191 pp., GBP£24.99 (paperback), ISBN 978 1 784270 11 7. Also available in hardback and electronic formats (ePub, Mobi, pdf).

Kristen Briney provides a useful guidebook, although the title may mislead those looking for a broad-ranging view of data management. The book addresses data management relatively

narrowly and targets a fairly specific kind of researcher – those the author encounters in her work as a research scientist turned librarian, specialising in advising scientists on data management. Thus the title refers primarily to researchers in physical sciences gathering data in laboratories, to digital data and to meeting the increasingly common requirement in academia for data management plans to be submitted with applications to research funding bodies.

Writing from her experience guiding academics encountering the limitations of disconnected data systems and the bureaucratic mechanisms attempting to overcome this, Briney paints a rather dismal picture of university data environments, where isolated researchers must work everything out for themselves and their data lies unorganised and unprotected. Briney's bottom line – 'If you get nothing else from this book, know that your data should be well backed up' (p. 122) – is sound, but frightening in what it implies about academic data management systems. That aside, the book delivers on its aim to help these researchers overcome data management obstacles, and goes beyond it to encourage in them a greater appreciation for data management.

Briney introduces a data life cycle model early and uses it to structure the book. Her model extends the 'plan-gather-analyse-publish' life cycle familiar to researchers to include stages of preservation, reuse and security, and connects the end of the life cycle back to its beginning. This gives the book a strong framework, which helps it avoid being just a list of tips. Briney's writing is clear and understandable and the book is full of practical advice. She does not just suggest using standard naming conventions for files, but explains the difference between CamelCase and `pothole_case` and gives a selection of file naming schemes. On data standards she says, 'If you adopt no other standard, I recommend you adopt ISO 8601'. Hear! Hear! to that.

Briney acknowledges 'most types of research documentation fit under the broad definition of metadata' (p. 56), but restricts discussion of metadata to highly structured digital documentation. This is another practical approach tailored to her audience. That is, while not disturbing the status quo process familiar to scientists of taking research notes in lab notebooks, Briney adds something important to it. She promotes the benefits of documenting and sharing your data, and usefully explains that sharing can mean sharing with your future self. However, the constrained view of metadata may leave users only partially equipped for issues faced in the broader metadata world.

Similarly, while the structure works well to organise the information, the overall learning is somewhat restricted. While each chapter addresses standalone issues, together these do not build to an overall recommended approach. Possibly Briney has brought a series of library cheat sheets into a polished format, but not fully synthesised them.

Some content appears to just fill a slot in the framework and the minimal illustrations also seem to just fill space, for example the screen capture of the Git user interface in chapter 6 is too small to be legible and adds nothing to the explanation. At the same time, the three-page description of the Git code repository code is both too long to be an overview and too short to help people use it. This is one of several places where I found content was at an awkward level of detail.

This book outlines requirements of institutions in the USA, where the author works, and the UK, where the book was published. There are some mentions of Australian data management, but these are incomplete or superficial. For example, ICPSR and UK data archives are mentioned but not the Australian Data Archive. On privacy, Briney refers to 'the [Australian] Privacy Amendment' but not the main legislation, the Privacy Act, which it amends. On standards, her suggestion to use SI units just seems quaint to an Australian reader.

So, while the book helps solve specific, local problems, it does not look outwards to draw on longstanding industry experience in data management, or upwards to articulate the general principles that underpin the advice given. For example, there is no mention of data governance, data warehousing, master data management, controlled vocabularies and ontologies, data architecture and data modelling.

Despite these small weaknesses, there's a lot to like. The book is well organised, relentlessly practical, and addresses many of the needs of its intended audience. It won't make you a data management professional, but if you are a research scientist, you might learn enough to get out of a hole and you might start managing your data better. It is data management for researchers who really care about other subjects but have to jump through some administrative hoops. Along the way, Briney aspires to help her audience care a little more.

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Practical Ontologies for Information Professionals, David Stuart, London, Facet, 2016, viii + 184 pp., GBP£59.95 (paperback), ISBN 978 1 783300 62 4.

Stuart's *Practical Ontologies for Information Professionals* is a timely work; a point the author agrees with when stating that the book comes at 'a pivotal point in the history of ontologies' (p. 21). Introducing the now-familiar background of a scenario of information overload, the author suggests that an understanding, and appropriate application of, semantic ontology is a way to address the collapse in meaning that is threatened by this situation. The audience for this practical primer is a broad-sounding 'information professionals', which appear on further investigation to be limited by the author to library and cultural heritage institutions. The rationale behind this limitation is not clear to this reviewer since the benefits outlined in the text are as applicable to the work of government archivists and records managers as to those involved more explicitly in cultural heritage organisations or libraries. It is an odd note in a work that is effectively advocating crossing the streams of the information profession(s) – but it does not significantly detract from its effectiveness.

The first two chapters are largely concerned with defining some of the – admittedly complex and often unfamiliar – terms involved. Unlike some other attempts, this section also includes some discussion about the reasons why an information professional might want to understand this complexity, establishing an idea that time investment has a return for the reader. This is of great benefit, but might have come before some of the definitions in order to avoid readers succumbing to existential dread while expanding their professional vocabulary. The definitions are solid though and are recommended for anyone trying to come to grips with the simultaneously new and old ideas involved in non-philosophic ontology. The third chapter discusses some of the more prevalent extant ontologies and puts them in some context. At this point the lack of glossary of the terms used, especially for the *many* acronyms involved, is a striking omission. Although these terms become rapidly familiar for a practitioner, it is fairly intimidating for the intended audience and newcomers may need to make recourse to a search engine if intuition fails.

Chapters four and five cover the adoption and building of ontologies and were the chapters most eagerly read by the reviewer. The chapter on adoption is a good mix of theoretical and pragmatic and is well supplied with clear diagrams to assist in interpretation. The chapter on building ontologies is also solid, but neglects a discussion of alternative methods which had been a pleasant surprise in preceding chapters. The absence of much mention of competency question-driven ontology authoring techniques was unexpected, but it is possible that this approach has not become popular in Stuart's information professional circles because there is less of a need