

you sit down and read cover to cover; however, it will become a great reference to pull out every time you come across an unfamiliar recording format lurking in your collection.

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Building Trust in Information: Perspectives on the Frontiers of Provenance,

Springer Proceedings in Business and Economics, edited by VL Lemieux, Springer International Publishing, Cham, 2016, v + 163 pp., US\$89.99 (hardcover), US\$69.99 (EPUB), ISBN 978 3 319402 25 3 (hardcover), ISBN 978 3 319402 26 0 (EPUB)

Building Trust in Information is a collection of multidisciplinary papers originally presented at an international workshop held in 2015 to explore the conceptualisation and application of provenance in digital ecosystems. While the book is 'foundational' in its treatment of provenance, it is not a text on provenance fundamentals. Nor does it seek to be a definitive representation of disciplinary views on provenance. The book's aims are to (1) unpack and explore different professional conceptualisations of provenance; (2) synthesise those ideas; and (3) enrich our understanding of provenance to advance new research in this area. The first two aims are broadly achieved in the first chapter authored by Victoria L Lemieux, and the imProvenance Group. Nine of the fifteen workshop participants present their disciplinary perspectives on 'provenance' in the rest of the book and, in varying degrees, contribute to the first and third aims.

Published in digital and hardcopy versions, the book is divided into five parts: (1) Synthesis; (2) Archival Perspectives; (3) Library and Information Science Perspectives; (4) Computer Science Perspectives; and (5) Cognitive Science Perspectives Through the Lens of Visual Analytics. Bibliographies and/or references are included in each chapter. The book is not indexed.

Part I is a lengthy and informative discussion of the key points raised in the rest of the book. It provides an extensive and diverse set of examples (use cases) where the application of provenance is challenged by technology, process and stakeholder expectations. It recognises that while different disciplinary views on provenance co-exist and can be challenging, they can also offer opportunities for all professions to better understand, manage and use provenance-related data. Very little guidance is given on how this can be achieved through research and practice.

Part II explores the history and application of provenance in archival science. In the first chapter Adrian Cunningham discusses the development of the Australian Series System in response to the challenge of multiple provenances and how the system has evolved and influenced archival theory, standards and practice in the digital environment. Giovanni Michetti examines the definition and conceptualisation of provenance and discusses provenance in the context of current research, how it influences different archival functions and identifies technology-enabled opportunities for enriching archival approaches to provenance. The archival perspective closes with Kenneth Thibodeau's argument that conceptual 'narrowness and vagueness' (p. 70) have generated disagreement and confusion about the archival application of provenance and original order. He suggests that by modifying concepts, methods and tools from other disciplines, archivists can enhance the management and preservation of records in the digital environment.

Part III covers the library and information science perspectives of provenance. Lucie C Burgess explains the wide definition of provenance in libraries and its use for understanding

and managing many aspects of information, including information quality, discovery and security. Joseph T Tennis examines conceptual provenance in indexing languages, noting changes in context (temporal or other) can also change a concept's meaning and relationships. The history of a concept, therefore, needs to be traceable and transparent.

The computer science perspective is presented in Part IV. It begins with Bertram Ludäscher's overview of the meaning and application of provenance in scientific workflows and databases. Ludäscher discusses why and how the notion of data provenance is: (1) critical to transparency, reproducible science and data quality decisions in research; and (2) how 'provenance-enabled workflows' are helping in this regard. Paolo Missier presents a brief history of the development of the PROV (Provenance) Standard from the first 'Provenance Challenge' (also discussed by Ludäscher). The chapter ends with a summary of three areas for further research: (1) incomplete and uncertain provenance (how to construct the 'big picture' from incomplete and fragmented collections of data); (2) trusted provenance (the provenance of documents from an evidentiary perspective); and (3) provenance to help the reproducibility of scientific processes (for example, using provenance to explain different results from the execution of different versions of a process).

Part V is the final part of the book and considers provenance from the perspective of visual analytics. The first chapter by Margaret Varga and Caroline Varga explores three types of provenance used in visual analytics where tasks and problems involve ambiguity: (1) data provenance (the source of data and system using the data); (2) analytical provenance (processes performed on data); and (3) reasoning provenance (how and why analysts have drawn specific conclusions from the data). In the final chapter Ashley Wheat, Simon Attfield and Robert Fields provide a deeper exploration of analytic provenance and distributed sensemaking (a human process of comprehension transcending beyond the mind of an individual to extract meaning and insights from data). The practical challenges of capturing data – time, effort and human fallibility – are highlighted as issues requiring further research and development.

While each of the chapters provides interesting and often alternative (but not competing) views of provenance, the absence of a conclusion detracts from the book's aim as a synthesis of ideas and platform for progressing the research agenda in this area. At times, technical jargon, practices and projects are not explained and the text flows with an unstated assumed knowledge required to understand the points raised. To overcome this, the reader may need to search practitioner and academic literature external to the book. The references included in each chapter are a great start, but readers lacking free access to academic publishers may find the paywalls a financial barrier.

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Adding Value to Libraries, Archives, and Museums: Harnessing the Force That Drives Your Organization's Future, by Joseph R. Matthews, Libraries Unlimited, ABC-CLIO, Santa Barbara, CA, 2016, 271 pp., USD\$70.00 (paperback), ISBN 978 1 440842 88 7

Published by Libraries Unlimited, Joseph R. Matthews is the author of 30 library and related reference books. Matthews, consultant at JRM Consulting Inc., is well published (1975 to 2017)