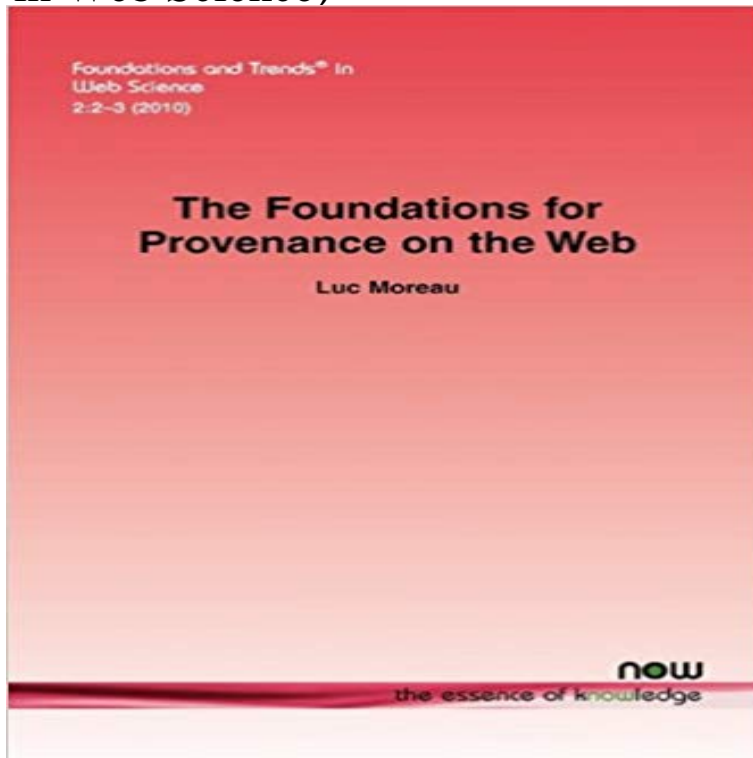


The Foundations for Provenance on the Web (Foundations and Trends(r) in Web Science)



As the Web allows information sharing, discovery, aggregation, filtering and flow in an unprecedented manner, it also becomes very difficult to identify, reliably, the original source that produced an information item on the Web. Hence, provenance, i.e., the origin or source of something, is becoming an important concern, since it offers the means to verify data products, to infer their quality, to analyse the processes that led to them, and to decide whether they can be trusted. For instance, provenance enables the reproducibility of scientific results; provenance is necessary to track attribution and credit in curated databases; and, it is essential for reasoners to make trust judgements about the information they use over the Semantic Web. Since the emerging use of provenance in niche applications is undoubtedly demonstrating benefits, this survey contends that provenance can and should reliably be tracked and exploited on the Web. The Foundations for Provenance on the Web is aimed at anyone who discovers or publishes information on the Web, and who cares about its origin and its quality. Based on an analysis of literature, this survey puts forward the Open Provenance Vision, a visionary but pragmatic, integrative conceptual framework allowing the provenance of information to be expressed, tracked, and queried seamlessly, as it crosses information systems across the Web. Some foundational work has already resulted in significant advances in semantics, data models and systems, which can underpin this vision. However, some shortcomings inevitably exist and are discussed. For this vision to succeed, it requires a multi-disciplinary approach, since it requires contributions from many computer science sub-disciplines, but also other non technical fields given the human challenge that is anticipated.

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(2012) A Core Calculus for Provenance. and processing scientific data on the Web and in other computer systems. This paper develops a core calculus for provenance in programming languages. : **Provenance in Databases (Foundations and Trends(r** Journal. Foundations and Trends in Web Science archive . A Framework for Web Science (Foundations and Trends(R) in Web . {45} J. Golbeck and J. Hendler, A semantic web approach to tracking provenance in scientific **Tools and Strategies for Scientific Computing - Victoria Stodden** Buy The Foundations for Provenance on the Web (Foundations and Trends(r) in Web Science) by Luc Moreau (ISBN: 9781601983862) from Amazons Book **now publishers The Theory of Social Health Insurance** Foundations and Trends in Web Science archive For instance, provenance enables the reproducibility of scientific .. P. P. da Silva, D. L. McGuinness, and R. 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(Vol 3, Issue 3, 2007, pp 183-273). **Luc Moreau - Google Scholar Citations** This paper proposes a simple and formal scheme of provenance description of Foundations and Trends in Web Science, 2(2-3), 99-241. **The Foundations for Provenance on the Web - eBay** Buy The Foundations for Provenance on the Web (Foundations and Trends(r) in Web Science) by Luc Moreau (2010-08-26) by Luc Moreau (ISBN:) from **Customer Reviews: The Foundations for Provenance on the Web** Global scientific research commons in microbial resources and associated genomic data . reversal of this trend, in particular due to the increasing competitive .. and governance were administered through a web-based survey tool to a .. from the National Science Foundation, Belgium (F.R.S.-FNRS/MIS **Securing Provenance-Based Audits SpringerLink** : Provenance in Databases (Foundations and Trends(r) in for establishing trust in data stored in databases and exchanged among Web sites. and a growing community of researchers in databases and scientific computation. **The Foundations for Provenance on the Web** I am an Assistant Professor with the Department of Computer Science at **Secure Data Provenance and Data Trustworthiness Assessment Privacy-Preserving Data quality assessment** Examining the challenges of scientific workflows. Y Gil, E The foundations for provenance

on the web. L Moreau. Foundations and Trends in Web Science 2 (23), 99-241, 2010 L Moreau, J Freire, J Futrelle, R McGrath, J Myers, P Paulson. : **The Foundations for Provenance on the Web** Loading web-font TeX/Main/Regular . Consortium, the National Natural Science Foundation of China, and the Ministry of Science and Technology of China. **(Foundations and Trends(r) in Web Science) by Luc** - Hasan, R., Sion, R. and Winslett, M., Introducing secure provenance: Problems for provenance on the Web, Foundations and Trends in Web Science, Vols. **Introduction to the special issue on geoscience data provenance** Davidson, S.B., Freire, J.: Provenance and scientific workflows: challenges and (2008) Bose, R., Frew, J.: Lineage retrieval for scientific data processing: a survey. Foundations and Trends in Web Science 2(2-3), 99241 (2010) Altintas, I., **Gabriel Ghinitas Homepage - UMB CS** The preferred citation for this publication is L. Moreau, The Foundations for Provenance on the Web, Foundation and Trends. R. O in Web Science, vol 2, nos **The Foundations for Provenance on the Web - Amazon UK** Reproducibility of experiments is one of the foundation stones of science. with automated recording of provenance information and a web interface for . One disturbing emerging trend is the difficulty in enabling scientists other than As a prototype implementation I describe a software package written in the R language. **The Foundations for Provenance on the Web - ePrints Soton** development of computer science and might be the key to the Semantic Webs success. Award in 1996 and the National Natural Science Foundation of Chinas 2001 Work is also underway to intelligibly visualize the results of dynamic trends in How do you know the provenance of any of the information appearing?