Provenance

What a Concept!

Report on the iTRUST Interdisciplinary Workshop on Provenance
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Motivation

How do we capture and represent provenance in increasingly distributed and networked information processing environments?
Disciplines/Perspectives Represented

- Archival Science
- Computer Science
  - Information Management
  - Data Management
  - Human-Computer Interaction
- Law
- Library Science
  - Classification Theory
- Visual Analytics
Why Does Provenance **Matter**?

- Establishing Trust
- Semantic interpretability
- Assessing value
- Transparency and accountability
- Reproduceability
- Attribution and protection of rights
- Sense-making

- Digital Preservation
- Digital Records Preservation
- Archival Arrangement & Description
- E-Science (e.g., Research Data Alliance)
- Digital Humanities
- Open Data
- Decision-Support
- Intelligence Analysis
Perspectives on Provenance

A dynamic and constantly reformulating concept even within disciplines and cognate areas

- Provenance as creator (AS)
- Provenance as original order (AS)
- Provenance as chain of custody/preservation (AS/LA)
- Provenance as relationships (AS)
- Provenance as graphs (AS)
- Provenance as context (AS)
- Parallel provenance (AS)
- Provenance as process (W3C PROV standard; IM)

- Analytic Provenance (VA)
- Reasoning Provenance (VA)
- Agent-centred provenance (IM)
- Object-oriented provenance (IM)
- What, where, why provenance (DM)
- Differential provenance (*NEW)
Research Challenges

Conceptual . . .

A deeper and agreed understanding of provenance is needed in order to cope with new forms of documentation and new modes of communicating and processing information.

-Michetti
Research Challenges

Interoperability . . .

W3C PROV Standard

&

Archival Arrangement and Descriptive Standards

InterPARES Chain of Preservation Model

Etc.
Research Challenges

Technical...

Capture
Storage
Security
Analytics/Exploitation
Next Steps

• Development of a synthesis paper and publication of the workshop proceedings (including an interdisciplinary bibliography on Provenance)

• Collaboration on iTRUST Project Archival Arrangement & Description in the Cloud (Michetti)

• Preparation of a new research SSHRC Insight Grant proposal and exploring other opportunities with other funding bodies e.g., NSF, JISC

• Monthly conference call and September research meeting (to be hosted by RDA)
Old Wine in New Bottles?

New Wine in New Bottles!

Image courtesy of Paolo Missier