



The Federation of Earth Science Information Partners
Fostering connections to make data matter



National Snow and Ice Data Center
Supporting Cryospheric Research Since 1976



DOL's and Data

R. Duerr



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On the utility of identification schemes for digital earth science data: an assessment and recommendations

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Abstract

In recent years, a number of data identification technologies have been developed which purport to permanently identify digital objects. In this paper, nine technologies and systems for assigning persistent identifiers are assessed for their applicability to Earth science data (ARKs, DOIs, XRIs, Handles, LSIDs, OIDs, PURLs, URIs/URNs/URLs, and UUIDs). The evaluation used four use cases that focused on the suitability of each scheme to provide Unique Identifiers for Earth science data objects, to provide Unique Locators for the objects, to serve as Citable Locators, and to uniquely identify the scientific contents of data objects if the data were reformatted. Of all the identifier schemes assessed, the one that most closely meets all of the requirements for an Unique Identifier is the UUID scheme. Any of the URL/URI/IRI-based identifier schemes assessed could be used for Unique Locators. Since there are currently no strong market leaders to help make the choice among them, the decision must be



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Within this Article

- » Introduction
- » Reasons for using unique identifiers
- » Use cases
- » Types of data needing identifiers
- » Assessment criteria
- » Assessments
- » Summary discussion



Data Citation Guidelines for Data Providers and Archives

Event:

[Winter Meeting 2012](#)

Collaboration Area:

[Data Preservation](#)

Technical Reports:**Document Status**

This document was approved by the ESIP Assembly 5 January 2012. The Data Stewardship Committee was charged with maintaining the Guidelines to ensure they remain functional and relevant.

The document was put out for review by all ESIP members 17 August 2011. As of 31 December 2011 some minor revisions have been made in response to feedback from the ESIP community and continually emerging guidance from the broader information science community.

So what does ESIP recommend?

- DOIs for datasets/collections
- UUIDs for data items

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- DOIs for datasets/collections
- UUIDs for data items

So why not?

handles

ARKs

XRIs

LSIDs

PURLs

URLs, URIs, IRIs

Getting a DOI in the USA



Long-term identifiers made easy

Vs



- Primarily meant for data
- Support for common metadata needed for finding finding and understanding data
 - Bounding boxes and place names
 - Links to full metadata record
 - Relationships to other objects
 - Versioning support
- Working to be included in citation indexes, etc.
- Supports ARKs too

- Primarily meant for publications
- Support for common metadata needed for finding publications or parts thereof
 - Books
 - Journals
 - Conference proceedings
- Well integrated into existing citation metrics, indexing, etc. providers using a pay for query model

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DOI's are forever!

Is your data?



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There are many publication models

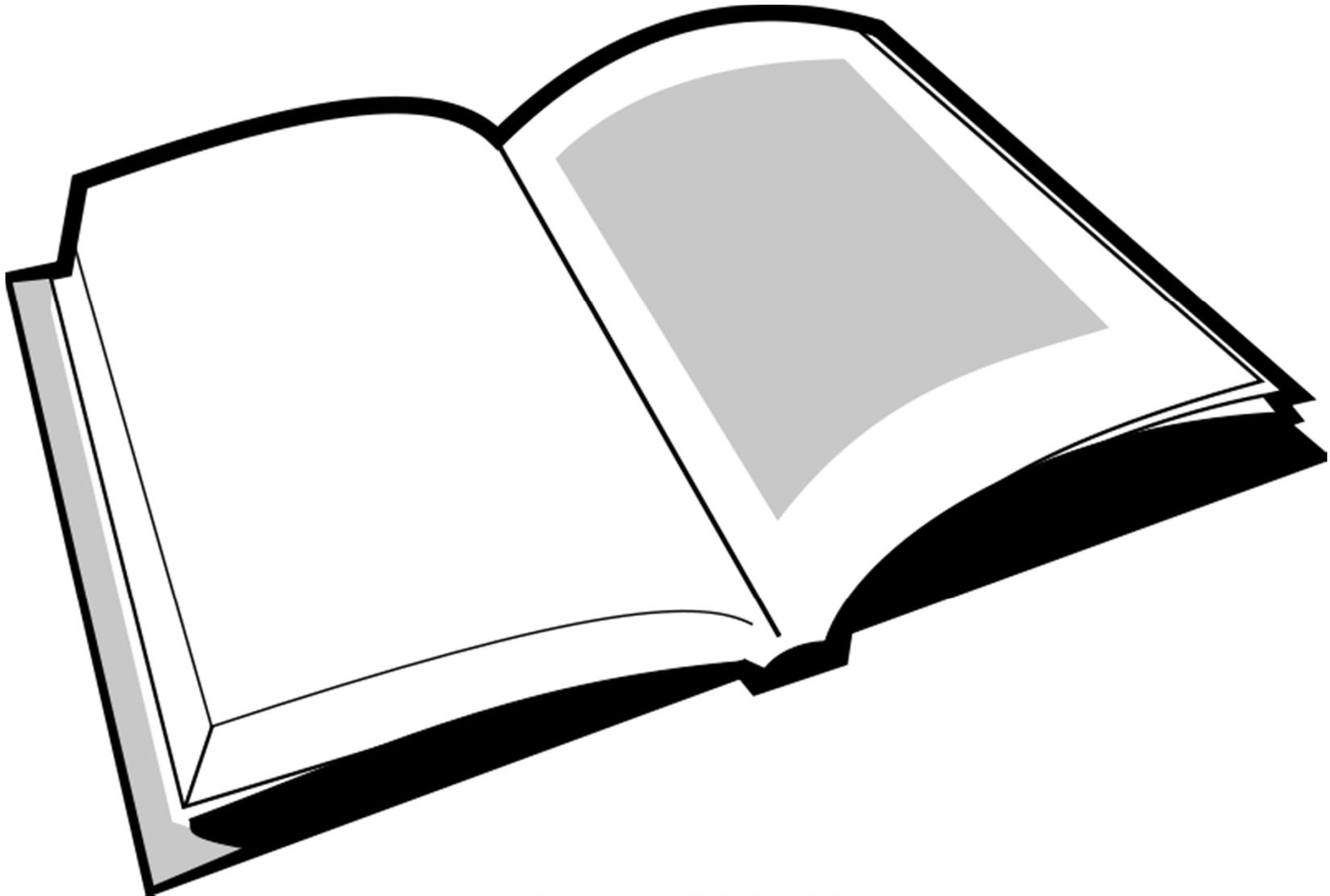
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By Ruth Duerr, June 27, 2013





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Is your data like a book?



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What about a serial publication?





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A data stream?

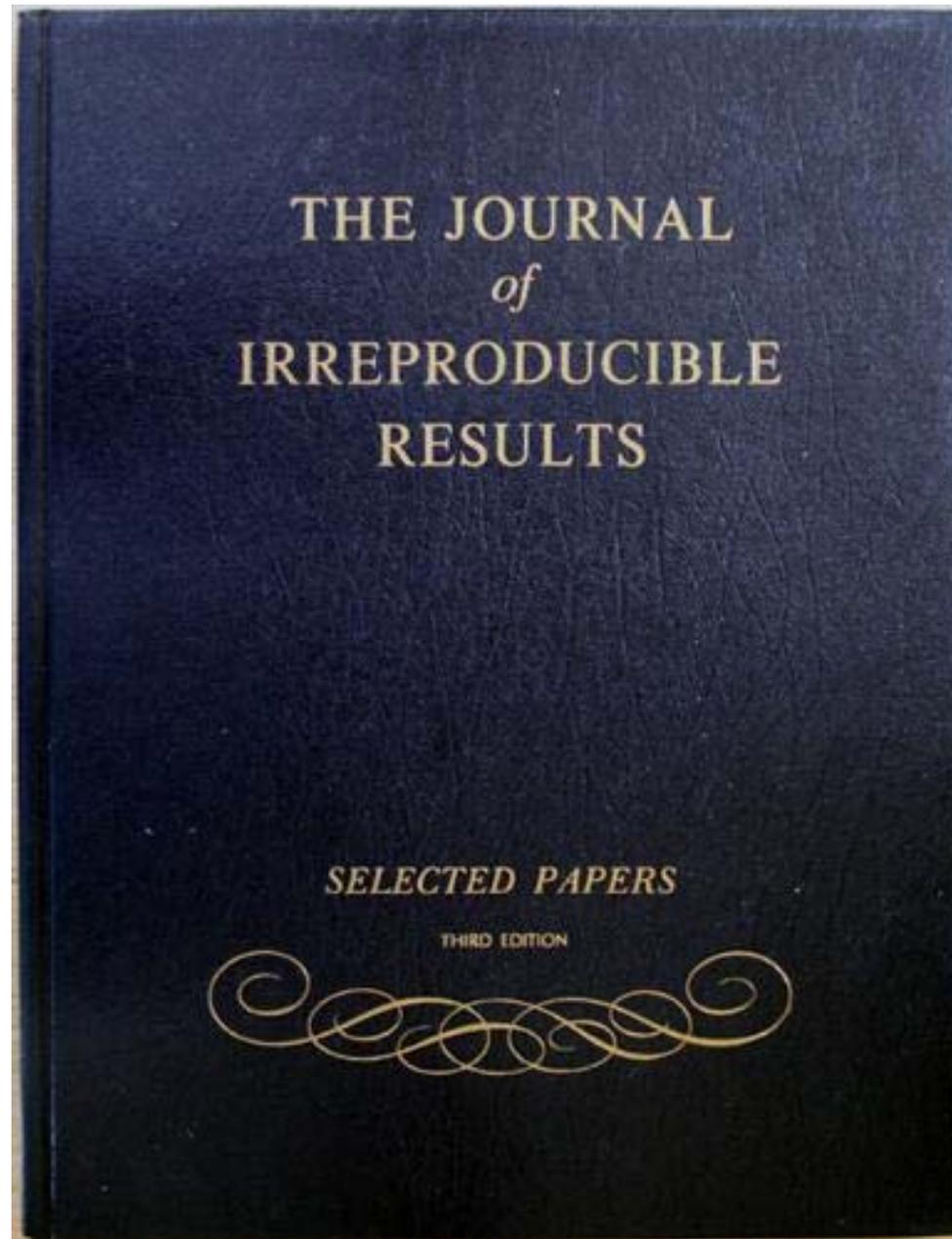


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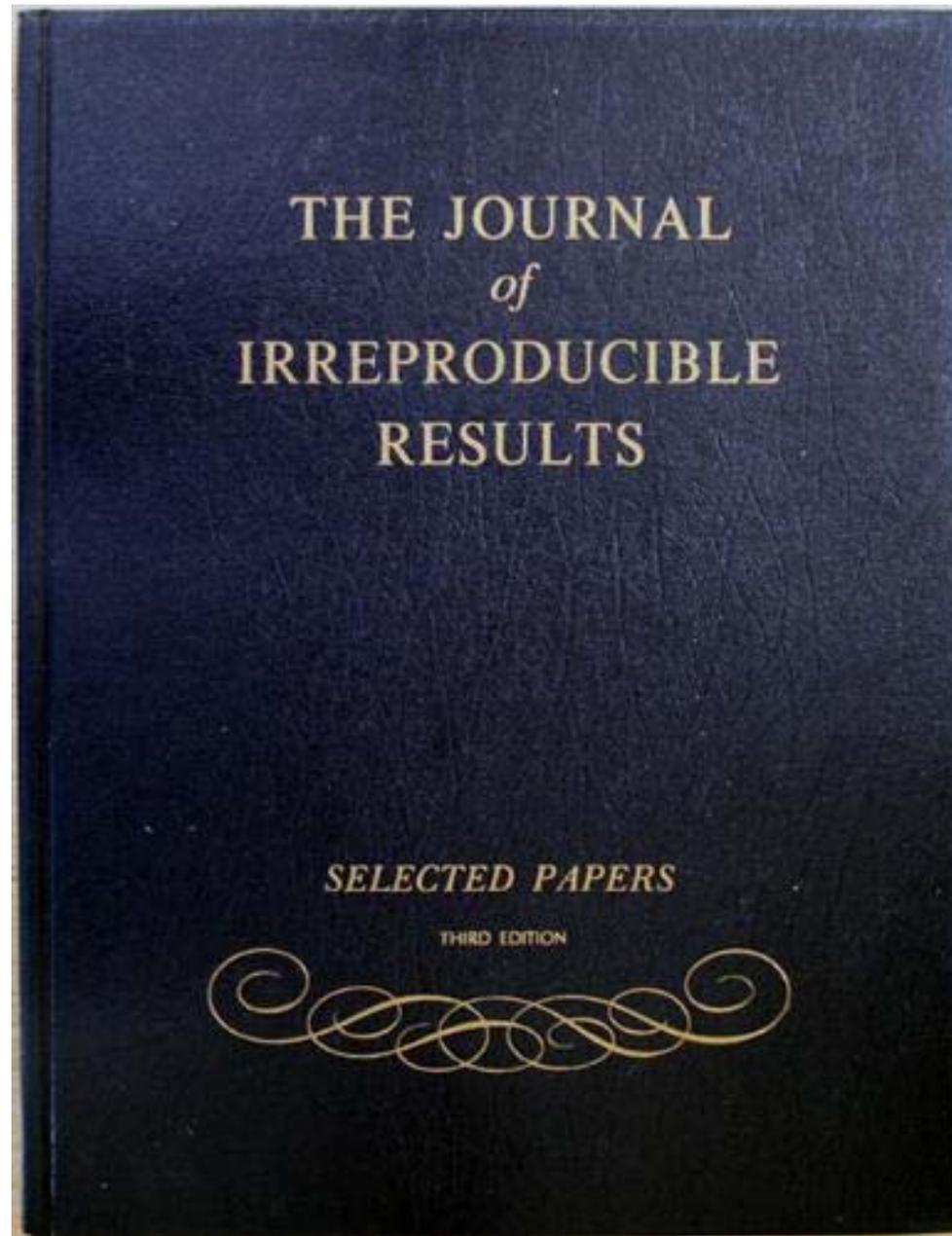


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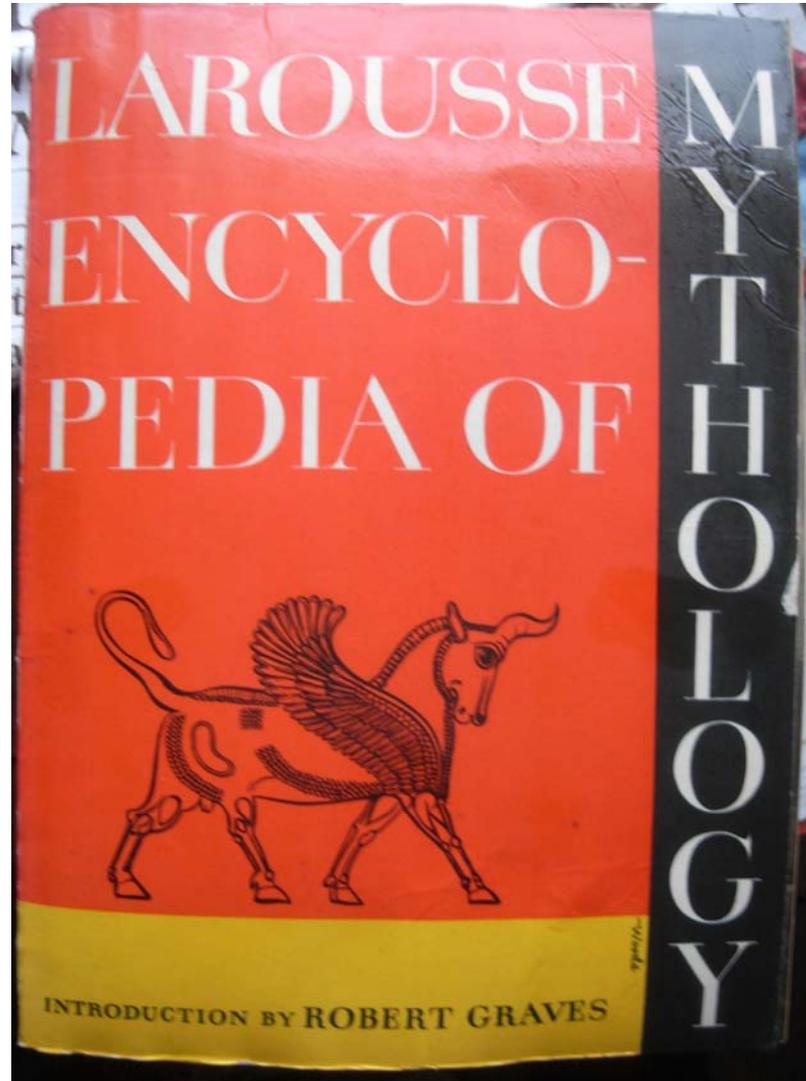
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Or maybe an encyclopedia?



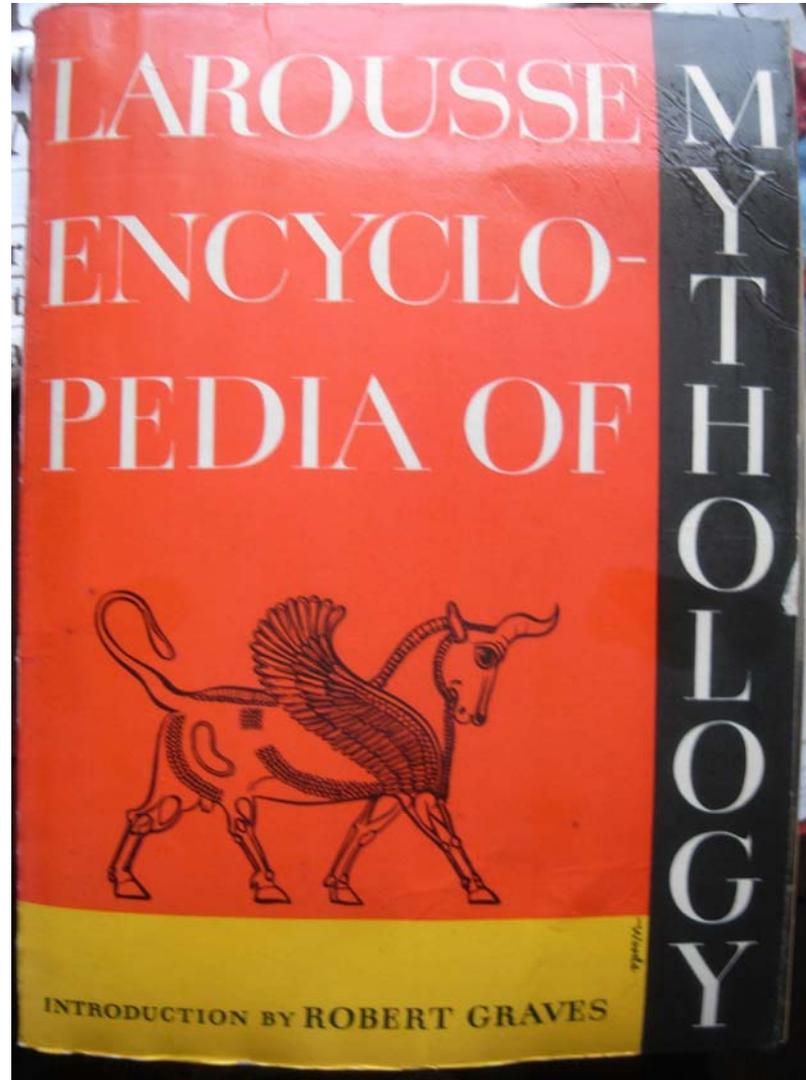
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The Data Model Resource Book

Revised Edition

Volume 1

A Library of
Universal Data
Models
for All
Enterprises

Len Silverston

Foreword by Graeme Staines

Data Model Resource Book





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