

A Brief Introduction to Linked Data:

Metadata for
Humans

+

Machines

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First,
some
definitions:

Linked Data & RDF



Semantic Web

“highly structured metadata that allow computers to understand the relationships between objects”

Byrne and Goddard, “The Strongest Link: Libraries and Linked Data.” *D-Lib Magazine* 16 no. 11/12 (2010), doi:10.1045/november2010-byrne

Four Rules of Linked Data

1. Use URIs as names for things
2. Use HTTP URIs so that people can look up those names.
3. When someone looks up a URI, provide useful information, using the standards (RDF, SPARQL)
4. Include links to other URIs so that they can discover more things.

Tim Berners-Lee, 2006-07-27, "Linked Data," <http://www.w3.org/DesignIssues/LinkedData.html>
(See this link for an explanation of "5-star linked data")

Uniform Resource Locator (URL)

Uniform Resource Identifier (URI)



RDF uses URIs

RDF represents information and relationships in a machine-readable fashion using URIs

URIs can represent:

1. Objects (people, places, things)
2. Categories (name, location)
3. Properties/Relationships
4. Values (content of fields)

Jane Austen is the author of *Pride and Prejudice*

Resource Description Framework

Subject: Jane Austen

Predicate: is the author of

Object: *Pride and Prejudice*



URIs

<http://id.loc.gov/authorities/names/n79032879>

<http://purl.org/dc/elements/1.1/creator>

<http://www.gutenberg.org/ebooks/1342>

Four Rules of Linked Data (Paraphrased)

1. Use standards-based, machine-readable names (URIs).
2. The machine readable names should be links that go somewhere online (URLs).
3. The links should go to information that is useful to humans and machines (ontologies).
4. Link your data to other linked data.

Linked Open Data

“Linked *Open* Data (LOD) is Linked Data which is released under an open licence, which does not impede its reuse for free.”

Tim Berners-Lee, 2006-07-27, “Linked Data,” <http://www.w3.org/DesignIssues/LinkedData.html>

Linked Data at LOC

Library of Congress Linked Data Service

<http://id.loc.gov/about/>