A Brief Introduction to Linked Data:

Metadata for Humans + Machines

Robin Dean
Digital Repository Director
Colorado Alliance of Research Libraries
robin@coalliance.org
First, some definitions:

Linked Data & RDF
Semantic Web

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

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.

(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.”

Linked Data at LOC

Library of Congress Linked Data Service

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