

RDF Schema for Thesauri

Phil Cross

University of Bristol, UK

Background: DESIRE II Project

- Development of Quality Subject Gateways
- Importance of indexing and classification
- Report on conceptual relationships for encoding thesauri and classification systems + RDF Schema
- <http://ilrt.org/discovery/2001/01/rdf-thes/>

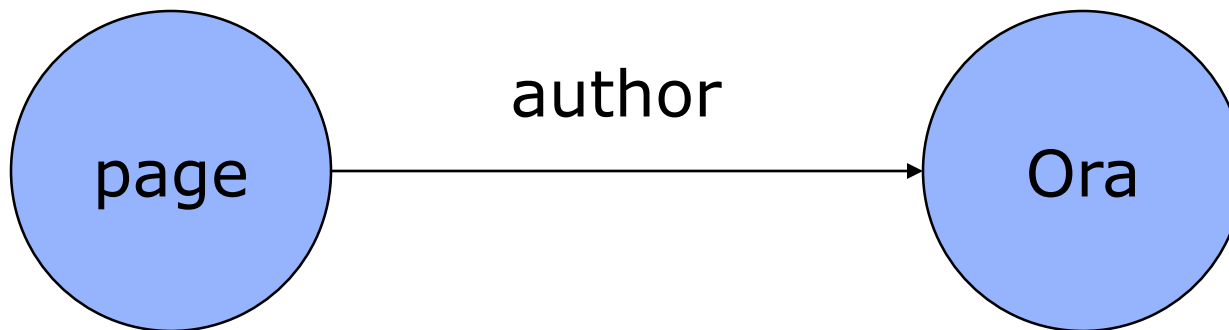
Why Use RDF?

- Importance as a fundamental layer of the semantic Web
- Standard for encoding *metadata*
- Intended as a means of expressing relationships between objects:
concepts and *terms*
- Extensible

What is RDF?

- Statement about identifiable objects
- "The author of the page is Ora"
- `triple(author, page, Ora)`

An RDF Statement



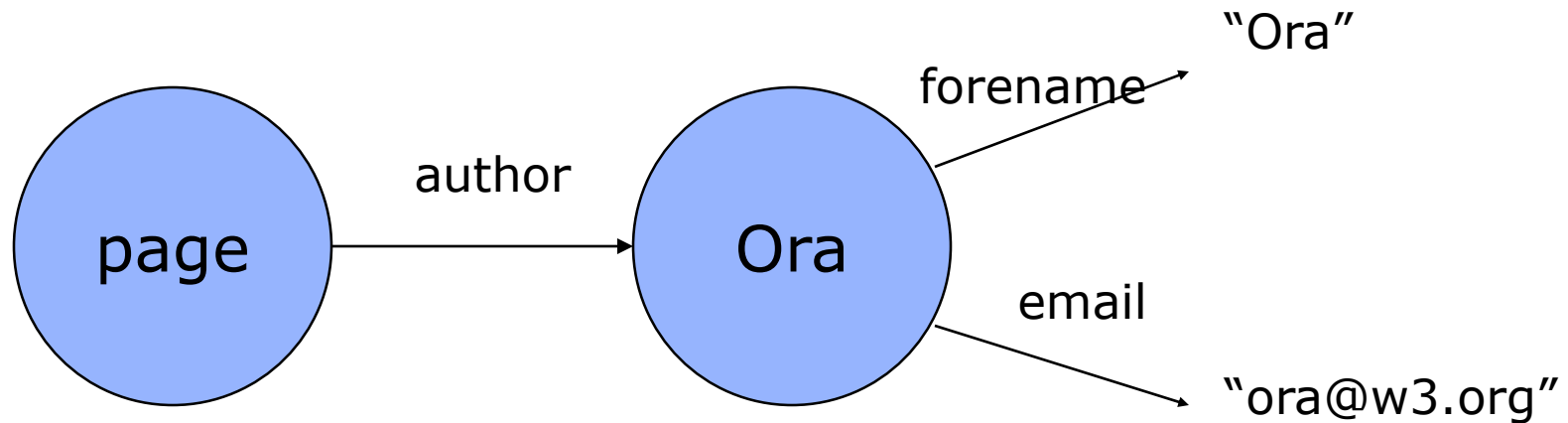
In XML/RDF

```
<rdf:description  
  rdf:about="http://ilrt.org/page.html">  
  <author  
    rdf:resource="http://www.w3.org/staffId/85740"/>  
</rdf:description>
```

Or

```
<rdf:description rdf:about="http://ilrt.org/page.html">  
<author> Ora </author>  
</rdf:description>
```

Adding further links



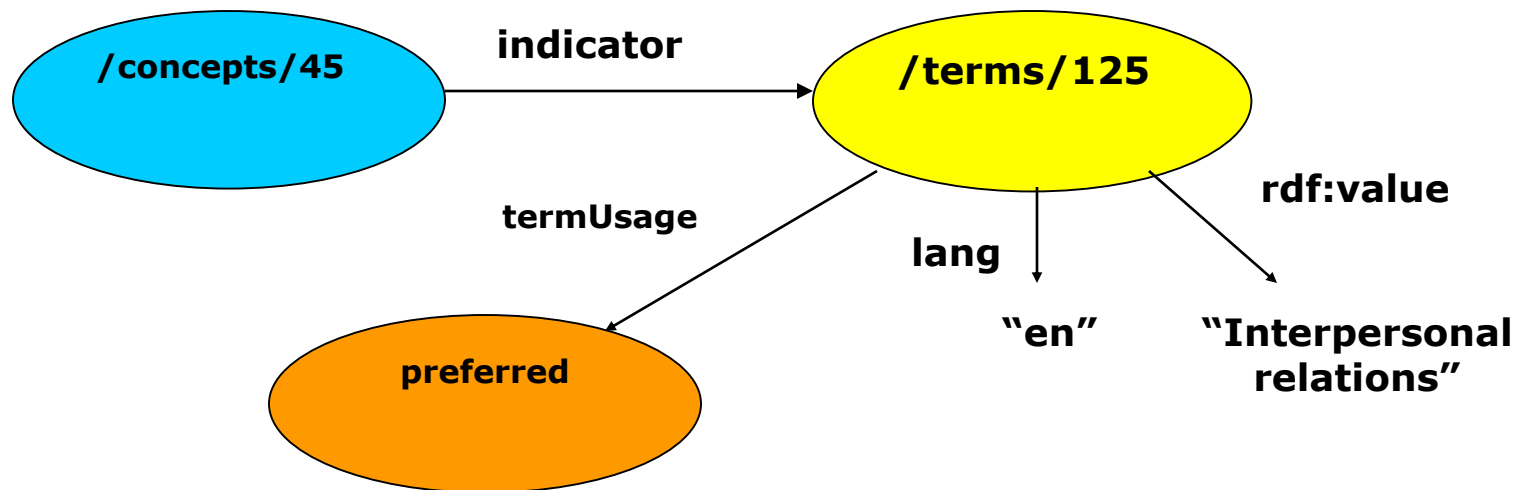
What is RDF Schema?

- Defines types of resources in a particular domain
- Declares their properties/attributes
- `rdfs:Class` & `rdfs:Property`
- `rdfs:subClassOf` & `rdfs:subPropertyOf`

Thesaurus schema

- Main classes:
 - *Concept*
 - *Term*
- Main properties
 - *broaderConcept*
 - *relatedConcept*
 - *indicator*

Concepts and Terms



Relationships Between Concepts

- broaderConcept
 - If *A broaderConcept B*
 - then assume *B narrowerConcept A*
- relatedConcept
 - If *A relatedConcept B*
 - then assume *B relatedConcept A*

Classes

- Concept
- Term
- ScopeNote
- TermUsageValue

Properties

- broaderConcept
- narrowerConcept
- indicator
- conceptCode
- scope
- lang
- termUsage

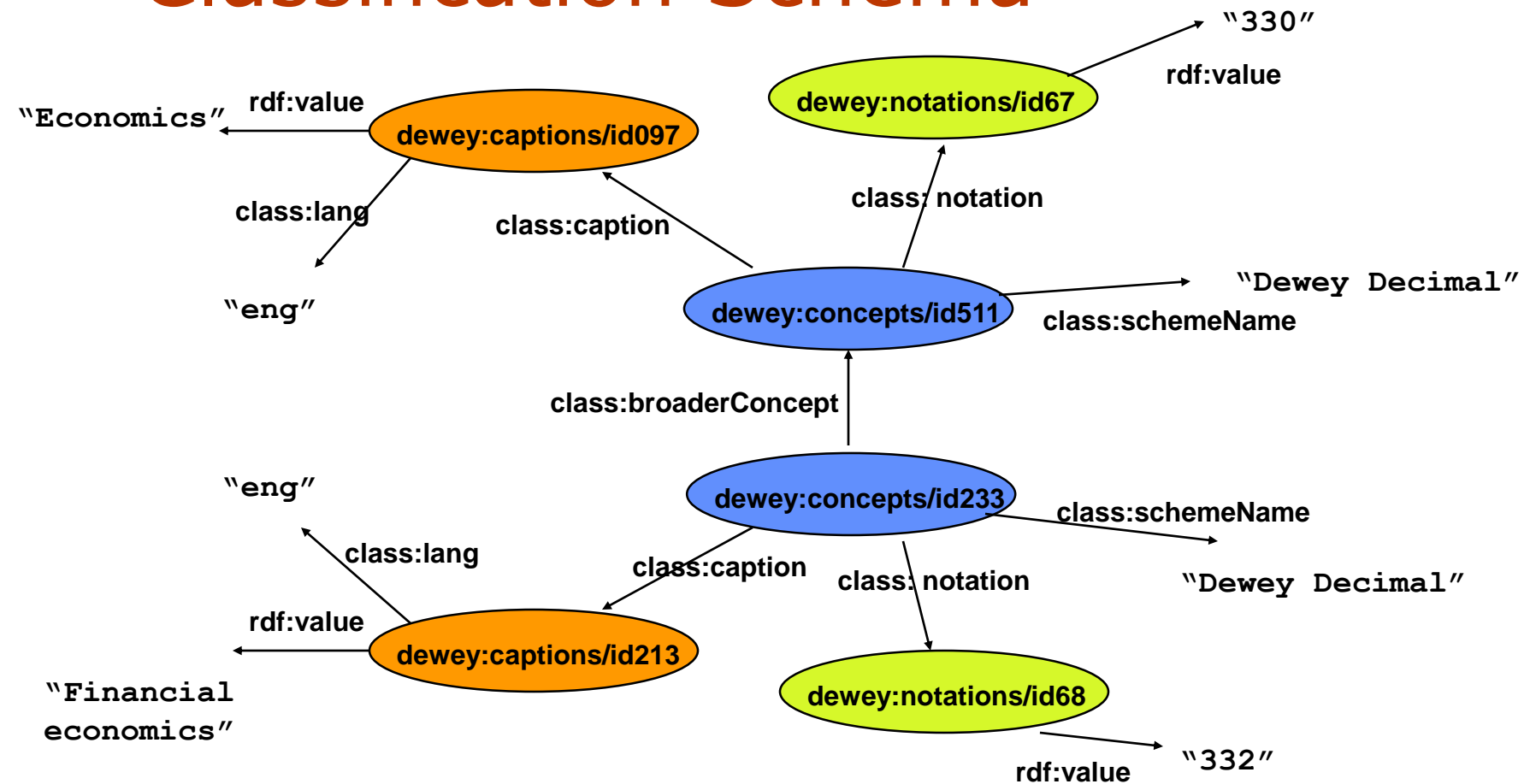
What can it be used for?

- Standard method for encoding thesaurus data
- Tested with developing RDF query standards
- Four thesauri on [SOSIG](#)
- MeSH thesaurus on Bristol [BioMED](#)
- LIMBER project

What can it be used for?

- Cross-mapping
 - New Concept properties
 - *fullyEquivalent, broaderEquivalent, etc.?*
- Multilinguality
- Classification

Classification Schema



References

- **Thesaurus schema:**
<http://ilrt.org/discovery/2001/01/rdf-thes/>
- **SOSIG thesaurus:**
<http://www.sosig.ac.uk/roads/cgi-bin/thesaurus.pl>
- **LIMBER project:** <http://jodi.ecs.soton.ac.uk/Articles/v01/i08/Miller/>
- **email:** phil.cross@bristol.ac.uk

Autoclassification?

