Semantic Web

Syntactic Markup of Documents

<P>
Semantic Web

Syntactic Markup of Documents

Semantic Markup of Data
dc:title
Semantic Web

Syntactic Markup of Documents

Semantic Markup of Data
dc:title
Semantic Web

Syntactic Markup of Documents

Semantic Markup of Data
dc:title

Think warm and fluffy thoughts
Linked Data
Linked Data
Think of lines joining everything together
4 Linked Data “Rules”
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http://www.w3.org/DesignIssues/LinkedData.html
4 Linked Data “Rules”

- Use URIs as names for things

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- Use HTTP URIs so that people can look up those names

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4 Linked Data “Rules”

• Use URIs as names for things
• Use HTTP URIs so that people can look up those names
• When someone looks up a URI, provide useful information, using the standards (RDF, SPARQL)

http://www.w3.org/DesignIssues/LinkedData.html
4 Linked Data “Rules”

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

My Real Mug
Names & Things

My Real Mug

My Web Page

About My Mug
My mug has colourful spots
Isn’t it Pretty!

Created: 2009-11-04
Names & Things

My Real Mug

≠

My Web Page

About My Mug

My mug has colourful spots

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Created: 2009-11-04

http://roger.hyam.net/mug#mymug
Names & Things

My Real Mug

![Image of a colorful spotted mug]

http://roger.hyam.net/mug#mymug

My Web Page

About My Mug

My mug has colourful spots

Isn’t it Pretty!

Created: 2009-11-04

http://roger.hyam.net/mug
http://roger.hyam.net/mug#mymug
Block of assertions about document

http://roger.hyam.net/mug#mymug
Block of assertions about document

Block of assertions about mug

http://roger.hyam.net/mug
dc:created = 2009-11-09
rdf:type = Web Page

http://roger.hyam.net/mug#
mymug
dc:created = 2006-02-28
rdf:type = Mug
bio:hazard = True
http://roger.hyam.net/mug#mymug
http://roger.hyam.net/mug#mymug

A pretty human readable page about the mug!

About My Mug

My mug has colourful spots

Isn’t it Pretty!

Created: 2009-11-04
Why HTTP URIs?
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- HTTP URI - power the current WWW
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Why HTTP URIs?

- HTTP URI - power the current WWW
- Supported by everything!
- We have seen brake downs so think we need a new car that won’t break down
- Hardly supported by anything!
- Tow it with the old car as a proxy for DOI, LSID, HTTP URI
Useful Information

http://roger.hyam.net/mug#mymug
Useful Information

http://roger.hyam.net/mug#mymug

dc:rightsHolder
Useful Information

http://roger.hyam.net/mug#mymug  

dc:rightsHolder  

http://roger.hyam.net/#me
Useful Information

http://roger.hyam.net/mug#mymug

dc:rightsHolder

http://roger.hyam.net/#me

Subject (URI)
Useful Information

http://roger.hyam.net/mug#mymug  dc:rightsHolder  http://roger.hyam.net/#me

Subject (URI)  Predicate (URI)
Useful Information

http://roger.hyam.net/mug#mymug

http://roger.hyam.net/#me

Subject (URI)

Predicate (URI)

Object (URI or Literal)

dc:rightsHolder
Useful Information

Subject (URI)

Predicate (URI)

Object (URI or Literal)

RDF = The way to specify the links
Biodiversity Informatics

- What’s in it for us?
Biodiversity Informatics

• What’s in it for us?
Biodiversity Informatics

- What’s in it for us?
- All our data sharing problems are over!
Biodiversity Informatics

- What’s in it for us?
- All our data sharing problems are over!
- Proven, scalable approach
Biodiversity Informatics

- What’s in it for us?
- All our data sharing problems are over!
- Proven, scalable approach
- Only need to define some shared URIs for our biodiversity predicates and object types
What’s in it for us?

All our data sharing problems are over!

Proven, scalable approach

Only need to define some shared URIs for our biodiversity predicates and object types

Kehan will now talk about building these vocabularies
Data Integration Theme

http://tinyurl.com/tdwg09di