

fedora

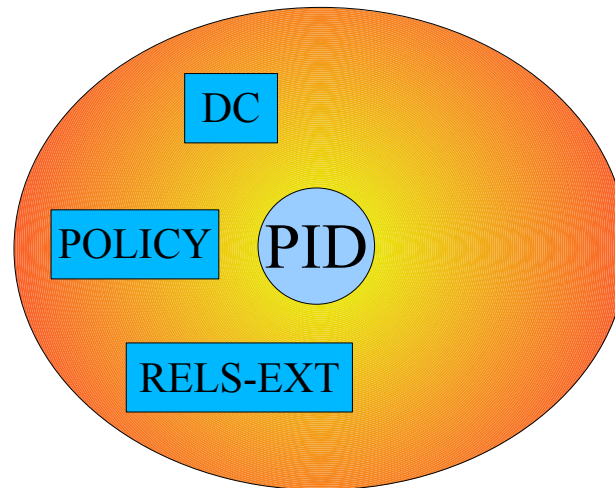


Special Datastreams in Fedora

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A Special Datastream:

*A datastream with a **known ID and format** that the repository can use to provide optional, built-in functions..*



The DC Datastream

- Simplified Dublin Core
- Descriptive metadata about the object
- Expressed in the oai_dc format

OAI_DC Format

A simple XML schema

```
<oai_dc:dc xmlns:oai_dc="http://www.openarchives.org/OAI/2.0/oai_dc/"  
           xmlns:dc="http://purl.org/dc/elements/1.1/">  
  <dc:title>This is the title</dc:title>  
  <dc:creator>Bob Smith</dc:creator>  
  <dc:creator>Peter Smith</dc:creator>  
  <dc:description>This is the description</dc:description>  
</oai_dc:dc>
```

How Fedora Uses "DC"

- To populate the built-in FieldSearch index.
 - List objects where dc:title = "Hello World"
- To provide a built-in OAI service for the repository.
- NOTE: DC is *automatically created* at ingest time if not already provided.

The POLICY Datastream

- Describes object-specific access controls
- Expressed in XACML format

How Fedora Uses "POLICY"

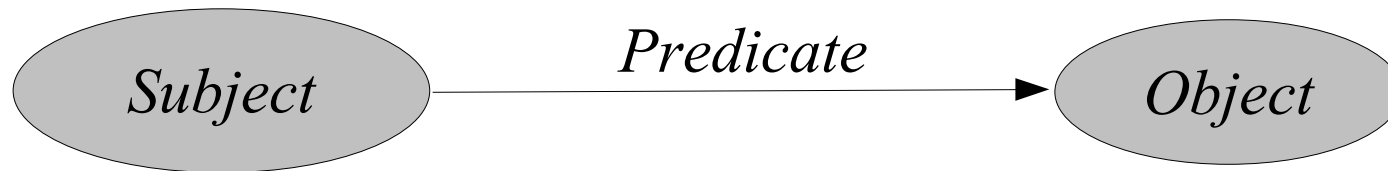
- Repository can enforce policies expressed in each digital object.
- Very specific policies are possible!
 - *Only Bob Smith can edit this datastream*
 - *Students can't read the ANSWER_KEY datastream until next week*
- ...but they're difficult to write (we need tools)

The RELS-EXT Datastream

- To describe relationships to other objects.
- To add arbitrary properties to this object.
- Expressed in RDF.

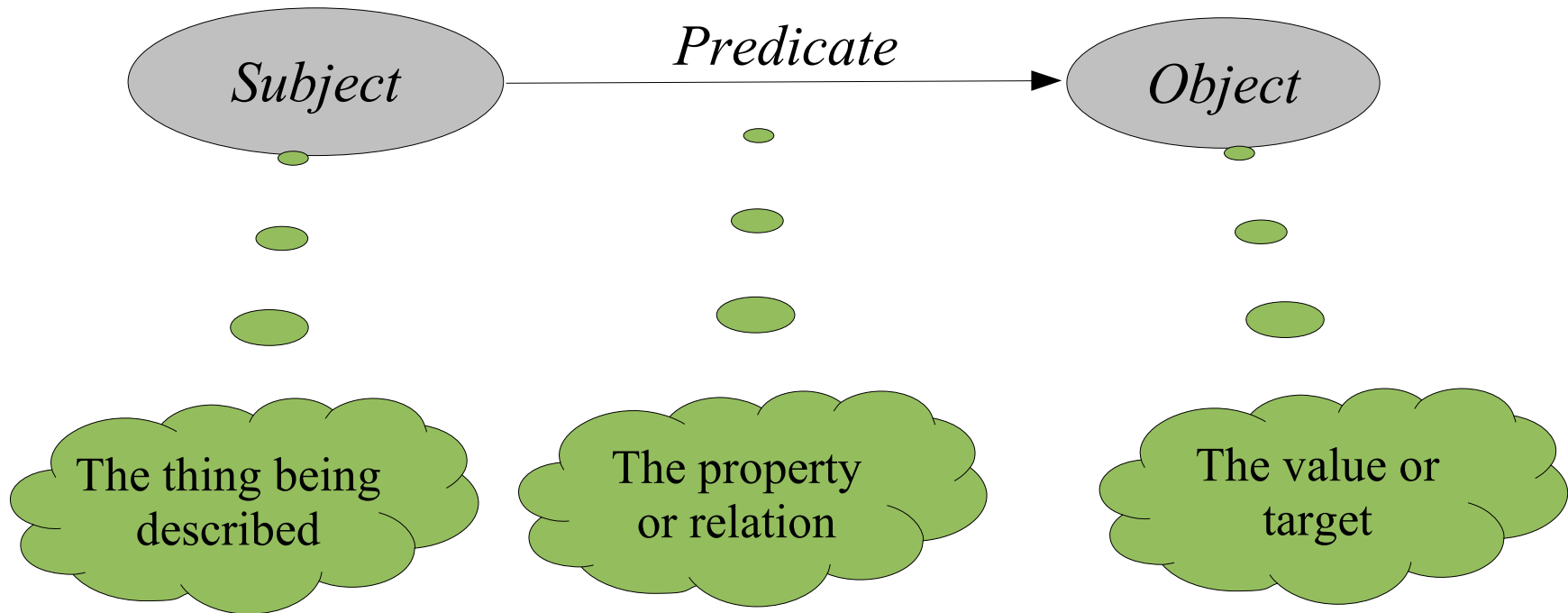
RDF Review

- Resource Description Framework
- Based on "triples" or "statements"

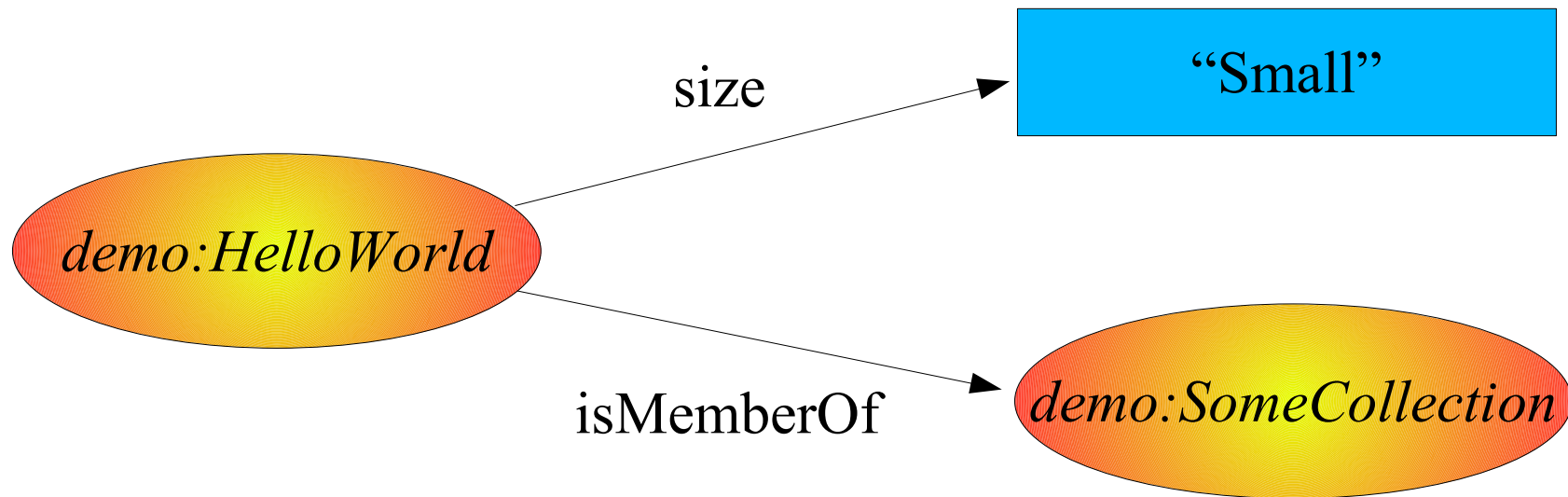


RDF Review

- Resource Description Framework
- Based on "statements" aka "triples"



Two Triples About a Digital Object



RDF/XML Format

An encoding for RDF statements

```
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:prop="http://example.org/property#"
  xmlns:rel="info:fedora/fedora-system:def/relations-external#">
  <rdf:Description rdf:about="info:fedora/demo:HelloWorld">
    <prop:size>Small</prop:size>
    <rel:isMemberOf rdf:resource="info:fedora/demo:SomeCollection"/>
  </rdf:Description>
</rdf:RDF>
```

Functionality using "RELS-EXT"

- To populate the built-in *Resource Index*
- Exposes the repository as a graph
 - This can be used by applications or services on Fedora
 - Example: OAI Provider *Service*