



Expressing the Scholarly Works (Eprints) DC Application Profile using the DSP wiki syntax

DC-2007: Application Profiles: Theory and Practice, Singapore

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- Report of work done by Julie Allinson (UKOLN/University of York)



Background to the Eprints DCAP

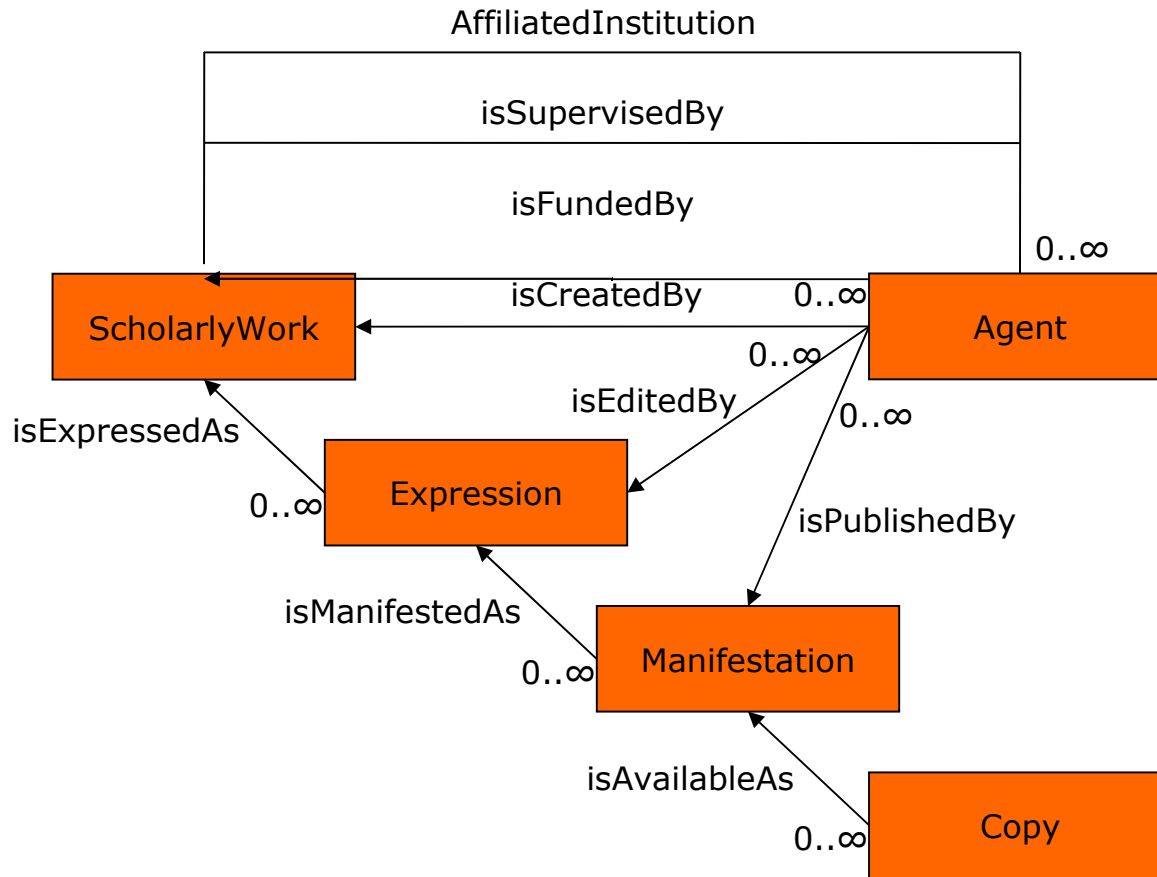
- Eprints AP development funded by JISC, Summer 2006
- Co-ordinated by Julie Allinson & Andy Powell (Eduserv Foundation)
- Specification for using DC metadata for eprints that overcomes limitations of "Simple DC"
 - especially relationships between "versions"
 - "what is being described?"
- "eprint":
 - a "scientific or scholarly research text" (Budapest Open Access Initiative)
 - e.g. peer-reviewed journal article, preprint, working paper, thesis, book chapter, report, etc.



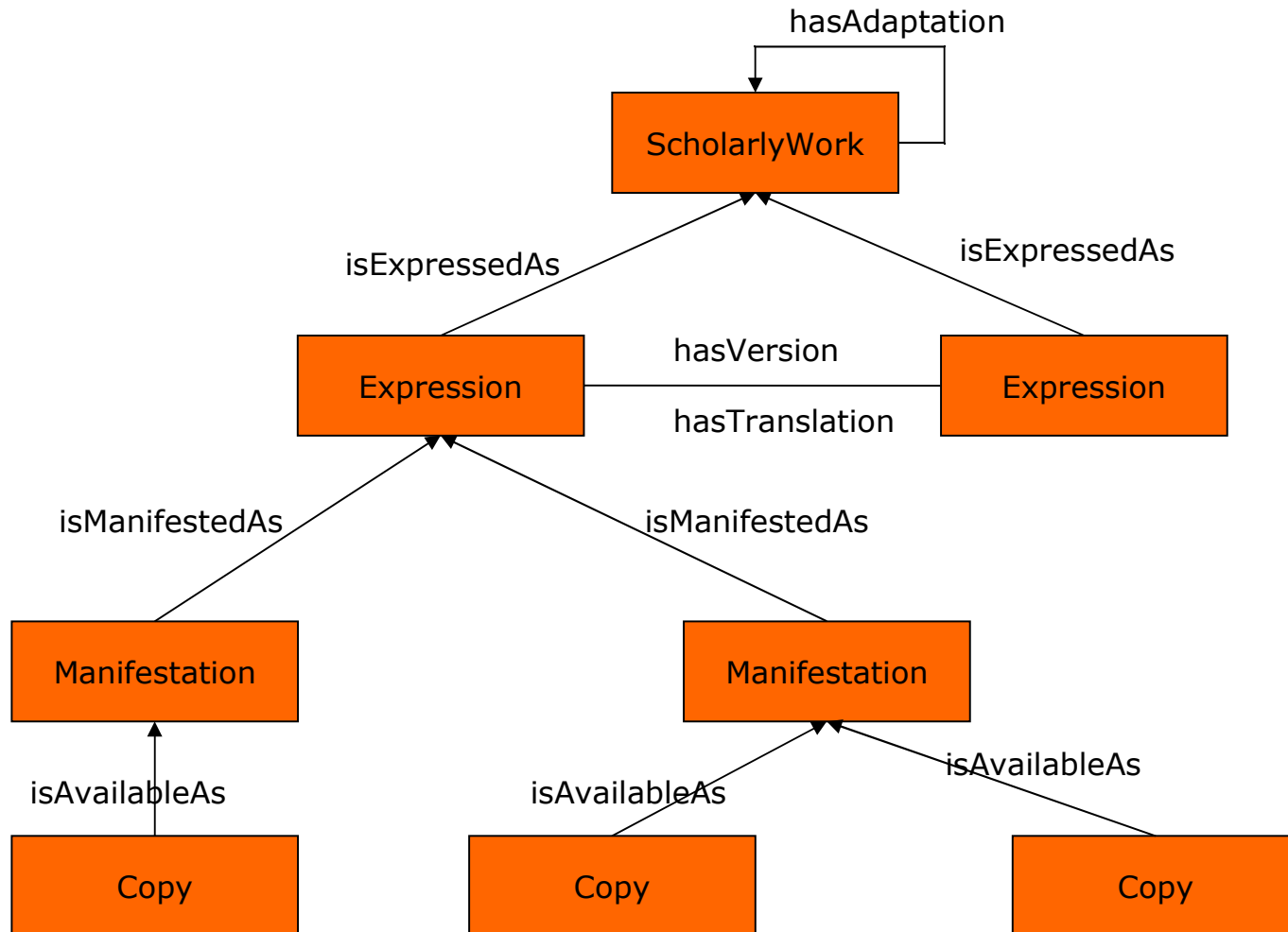
Components

- Functional requirements specification
- Domain model
 - Based on subset of FRBR
- The "eprints DCAP"
 - a "Description Set Profile"
 - plus human-readable commentary, usage guidelines
- New vocabularies of metadata terms
 - With URIs like <http://purl.org/eprint/terms/xyz>
- Eprints DC-XML XML format
 - Based on DC-XML-Full, Version 2006-09-18

The eprints DCAP Domain Model



The eprints DCAP Domain Model





The eprints DCAP as DSP

- Developed initially using "traditional" "tabular" DCAP presentation
- Document divided into five sections/tables, one for description of each entity type
 - -> DSP Description Template
- Each section/table divided into rows, one for each statement type within description
 - -> DSP Statement Template
- For statement referencing Literal Value
 - -> DSP Literal Value Constraint
- For statement referencing Non-Literal Value
 - -> DSP Non-Literal Value Constraint

http://www.ukoln.ac.uk/repositories/digirep/index/EPrints_Application_Profile

- **Description of ScholarlyWork**

```
DT= (  
  ID="ScholarlyWork"  
  min="1" max="1"  
  standalone="yes"  
  RC=[http://purl.org/eprint/entityType/ScholarlyWork/]  
)
```

- **Description of Expression of ScholarlyWork**

```
DT= (  
  ID="Expression"  
  standalone="no"  
  RC=[http://purl.org/eprint/entityType/Expression/]  
)
```

- And so on for Descriptions of Manifestation,
Copy, Agent

• Description of ScholarlyWork

```
DT= (  
  ID="ScholarlyWork"  
  min="1" max="1"  
  standalone="yes"  
  RC=[http://purl.org/eprint/entityType/ScholarlyWork/]  
)
```

- Title

```
ST= (  
  type="literal"  
  min="1"  
  PC={http://purl.org/dc/elements/1.1/title}  
)
```

- Subject

```
ST=(
  type="nonliteral"
  PC={http://purl.org/dc/elements/1.1/subject}
)

NLC=(
  VURIConstraint=( occurrence="optional")
  VESConstraint=( occurrence="optional")
  VStringConstraint=(max="1"
    LangC=(occurrence="optional")
    SESConstraint=(occurrence="disallowed")
  )
)
```

- Is Expressed As

```
ST=(
  type="nonliteral"
  PC={http://purl.org/eprint/terms/isExpressedAs}
)

NLC=(
  description="expression"
  [http://purl.org/eprint/entityType/Expression]
  VURIConstraint=( occurrence="mandatory")
  VESConstraint=( occurrence="disallowed")
  VStringConstraint=(max="0")
)
```

- And so on for Statements referencing other properties

```
http://knowware.nada.kth.se/DCWiki/  
EprintsApplicationProfile?action=raw
```

Is Expressed As

Property	http://purl.org/eprint/terms/isExpressedAs
Literal?	No
Definition	A version of the described eprint.
Eprint-specific recommendation	An expression of the described eprint. In FRBR terms, an eprint is a Work. Use this <i>property</i> to provide the URI of an expression of the eprint and/or to link to a <i>related description</i> (with the <i>description set</i>) about the expression.
Value (Non-Literal)	<p>Description: expression</p> <p>Vocabulary Encoding Scheme Constraint</p> <p>Occurrence: disallowed</p> <p>Value String Constraint:</p> <p>Max occurrence: 0</p> <p><i>Syntax Encoding Syntax Constraint:</i></p> <p>Occurrence: disallowed</p> <p><i>Language Constraint:</i></p> <p>Occurrence: disallowed</p>

For example:

```
Statement (
  Property URI ( eprint:isExpressedAs )
  DescriptionRef ( expression1 )
)
```

<http://knowware.nada.kth.se/DCWiki/EprintsApplicationProfile>

Description of an Expression of the eprint

Entity type

```
- <NonliteralConstraint>
  <ValueURIOccurrence>mandatory</ValueURIOccurrence>
  <VocabularyEncodingSchemeOccurrence>disallowed</VocabularyEncodingSchemeOccurrence>
- <ValueStringConstraint maxOccur="0">
  <SyntaxEncodingSchemeOccurrence>disallowed</SyntaxEncodingSchemeOccurrence>
  <LanguageOccurrence>disallowed</LanguageOccurrence>
</ValueStringConstraint>
</NonliteralConstraint>
</StatementTemplate>
- <StatementTemplate type="nonliteral">
  <Property>http://purl.org/eprint/terms/isExpressedAs</Property>
- <NonliteralConstraint descriptionTemplateID="expression">
  <VocabularyEncodingSchemeOccurrence>disallowed</VocabularyEncodingSchemeOccurrence>
- <ValueStringConstraint maxOccur="0">
  <SyntaxEncodingSchemeOccurrence>disallowed</SyntaxEncodingSchemeOccurrence>
  <LanguageOccurrence>disallowed</LanguageOccurrence>
</ValueStringConstraint>
</NonliteralConstraint>
</StatementTemplate>
</DescriptionTemplate>
- <DescriptionTemplate ID="Expression">
  <ResourceClass>http://purl.org/eprint/entityType/Expression/</ResourceClass>
- <StatementTemplate minOccur="1" maxOccur="1" type="nonliteral">
  <Property>http://purl.org/dc/elements/1.1/type</Property>
- <NonliteralConstraint>
  <ValueURIOccurrence>mandatory</ValueURIOccurrence>
  <ValueURI>http://purl.org/eprint/entityType/Expression/</ValueURI>
  <VocabularyEncodingSchemeOccurrence>mandatory</VocabularyEncodingSchemeOccurrence>
  <VocabularyEncodingScheme>http://purl.org/eprint/entityType/</VocabularyEncodingScheme>
- <ValueStringConstraint maxOccur="0">
  <SyntaxEncodingSchemeOccurrence>disallowed</SyntaxEncodingSchemeOccurrence>
  <LanguageOccurrence>disallowed</LanguageOccurrence>
</ValueStringConstraint>
</NonliteralConstraint>
</StatementTemplate>
- <StatementTemplate type="literal">
  <Property>http://purl.org/dc/elements/1.1/title</Property>
</StatementTemplate>
- <StatementTemplate type="nonliteral">
  <Property>http://purl.org/dc/elements/1.1/description</Property>
</StatementTemplate>
- <StatementTemplate minOccur="1" type="literal">
```

<http://knowware.nada.kth.se/DCWiki/EprintsApplicationProfile?action=DSP2XML>



Issues arising

- Formal model based on description model of DCAM 2007-06-04
 - e.g. literal v non-literal values
- Constraint matching limitations e.g.
- DT may contain max of one ST referencing a single property
- ST must contain either a NLC or a LC
- So
 - can't specify the use of a statement referencing property P with either a literal value or a non-literal value
 - e.g. dcterms:abstract (abstract as literal or as document)
 - can't specify the use of a statement referencing property P with two different NLCs
 - e.g. dcterms:subject (subject as keyword/no VES or subject as member of specified VES)

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Title slide photo of Singapore Orchid Gardens by Flickr user Andries3
See <http://www.flickr.com/photos/andriesoudshoorn/458660650//>
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