



Description Set Profiles

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DC Application Profiles

- traditional definition

“A Dublin Core Application Profile (DCAP) is a declaration specifying **which metadata terms** an organization, information provider, or user community uses in its metadata. By definition, a DCAP identifies the source of metadata terms used—whether they have been defined in formally maintained standards such as Dublin Core, in less formally defined element sets and vocabularies, or by the creator of the DCAP itself for local use in an application. Optionally, a DCAP may provide additional documentation on **how the terms are constrained, encoded or interpreted** for application-specific purposes.” --*CEN CWA 14855:2003*



Machine-readable constraints?

- XML Schema?
 - Not applicable to RDF
 - Not applicable to HTML
 - Not applicable to
- CEN Guidelines
 - Not based on DCAM
 - No support for Description Sets
- Needed something new
 - “Dublin Core Description Set Profile”



Envisioned usages

- as a formal representation of the constraints of a Dublin Core Application Profile
- as configuration for databases
- as configuration for metadata editing tools
- etc.



Scope of a DSP spec

- Information model: Structural constraints on a description set:
 - what descriptions may occur
 - what properties may be used
 - what ways might a value surrogate be given
- XML expression



Out of scope

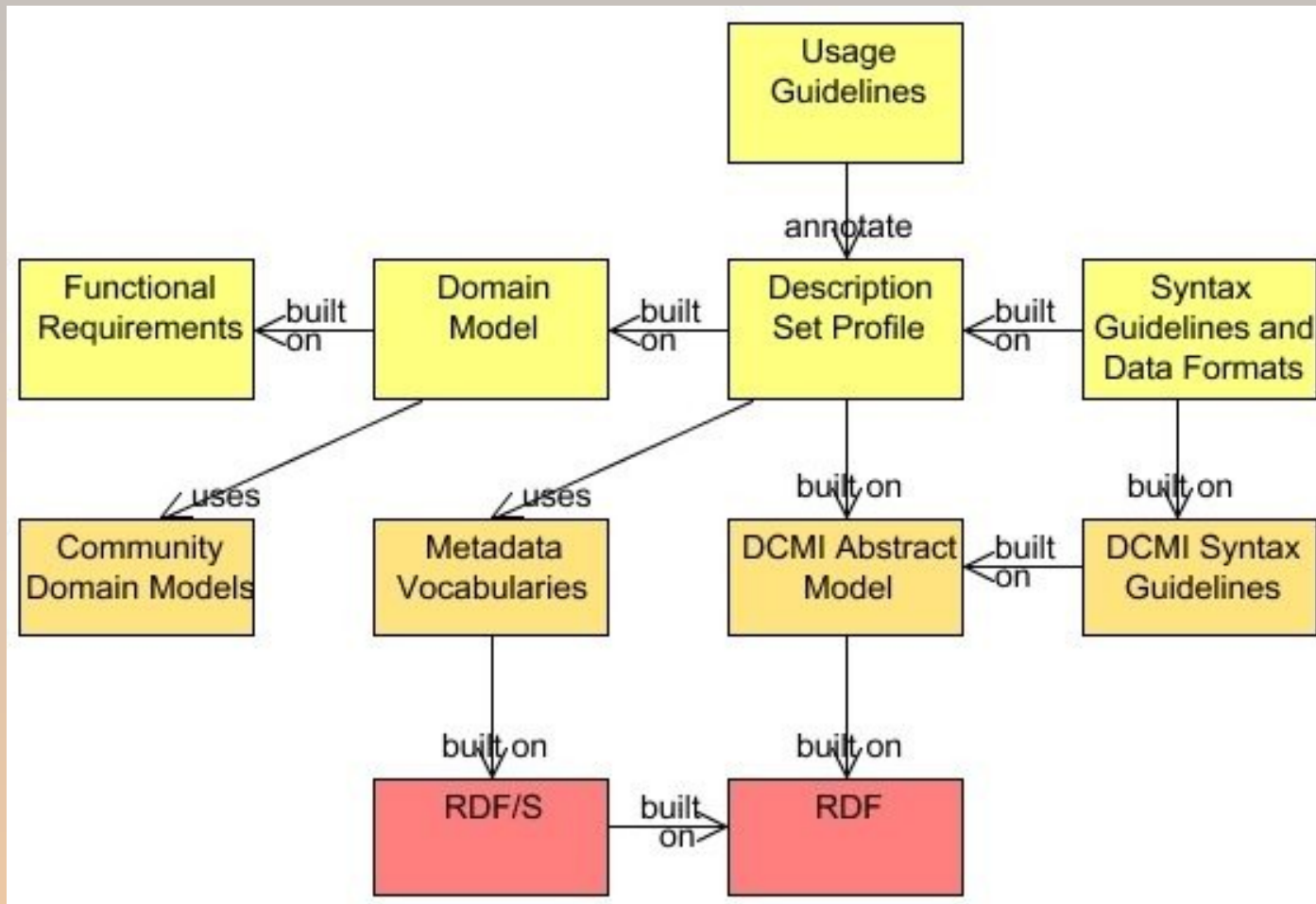
- Human-readable documentation
- Definition of vocabularies
- Version control
- etc.

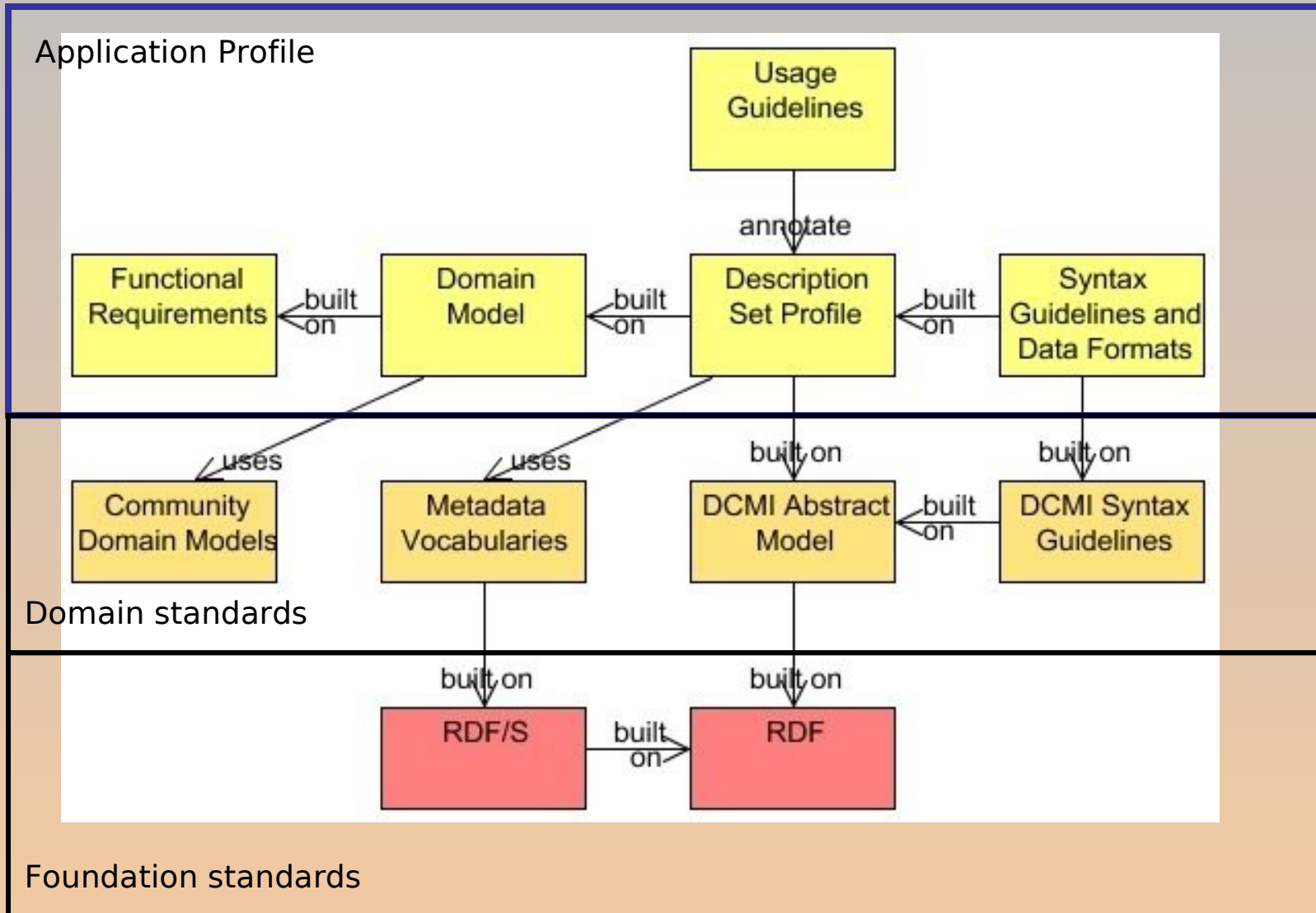


DC Application Profiles

- new definition (in progress)

- A DCAM-conformant Application Profile (“DC Application Profile”) is packet of documentation which consists of:
 - Functional requirements (mandatory)
 - Domain model (mandatory)
 - Description Set Profile (DSP) (mandatory)
 - Usage guidelines (optional)
 - Encoding syntax guidelines (optional)







First working draft

- <http://dublincore.org/architecturewiki/DescriptionSetProfile>
- Comments on DC-ARCHITECTURE
- Publication schedule not defined



Example: The book AP

- A book:
 - a literal title
 - a creator, described separately
- A creator
 - a literal name



Description Template: Book

Statement template: literal title

Property: [dcterms:title](#)

Literal value Language SES

Statement template: creator

Property: [dcterms:creator](#)

Description reference: Creator

Value URI

Vocabulary Encoding Scheme

Value string Language SES

Description Template: Creator

Statement template: literal name

Property: [foaf:name](#)

[standalone:no](#)

Literal value Language SES



<http://knowware.nada.kth.se/DCWiki/TheBookAP?action=raw>

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

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

```
{#{DSP
== Description template: Book ==
DT=(min="1" max="1" standalone="yes" identifier="book")

=== Title ===

ST=(max="1" type="literal" PC={http://purl.org/dc/terms/title})
|| Definition || A name given to the resource. ||
LC=(LangC=(occurrence="optional") SESConstraint=(occurrence="disallowed") )

=== Creator ===

ST=(max="1" type="nonliteral" PC={http://purl.org/dc/terms/creator})
|| Definition || An entity primarily responsible for making the resource. ||
NLC=(VURIConstraint=(occurrence="disallowed") VESConstraint=(occurrence="disallowed")
      VStringConstraint=(max="1" LangC=(occurrence="disallowed")
      SESConstraint=(occurrence="disallowed"))) description="creator" )

== Description template: Creator ==
DT=(min="1" max="1" standalone="no" identifier="creator")

=== Name ===

ST=(max="1" type="literal" PC={http://xmlns.com/foaf/0.1/name})
|| Definition || A name for some thing. ||
LC=(LangC=(occurrence="disallowed") SESConstraint=(occurrence="disallowed") )

}}}
```

[Link](#)



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

Description template: Book

Title

Property	http://purl.org/dc/terms/title
Max occurrence	1
Literal?	Yes
Definition	A name given to the resource.

Value (Literal)	Syntax Encoding Scheme:
	Occurrence disallowed
	Language Constraint:
	Occurrence optional

Creator

Property	http://purl.org/dc/terms/creator
Max occurrence	1
Literal?	No
Definition	An entity primarily responsible for making the resource.

Value (Non-Literal)	Description: creator
	Value URI Constraint:
	Occurrence disallowed
	Vocabulary Encoding Scheme Constraint
	Occurrence: disallowed
	Value String Constraint:
	Max occurrence 1
	<i>Syntax Encoding Syntax Constraint:</i>
	Occurrence: disallowed
	<i>Language Constraint:</i>
Occurrence disallowed	

Description template: Creator

Name

Property	http://xmlns.com/foaf/0.1/name
Max occurrence	1
Literal?	Yes
Definition	A name for some thing.

Value (Literal)	Syntax Encoding Scheme:
	Occurrence disallowed
	Language Constraint:
	Occurrence disallowed



<http://knowware.nada.kth.se/DCWiki/TheBookAP?action=raw>

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

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

```
<?xml version="1.0"?>
```

```
<DescriptionSetTemplate>
```

```
  <DescriptionTemplate maxOccurs="1" minOccurs="1">
```

```
    <StatementTemplate maxOccurs="1" type="literal">
```

```
      <Property>http://purl.org/dc/terms/title</Property>
```

```
      <LiteralConstraint>
```

```
        <SyntaxEncodingSchemeOccurrence>disallowed</SyntaxEncodingSchemeOccurrence>
```

```
        <LanguageOccurrence>optional</LanguageOccurrence>
```

```
      </LiteralConstraint>
```

```
    </StatementTemplate>
```

```
    <StatementTemplate maxOccurs="1" type="nonliteral">
```

```
      <Property>http://purl.org/dc/terms/creator</Property>
```

```
      <NonliteralConstraint descriptionTemplateID="creator">
```

```
        <ValueURIOccurrence>disallowed</ValueURIOccurrence>
```

```
        <VocabularyEncodingSchemeOccurrence>disallowed</VocabularyEncodingSchemeOccurrence>
```

```
        <ValueStringConstraint maxOccurs="1">
```

```
          <SyntaxEncodingSchemeOccurrence>disallowed</SyntaxEncodingSchemeOccurrence>
```

```
          <LanguageOccurrence>disallowed</LanguageOccurrence>
```

```
        </ValueStringConstraint>
```

```
      </NonliteralConstraint>
```

```
    </StatementTemplate>
```

```
  </DescriptionTemplate>
```

```
<DescriptionTemplate maxOccurs="1" minOccurs="1">
```

```
  <StatementTemplate maxOccurs="1" type="literal">
```

```
    <Property>http://xmlns.com/foaf/0.1/name</Property>
```

```
    <LiteralConstraint>
```

```
      <SyntaxEncodingSchemeOccurrence>disallowed</SyntaxEncodingSchemeOccurrence>
```

```
      <LanguageOccurrence>disallowed</LanguageOccurrence>
```

```
    </LiteralConstraint>
```

```
  </StatementTemplate>
```

```
</DescriptionTemplate>
```

```
</DescriptionSetTemplate>
```



Putting DSPs to work

- The SHAME demo
- Takes DSP-XML
- Generates an RDF editor on the fly
 - RDF conforms to DSP constraints