

Stefanie Rühle
sruehle(a)sub-uni-goettingen.de



RDF Validation in the Cultural Heritage Community

Use Cases and Analysis

Overview

- Singapore Framework
- Functional Requirements and Use Cases
- My (Fake) Example
- My Constraints
- And more Use Cases and Requirements
- Summary

Singapore Framework

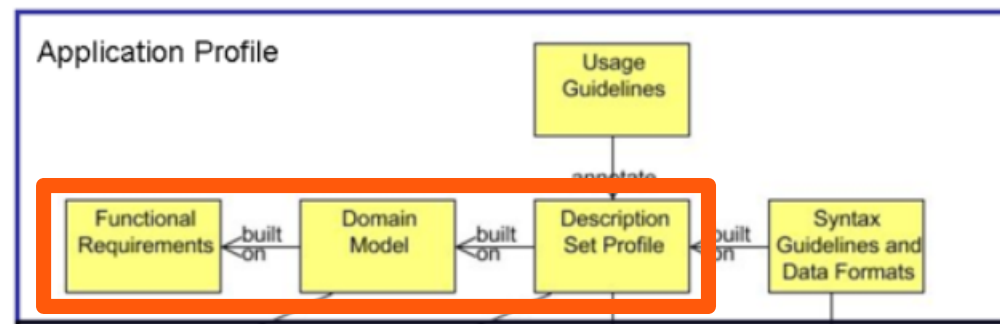
- The Singapore Framework for Dublin Core Application Profiles
 - <http://dublincore.org/documents/singapore-framework/>
 - issued 2008-01-14
- Components of a Dublin Core Application Profile
 - Functional requirements (mandatory)
 - Domain Model (mandatory)
 - Description Set Profile (DSP) (mandatory)
 - Usage guidelines (optional)
 - Encoding syntax guidelines (optional)

Functional Requirements / Use Cases

- "... a functional requirement defines a function of a system and its components."
- "Often, though, an analyst will begin by eliciting a set of use cases, from which the analyst can derive the functional requirements that must be implemented to allow a user to perform each use case."
- source: http://en.wikipedia.org/wiki/Functional_requirement

Functional Requirements and DSP

- "The functional requirements of a Dublin Core Application Profile describe the function that the application profile is designed to support ..."
- "A DSP **constrains** the resources that may be described by descriptions in a description set conforming to the application profile, the properties that may be used, and the ways a value may be referenced."
- <http://dublincore.org/documents/singapore-framework/>



My (Fake) Use Case for an Application

- Librarian
- from Hamburg
- METS/MODS Data
- DDB → DDB-EDM
- HELP!!!!!!!!!!!!
- now
- nearby

Requirements to my application

- Librarian
- from Hamburg
- METS/MODS Data
- DDB → DDB-EDM
- HELP!!!!!!!!!!!!
- now
- nearby

- Person
- Place
- Metadata specifications and projects
- Contact information
- GeoInfo

My constraints

- Person
 - Place
 - GeoInfo
 - Metadata Specifications and projects
 - Contact information
- Name of the person (mandatory) – separate family and given name (mandatory)
 - Name of the place he/she is living (mandatory)
 - with geo information using WGS84 (mandatory)
 - Metadata Standards he/she is interested in (mandatory)
 - Projects he/she is/was involved by linking to the project homepage (optional)
 - Working Groups he/she is/was a member (optional)
 - Documents he/she published (optional)
 - Current mail using mailto URI scheme or phone number (either mail or number is mandatory)

Use Cases for my Application Profile

- In my closed world
 - Template for design/implementation of my application
 - Guideline for the data entry
 - Validate the data entry
- In the open world
 - Documentation allowing any aggregator to understand my data
 - Support the data conversion/mapping by interlinking with other metadata standards (esp. DCMES) → Beispiel EDM
 - Provide a "Schema" that allows the validation of my data exports/publications and its compliance to other metadata models

Again – Use Cases and Requirements

- ... validation of my data exports/publications and its compliance
 - Use Case 1: Every instance of foaf:Person must be described with the the property foaf:interest
 - Requirement: The AP enables to check wether mandatory properties are present
 - Use Case 2: The value of the property foaf:interest must be an instance of foaf:Document
 - Requirement: The AP enables to check of which class a value is an instance
 - Use Case 3: An instance of foaf:Document must be described using either foaf:topic or foaf:primary:topic
 - Requirement: The AP enables to check wether one of the two properites exist
 - Use Case 4: The value used with foaf:topic or foaf:primaryTopic must be a value from my controlled vocabulary of metadata standards
 - Requirement: The AP enables to prove wether the value is used from this vocabulary or not.
- <http://lclystad.informatik.uni-mannheim.de/rdf-validation/>

the long and short of it

Don't start with validation rules

1. Check the use cases of your system/application
2. Define the requirements based on these use cases
3. Define the constraints needed to fulfill these requirements
4. Based on these constraints define the requirements of your application profile



Thanks for your attention and see you
later

[sruehle\(a\)sub.uni-goettingen.de](mailto:sruehle(a)sub.uni-goettingen.de)