Towards semantic asset management and Core Vocabularies for e-Government

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Five maturity levels for metadata management

Our proposal (authored by Vassilios Peristeras) is shown below:

**Level 1** Metadata Ignorance
Reusable metadata + reference data are not documented, mainly because administrations don’t consider this exercise important. This results in serious semantic IOP problems within each country as developers use ad hoc data models, metadata, codelists, taxonomies, etc for developing eGov systems.

**Level 2** Scattered and/or Closed Metadata
Reusable metadata + reference data may be documented but a) not in a centralised and organized way and/or b) they are not available and accessible as "open metadata" for developers, etc

**Level 3** Open Metadata for Humans
Reusable metadata + reference data are documented, and are made available as "open semantic assets" but are not systematically published in a reusable format (e.g. only available as pdf documents).

**Level 4** Open Reusable Metadata
Reusable metadata + reference data are centrally documented, they are published as "open semantic assets", in a machine readable format and/or provide an API for computers to access, query and reuse them. Electronic Metadata Management Systems (MMSs) are introduced (e.g. the SEMIC platform, Digitalisér.dk) to support the established metadata architecture and policies.

**Level 5** Linked Open Metadata
Semantic Assets are documented using linked data principles and are managed by advanced MMSs.
SEMIC.EU is a **collaborative** platform and a set of services to promote semantic interoperability for e-Government in Europe.

SEMIC.EU encourages public administrations to manage their code lists, taxonomies, data models as semantic interoperability *assets* and to **share** them!
SEMIC.EU is not the only repository on the Web

The scope of SEMIC.EU is limited to EU policies and activities.

Other countries have also started to host repositories and promote the publication of eGovernment vocabularies as semantic interoperability assets on the Web.

Currently, repositories are unlinked and non-interoperable.
The Semantic Web presents a huge opportunity to publish the **description metadata** of semantic interoperability assets as machine-readable data on the Web.

A common vocabulary is needed.

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1. Use Uniform Resource Identifiers (URIs) to uniquely identify semantic interoperability assets on the Web.
2. Use HTTP URLs corresponding to these URIs so that information can be retrieved.
3. Provide description metadata using open standards based on RDF(S).
4. Include links to related semantic interoperability assets, so that people can discover more.

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Tim Berners-Lee’s Linked Open Data Guidelines
http://www.w3c.org/DesignIssues/LinkedData.html
The Asset Description Metadata Schema (ADMS) will be a common vocabulary to publish description metadata about code lists, taxonomies, data models, etc. on the Web.

ADMS - Asset Description Metadata Schema

Draft Specification v0.6a for Community Consultation, 2011-03-17

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Abstract

The Asset Description Metadata Schema (ADMS) tackles the issue of a federation of repositories for semantic assets to make de-centralized resources available through a single point of access. ADMS can be used as a common language to describe semantic artifacts stored in separate systems. It can also provide some directions for new initiatives to create similar repositories. In this way, ADMS will facilitate the federated use of semantic resources, especially those used for and by public administrations.

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Version 0.6a!
Initial draft to be further elaborated and endorsed by the EU Member States
Asset Description Metadata Schema (ADMS): initial draft

Version 0.6a!
Initial draft to be further elaborated and endorsed by the EU Member States
Design process and methodology

ADMS draft specification

Consensus building on ADMS

ADMS v1

Improved search on joinup.eu based on ADMS

Federation of semantic asset repositories

Roadmap

September 2011

October 2011

March 2012

April 2012

April 2012

May 2012
1. Encourage Member States to adopt policies, processes, and repositories for semantic asset management at national, regional or local level;

2. Refine and build consensus on an interoperable way to describe the semantic asset metadata, what we like to call the Asset Description Metadata Schema (ADMS);

3. Setup a federation of semantic asset repositories with interested Member States that uses the above-mentioned ADMS specification as a common format for the exchange of asset description metadata.

4. Encourage Member States to endorse and reuse the ADMS specification.
Work Ahead

Asset Description Metadata Schema (ADMS)

Enabling a federation of semantic assets repositories;

Using common semantics to describe a “semantic asset”

Need a common schema for assets description or an Asset Description Metadata Schema (ADMS)
**A Core Concept is a simplified data model** that captures the minimal, global, generic, country and domain neutral characteristics/properties of an entity.

A Core Concept can be represented as **Core Vocabulary** using various formalisms (e.g. XML, RDF).

A Core Concept/Vocabulary is highly reusable and extensible.
1. Raise **awareness** about the importance to agree on a small set of simplified, reusable, context-free Core Vocabularies as a fundamental semantic basis for interoperable electronic public services;

2. Specify a **process and methodology** for developing Core Vocabularies;

3. Identify a list of 20-30 Core Vocabularies to be elaborated in the future and agree on two additional Core Vocabularies to be specified first;

4. Finalise and **build consensus** on the Core Person vocabulary

5. Encourage Member States to **endorse** and reuse the Core Vocabularies.
The new ISA Collaborative Platform is about to go live

Mid October 2011, the OSOR.eu and SEMIC.eu portals will merge into the new ISA Collaborative Platform to offer their users a single integrated platform with an enhanced range of value-added services.

OSOR.EU + SEMIC.EU = joinup

http://joinup.ec.europa.eu

Thank you!