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CESAR

VIRTUAL MEETING 2012.01.27

TECHNICAL ASPECTS OF THE FEDERATION

Meeting minutes

CESAR Virtual Meeting on the technical aspects of the federation – Meeting minutes			
Venue	Virtual Meeting on Arkadin	**Meeting date**	27/01/2012
Author	SG	**Meeting time**	14:00 – 16:00
Reviewed by		**Issue date**	01/02/2012
Status	for review	**Version**	

Attendees	Abbreviation	Organisation
Paul Polydoras	PP	GR - Ubitech
Adam Arndt	AA	DK - Ministry of Science
Sebastian Sklarss	SS	DE –]init[AG
Makx Dekkers	MD	ES – AMI Consult
Arnold van Overeem	AVO	NL - The Open Group
Erik Tilburgh	ET	EU – DG DIGIT
João Rodrigues Frade	JRF	BE – PwC Belgium
Robin Cover	RC	US - Oasis
Willem van Gemert	WVG	EU - OP
Stijn Goedertier	SG	BE - PwC Belgium
Gofran Shukair	GS	IE – Digital Enterprise Research Institute (DERI)
Vasilios Peristeras	VP	EU – DG DIGIT
Andrea Perego	AP	EU – INSPIRE
Marco Fichera	MF	BE - PwC Belgium

Excused attendees	Abbreviation	Organisation
Dimitris Alexandrou	DA	GR - Ubitech
Andreas Gehlert	AG	DE - Federal Ministry of Interior - Germany
Andy Waters	AW	UK - National Police Improvement Agency
David Mitton	DM	UK – Listpoint The Code List Management Service
Priit Parmakson	PP	EE - Estonian Information System's Authority
Phil Archer	PA	UK – W3C
Peter Schmitz	PS	EU – OP
Oriol Bausà Peris	OBP	EU - INVINET on behalf of CEN
Nikos Loutas	NL	IE – Digital Enterprise Research Institute (DERI)
Douglas Hill	DH	GS1

AGENDA:

Agenda Item	Owner	Subject
1	SG	Welcome, details on the conference system, presentation of the agenda and roll call
2	VP	Background on ADMS and federation of semantic asset repositories
3	MF	How to join the federation step-by-step, PoC in June
4	SG	Introduction to mapping to ADMS [this will be the main topic of the next meeting]
5	MF	Proposed solutions for ADMS protocol
6	All	Questions
7	JRF	Conclusions and next steps

Meeting minutes

1. Welcome, details on the conference system, presentation of the agenda and roll call

2. Background on ADMS and federation of semantic asset repositories

Discussion

- VP introduces the background to ADMS and the federation of semantic asset repositories:
    - The term Semantic Interoperability was coined by the European Commission in the European Interoperability Framework ([EIFv2](#)). Communities are shifting the attention from technical interoperability agreements to semantic interoperability agreements.
    - In this context, the ISA Programme defines **semantic interoperability assets** as highly reusable metadata (e.g. xml schemata, generic data models) and reference data (e.g. codelists, taxonomies, dictionaries, vocabularies) that are used for eGovernment system development.
    - Governments and standardisation organisations generate many semantic interoperability assets... How can the ISA Programme promote the sharing and reuse of semantic assets?
    - As the ecosystem is diverse and semantic assts are in many places, one does not have an overview of which semantic interoperability assets are available from a single point of access. Therefore, the ISA Programme intends to enable a federation of semantic asset repositories
    - To setup the federation, we require a specification to exchange descriptions about semantic assets: the **Asset Description Metadata Schema**.
    - The ADMS Working Group has so far had a broad interest and support of many experts. VP thanks all for their involvement and says that we remain open to new ideas for further improving the work.
    - The ISA Programme wants to deploy the federation by June 2012 and some MS repositories and standardisation organisations have shown an interest to join the federation.
    - The purpose of this meeting is to see who participates in the first wave of the federation and discuss the technical aspects of the federation.
    - VP says that his requirements for the federation are to have an open architecture, so that it does not impose any technical solution to the federation partners.
    - VP also announces that the lessons learned from the federation will be documented in the CESAR community website.

Documentation

[2012_01_26 Intro CESAR webconf_v0.03.pdf](#)(540.72 KB) – Background on ADMS and federation of semantic asset repositories

3. How to join the federation step-by-step, PoC in June

Discussion

- JRF says that there are many organisations who maintain semantic asset repositories. There is no common way to find a semantic asset and one misses the overview.
    - o The federation can provide a single access point to explore and find the assets located in disparate asset repositories.
- JRF says that the CESAR community was created to share experiences with setting up repositories, with mapping to ADMS and joining the federation.
- JRF points out that organisations who join the first wave of the federation will give them visibility as being the first movers. He also says that organisations will be allowed to expose the federated search on their own portal, through a search widget and querying API on Joinup.
- JRF explains a possible scenario of how one could join the first wave of the federation:
    - o **1. Kick-off – March (estimate 1 day)**: first we organise a meeting between our team and your team to identify barriers and enablers.
    - o **2. Mapping – March (estimate 5 days)**: analysing a mapping of the descriptions of your semantic assets to ADMS.
    - o **3. Export – March/April (estimate 10 days)**: export your description metadata to an ADMS file (in XML or RDF)
    - o **4. Transmit – May (estimate 1 day)**: send the ADMS file to the Joinup repository
    - o **5. Federated – June** : What is the benefit for you joining the federation?
- JRF says that participating in the first wave of the federation could take less than 20 days in total.
- VP says that the 20 man days is really a rough estimate. These days can easily become less. They mapping may take less than 5 days. The export can also take less time. If there is already an export of the metadata you can more quickly export to ADMS.
- AA says that he was involved in the federation prototype with DERI. He thinks that the estimates would be higher in the case of Digitaliser.
- WVG says he will have to look into the ADMS to estimate the mapping efforts. He says they have limited resources.
- JRF says that the adjustment of scope or timing can be discussed. Reducing the scope is beneficial, at least we can learn from setting up the federation.

Documentation

Presentation of Virtual Meeting 27-01_0.4.pdf(818.53 KB) - How to join the federation step-by-step

4. Introduction to mapping ADMS (this will be the main topic of the next meeting)

Discussion

- SG points out that the public comment period on the draft ADMS specification ends on February 6 and invites the participants to provide their feedback on the specification.
- SG introduces a mapping template that can be used to provide feedback on ADMS. Two forms of analysis are possible:
  - One way is for repository owners to check whether a semantic asset can be meaningfully described with ADMS.
  - A second way is for repository owners to check whether the descriptions in their repository can be mapped to the ADMS specification.
- SG announces that the mapping exercise is essential to make the following decisions for the federation:
  - Minimum set of ADMS properties and relationships to be exchanged within the federation
  - Minimum set of controlled vocabularies that must be respected
  - XML and/or RDF
  - URIs and/or codes

Action Items	Responsible	Deadline
SG to organise a follow-up meeting to discuss the mappings	SG	2012-02-07

Documentation

- Presentation of Virtual Meeting 27-01_0.4.pdf(818.53 KB) - Mapping to ADMS
- ADMS_Mapping_Template_v0.03.zip(597.79 KB)

5. Proposed solutions for ADMS protocol

Discussion

- MF explains four solutions for the ADMS exchange protocol
  - **Solution 1 – Rest Web Services**: Local repositories send the description metadata to a Web service on the central repository.
  - **Solution 2 – E-mail**: Local repositories send the description metadata via e-mail to the central repository.
  - **Solution 3 – Harvesting**: Local repositories publish the description metadata on the Web, the central repository harvests the metadata descriptions from there.
  - **Solution 4 – Upload on Joinup**: Local repositories manually upload the asset description metadata (spreadsheet or RDF/XML format) on the

central repository using a Web user interface.

- MF weighs off the pros and cons of each solution (see Presentation of Virtual Meeting 27-01_0.4.pdf).

- VP says that we intend to expose a querying API on the central repository and want to widgetize all querying possibilities, so that it can be embedded in any web platform.

- JRF says that multi-channel solutions should be supported to lower the threshold for joining the federation.

- SS says that the federation must impose a low threshold. Pull architecture might help to achieve this. For example, XRepository is hosted in a highly secure data centre; it is not possible to easily install a web service client in the data centre.
    - AA agrees that pull architecture would be preferable. They already have a RESTful API.
    - WVG says they need to define an "export profile" from the CELLAR repository, to expose metadata of our Authorisation Tables.
    - RC says that OASIS is only now working on a metadata model for its own standards and specifications.

- AP says that the AtomPub protocol would be a possible exchange protocol to implement both a push and pull architecture.

- SS has an issue about the scope of ADMS and wonders whether a **peer-to-peer architecture** (Solution 3) should not be encouraged. Semantic asset repositories in Germany and Austria might for instance setup a metadata exchange among themselves and by-pass the EU-level federation.
    - JRF answers that peer-to-peer is absolutely possible, and ADMS is an enabler into that direction. The federation will not prevent this at all. Even standardisation bodies will for the first time be able to share descriptions about the standards and specifications.
    - VP says that the discussion is also how to reuse ADMS at the national or bi-lateral level.

- AA (DK) is in favour for solution 3: metadata harvesting to be open to 3rd parties
    - AP (JRC for INSPIRE) agrees.
    - AVO (The Open Group) agrees. They already have the RDF available and want it to be openly available to everybody.
    - GS agrees to favouring solution 3
    - GS (DERI) agrees and says she can give advice from a technical point of view.
    - MD says that on the long term solution 3 is probably the best solution in the case where RDF is already available.
    - PP (Ubitech) says that they do not see security issues and therefore go for the solution number 3.
    - SS agrees on solution 3.

- WVG says that he is in favour of the harvesting approach... but he remarks that for the pilot another solution might be also favourable.
    - MD agrees. Sometimes it might be better to work in two phases. First it might be better to work with FTP and at a later stage move towards a harvesting solution.

- o   VP agrees. Although the harvesting solution is preferable, we still need to have a door open for other solutions.
- o   AVO agrees.
- PP says that for testing purposes, he would go for number 4, because at transfer time, people would get a feedback on the validity of the uploaded file.
  - o   AP says that validity of the exchanged metadata is important.
  - o   VP says that we will be monitoring what is sent to the federation, for sure.

Documentation

[Presentation of Virtual Meeting 27-01_0.4.pdf](818.53 KB) - Proposed solutions for the ADMS protocol

6. Questions

Discussion

- AVO asks whether asset descriptions should be shared with the federation in the format of a file and whether a new ADMS file need to be exchanged, every time an asset is updated.The Open Group has two million semantic assets in its repository.
  - o   VP argues that for some organisations it might be a solution to embed metadata inside HTML pages of specifications. For example, the Greek National Interoperability Framework has a lot of information, but all this information is in HTML. In this case, the alternative could be to annotate the HTML with RDFa annotations.
  - o   AVO says that The Open Group already has all its metadata available in RDF. He will share this metadata with VP.
- PP asks how often the metadata would need to be exchanged with the federation.
  - o   JRF says that the frequency of updating the descriptions is up to the participating repositories to decide.
  - o   VP points out that a semantic asset catalogue is often not a time-critical system. So we can accept a time scale of hours or even days. The federation will also deal with files that are in the size of megabytes. In consequence, we do not need an online processing system with a high throughput that does real-time processing.
  - o   AVO agrees and says that for The Open Group metadata changes occur on average every three months. On the other hand, a URI solution (polling) could ensure less latency.
- AVO says that the next version of UDEF is planned next week. This will increase number of potential assets to over 2 million (in each of 3 currently published languages) and include an upgrade enabling satellite repositories with another order of magnitude.
- PP asks how would the security of the transfer would be set up for solution 1? Confidentiality is not important, but integrity might be. For a first implementation, he thinks that security is not that important.… He says that they are experts in

secure communication between repositories.

- o JRF says that there is no private data... confidentiality does not seem to be important

- PP asks how often there will be harvested.
    - o MF says that the frequency of update can be discussed and this is a requirement that should come from the local repository.
    - o AVO says that minimum harvesting frequency for UDEF would be between 4 and 12 times a year.

Action Items	Responsible	Deadline
Send The Open Group RDFfile with the metadata descriptions to VP (done).	AVO	2012-02-07

7. Conclusion and next steps

Discussion

- JRF explains the next steps:
    - o JRF asks the participants to review the Draft ADMS specification, and explore the mapping template.
    - o JRF asks the participants to decide whether they want to participate in the first wave of the federation and also define their business / technical requirements for the federation and confirm their preferred solution.
    - o JRF announces that he will invite the participants to an individual conference call to help you to be part of the federation
    - o JRF says that the meeting minutes will be shared on the webpage of the virtual meeting.

Action Items	Responsible	Deadline
Share mapping experiences	All	2012-02-07
Send the business and technical requirements for the federation	All	2012-02-07
Organise a call to discuss on-boarding.	All	2012-02-21