"Open discussion of the impact of Semantically-enabled data and techniques within eGov projects, e.g. Data.gov

Workshop on Improving Access - Financial Data on the Web
Brand Niemann, US EPA
Invited Expert to the W3C eGovernment Interest Group
October 6, 2009
Data.gov Concepts of Operations

• Key Excerpt (September 4th DRAFT):
  – As semantically enabled data concepts are matured and pilots are successfully executed, the Data.gov team will provide specific guidance to help agencies implement semantic markup within their datasets. Specifically, the Data.gov team will not only leverage semantically enabled techniques within the Data.gov site, but will help agencies implement semantically enabled data within their datasets so that the datasets can be better leveraged not only by Data.gov but also by other end users of the data.

• What is your reaction to this?
Open Linked Data

• Key Concepts of RDF and OWL:
  – Works for structured, semi-structured, and un-structured information.
  – Metadata and data travel together.
  – Machine-processible.
  – Supports relational – like joins over the network.
  – Inferencing / reasoning (still in development for scalability).
# Federal Segment Architecture Methodology Step 4: Principle 5*

<table>
<thead>
<tr>
<th>Data (markup)</th>
<th>Business</th>
<th>Presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Silos</td>
<td>“One-Offs”</td>
</tr>
<tr>
<td>XML / XQuery</td>
<td>Collaboration</td>
<td>“Author Once-Use Many”</td>
</tr>
<tr>
<td>RDF / SPARQL</td>
<td>Relational-like Joins</td>
<td>Federation</td>
</tr>
<tr>
<td>RIF / SPIN</td>
<td>Rules</td>
<td>Logic</td>
</tr>
<tr>
<td>OWL</td>
<td>Reasoning</td>
<td>Inferencing</td>
</tr>
</tbody>
</table>

* Evolution based on September 2009 DRAFT Data.gov CONCOPs
A Little History of How We Got Here

- **SOA CoP** and **SICOP** Conferences and Pilots: SOA, Semantic Interoperability, and XBRL, NIEM, etc.
  - Pilots for the 9th SOA for eGov Conference, April 5th, 2010
- **ISE EA Statement on RDF/OWL**: Jeremy Warren at EA2009 agreed still the goal!
- **SemTech 2009**: Diane and Dave Conversion of XBRL to RDF.
- **W3C eGov SIG**: Series of Meetings and Notes.
- **SICoP Special Conference February 17th**: Netherlands Demo and TQ - SPIN Demo.
- **DRM CoP Work on DRM 3.0 and Pilots**:
  - **Google: Federal data population data** - two hits illustrate DRM 3.0 concepts - difference from Census hit - real data and reusable (Web 2.0/3.0). Data Model Ontology for the Government (Hay).
- **Semantic Web Meetups**:
  - **May 13th** in Washington, DC
  - 1000s working around the world on Open Linked Data

* See last slide for the URIs for the above hyperlinks
Contact Information

• niemann.brand@epa.gov
• 202-564-9491
• http://semanticommunity.net
• http://www.twitter.com/bniemannsrm
References for slide 5

Provided here as hyperlinks weren’t preserved in export to PDF

- A CoP  http://federalsoa.wik.is/
- SICOP  http://semanticommunity.net/
- NSF Accounting Ontology Workshop 2008  http://nsfaccountingontology.wik.is/
- W3C eGov SIG  http://www.w3.org/2007/eGov/IG/wiki/Main_Page
- SICoP Special Conference February 17th  http://bit.ly/5sOO
- Semantic Web Meetups  http://semweb.meetup.com/31/