Convergence of Semantic Naming and Identification Technologies?

A Joint Open Group, Federal Semantic Interoperability Community of Practice (SICoP), and Federal Metadata Management Consortium Conference

April 27, 2006

Hilton Crystal City, Arlington, Virginia

Welcome

- Co-Organizers:
  - Dr. Christopher J. Harding, Forum Director for SOA and Semantic Interoperability, THE OPEN GROUP.
  - Brand Niemann, Chair, Federal Semantic Interoperability Community of Practice (SICoP).
  - Diana Young, FAA, Chair, Federal Metadata Management Consortium (FMMC).
    - With Denise Warzel, NIH, as FMMC Official Representative.
      - Note: FMMC participation does not imply an endorsement by the FMMC or any of the member agencies of UDEF or SICoP, but rather an opportunity to share experiences, ideas, and advances in data management practices.

Welcome

- Semantic interoperability is a major issue for government organizations and commercial enterprises today. How to manage and relate information in different forms is a big problem, which must be solved if we are to achieve Boundaryless Information Flow™. There are several different and apparently conflicting approaches, and as yet no agreement on a solution. But perhaps it is now time to start looking for consensus.
- Announcements:
  - This event is co-located with The Open Group's Architecting to the Edge™ Conference (April 24-26th).
  - On the day following the meeting, there are two extra Semantic events (April 28th):
    - Meeting of the SICoP/SWIM WG (10 a.m. – 12 noon) (Semantic Wikis and Information Management).
    - Tutorial on the Semantic (Bayesian) Web by Professor Ken Baclawski (2-5 p.m. at the Hilton Crystal City Hotel).

Purpose

- Within the overall conference theme, the primary sub-topics will address the candidate semantic naming and identification standards (e.g., Semantic Web, RDF/OWL, Ontologies, UDEF, ISO/IEC 11179, PURLs, etc.) and example use cases (e.g., RFID, IPV6, National Cancer Institute, etc.). At the conclusion of the day's events, a panel of all the speakers will be used to address the question whether convergence of these semantic naming and identification standards and technologies is possible or practical.

Purpose

- In essence:
  - RFID is about unique identification of physical objects (tags).
  - RDF leverages URIs as universal, unique identifiers, to describe all kinds of resources (identifiers).
  - IPV6 is about unique identification of devices attached to the Internet (addresses).
  - UDEF is about unique semantic naming of anything to make it easier to find and use (names mapped to addresses).
  - ISO/IEC 11179 is about defining and registering data element concepts (metadata registry).
  - Persistent Uniform Resource Locators (PURLs), Digital Object Identifiers (DOIs), Handles, and Archival Resource Keys (ARKs) are about persistent and searchable identifier schemes (identifiers).

The Open Group

- Vendor-neutral and technology-neutral consortium, whose vision of Boundaryless Information Flow™ will enable access to integrated information, within and among enterprises, based on open standards and global interoperability.
- Enterprise architecture is a primary means for making the vision a reality
- Semantic Interoperability is crucial for Boundaryless Information Flow™
- And it must be based on **Open Standards**

The Open Group

- Delivers conferences, architecture methods, guides, profiles and standards
  - Semantic Interoperability conference, Houston, Tx, October 2005
  - Semantic Interoperability Working Group
  - UDEF Forum
- Funded through membership, certification services, and consortia services
- Over 200 member organizations, with over 6,000 participants in The Open Group activities from 19 countries
- www.opengroup.org

SICoP

- The Semantic Interoperability Community of Practice (SICoP) has made considerable progress towards implementations of semantic technologies and web standards in the U.S. government with a series of white papers, conferences, and pilot projects.
    - White Papers: February 16, 2005, Introducing Semantic Technologies and the Vision of the Semantic Web ("DRM of the Future") and January 6, 2006, Semantic Wave 2006: Executive Guide to the Business Value of Semantic Technologies.
    - Conferences: February 9-10, 2006, 4th Semantic Interoperability for E-Government Conference.
    - Pilot Projects: Data Reference Model 2.0 Implementation (Making it Real) and SWIM (Semantic Wikis and Information Management) WG.

See http://colab.cim3.net/cgi-bin/wiki.pl?SICoP

SICoP

- DRM 2.0: Vendor Implementations (5 so far), Recognitions from OMB and the Federal CIO Council Leadership, Press Coverage, State Adoption (3 so far), Industry Adoption (Lockheed Martin, etc.), and the Relationship Building That Led to this Conference:
  - SICoP Special Recognition to Ron Schuldt For the "Disaster Response Pilot Demonstrating Semantic Naming Technology for Web Services"
  - Conor Shankey is a member of the SICoP SWIM WG and a leading early implementor of a Semantic Wiki.
  - Garry Duvall was a featured presentor at the recent FCW RFID/Wireless Conference.
  - Denise Warzel, Nancy Orvis, and I are members of the Federal Health Architecture's Data Architecture WG using DRM 2.0.
  - CISCO is supporting the CIO Council AIC Emerging Technology Subcommittee's (of which I am a member) IPV6 Working Group and Neil Lovering is representing CISCO today as one of their top Distinguished Engineers.

The FMMC – What Is IT?

- The Federal Metadata Managers Consortium is an interagency group of data mangers from over 30 federal government agencies.
  - AOT-300, in partnership with the Department of Housing and Urban Development (HUD), co-founded this interagency organization.
  - Originally called the Federal Data Registries Users Group (FDR-UG).
- FMMC's vision:
  - Improve the quality and efficiency of Federal information through the practice of metadata management principles.

The FMMC – How It Started?

- HUD needed a 11179 compliant metadata registry, sought to share FAA's.

- FAA's data registry – originally GOTS software.

- Discovered – License issue and other contractor & software issues.

- Discussed possibility of other agencies having similar problems and need to share.

- Scheduled exploratory meeting.

The FMMC – Where It Is Going?

- Committed to support / guide FEA DRM-WG.
- Potential for governance role in FEA DRM.
- Federated Metadata Registries.
- Shared Metadata and Metadata Registries.
- Federal CIO Council Recognition.
- Influence evolution of ISO/IEC Metadata Standards.
- Influence vendor product development.

FMMC Membership Composition

Departments / Agencies	Operating Administrations
Housing & Urban Development	Federal Aviation Administration
Health & Human Services	Bureau of Census
Veterans Affair	Bureau of Labor Statistics
State Department	National Institutes of Health
Navy	Environmental Protection Agency
Agriculture	Centers for Medicare and Medicaid Services
Homeland Security	U.S. Patent and Trademark Office
Defense	Centers for Disease Control
Interior	Federal Transit Administration
National Security Agency	General Services Administration
National Sciences Foundation	National Inst. For Standards and Technology
Federal Deposit Insurance Corp.	National Cancer Institute
Energy	Federal Highways Administration
U.S. Postal Service	Security Exchange Commission

Agenda

- 08:30 Welcome and Introductions
- 08:45 Opening Keynote: Convergence of the Semantic Naming and Identification Technologies - What are the Choices - What are the Issues?
  - Ron Schuldt, Senior Staff Systems Architect, Lockheed Martin Enterprise Information Systems.
- 09:45 Tooling to Implement the Federal Enterprise Architecture Data Reference Model and a Knowledge Reference Model
  - Conor Shankey: CEO, Visual Knowledge.
- 10:30 Break
- 11:00 RFID/Wireless Coordination and Collaboration
  - Garry Duvall, OASD.
- 11:45 Consolidated Health Informatics - A Use Case
  - Denise Warzel, Assistant Director caDSR, National Cancer Institute, Center for Bioinformatics; and Nancy Orvis, OASD.
- 12:30 Lunch Break

Agenda

- 13:30 The Impact of IPV6 on Semantic Interoperability
  - Neil Lovering, Cisco.
- 14:15 Convergence of Semantic Naming and Identification Technologies - the Key Questions
  - Brand Niemann, Chairman of the Federal Semantic Interoperability Community of Practice (SICoP), and Chris Harding, Forum Director for SOA and Semantic Interoperability, The Open Group will identify the issues as they see them within the context of Semantics Within DRM 2.0 and Enterprise Architecture.
- 14:45 Is Convergence Possible or Practical?
  - The speakers will form a panel to address points raised by the meeting in a discussion moderated by John Yanosy, chair of the SII WG of the Network Centric Operations Industry Consortium (NCOIC).
- 15:45 Conclusions from the meeting and Next Steps
  - Brand Niemann and Chris Harding.
- 16:00 Close

Logistics

- Please use the microphone and identify yourself.

- Lunch will be on your own, but we encourage networking at lunch.

- We will publish the proceedings of this Joint Conference.