"CODS" –
a Collaborative Ontology Development Service & Infrastructure

by

Peter Yim (CIM3)

October 11, 2007 – Ontolog Forum

(v 1.00)

ref. http://ontolog.cim3.net/cgi-bin/wiki.pl?ConferenceCall_2007_10_11

Introduction

- Stanford Center for BioMedical Informatics Rsearch (BMIR), formerly Stanford Medical Informatics (SMI) - developer of Protégé
  - An open-source ontology tool platform
  - Comprehensive OWL / RDF / Reasoning support
  - Active community with tens of thousands of users (80,000+ registrations)
  - Has been used to edit ontologies with tens of thousands of concepts

- CIM3 – the ISP for CWEs (Collaborative Work Environments)
  - Mission: to enable more effective distributed collaboration and virtual enterprise through bootstrapping collective intelligence over the Internet
  - Products/Services: providing a robust CWE infrastructure that enables high performance distributed project teams, virtual enterprise partners and communities of practice to work
  - Host to the Ontolog-Forum – an international CoP focusing on the practical issues of both formal and informal ontologies, and their adoption into mainstream application through standardization

- Ontolog
- CWE-dev
- Bootstrap
- Protégé
- eGov: colab
  - Expedition Workshop
  - DRM project work & public forum
  - SICoP
    - ONTAC
    - COSMO
  - Chief Architects Forum
  - GeoSpatial CoP
  - Intergovernmental Advisory Board
- NIST: interop
- IMS-US
- Millennium Project (AC/UNU)
- Digital Art Ontology
- Hosting of:
  CODS, SIGMA-kee, SUMO, kifb, purpleslurple,

COLAB - cwe

COLAB – collaborative work environment

Portal

Wiki

Forum

Shared File

Community...
Community...
Community...
Messa...
Subsc...
To Po...

collaborative work environment

SINE - Sustainable Intergovernmental Network Exchange

trator for password to upload)

ONTOLOG – collaborative work environment

Open, International, Virtual Community of Practice on Ontologies

Community Portal: http://ontolog.cim3.net/

Community Wiki: http://ontolog.cim3.net/wiki/

Community Forum:
Message Archives: http://ontolog.cim3.net/forum/ontolog-forum/
Subscribe/Unsubscribe/Configure: http://ontolog.cim3.net/mailman/listinfo/ontolog-forum/
To Post: mailto:ontolog-forum@ontolog.cim3.net

@sine.cim3.net)

Community Repository:
Shared File Workspace:
http://ontolog.cim3.net/file/pub/
http://ontolog.cim3.net/file/resource/   *(member password required to upload)*
http://ontolog.cim3.net/file/work/   *(member password required to upload)*
http://ontolog.cim3.net/file/community/ *(member password required to access)*
http://ontolog.cim3.net/file/admin/ *(administrator password required to access)*

quired to access)

Google [   ] [Search]
⦿ Search ontolog.cim3.net   ○ Search cim3.net   ○ Search WWW

This collaborative work environment is hosted on the CIM3.NET infrastructure.

CODS

- a Stanford-BMIR & CIM3 joint initiative

- to develop and host an open Collaborative Ontology Development Service (CODS) for the ontology community

- first announced back in Sep-2005 (SICoP Meeting), as well as Oct-2005 (NCOR Inaugural Event) and Feb-2006 (4th Semantic Interoperability for eGovernment Conference)

- pilot projects in the interim

- Launching the service to the Ontolog Community today!

4 basic pieces to make up an Open CODS

- A robust Infrastructure – server(s), hosting facility, adequate Internet bandwidth, high availability, security against malicious access and tempering

- A good set of Ontology Development Tools – rich suite of tools, extensible, field proven, active user community

- A collaborative work environment (groupware + knowledge repository) for the user/project community

- A Repository and Registry to make the ontology work products available to the rest of the world

Software Featured in CODS

- Protégé Multiuser Server
- PomptTAB (Protégé plugin)
- Collaborative Protégé (Protégé plugin)
- RDBMS backend (MySQL or Oracle)
- Linux platform
- Apache web server & WebDAV server
- Augmentation of the team collaboration with the Collaborative Work Environment (CWE) suite of open source collaboration tools (for portal, archived discussion, wiki & file-sharing workspace)
- Subversion server & client (also TortoiseSVN client for Windows)
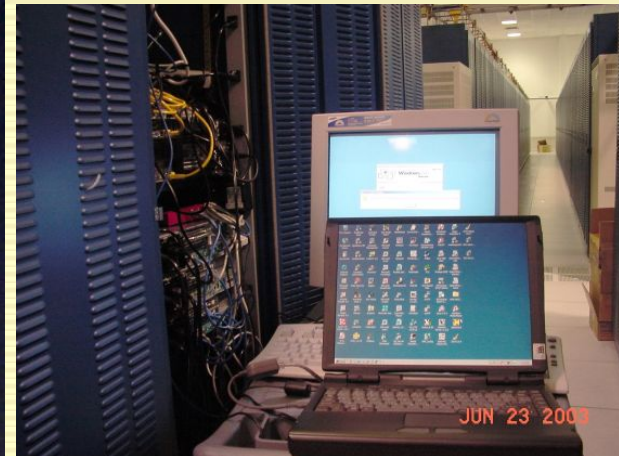
Hosted Infrastructure

- Product features:
  - CWE – "open"
  - Robust, scalable, enterprise performance
  - Secured, Fault Tolerant and High Availability
  - Platform neutral (PC's, Mac's, Linux, Unix, …)

- Infrastructure:
  - Tier-1 hosting facility (in Fremont, CA)
  - 100Mbps bandwidth into the Internet backbone
  - Backbone: multiple OC48 + Gige self-healing fiber-ring
  - Server now runs on a 64-bit x86 Dual Processor (SMP) machine with 8GB of memory

Our Hosting Facility

An Augmented Approach

- We combine the strengths of both the Protégé ontology tools platform, and CIM3's infrastructure to provide a collaborative ontology development environment for *both* humans and machines, optimizing between (sometimes conflicting) objectives like:
  - Human expressiveness vs. machine rigor
  - Average user vs. power user expectation
  - Secured system vs. open system
  - Transaction system vs. groupware system behavior
- Our intent is to foster collaboration and shared understanding
- We are trying to spur innovation, as well as organic or emergent behavior in the user communities and teams

over to Dr. Tim Redmond
to take us through the steps on
how one can do "Distributed
Ontology Development with
Protégé" and CODS

What Next?

- CODS is now available to community member of Ontolog & Protégé

- New forum (archived mailing list) just started: [cods-user] for the CODS user community

- open community project welcome!

- Further refinement of process, tools, infrastructure, ...

- Funding solicited to support the cause – for development of both the open source tools and the infrastructure

- we need a volunteered [cods-admin] team to administer this service

- Further pursuit of a world-class Registry/Repository solution

  - suggestion to start a task force to take this forward

  - contacting potential organizing committee members, please suggest/nominate candidates

  - look out for a launch meeting ... if this manages to take off!

To pursue any of the above items, please email: **Peter Yim** **peter.yim@cim3.com**

Q & A / Discussion