

# Collaboration Enabling QUOMOS

How community interest built into a formal  
standardization activity

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# QUOMOS

Quantities and Units of Measure Ontology Standard  
Hosted by OASIS

“...to develop an ontology to specify the basic concepts of quantities, systems of quantities, and systems of measurement units and scales, various base dimensions and units of the SI system, metric prefixes (nano-, micro-, milli-, kilo-, ...), rules for constructing various derived units, and designations of the most common derived units (joules, watts, ...) for use across multiple industries.”

# Timeline of QUOMOS

- Long-time passion of Frank Olken of the Lawrence Berkeley Laboratories (currently at NSF)
- **January 15, 2009** – Launch event for the 2009 Ontology Summit, (see [http://ontolog.cim3.net/cgi-bin/wiki.pl?ConferenceCall\\_2009\\_01\\_15](http://ontolog.cim3.net/cgi-bin/wiki.pl?ConferenceCall_2009_01_15))
  - Ontology Summit lasted from January 15, 2009 - April 7, 2009 as a virtual dialogue, ending with a 2-day physical meeting at NIST, Gaithersburg, MD
  - Theme: Toward Ontology-based Standards
  - Goal: To galvanize the ontology and standards communities by articulating the benefits each can bring to the other
  - Outcome: Nine projects were identified (see [http://ontolog.cim3.net/cgi-bin/wiki.pl?OntologySummit2009\\_Communique](http://ontolog.cim3.net/cgi-bin/wiki.pl?OntologySummit2009_Communique))
  - One of those nine projects was “A harmonized ontology of units and dimensions”

# Timeline of QUOMOS

- **June 19, 2009** – Follow-on virtual panel discussion: "Toward a Units of Measure Ontology" (see [http://ontology.cim3.net/cgi-bin/wiki.pl?ConferenceCall\\_2009\\_06\\_19](http://ontology.cim3.net/cgi-bin/wiki.pl?ConferenceCall_2009_06_19))
  - A number of existing ontologies for units and measures were brought to the table
- ...much email discussion
- **September 24, 2009** – Strawman units-of-measure virtual discussion (see [http://ontology.cim3.net/cgi-bin/wiki.pl?ConferenceCall\\_2009\\_09\\_24](http://ontology.cim3.net/cgi-bin/wiki.pl?ConferenceCall_2009_09_24))
- ...more email discussion, → decision to develop the standard within OASIS (see <http://ontology.cim3.net/forum/uom-ontology-admin/2009-10/msg00002.html>)
- **October 30, 2009** – Units-of-Measure Ontology Standard Workshop (see [http://ontology.cim3.net/cgi-bin/wiki.pl?UoM\\_Ontology\\_Standard/Workshop\\_2009\\_10\\_30](http://ontology.cim3.net/cgi-bin/wiki.pl?UoM_Ontology_Standard/Workshop_2009_10_30))

# Timeline of QUOMOS

- **November 19, 2009** – Review and adoption of QUOMOS TC Charter (see [http://ontolog.cim3.net/cgi-bin/wiki.pl?UoM\\_Ontology\\_Standard/ConferenceCall\\_2009\\_11\\_19](http://ontolog.cim3.net/cgi-bin/wiki.pl?UoM_Ontology_Standard/ConferenceCall_2009_11_19))
- **November 20, 2009** – Submission of charter to OASIS
- **December 11, 2009** – OASIS QUOMOS TC Call for Participation
- ...several organizing virtual meetings
- **January 21, 2010** – First OASIS QUOMOS TC Meeting
  - Election of co-chairs: Frank Olken & Steve Ray
- Future: Take the work done so far and create an OASIS standard for units and measures

# Lessons learned

- It is possible to formulate, incubate, execute and deliver real work with a distributed, virtual community
- Technologies that help include an interconnected set of wiki, chat, archived email, remote screen tools, with a few physical meetings
- Use of a chat room in parallel with a teleconference and shared slides has worked extremely well for efficiently getting broad input in a recorded form
- Credit should go to Peter Yim of CIM3 for providing the collaboration infrastructure that enabled this particular project to get launched
- The rest of the credit goes to all the participants who gave their time, expertise, and intellectual property to make this effective

# Issues to Consider

- Tradeoff between openness & candor
  - Audio recordings vs. minutes
- Copyright of standards
- Long-term persistence of archives
- Transitioning of infrastructure to OASIS

# Persistent Archives

- Complete archives of meetings (audio recordings, chat transcripts, slide presentations), email discussions, announcements, communiqués, are always available at
  - <http://ontolog.cim3.net/cgi-bin/wiki.pl?OntologySummit2009>
  - [http://ontolog.cim3.net/cgi-bin/wiki.pl?UoM\\_Ontology\\_Standard](http://ontolog.cim3.net/cgi-bin/wiki.pl?UoM_Ontology_Standard)
  - [http://www.oasis-open.org/committees/tc\\_home.php?wg\\_abbrev=quomos](http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=quomos)
- The existence of these archives made it easy to go back, reconstruct the history, and prepare this talk