Ontology Summit2007 Survey Response Analysis

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Outline

- Communities
- Ontology value, issues, problems, solutions
- Ontology languages
- Terms for "ontology"
- Ontologies

Communities

- Diversity of community membership
  - All 15 communities listed in the survey had at least six members.
  - 19 other communities were added by respondents.
- Community representatives
  - 24 communities had at least one representative.
  - The communities overlap one another.
- Community memberships and representatives

Ontology: Issues & Solutions

- The answers to the four questions were arranged by community.
  - Full answers
- Individual values, issues, problems and solutions were extracted and arranged by community.
  - Values
  - Issues
  - Problems
  - Solutions

Ontology and "Meta" Languages

- ANSI IRDS and the ER model: Information Resource Dictionary System
- CL and IKL: Common Logic
- ISO 15926: An International Standard for the representation of process plant life-cycle information
- OMG languages: MOF, UML, ODM, QVT, OCL: Meta Object Facility, Unified Modeling Language, …
- OWL: Web Ontology Language
- RDF/S: Resource Description Framework
- RuleML: Rule Markup Language
- SKOS: Simple Knowledge Organisation System
- SWRL: Semantic Web Rule Language
- UIMA: Unstructured Information Management Architecture

Ontology and "Meta" Languages

Languages	Structure	Expressivity	Granularity	Intended Use	Reasoning	Strictness
CL and IKL	N/A	High	N/A		Yes	Prescriptive
IRDS and ER	N/A	Low	N/A	Databases	No	Prescriptive
ISO 15926				Oil and gas production facilities		
OMG				Software Engineering		
OWL	N/A	3 levels	N/A	Web Annotation	Yes	Prescriptive
RDF/S				Web Annotation		
RuleML				Rule Engines		
SKOS						
SWRL						
UIMA						

Ontology Synonyms

- There were 41 terms similar to "ontology"
- Terms ordered by "called an ontology"
- Alphabetical list of terms
- Reference links for terms
- Spreadsheet (csv format)

Ontology Synonyms

- Business Rule Design (2)
- Classification (2)
- Concept system (4)
- Content Models (3)
- Controlled Terminology (3)
- Controlled vocabulary / thesaurus (8)

- Data dictionaries (2)
- Domain model (2)
- Enterprise knowledge base (2)
- Entity Relationship Diagram (3)
- Entity Relationship Model/Data Model (3)

Ontology Synonyms

- First Order Logic Ontology (5)
- Folksonomy (3)
- Formal ontology (5)
- Glossary (1)
- Hierarchical Taxonomy (1)
- Library Classification schemes (3)

- Logical theory, upper ontology (5)
- Metadata (3)
- Metadata Scheme (2)
- Metathesaurus (4)
- Model (2)

Ontology Synonyms

- Network Taxonomy (sometimes called semantic network or thesaurus) (3)
- Nomenclature (1)
- Object Information Model (5)
- Ontology (5)
- Ontology (computer science) (5)

- Ontology (philosophy) (1)
- Ontology Model (0)
- OWL Ontology (5)
- Reference Model (4)
- Ring Taxonomy (synonyms) (1)
- Schema (3)

Ontology Synonyms

- Semantic data model (3)
- Semantic network (4)
- Tag cloud (3)
- Tag library (2)
- Taxonomy (2.5)
- Thesaurus (3)
- Upper ontology (5)

Term	Gloss	#
Business Rule Design	A framework for building multi-lev	2
Classification		2
Concept system	Set of concepts and the relations	4
Content Models	describes how content in a CMS is	3
Controlled Terminology	set of terms representing the syst	3
controlled vocabulary / thesaurus	The Metathesaurus is a very large	3
Controlled vocabulary thesaurus	It consists of sets of terms namin	5
data dictionaries	a list of natural language definiti	2
domain model	typically a UML model of a softwa	2
enterprise knowledge base	"a natural language/ textual descr	2
Entity Relationship Diagram	A model of (entity) concpets and	3
Entity Relationship Model/Data Model	A collection of entity types posse	3
First Order Logic Ontology	A computer interpretable collectio	5
Folksonomy	A folksonomy is a user generated	3
formal ontology	Vocabulary of terms together with	5
Glossary	A list of terms with agreed natura	1
Hierarchical Taxonomy	Classification Scheme - World Bar	1
Library Classification schemes	The classification scheme is a col	3
logical theory, upper ontology	a logical theory about aspects or	5
Metadata	Data that defines and describes ot	3
Metadata Scheme	Set of metadata attributes which a	2
Metathesaurus	"Vocabulary database. The term l	4
Model	A set of inter-related documents	2
Network Taxonomy (sometimes called s	Extended thesaurus structure of d	3
nomenclature		1
Object Information Model	represents the types of informatio	5
Ontology	In both computer science and info	4
ontology (computer science)	An ontology is a specification of	5
ontology (philosophy)	the study of being or existence [T	1
OWL Ontology	A collection of formal classes an	5
Reference Model	A abstract model capturing the ma	4
Ring Taxonomy (synonyms)	Set of equivalent terms, including	1
schema (??)		3
Semantic data model	A graphic representation of the th	3
Semantic network	The Semantic Network consists of	4
tag cloud	a group of tags of varying sizes,	3
tag library	informal organization of xml tags	2
Taxonomy	Taxonomy, sometimes alpha taxor	2
Thesaurus	A controlled vocabulary used for i	3
upper ontology	An upper ontology is limited to co	5

Ontology Artifacts

- After removing duplications there were 70 ontology examples.

- Ontologies arranged by ontology term

- Alphabetical list of ontologies

- Spreadsheet (csv format)