Knowledge Organization: Evaluating Foundation and Function in the Information Ecosystem.

Marjorie Hlava

Hollie White
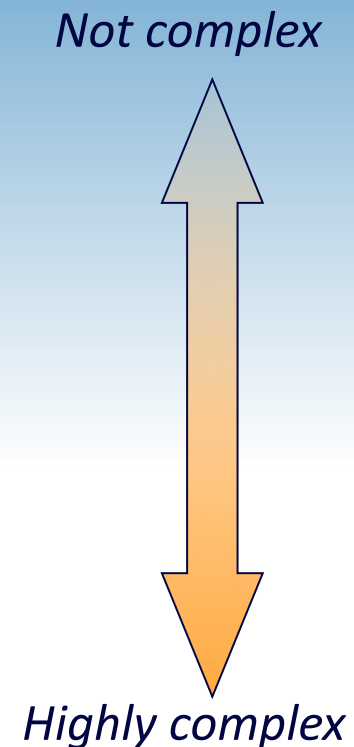
Denise Bedford

Gail Hodge

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Marjorie M.K. Hlava
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- ❖ Active in thesaurus and taxonomy building.
- ❖ Recent works include IEEE, Ei, ASCE (Civil Engineers). AIP, SPIE thesauri and 200 + others.
- ❖ Widely published - TaxoDiary.com = Blog
- ❖ Research areas
  - furthering the productivity of content creation
  - improving the governance layer for information access
  - Automated indexing, natural language processing, machine translations, and machine aided indexing
  - Knowledge Organization systems = Thesaurus development, taxonomy creation, authority files, ontologies etc.
- ❖ Standards work includes the Dublin Core, Controlled Vocabularies, NISO content Board

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A Taxonomy is a Knowledge Organization System

- ❖ Uncontrolled list
- ❖ Name authority file
- ❖ Synonym set/ring
- ❖ Controlled vocabulary
- ❖ *Taxonomy*
- ❖ *Thesaurus*
- ❖ Ontology
- ❖ Semantic network

Not complex

Highly complex

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How to Evaluate a KOS?

❖ First push – get it built

❖ Implementation is next

❖ When to evaluate?

❖ How to evaluate?

- What are the metrics?

- What is accuracy?

- What about the relationship to a Knowledge domain?

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Today's outline

❖ Three speakers

❖ Interactive session

❖ Try to outline some common requirements

❖ Discuss options for best practices

❖ Put together a list of guidelines for evaluation

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Hollie White, University of North Carolina

- ❖ Doctoral Fellow at the School of Information and Library Science, Metadata Research Center, University of North Carolina at Chapel Hill.

- ❖ 2009 recipient of the Council of Library and Information Resources' Zipf Fellowship in Information Management.

- ❖ Research areas knowledge organization, information organization, metadata, and personal information management.

- ❖ Catalog Librarian at the Ross-Blakely Law Library at Arizona State University.

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Denise Bedford, World Bank and Kent State University

- ❖ Goodyear Professor of Knowledge Management at the College of Communication and Information, Kent State University.
- ❖ Expanding the M.A. program and the future Ph.D. program in Knowledge Management,
- ❖ Expanding outreach and support to the national and international knowledge management community.

- ❖ Research interests include knowledge architectures and knowledge engineering, business architecture and business rules representation, document engineering and content architectures, multilingual architecture, and search system design and architecture.
- ❖ Retired World Bank in 2010 she was responsible for development of the Bank's taxonomies and the Multilanguage topic thesaurus and the development and operationalization of the Bank's semantic analysis technologies.

Gail Hodge,
Information International Associates, Inc.

❖ Advanced Informatics Group,

❖ Project manager on a variety of controlled vocabulary development projects including those for the US Geological Survey, the National Agricultural Library, Science.gov, and the National Institute for Literacy.

❖ Currently developing a controlled vocabulary for the US Environmental Protection Agency's Office of Research and Development and serving as Terminology Services contractors for the Data Standards Branch of the US EPA.

❖ Ms. Hodge is involved in terminology and standards activities internationally.

❖ She is a charter member of the Networked Knowledge Organization Systems (NKOS) an ad hoc group and has helped to organize many of their workshops in the US and internationally.

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On KOS

- ❖ What are the most pressing evaluation needs?

- ❖ What are the current priorities for the field of information science?

- ❖ What do you think of the approaches presented?

- ❖ Everyone - join in the final evaluation discussion

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Discussion?

- ❖ Complies with the standards?
  - NISO
  - ISO
  - W3C
- ❖ Establish user needs?
- ❖ Represents the data collections
- ❖ SME's agree with the outline of the field?

- ❖ Etc…

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Thank you!

❖ To our speakers

❖ Hollie White

❖ Denise Bedford

❖ Gail Hodge

❖ !!!!!!!!!!!!!

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Structure of Knowledge Organization Systems

Lists	Synonyms	Taxonomy	Thesaurus	Ontology

INCREASING COMPLEXITY and CONTROL →

Ambiguity	Ambiguity		Ambiguity	
	Synonym		Synonym	Synonym
		Hierarchy	Hierarchy	Hierarchy
			Relationships	Additional kinds of relationships

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What are the parts? The term record

- **Main Term (MT)**
- **Top Term (TT)**
- **Broader Terms (BT)**
- **Narrower Terms (NT)**
- Related Terms (RT)
  - See also (SA)
- Non-Preferred Term (NP)
  - Used for (UF), See (S)
- Scope Note (SN)
- History (H)

TAXONOMY

ONTOLOGY

THESAURUS

= subject term, heading, node, category, descriptor, class

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