Questions and Possibilities: The Four-Dimensional Future of Metadata

Stephen Downes National Research Council for the Canadian Metadata Forum Ottawa, Canada, September 20, 2003 Creating metadata standards is the act of defining all possible worlds within a space...

Posing questions is the act of articulating those possibilities that we can comprehend...

But what of the possibilities we cannot comprehend?

They exist in four dimensions...

1. Resources

What is the nature of things? Is a rose, by any other name, still a rose?

What Exists?

- Works, Expressions, Manifestations, Items (Chris Oliver)
- Different 'things' consider, for example, the status of geographic data, which is classed by latitude and longitude (Andrea Buffam) – what is the ontology of a shoreline?
- Paul Johanis the 'survey object'

What Doesn't Exist?

- "We may have more labels than we have things out there." – Jutta Treviranus
- *But* how can we avoid creating ontologies through classifications inheritance, the dispute between Ockham and Scotus
- Some artifacts are not 'works' they are merely expressions – a ticket stud, for example – Wendy Duff

How Are Things Grouped?

- ... and do these groupings become entities that exist? (And does this invalidate the existence of the things grouped?)
- In archival metadata the font places a key role... is a font an entity? (Wendy Duff)

What's in a Name?

- Wendy Duff filing complaints under 'crackpots' changes the nature of the items
- Is a name simple? Maybe not: statistical unit (the things we observe) + property (thing being measured) + representation (form of the data) = variable. These three elements are used to create the name of the variable. - Paul Johanis

2. Descriptions

To describe is to perceive, but each of us is alone in our perceptions...

What Types of Things Are There?

- This is like asking, how are things grouped...maybe?
- More types that we can possibly imagine: Walter Lewis - newspaper archives, image archives, books, census reports, wills, property records, military records, cemetary information, business directories, maps....
- Transactions, events, etc. Catherine Zongora Supply chain metadata – Doug Minett

Where is the Description?

 The description is not always in the object – "The description is usually the first level of encounter; without the description it floats anonymously." – David McKnight

What is the Logical Structure of Description?

- It's more like a crossword than a tree, isn't it? Wendy Duff.
- Descriptions the *nature* of descriptions varies across language (Sarah Klotz and Lorraine Gadourt)
- Controlled vocabularies Nancy Brodie

Can We Describe Different Types?

- Walter Lewis: describe each type appropriate to the medium – but what dimensions of type are there? Medium, message, creator, format... each with a bearing on description
- There may be a 'core' but we can't standardize on the core, we need much more information (Lewis)

Can We Create Venn Diagrams from Silos?

- Comment to Wendy Duff: harmonization won't happen. Reality is more like a Venn diagram. We all see items - we need a way to create things at the item level. We need the 'ANDs' and the 'NOTs'.
- *Is there* a common element set?
- If not, how do we translate? Several people (eg., Norm Friesen) mentioned 'crosswalks'

How Can We Ensure Our Descriptions are Relible?

- Museums provenance (Sheila Carey)an we have descriptions without open access?
- Where do descriptions come from who is responsible? - Catherine Zongora – elements for sign-off, trustee, other data management
- Can we have descriptions without open access?

What Is the Range of Descriptive Possibility?

- The card catalogue? Ron Wakkary
- Chris Oliver Attributes and Relations Is that all? What about, say, attitudes?
- Tom Delsey information about availability, rights, reviews...
- Several people: 'administrative metadata' metadata about the management of the metadata

3. Time

Time – that most unreal of dimensions – is the only dimension unchanged in the digital world

What Can We Find?

- What we can find is changing. Consider the use of MPEG-7 to define parts of video.
- Alex Eykelhof: "When you're dealing with video, metadata takes us past the black box."
- Time is relevant Statistics Canada 'The Daily'

How Does Time Change Objects?

- More than just living and dying... (though these are of some importance)
- Wendy Duff: "Categories are historically situated artifacts and like all artifacts are learned as part of membership in a community of practice."
- What is cool today is cold tomorrow; "Rust never sleeps." David McKnight

What are the Other Dimensions of Time?

- Time is closely related to place (just ask Einstein). An object's place is a *temporal* property.
- But what is the 'place' of metadata? Of a digital object? And how does that relate to identity?
- How does 'place' change metadata eg., Doug Minett – no use of 'trade paperback' category in U.K.

4. Community

Who Am I?

- Questions of authentication, etc., for data management, but not just that...
- People as entities? No discussion...
- Who am I from the point of view of accessibility personal preferences Jutta Treviranus

Who is our Audience?

- Ian Wilson opening remarks the focus is on Canadians
- Nancy Brodie client focus

How do we reach them?

- The question is: how do we make our data accessible? (Ian Wilson)
- Will the users go to *your* site? "Users do not differentiate searches by professions. They want access regardless of institution type. To meet our user needs we must collaborate and develop compatible metadata schemes." Wendy Duff

How Do They Understand?

- The challenge is the task of translating many languages, some of them secret, with source material in many locations and sometimes hidden. – Jutta Treviranus
- Maps and Metaphors (James Turner, the MetaMap)
- Not only a map, but also a structure. David McKnight

Can They Access?

- Questions of rights, of course MPEG-21 and ODRL
- But also models: Grace Welch data on a cost recovery model so people created their own data rather than reuse
- Education: reuse is the only economically viable model Norm Friesen

How Do They Speak?

- The 'human element' in metadata
- Wendy Duffan people do not know how to use the DGCI metadata... don't use ll the fields
- CanCore bridging the gap Norm Friesen
- Sheila Carey museums Community Memories
- "integrated, unconscious authoring" the TILE
 Project Jutta Treviranus

What Tools Do They Use?

- Cataloguing Tools eg., Sheila Carey, museums
- News Input Robert Oates
- But will people fo to *your* website to input *their* data?

What Does Our Audience Say?

- Was listening for the other direction of communication...
- Personal portfolios?
- E-government?
- How do we incorporate their contribution into our metadata (or do we dare?)

What are Metadata Networks?

- eduSource Gilbert Paquette types of network forms – it not just search on a given website (can't be)
- RSS Feeds Robert Oates
- Is there an overlap with commercial book distribution networks? Tom Delsey

Why?

- We welcome standards, so long as they don't hinder our capacity to create Ron Wakkery
- Reusability isn't itself enough Wakkery
- The idea of the 'third wave' semantic web more than just document management; you need to work with the knowledge representation to get access to the knowledge that you need. - Gilbert Paquette

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