Oct. 21, 2010 DCMI NKOS Workshop
Minutes taken by Margie Hlava
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Introductions
Task Group members: Diane Vizine-Goetz, Marjie Hlava, Doug Tudhope, Traugott Koch, Ahsan Morshed, Maja Zumer, Gail Hodge, Marcia Zeng
Workshop participants: Joan Mitchell, Athena Salaba, Haliza, Phillip Meyer, Maria (Maxico), Antione Issac; two students: Angela Presutto and Jack Balzer

Intro.
Why we are here today: Developing a DC Application Profile for KOS Resources

NKOS has done a lot of work in this area but have not had a formal channel for presentation of these results. Results of many researchers here today. Including a taxonomy of taxonomies by Marjorie Hlava. Last year DC said they would like to create a description of KOS for the DC. Marcia and Gail took this one as a task and became co chairs. What kind of coverage, how deep is it? etc. Once in a registry there should be additional information hierarchy, associative, and other relationships.

Objective
- Want to develop a protocol for describing
- Brainstorm what we have already done and talk about how to make it into a

Scope and definition of Application Profiles
What are the components.
- 3 required:
- functional requirements
- domain model
- description set profile and usage guide lines
  - metadata terms
  - usage guidelines

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Part I. Discussion of KOS type Vocabulary
Today we want to make something which is Dublin Core compliant but open enough that it is useful outside and beyond the DC community.

Knowledge organization types
Gail and Doug Slide set. presented by

Categorize based on
- Characteristics
- structure
- application / purpose

Important for the scoping effort
Present 2 taxonomies but there are many others
- NKOS taxonomy
- JISC-TRSS

Previous work and how it will influence the profiles

Taxonomy of KOS - NKOS Circa 2000

1. Term lists - flat lists
    - Authority files
    - Glossaries
    - Gazetteers
    - Dictionaries
    - controlled pick list
2. Classification and categorizations
3. relationship groups
    - Thesauri
    - Semantic
4. Ontologies
    - complex relationship models with rules and axioms

[Change to Doug's slide set]
the KOS spectra: a tentative typology of Knowledge Organization Systems.
D. Soergel 2001Characteristics fo describing and evaluating KOS

- purpose
- coverage
- terminology analysis
- index language
- access and display
- updating.

Sue Ellen Wright ISKO 2006 keynote
Knowledge representation resources with a wonderful map of the resources

Factors governing types of KOS

- Subject heading
- Concepts as terms
- high coordination
- relationships
- done by a domain of interest

KOS Map
to KOS dimensions map

- intrinsic
    - essential
        - structural
        - standardization
    - accidental
- extrinsic

Structural is just one element of the type
There are hybrid KOS nowdays

- having a good set of metadata will help in describing these things

[Doug second slide set

- terminology registries]

Task to describe metadata and the current efforts
choice to see what the different options are for using the registries
KOS resource as a whole? Pointing to the contents or holding the

actual KOS themselves.

three options

1. R provides metadata for each vocab and links to provider
2. provide links to terminology services
3. provide access to the vocab content by downloading etc.
4. orthogonal independent facets which can be combined.

Use cases - I want to find a vocab like this...

free, in Spanish,

if metadata is about the vocab then we can find it. so are we defining a metadata set or a registry set? Are they the same?

[Back to Gail]
recommendations
Need a type element
in practice increasingly difficult to type a resource to a single KOS type
Ultimately more flexible if Multiple schemes can be used. similar to the subject element in DC
any preference fort a controlled vocab should be a separate work stream
we could talk about types forever.

Traugett
Need to develop one set of functional requirements.
registries can vary in their implementations

Marcia - should we just add to the NKOS taxonomy? no other types of things will come up - could be a subgroup to look at what has been done and add to it.
review the ISO and NISO standards an see what they have outlined
that is connected to the terminology community

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Part II. Functional requirements options
Gails notes on Margies talk
1. [Margies slide deck here]
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2. General Domain model: Useful for KOS
[Add Maja Zummer slide deck here]
is it possible to have one general model
KOS (DDC) as "work" for example

- edition - a new work or a new expression?
- translations
- translations with modifications
- adaptations
- subsets
- other?
  - Aggregated?
  - Mappings

Option A
Editions
New work

- related works (based on or sequel)

- creator of work for each edition

New expression
- one work
- all editions grouped
- relationships between expressions

Many expressions: editions, translations, adaptations
Need to be distinguished or we have a pike - a mess

Option B
graphic of the options
- ddc
- ddc 21 original
- DDC 22 Original
  - online edition
  - printed edition
- DDC 22 - German
- ddc\outline - German

Provide as three levels perhaps
- Work
- Expression
- Manifestation

Maja leans to this model rather than option A

For translations
The same as any text resources
- new expression linked to the source expressions
- translator as creator of expression
- one more...

Adaptations
- is it necessary to identify the segment modified?
- links to the originating expressions

Express as a partial relationship as needed.

Subsets
- partial relationships
- 21st edition
- 22 editions
- German translation of 22nd edition
- .....

All of these thoughts should apply to all KOS

Reaction by Joan Mitchell. All of these are related to the original. All translations are inter-operable and localized only by examples. They are the same and
Swiss used the DDC in five levels as the catalog for their National Library

A GENERAL DOMAIN MODEL

Connecting to agent
HasAffilaition / AffliatedWith
IsSupportedBy / SupportIscreatedBy/creates

IsSupervisedBy / SUpervises
RightsControlledBY / ControlsRights

Connecting to Work
Work
    IsExpressedBy / Expresses

Expression
    IsManifestedIn / Embodies

Manifestation

IsAvailableAs / InExamplarOf

Item

Also Thema

Connects to work as
IsSubjectof / HasSubject

within work HasPart / IsPartOf

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3. Discussions on domain model
Useful to KOS? what are the user cases?
Perhaps the data from the Thema will work for this
Most KOS are applied to particular collection or domain areas

KOS are modified everyday

All of these elements are in SWAP already. heavily overlapping and
are being collapsed already.

In which circumstances is this helpful? Show the intellectual effort
in designing the applications profile.
This shows the steps in that path.

Extensions to vocabularies - where are they located? Maja would
consider these a new expressions. would need the new relationships

This model and the FRBR model are both very broad
Diane had the KOS type listed
http://staff.oclc.org/~vizine/NKOS/Thesaurus_Registry_version3_rev.htm#KOS_Type

Category 3 of Margie's list is not in this model   could be in the
manifestation part of Maja's model
could one query the current model. ??
Where would the registry be listed?
We lost much of the information that used to be listed in the forward
when things when digital
cannot get to many of the pieces - latency in the online version
how many levels deep are these things?

These are not inconsistent models
rights can be granted at many levels.

maintains it in a library model
online library catalogs to harvest KOS's

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4. Discussion of how to proceed.

Perhaps use the JISC use case of Functional requirements as a model
to develop the DC requirements. What do we do next?
Need more use cases?

RDF linked data file = void file in linked data?
HTML header of the web representations?
Depository for KOS a registry?
Open Ontology repository - no requirements in there now.
    bioportal has more data
Indexing community?

Could make a general call for use cases.
Linked data issued one -
Is that inward looking?
    DC AP needs these functional requirements.

SWAP is approved by the DC board and is a recommendation
The AP is a core set?
GH; We would scope to constrain the use cases is to just this community
    if we engage computer science and ontology community they
    use the DC terms because they support interoperability across communities
    hard work and painful to engage the others.
TK; Look to the other worlds but do not adopt their work and
terminology they might use your semantics anyway

other terms
Concept terms vs controlled vocabularies vs KOS
value or reference value vocabulary
in SKOS the general description is very clear for KOS.

DT: Many use cases we can draw on
contributing use cases = examples from the life cycle part of the
TRSS report. That was based on another document and then boiled
down. Look at that and then draw down on that and look at additional
use cases where we do not have enough coverage.

Where is the use case?
Use in HTML headers? Linked data? SOAP Calls?
IN KOS registries?
In library linked data?
In library catalogs?

this group should come with a broader solution that the LL people can point to.

What is the problem which needs to be solved?

KOS could be reused and repurposed and shared if they could be discovered.

Discovery, reuse and repurpose the KOS that exist so that we can speed the process or discovery of the collections that are subject metatagged and not available. So to get at more information and cross walk collections.

classify data collection. have to be able to go out manipulate, find the formats, the data is in how big how deep

Bridge to the data registers versus KOS and terminology registries resource levels for KOS's

Want to be sure there is interoperability between the KOS

In naming triples for the Z39.19 there can be confidence that the same relationship is stated consistently across many KOS but using SKOS that is not the same. We can not be sure that the same is true in trying to map various SKOS KOS. An altLabel may not always be there same

Human evaluation component is also needed

Next Steps

Get additional use cases
Get samples of use cases as examples so that we can use that to write up our case
Write the functional requirements

- use Margie's models
- use Maja's models

Will continue or meeting after the standards committee meeting at the ASIST Meeting to decide on task assignments and time line.

Oct. 24, 2010. 6:00 pm to 6:45 pm. During ASIST Annual Meeting, after Standards Committee meeting
Task Group members: Marjie Hlava, Traugott Koch, Maja Zumer, Gail Hodge, Marcia Zeng
Other participants: Athena Salaba, Phillip Meyer, Joe Tennis, Mark Needleman, two others

Major problems to solve: how to find KOS - Discovery options.
A way to define or describe a KOS
A way to consistently describe a KOS

KOS taxonomy . How to handle it? Any more to add
Enhance the list from NKOS and NISO Z39.19 and add Concept Map

terminologies - for translation - or as used by ISO 37 or.....

1. Defining the functional requirements:
Use cases can be identified, (mostly related to directories and registries)

1. Registry like TRSS / JISC and TaxoBank
2. HTML Metatags

3. For ingesting systems for linked dictionaries registry of the KOS used in building the metadata registry. Way to refer from the one registry
4. Cross referencing registries or individual KOS.
5. Catalog of KOS resources
6. Directory of KOS like Taxonomy Warehouse tells about it
7. OCLC registry is a term registry and maintains the relationships

Needs to be broad enough that other people can broaden in the future. Be sure that it is broad enough but formal and clear.

We could put out a call to SLA Taxonomy Division, to the NKOS list. For use cases.

These would be biased to implementation cases. Not many implementations now so we need to discuss and make some user scenarios that people could add to and expand on.

Get member generated use cases and then get broader scenarios for the future.

The registries we have identified. Use those first
what was the use case for building each of them?
Might surface functional requirements for each. What was the purpose, formulation of the requierments, divide it up and suggeste broader applications.

There might be documents and suggestions for each.

Doug Tudhope TRSS report - section 5 has some use cases.
Z39.19 survey.
SKOS use cases six of them

We could review them all and see what might e useful

Linked data use cases - ISO 3 is related to vocabularies, one to the registry

Start from these sources and see what there is.

Outline of what we need to do:

Find use cases
Define requirements.
Develop our own vocabulary

Joe Tennis - perhaps has a model of the work we need to do. Useful in the Metadata area for the registries. Taxonomies are frequently single dimensional but now we can look at it from many views. Scope it. Make it simple needs to be a hook or handle, what is in and what is out. Could just use a pick list for our work

Functional requirement Model
SWAP as an example - Scholarly Work Application Profile.
http://dublincore.org/usage/reviews/2009/swap/
Simple model
Image model excludes the manifestation
W3C requirements style
collection description application profile.

Joe T. has review criteria for the applications board

Library Application profile. - Marcia thinks we should not use this one. Our case is closer to describing Gov Doc or SWAP. Clear goals of description. This one is for the community using DC to catalog instead of MARC. Should we do something more like a resource type?

What level FRBR might be a good example for us.

http://nkos.slis.kent.edu/FRSAR/DC2010_FRBR4APDomainModel.pdf

The problem with KOS is that they are never finished - not a spot in time - continue to evolve.

Who are the use cases - who is going to use this?

Who is the consumer of the application profile?

Who are the users of the applications built following the application profile?

Build an application profile for describing KOS

Functional requirements for the application profile.

List of required metadata

minimal set of metadata

optional additional metadata

Describing collections and describing KOS are very similar.

Guide people on how to published the recommended data for each type of KOS

If Classification systems are xxx

then how are these maintained.

what are the elements for each?