VCoI Call Notes

*2 August 2021*

# Attendees

* Mike Bennett
* Bobbin Teegarden
* Claude Baudoin
* Rob Nehmer

# Agenda

2 topics are open (see previous notes 7/19 and 7/26:

* BMM Ontology
* SKOS Broader / narrower

# Meeting Notes

## Set the Agenda

Prepared slides on the SKOS Broader stuff

So we will cover SKOS.

## SKOS

### Follow-up Action on SKOS Usability with Elisa

Other open question from last time – CB asked EK why she felt SKOS was not the right thing to do.

EK: because it does not correctly represent the hierarchy

Why / how not?? Unclear explanation: 'Not a complete / proper way to describe hierarchy'

May make sense in the sense that it is just an assertion by the modeler that this is broader than that, without committing to a specific kind of broader or narrower in formal logic (i.e. generalization)

- which is kind of the point!

The point seems to suppose that the formality of a logical statement is useful and necessary in terminology management. But if you are not trying to do reasoning but only to express a hierarchy of concepts then this is not a weakness but a strength.

Once you want to be able to go from a 'taxonomy' in the broader sense to an ontology then and only then it makes sense to define which of the relationships are generalizations. For the purposes of a Taxonomist these relationships are perfectly consistent.

BT had a similar conversation about mereologies – certain hierarchical kids of relation that you can't say in OWL e.g. ComposedOf that you can do in UML.

For Claude's use SKOS broader etc. is perfectly reasonable.

To the slides…

## SKOS Broader and Narrower Types

### Comments

See the French Book example.

CB: Can this be more generalized?:

Are there always a separate set of things C and D that ARE in a Generalizaton rlation

Books / info v Topic: yes

Nairobi / Kenya: inhabitantOf also gives you a Generalization relationships.

#### Conclusion

There is a real possibility that:

Every time we say there is a (taxonomic) relationship between A and B that are not Generalization, there is always a C and D that ARE in a Generalization relationship.

i.e. what Mike found with Topic may be more broadly applicable.

MAYBE: it applies to some but not all? In which case it would delineate a kind of broader / narrower that can be called out as such

OR

It applies to them all.

**Exercise:** find examples of C and D for all of them.

Is there an implied set for which this would apply. i.e. In English you would not have to tease it out, i.e. 'Find the appropriate set you are talking about' e.g. the set of cities in Kenya, the set of inhabitants / citizens / residents of Kenya, or Nairobi. In common English most people would figure out what set you are referring to.

That may be that underlies how in common English, where people use synecdoche all the time, they may always be referring to something that has some set generalization relation C -> D somewhere, as part of why they are referring to the more underspecified notion of Taxonomy in that way.

Similarly, in the language of set theory, the 'is a sub set of' sign that is also used for the logical implication C implies D, looks visually similar to 'C contains D'.

### Mereology:

* Containment
* Collection constituents
* Parthood (proper parthood)
* Relative part
* UML:
  + Composition (proper parthood)
  + Aggregation – some other name in Mereology (== the collection relation)

The challenge: can we figure out for each of the mereological relations, what are C and D?

Are there non mereological relations other than Generalization??

YES = Topic.

As Claude demonstrated there is at least one mereological relation where the C + D pattern applies.

Possible by-product is that once we can identify the C+D relations, does that help to clarify what kind of mereological relation is in play? Does it give a set of sensible definitions for the relevant kinds of taxonomic and mereological relationships?

We can then put some logic around these (and identify the relevant ones in the TLO literature)

RN: In Aaron's work in the OFDG paper (quoted in the slides) we looked at Collection as a kind of looser set, and identified several types of sets, and had some mathematical PoV in which these were clearly defined.

Action: Go back and look at the paper. This is the same one in which we did the Classification Facets.

If the above thinking is not in the paper, or the later paper, it will be in the notes.

See 'Facet' Aaron's work (in the cited academic works, Facet was more like TLO partitions specifically, whereas we have used the same principle more widely) i.e. complete, disjoint facets versus in library science it did not have the specificity in how it was defined.

## Next time:

Think of some examples of C + D patterns.

Pick that up next time.

Then we can come back to the 'abstraction' question in the light of that.

MB to send Clubhouse invitation to Bobbin. Needs her phone number?