VCoI Call Notes

*22 Feb 2021*

# Attendees

* Claude Baudoin
* Mike Bennett
* Cory Casanave
* Rob Nehmer

# Agenda

* Decide what is presented to whom for Quarterly Meeting
  + Gov DTF (15 min)
  + Consider a presentation at Blockchain PSIG
* Continue with the wishlist
  + Including how to represent the Qualifier stuff
    - As with definitions, there was information we needed to capture that wasn’t visible in the end product, so we had a wishlist for that.
    - Do the same for what we needed to know in order to derive the property hierarchy, naming (qualified names), use of restrictions etc.
  + Other wishlist requirements e.g. how to address models that morph

# Meeting Notes

## Quarterly Meeting

* Gov DTF (15 min)
* Consider a presentation at Blockchain PSIG

#### GovDTF

Previously used their needs to get the exercise up and running

* Did a spreadsheet of columns needed

Now goes to Wishlist

Being extended

For GovDTF we did an initial very thin vocabulary but this has not been extended

* See if we can encourage them to take this on and extend
* Identify any issues in doing so

#### Blockchain PSIG

We are using their needs as an example

Specifically the Smart Contracts RFI

Start with a rough word file with what I needed for the DSSID RFI

* To wishlist
* More specific to that RFI
* Included stuff for the SIG as a whole
* Extend that for the SIG overall wishlist

Present overall draft of what we have so far for:

* Ontology
* Vocabulary
* Wishlist

Qualifiers – what to present on that?

* Can we extend the Qualifiers thinking into BC-PSIG requirements?

(today and next couple of weeks)

#### Generally

Would be useful to have others present their requirements

Especially for different domains:

* Healthcare
* Finance

What are they either already trying to achieve, what they need, or based on this VCoI, what they would intend to do with it once they get deliverables.

How do we get people on the other end of the rope pulling on it?

Present at different groups

#### June QM

* June agenda / mini-event
  + Could do as a half day, along with some ontology presentations (Ontology PSIG, Evan (NIST)
  + Then seek use cases from Healthcare, Gov, Finance, Manufacturing etc.
  + What exists in their domain as taxonomy and ontology efforts
    - e.g. FHIR, CTS2, HL7 etc. in Healthcare
      * There was also a good analysis of these at FOIS in Cape Town in 2018
  + What is their use case?
  + Then present what VCoI is doing
  + Also deliverables and time frames

### Broader Issues

In general – any area of business will have formal definitions for things, so the exercise is how to formally frame these concepts in formal logic (DL)

* This may not be the case for less mature communities
  + E.g. Blockchain (Smart contracts etc.)

e.g. IIC – there are mature terms for most manufacturing concepts, but there is also current discussion on IIC vocabulary, with questions similar to the ones we have been looking at, e.g. dependencies between terms.

Once you represent these graphically there tend to be indications of where terms are missing.

(that can often lead people to want to obscure that kind of information)

e.g. entity of interest versus device of interest

- these will often indicate where an appropriate TLO hasn’t been used e.g. ‘X of interest’ implies the need for a ‘Relative Thing’ (e.g. Role + Relator in ontoUML)

Potential outcomes include maintaining such graphical representations internally to the group, to maintain and prioritize fixes and completion.

Also questions on how such a graphical form is maintained (if not e.g. a persistent-diagram supporting tool like UML tooling). Other initiatives where there are raw diagrams, are harder to maintain e.g. the VOWL plugins with the bouncy balls.

#### For the Meetings

Use the above to give us a good steer into what TFs might need, based on experience of other industry groups and consortia (e.g. IIC)

Summarize some of that in the March QM presentations to GovDTF and Blockchain PSIG.

### Other TFs?

For March QM – just Blockchain PSIG and GovDTF should be enough to get the feedback we need.

#### What about Finance?

* Not constructing anything at the moment (since FIBO)
* Digital Currency RFI will need vocab at some point but not using VCoI just yet

Want other groups to take the lead with what we are doing and potentially identify things we might have missed.

Reminder: It’s not for us to create or maintain those vocabularies.

See GovDTF.

For Finance: encourage the to put something on the FDTF weekly calls agenda during Q2.

Nothing this Quarter.

## Annotations Wishlist

### Qualifiers

What does a wishlist look like here?

How much is for the TF Ontology, versus what is additional annotation / metadata.

To flesh out:

* Context v Qualifiers

#### Context v Qualifiers

Note the convergence we spotted last week:

Context: the Ws

This Qualifier treatment – needed to talk about Time and by implication we can talk about the other Ws in a similar way (they are all context)

A lot of what Cory was saying re time would apply to people, places etc.

Context is not a special thing – these are concepts (or clusters of concepts)

The same concepts seem to end up being potential qualifiers for properties, in Cory’s qualifiers treatment.

Was there a relation between Qualifiers and Context specifically?

The Context thing was where the most abstract term used (e.g. for Unpaid Principal Balance) was only as abstract as it needed to be in the context of that application – so for the TF as a whole you would need a broader context for the overall TF than for that document, and so on for broader contexts.

Context narrows things down – CC was talking about how you broaden it back out again.

With Time as a context as an example – make explicit where some concept is specific to a time frame

### To Cory slides…

#### See Slide 7

Context = that which impacts the interpretation of something else.

The Ws are dimensions of that.

We narrow the context of the more general concept as we identifier the qualifiers.

Would other dimensions work in the same way as Time?

CC: certainly possible for al the Ws to at as partitions that represent some contextual dimension.

Could be null in some case that don’t have an effect e.g. if one or more of the Ws have no effect.

What we call Context may be anything including a single concept but more commonly we use that word for multipls Ws. But it need not be all of them.

### Worked Example

e.g. ‘US Ports of Call’

where ‘US’ is the W dimension Where. We use that to narrow down the general concept to a specific Where.

Q: Can we imagine this working for all of these?

Think so.

e.g. Who would be a Party, or a person or organization?

RN: Possible idea - It may be that in different contexts, the Where may go under the What in a specific context. In another e.g. different business domain, the What might go under the Where. May be how the SMEs conceive of the context. That is, ordering or prioritizing of context concepts.

See e.g. the English implicit order for adjectives.

CC: in defining the qualifiers we try to keep them semi-linearly independent. These ordering concerns come into play when you want to reassemble things, but not in how we pull them apart. This would be language specific.

Possible that the same thinking applies in language more broadly (not specifically English as in the example above). E.g. you might have to consider geographical location before considering what kind of bond you could have.

Might be different than classification.

#### Example:

Bond thing – geographical and geopolitical precedes the jurisdictional.

‘Where’ precedes Jurisdiction (as another kind of Where)

Then maybe? The answer to the precedence questions are in the conceptual ontology?

CC: Can assign some precedence based on this. But the specifications themselves, should be largely order non-specific – no firstness. May be some firstness to the processes in which to define them, and how you would define them in a given language.

RN: Occam’s Razor: If the order noes not matter in a given context they should be independent. But be cognizant of the likelihood that in some domains that classifies the context. Context ambiguity could be driven by the lack of ordering – with the potential to confuse the SMEs. Need to be able to address how there is a particular context you are dealing with.

See e.g. legal reasoning. ‘This paragraph .. therefore these other things apply’ – details under that context

Applies to:

* Accounting standards
* Auditing standards

Hierarchy of types, but within that, when talking about a given account or kind of account – when recognition of a txn has happened appears in one kind of account, it is pertinent to that account but not others or the more general level.

e.g. Fannie / Freddie.

CC: Presentation is order

Qualifiers as they appear in phrases is consistent but how much is natural to the domain versus the structure of the process they want through). Still structured terms they are evaluating.

Including data terms

A process of qualification would make sense, both in understanding the concepts and in any processes to deal with them.

#### See Slide 5

Is there a potential challenge in capturing order information to SMEs given that it can’t be represented directly in DL / OWL?

CC exploring this at the moment.

Using what? Additional stereotypes (not OCL constraints).

Similarly in OWL the time frame things can’t be said directly in that language (but can be reflected in the intended semantics of the TLO basic properties, classes).

Likewise the assertions you might make in OWL are too strong

e.g. ‘Actual’ in actual v projected events.

Then is this property (on Slide 5) a sub-type of Actual (or vice versa)? CC expressing those as different relationships.

Almost need a standard language for the TLO to represent these kinds of things that are (rightly) not in OWL.

Can use some of the features in DL but you need others.

### Recommendation:

Have a very basic TLO for TFs to use, with simple standardized properties, classes (partitions) such as parthood kinds, tenses, phases and so on.

Such a way to formalize concepts is valid. Whether appropriate for TFs to use to define their vocabularies, is less clear.

More ambitious needs, e.g. in enterprise DD and integration.

MB: Do we need to try and recommend and propagate a very simple TLO for people to use to ‘extend’ OWL? Like gUFO.

CC: two problems – the extensions and the foundational building block concept. Like an open library.

#### Proposal – User-friendly TLO abstractions

Not prescriptive – give people a thing they can use.

Then instead of them need to understand a TLO of FO or UO, we give them something with a term and definition – ‘is this the thing you mean?’ etc.

Start with what the stakeholders and help them formalize these.

Present as a library.

Also tooling – have to be top down.

### Wrap-up

This is what Cory is experiment with. Also experiment with the tooling.

### Other Wishlist Requirements – e.g. models that morph

See agenda. We did not get to this today but it may be implied in today’s conversation anyway.

## AoB

No. Nothing in today’s Chat Log at all.

4 weeks to QM.

## Next Meeting

Continue with the Wishlist as above?

Examples? Go back to the RFI for BC-PSIG and fill in.

Look for specific examples in the Qualifiers problem space as well as overall.