VCoI Call Notes

*10 May 2021*

# Attendees

* Claude Baudoin
* Mike Bennett
* Rob Nehmer

## Apologies

* Bobbin
* Elisa

# Agenda

* Develop the Process using Pilot Terms

# Meeting Notes

## Process

### Pilot Terms

- use the RDF

- see the spreadsheet for earlier analysis and conclusions

## Words – Notes

**Algorithmic Governance**

Step: Analyze the Definition

* Does this define
  + A Term?
  + A Reference (e.g. a law)
  + An abbreviation, acronym etc.

**Definition:**

“an alternative form of government or social ordering, where the usage of computer algorithms, especially of artificial intelligence and blockchain, is applied to regulations, law enforcement, and generally any aspect of everyday life such as transportation or land registration. It is defined as setting the standard, monitoring and modification of behaviour by means of computational algorithms — automation of judiciary is in its scope”

Analysis:

What do the various parts of this definition mean? Specifically:

What behavio(u)r? Of governments? Of people?

Seems an armchair definition

Expect to see a whole class of things that are kinds of Algorithmic Governance

The point is how serious should we get about these types of things in the incoming material? For a given TF, might make a big difference whether or not that TF wants to limit itself to this definition.

Next step for the TF:

Here’s one definition + its source

Here’s another definition + its source

### Usage Considerations

In other places: we want outside people to come in and pick up our (the TF’s) definition(s)

Need a caveat on that – don’t want a user to assume ‘this is the definition’

* So here we need to capture the usage context

### Characterize for the Entry:

Context (1): the intended usage context (what\* does this TF want to define?)

What = concept

Context (2) the origin context of a given definition for a concept and its words (term)

The 2nd will be difficult in some cases as it needs research:

* We can easily say ‘where’ the definition came from BUT
* We can’t do easily say ‘what’ the originator intended the context to be
  + Not trivial – requires research
    - What did the originator mean the usage context to be of the term when they defined it?
  + The trivial bit: just the URI of where we got it from
    - In the annotation Metadata already

Examples: Blockchain, DLT

### Buzzwords versus Concepts

**Buzzword:** reflects a broad range of concepts, not necessarily coherent (see e.g. schema.org)

**Precision:** define a coherent Concept, reference this from whatever words are relevant in a given Context

May be a continuum here – may start with something broad and later move towards a narrower concept or set of concepts.

Algorithmic Governance is a good example of this.

So there is a process implication here.

### Concept Resources

See Slide 13 of the working deck

There are 2 sets of ‘Concept’ resources:

* The ontology of Concepts that make up the Context
* The Concept ontology for the concepts themselves (to which the words are contextually related)

For a standard, shouldn’t the concepts be mutually consistent?

* One or several ontologies
* Assume there are standards where there should be an ontology behind it

**Broader question:** Ontology for Regulation, Rule etc. for use in **References**.

### Ontologies

One or Two ontologies (ignoring References for now):

1. The concepts you need to define the context
   * **Concepts:** Task Force (people, org), Document, other orgs, time / event etc.; Process, governance (also References); Rules (market practice, statutory, standards-setting etc).
     + Standards setting rules also == Process (OMG Process)
     + Or even W3C, ERC, or other Stds groups process
2. The concepts for the Vocabulary itself (split Word v Concept)

Name them:

1. Is ‘Context Ontology’
2. Is ‘Domain Concept Ontology’

In terms of our process some of the above is in the subsequent analysis i.e. Terms and Definitions ‘branch’ of the process

**Actually:**

In (1) above – these are applicable to all 3 Branches

Whereas (2) above only comes into play in the ‘Terms and Definitions’ branch.

In Branch (2): there is a step where we (optionally) ‘Update Concept Ontology’

Ambition: unify (1) and (2) – or do we need to?

* Have a common TLO / FO that provides some unification.
* Common concepts = the concept relevant to Context e.g. the Organizations, documents, process etc. as above

For this (1) – would be the same across all TFs /SIGs and e.g. how you do this for an RFI

Where (2) is owned by the TF.

So define for (1)

* Here’s the context for an RFI
* Here’s the process flow for your particular RFI and here’s how you deal with your particular Domain concepts
  + Part of the RFI development process alongside developing the Questions, Audience etc. in an RFI.

## Conclusion:

We are to develop the Context Ontology (the (1) ontology) as a part of our deliverables

Along with guidance for TFs on how to use, develop or extend this.

* Part of a process manual for OMG document development in a SG

### Add to the process:

From time to time, a given TF may end up finding something new to add to the (1) Ontology for Contexts.

* example: Lars: ‘I want to use these terms at an MIT conference’ (the original impetus for this exercise)

### Lifecycles

Lifecycle of (1) is slower moving (stable)

Lifecycle of (2) is more dynamic

Also

Lifecycle of (1) is owned somehow across the OMG (update whenever a TF comes up with a new piece of Context)

* recall that (1) may also be used in talking about types of references
  + e.g. laws, Federal Register, MoDAF / DoDAF etc. may come out from different TFs
    - where the RDF file structure we were using isn’t fully defined yet
    - e.g. URI, other stuff
    - References Structure
      * Only changes if there is a new definition of the References structure
      * There is already a basic ontology of things for References out there (article, author, publisher, year, city etc.)
      * New reference TYPE would make a change in (1)
* Also use in things other than References
  + RFI / RFP
  + White papers
* What about Abbreviations?
  + These have a different contextual application from Terms and Definition
    - So the (1) Ontology needs to accommodate those also
* Meanwhile (1) also used in Terms and Definitions
  + Usage Context (document, paper, TF itself, wiki etc.
  + Origin context (of Term, of Meaning, or Acronym)

Meanwhile adding a new concept is Ontology (2) only.

### Domain Concept Ontology (2)

We would not come up with a common domain Concept ontology structure or metastructure.

What we can hope to do?

* Have some kind of guidelines
  + Without tripping over some of the differences in perspective on what constitutes a Concept Ontology

Also some Domain TFs already have a Domain ontology that they maintain:

* Retail
* Space
* Finance

So we have a challenge on (2) to put together some minimal guidelines that lets people use their existing ontology conceptually to whatever extent it supports this.

### Divergences at present:

**Vocabulary:**

* VCoI
  + GovDTF
  + FDTF
  + Blockchain PSIG
* Nick Stavros
  + AI PTF
  + DDS?
  + Blockchain PSIG?

No process seen to date for the Nick stuff. The tooling looks impressive and we should able to use it but it does not yet reflect the Contextual calculus.

### Using this Toolset - Challenges

e.g. 19000 terms in a Taxonomy for XBRL

Wants to create the document with the 19000 facts the majority of which would be empty (instance data terms). We have not seen a presentation on how to determine which part of this toolset you would need and how to structure this for the users in your group.

One possible way to bring these together: Wiki references – where the wiki has reference to a VCoI derived structure so it can pull in whatever it wants to pull in for e.g. definitions, reference etc.

**Ontology:**

See above – different ontology styles already in play

## Outcomes

* We will build and deliver Ontology (1) as a deliverable of this group
* We will try and articulate some guidelines for how to use ontology (2) for TFs to follow
  + This may help them understand or fine tune when their existing ontologies don’t fully support full concept disambiguation

**Keywords:**

* Disambiguate
* Concept intension
  + Alignment of Written v Logic-framed intensions

We can write up gentle guidelines that start to reflect these ideas. Help them tease out how to define a context-sensitive Vocabulary.

Introduce the notion of ‘intension’.

Use nice neutral words like ‘logical framing’ to describe how a combination of class hierarchy, properties and restrictions can unambiguously frame the meaning for a concept.

* Class concept
* Property concept

## Pilot Exercise (Continued)

### Back to the example term

**Step 1 triage:** It is a ‘Term’

**Triage 2nd Stage:**

Analyze the definition.

(see above: looks a bit aspirational / armchairy)

What we think happened:

(find a way of not making the originator look bad in saying this)

* They found a word they were interested in;
* They looked it up in Wikipedia

Source was not for that term but the most similar worded term:

"https://en.wikipedia.org/wiki/Government\_by\_algorithm";

**Step [n]:** Conceptual analysis

* On both the words and the definition received
* Feedback to the TF – what they wanted to mean

Government\_by\_algorithm

* Is A kind of Government

Algorithmic Governance:

* Is a kind of Governance

#### In this step:

Don’t accept or reject one or the other; instead we present it back to the submitter as two concepts:

* ‘A kind of Government’
* ‘A kind of Governance’

Term to Concept mapping (before we even think of Context): provide both mappings:

* Algorithmic Governance maps to Concept: ‘A kind of Governance in which..’
* Algorithmic Governance maps to Concept ‘A kind of Government in which…’

**Step n+1:** Present this back to the TF or submitter of the ‘words’.

At this stage these Concepts can just be in a simple Taxonomy (we only need to extend the Domain Concept Ontology once we know what concepts are really needed).

**Outcome of Step:** a reduced list of Concepts in their Taxonomy, that are needed in the domain (2) Ontology.

### Proposal:

* Do we want to refine a well-formed RDF format for submission of such stuff?
* OR do we define some other e.g. spreadsheet that anyone can use and put the structure of what’s hooped for (pre-triage) in that spreadsheet.
* That is a spreadsheet in which to receive un-triaged things.

Part of ontology(1) – make equivalence of an RDF format and a spreadsheet format.

Then the RDF format could also be the underlying schema for UI-based entry of ‘words’ proposals like these ones.

OTOH we want the submission process to be as easy as possible. RDF would be a road block. If we have a web form with all the stuff needed:

* Justification
* References to sources that the submitter finds inadequate

Effectively an RFC

Form populates the Spreadsheet / CSV (doesn’t need to know RDF)

Can output the form as RDF or CSV

Can even use Excel functions or PERL script to get to formatted RDF stuff

Burden of formalizing the submission is on this group not the submitter.

### Implications: Contexts ontology (1)

The Contexts (1) ontology need to hold all of what we want the user to fill out, and some process

* Thereby we are actually capturing the context that the Context (1) ontology is for
* The form is part of the context!

Other things to include:

* What group they represent
* Whether there’s another term that they want to use
* External sources that are not adequate
* Narrative / comments (unstructured)
* Proposed definition if they have one
* Abbreviation if there is one

Focus: What am I trying to do, why am I requesting this, what is the **use case** for this term.

## Next Meeting

**Process:** CB working on a BPMN process for this (not yet complete)

Will send in next few days

**Next Week agenda:** Look at CB draft of the BPMN Process