

## QUESTIONS AND ANSWERS FROM THE WEBINAR: TOPBRAID SUITE SOLUTION CASE - DEMO OF THE NETHERLANDS MINISTRY OF JUSTICE METADATA WORKBENCH

**Q1:** If an OWL-DL model is used as the basis of a conceptual data model, how would this map to a DODAF v2.0 DIV-1 model? Also, how is the semantic CDM impacted if it is replaced by an RDF-based model built upon some other formal logic - one other than OWL-DL?

**A:** This is two questions, and the latter one is a much more complex question.

Let's start with the first: How would this map to DODAF? We are not sure if the question is about how does CCTS map to DODAF or about how the solution presented at the webinar maps to a solution that may be possible using CDM at the core instead of CCTS. We assume that CDM in the question is a conceptual level of the DODAF metamodel. It defines the high-level data constructs from which Architectural Descriptions are created.

In our view, CDM is quite different from CCTS. CDM is a specific model for expressing Enterprise Architecture that describes activities, organizations, measures, systems, skills, etc. There are no naming and design rules in CDM. CDM is not focused on reusable data components and general data exchange and aggregation. Rather it is focused on standardizing the way people talk about enterprise architectures. CCTS, on the other hand, is all about Core Components, Datatypes, Business Information Entities and Business Documents. It has very specific naming and design rules. A Core Component can be a System, an Activity, a Purchase Order or any other object. CCTS is neutral about the actual content of the core components. It is a methodology for capturing data models that achieves a common understanding of data structures and message types on a syntax independent level.

On the topic of DL and formal logic, we can address rules in a number of ways; however the intent of the workbench is to specify XML Schemas and not to do inferencing at this point in time. In the future there will be work of this kind. We can talk specifically how we addressed compatibility between rich ontologies and CCTS compliant ontologies (not everything can be translated because of the limitations of CCTS) or how we addressed translation between RDF/OWL and XML Schema. We also have DoDAF OWL models that could be transformed to CCTS.

It is too much to go into here, but there are conceptual (rich ontologies), logical (RDF/OWL but constrained by CCTS meta model) and physical (XML Schema). There is also an approach to getting the data (XML) back in a way that it can be used in the conceptual realm. We invite you to contact TopQuadrant if you are interested in further details such as this.

**Q2:** What rule is applied to translate to/from an `<xsd:choice>` compositor and OWL-DL?

**A:** In the MoJ work, there is no rule for translating to/from `<xsd:choice>` compositor. Instead `<xsd:sequence>` is used for ordering properties. `<xsd:choice>` can be handled by cardinalities and rule checking to ensure that only one of the options is in place.

However, we are currently developing [SPIN](#) rules for customizable generic translation from XSD to OWL. Among these rules, `<xsd:choice>` is included. In the MoJ context, a typical work-flow would be first a XSD - Rich OWL model translation using these rules, then a Rich OWL model - CCTS OWL model conversion using the Rich - CCTS converter, which is offered with the Metadata Workbench solution. The generated CCTS models can be displayed using Metadata Workbench.

**Q3:** I read the EnterpriseData Journal article and wonder if the CCTS integration uses the Core Component Library (I assume not).

**A:** You are correct. It does not use the Core Component Library.

**Q4:** Are context values somehow assigned to a BIE when a new one is created on the workbench?

**A:** Yes. When a new BIE is created the Metadata Workbench requires that a "Qualifier Term" be given to specify the context.

**Q5:** How are code list changes made in the systems that consume that list? Subscription?

**A:** Code lists, and all entities, are versioned. Systems consuming a code list will do so specify the version required. It is left to individual system maintainers to decide when to migrate to a newer version.

**Q6:** Please say something more about XML Schema Plus - is this work being done within W3C?

**A:** XML SchemaPlus is published at the web-site <http://www.xspl.us>. The work has been and is being done in a NASA project for telemetry and commanding of Space vehicles, modeling and simulation, systems engineering and data architecture. NASA's intention is to submit this work for standardization as it has done with other work from the same project, the QUDT ontologies for Units of Measure, also published on the web at <http://www.qudt.org>.

**Q7:** Have you considered using existing ontologies and vocabularies such as FOAF?

**A:** FOAF no, but other ontologies can and are being used such as LKIF.

**Q8:** In principle, your XML literals could be available as both Dutch and English (@en) to allow automatic adjustment in the user interface.

**A:** Yes, rdfs:labels and other text fields can be qualified with the language attribute, there were no English definitions in the MoJ information models, so we have done a quick translation in order to have rich content for the webinar.

**Q9:** Is the CCTS owl model/metamodel in the public domain?

**A:** It is the intention of the Netherlands Ministry of Justice to make all project assets available under an open source license. The type of license is being determined right now, and the release should occur within the next couple of months.

**Q10:** Can you talk a little about the relation between the OWL model and CCTS

**A:** OWL is used throughout the solution. Rich models of legal domains are transformed to ontologies that represent CCTS constructs. These models are then transformed using OWL transform models into XML SchemaPlus (XSP) which is then transformed using XSLT into CCTS XML Schemas. To do all of this, there is an ontology architecture that has meta-models of CCTS expressed in OWL.

**Q11:** Could you speak to the type of expertise of the analysts who would use the metadata workbench. Who trains them - what expertise/competencies leads to the most success in doing this work?

**A:** It is intended that the Metadata Workbench require only minimal training to operate. However an analyst using the application should be familiar with the concepts and terminology of CCTS and of course, those of the domain in which the metadata workbench is being used, - in the case of the MoJ, the judicial domain and processes.