NoMagic Assistance on FIBO

**Summary of what we have and what we might need.**

14 March 2014

# Overview

There are three areas of FIBO in which Cameo is used and where further support would be needed:

1. Production of “Clean” XMI for creation of OMG Deliverables
2. Creation of “Model Content” material for the written OMG Specification
3. Provision of business facing diagrams for Subject Matter Experts review.

Of these, (1) is out of scope of this document.

# Model Content Reports

A detailed requirements specification exists for all the activities described in this section.

## Current Arrangements

The written OMG specification for each FIBO standard contains a section for model content. Because FIBO is a model driven specification, the material in this section is derived directly from the VOM model in Cameo.

There are 3 aspects to this:

1. Module and ontology metadata
2. Diagrams
3. Tables

Assistance is sought in two areas:

1. Completion and improvement of the existing reporting facilities in Cameo
2. To the extent possible, streamlining the current manually intensive process so that fewer actions are required of the specification editor.

### Module and ontology metadata

These are in the form of tables at the start of each sub-clause in the model content specification.

Previously these were produced via a report from Cameo. This was not tabular, and so these have been replaced with hand-written tables.

**What we would like:** New report within Cameo which would automatically generate the tables in their current format.

### Diagrams

These are currently output from the model by hand.

**What we would like:** The new report noted above would also emit the required diagrams. Note there are several styles of diagram in the VOM models; the required report would select all the diagrams from only one specific, named UML package within the VOM package structure.

### Tables

These are currently created using a plug-in from NoMagic called “FIBO Profile”.

There are three tables in existence, and a fourth is required.

#### Classes, Properties Tables

The existing Classes and Properties tables have a number of issues recorded in GitHub, which need to be addressed.

Additional changes are required to the wizard which populates these tables, to reduce manual editing.

#### Restrictions Table

The third table, called “Restrictions”, has new requirements which are not yet recorded in GitHub. These changes require some navigation from the element reported on,via a set of defined relationships, to other elements in the model, with labels from those element to be placed at defined places in the table.

#### New Table: Logical Unions

A new table is required in the same form as the others.

## End to End Automation

To the extent possible, simply or automate the collation of the material in the four tables for each ontology, and arrange for these to be dropped into the relevant part of the overall Model Content report.

# Business Facing Diagrams

There are 2 requirements which we need assistance with:

1. Provision of diagrams and diagram editing facilities such that a business facing diagram may be produced for each ontology, and this diagram may be manipulated in real time in front of a business audience
   1. drag and drop operations only, no opening of dialog boxes to implement model edits
   2. no appearance of and UML or other technical notation during the editing process
2. Presentation of complex model patterns, as different model patterns

Details of the model patterns will be made available as a separate specification.

To give an idea of the work: there are at least two such patterns:

1. There is something called a “Restriction” in OWL, which is modeled as a class with up to three distinct relationships to other elements.
   1. This is to be represented in the business facing diagrams by way of a simpler set of lines and labels at defined points on those lines (no boxes).
   2. There are three styles of these, in which different types of relationship in the underlying model map to different textual labels in the business-facing pattern.
2. Complex patterns involving two or more restrictions, or a restriction used in combination with a logical union (a logical union is represented as a UML class with two or more UML Generalization relationships to other classes).
   1. These will be represented by a combination of a line, a new icon, and more lines, with mapping of detailed relationships to textual annotations on that pattern as above
   2. There are two such icons, and selection of the required icon will depend on interrogation of the type of one of the relationships in the underlying model.

Full details can be made available, and alternatives may be experimented with as we seek to achieve the right balance between what is economically possible and what is suitable to rendering ontology content to a business audience.