# Report of the DOL 1.0 FTF Finalization Task Force to the OMG Platform Technical Committee

### 7 November 2017

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JIRA Project Prefix: DOL

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Title: Annex references to metaclasses

• OMG Issue DOL-40

Title: Inaccurate footnote 35

• OMG Issue DOL-41

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• OMG Issue DOL-43

Title: typo

• OMG Issue DOL-68

*Title: The label for supportsLogic in the ontology is duplicated.* 

• OMG Issue DOL-81

Title: Minor bugs in the translation from OWL to FOL

• OMG Issue DOL-82

Title: change terminology from "model" to "realisation"

• OMG Issue DOL-90

Title: minimize can be used to express reachability models

• OMG Issue DOL-92

Title: missing parenthesis in the concrete grammar

• OMG Issue DOL-94

Title: BasicOMS may need to be included in delimiters

• OMG Issue DOL-96

Title: Don't include version number of cited standard unless it is required.

• OMG Issue DOL-98

Title: update the copyright to 2017

• OMG Issue DOL-101

Title: Cleanup of encoding and markups

• OMG Issue DOL-102

Title: Improvement of definitions and comments in the ontology

### • Disposition: Deferred

• OMG Issue DOL-20

Title: The DOL ontology should be documented properly in the specification

### • Disposition: Closed; No Change

• OMG Issue DOL-5

Title: Potential misclassification of several classes

• OMG Issue DOL-6

Title: Need for intermediate class to disambiguate OWL 2 profiles

• OMG Issue DOL-13

Title: Redundant declaration of dol:OMSLanguageTranslation in the ontology

• OMG Issue DOL-15

Title: Clarify the definition of dol:OMSLanguageTranslation

• OMG Issue DOL-16

 ${\it Title: Missing definition for dol:} OMSLanguage Reduction$ 

• OMG Issue DOL-17 Title: Clarify the definition of dol:LogicMapping in the ontology

OMG Issue DOL-18
 Title: Revise/clarify the definition and related notes for dol:LogicReduction in the ontology

• OMG Issue DOL-35 Title: The definition of union is misleading

Disposition: Closed; Out Of ScopeDisposition: Duplicate or Merged

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### **Deliverables**

### **Publication Directions**

This section contains information about how OMG staff should publish the resulting specification on the OMG formal specification web page. The chosen acronym and version number determine the URL to be used; for instance, if the acronym chosen is "ABCD" and the version number is "1.2", the normative specification documents will be available under the URL http://www.omg.org/spec/ABCD/1.2/.

Documents in this section are classified as one of:

Normative: A document that specifies how a conforming implementation shall behave (but may

contain specifically-labelled non-normative sections).

Informative: Non-normative material aimed at users of the specification, such as examples or non-

normative guidelines.

Material intended to help OMG Members reviewing the report or creating future

revisions of the specification, such as a change-tracked specification showing issue resolutions applied, editable source of models stored in proprietary formats, or programs

Ancillary: used to build parts of the specification from machine-readable sources. The

specification shall be usable without reference to the ancillary files, which should not be

given URLs.

### **Specification**

Chosen acronym: DOL Version number: 1.0

Title: Revised specification (clean)

Doc Number: ptc/17-11-09
Status: Normative

URL: http://www.omg.org/spec/DOL/1.0

Title: DOL 1.0 revised specification with change bars

Doc Number: ptc/17-11-10
Status: Informative

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### **Supporting Documents**

Title: DOL Terminology Ontology 1.0 VOM/MagicDraw Model (ancillary)

Doc Number: ptc/17-11-14 Status: Ancillary

Title: diff document for the DOL ontology to highlight the changes (informative)

Doc Number: ptc/17-11-15 Status: Informative

Title: DOL 1.0 FTF metamodel tool file

Doc Number: ptc/17-11-17 Status: Ancillary

Title: DOL 1.0 FTF ancillary .zip archive (Zip File)

Doc Number: ptc/17-11-16 Status: Ancillary

Title: Issue DOL-1 Attachment 304.diff

Doc Number: ptc/17-11-16

Filename: DOL-1/304.diff (zip entry)

Status: Ancillary

Title: Issue DOL-2 Attachment 305.diff

Doc Number: ptc/17-11-16

Filename: DOL-2/305.diff (zip entry)

Status: Ancillary

Title: Issue DOL-4 Attachment 307-308.diff

Doc Number: ptc/17-11-16

Filename: DOL-4/307-308.diff (zip entry)

Status: Ancillary

Title: Issue DOL-4 Attachment spec307-308-diff.pdf

Doc Number: ptc/17-11-16

Filename: DOL-4/spec307-308-diff.pdf (zip entry)

Status: Ancillary

Title: Issue DOL-7 Attachment 310.diff

Doc Number: ptc/17-11-16

Filename: DOL-7/310.diff (zip entry)

Status: Ancillary

Title: Issue DOL-8 Attachment 311.diff

Doc Number: ptc/17-11-16

Filename: DOL-8/311.diff (zip entry)

Status: Ancillary

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Title: Issue DOL-9 Attachment 312.diff

Doc Number: ptc/17-11-16

Filename: DOL-9/312.diff (zip entry)

Status: Ancillary

Title: Issue DOL-10 Attachment 313.diff

Doc Number: ptc/17-11-16

Filename: DOL-10/313.diff (zip entry)

Status: Ancillary

Title: Issue DOL-11 Attachment 314.diff

Doc Number: ptc/17-11-16

Filename: DOL-11/314.diff (zip entry)

Status: Ancillary

Title: Issue DOL-12 Attachment 315.diff

Doc Number: ptc/17-11-16

Filename: DOL-12/315.diff (zip entry)

Status: Ancillary

Title: Issue DOL-14 Attachment 317.diff

Doc Number: ptc/17-11-16

Filename: DOL-14/317.diff (zip entry)

Status: Ancillary

Title: Issue DOL-19 Attachment 322.diff

Doc Number: ptc/17-11-16

Filename: DOL-19/322.diff (zip entry)

Status: Ancillary

Title: Issue DOL-21 Attachment 324.diff

Doc Number: ptc/17-11-16

Filename: DOL-21/324.diff (zip entry)

Status: Ancillary

Title: Issue DOL-21 Attachment spec324-diff.pdf

Doc Number: ptc/17-11-16

Filename: DOL-21/spec324-diff.pdf (zip entry)

Status: Ancillary

Title: Issue DOL-22 Attachment 325.diff

Doc Number: ptc/17-11-16

Filename: DOL-22/325.diff (zip entry)

Status: Ancillary

Title: Issue DOL-23 Attachment 326.diff

Doc Number: ptc/17-11-16

Filename: DOL-23/326.diff (zip entry)

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Status: Ancillary

Title: Issue DOL-24 Attachment 327.diff

Doc Number: ptc/17-11-16

Filename: DOL-24/327.diff (zip entry)

Status: Ancillary

Title: Issue DOL-25 Attachment 328.diff

Doc Number: ptc/17-11-16

Filename: DOL-25/328.diff (zip entry)

Status: Ancillary

Title: Issue DOL-26 Attachment 329.diff

Doc Number: ptc/17-11-16

Filename: DOL-26/329.diff (zip entry)

Status: Ancillary

Title: Issue DOL-27 Attachment 330.diff

Doc Number: ptc/17-11-16

Filename: DOL-27/330.diff (zip entry)

Status: Ancillary

Title: Issue DOL-28 Attachment 331.diff

Doc Number: ptc/17-11-16

Filename: DOL-28/331.diff (zip entry)

Status: Ancillary

Title: Issue DOL-29 Attachment 332.diff

Doc Number: ptc/17-11-16

Filename: DOL-29/332.diff (zip entry)

Status: Ancillary

Title: Issue DOL-30 Attachment 333.diff

Doc Number: ptc/17-11-16

Filename: DOL-30/333.diff (zip entry)

Status: Ancillary

Title: Issue DOL-31 Attachment 334.diff

Doc Number: ptc/17-11-16

Filename: DOL-31/334.diff (zip entry)

Status: Ancillary

Title: Issue DOL-32 Attachment 335.diff

Doc Number: ptc/17-11-16

Filename: DOL-32/335.diff (zip entry)

Status: Ancillary

Title: Issue DOL-33 Attachment 336.diff

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Doc Number: ptc/17.11.16 Filename: DOL-33/336.diff (zip entry)

Status: Ancillary

Title: Issue DOL-34 Attachment 337.diff

Doc Number: ptc/17-11-16

Filename: DOL-34/337.diff (zip entry)

Status: Ancillary

Title: Issue DOL-36 Attachment 339-diff.pdf

Doc Number: ptc/17-11-16

Filename: DOL-36/339-diff.pdf (zip entry)

Status: Ancillary

Title: Issue DOL-38 Attachment 352-diff.pdf

Doc Number: ptc/17-11-16

Filename: DOL-38/352-diff.pdf (zip entry)

Status: Ancillary

Title: Issue DOL-39 Attachment OMG\_OntoIOp\_current-diff-342.pdf

Doc Number: ptc/17-11-16

Filename: DOL-39/OMG\_OntoIOp\_current-diff-342.pdf (zip entry)

Status: Ancillary

Title: Issue DOL-68 Attachment 353.diff

Doc Number: ptc/17-11-16

Filename: DOL-68/353.diff (zip entry)

Status: Ancillary

Title: Issue DOL-81 Attachment 301-diff.pdf

Doc Number: ptc/17-11-16

Filename: DOL-81/301-diff.pdf (zip entry)

Status: Ancillary

Title: Issue DOL-82 Attachment 302-diff.pdf

Doc Number: ptc/17-11-16

Filename: DOL-82/302-diff.pdf (zip entry)

Status: Ancillary

Title: Issue DOL-90 Attachment 348-diff.pdf

Doc Number: ptc/17-11-16

Filename: DOL-90/348-diff.pdf (zip entry)

Status: Ancillary

Title: Issue DOL-92 Attachment 350-diff.pdf

Doc Number: ptc/17-11-16

Filename: DOL-92/350-diff.pdf (zip entry)

Status: Ancillary

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Title: Issue DOL-94 Attachment 351-diff.pdf

Doc Number: ptc/17-11-16

Filename: DOL-94/351-diff.pdf (zip entry)

Status: Ancillary

Title: Issue DOL-96 Attachment 288-diff.pdf

Doc Number: ptc/17-11-16

Filename: DOL-96/288-diff.pdf (zip entry)

Status: Ancillary

Title: Issue DOL-102 Attachment DOL-terms.rdf

Doc Number: ptc/17-11-16

Filename: DOL-102/DOL-terms.rdf (zip entry)

Status: Ancillary

### Machine-consumable documents

This section contains one entry for each machine-consumable file accompanying the submission.

Authors should assign a version stamp to each new normative or informative machine-consumable file that they create. Version stamps comprise 8 digits, and each newly-assigned version stamp for a particular specification must be greater than any previous version stamp for the same specification. One convenient way to achieve this is to concatenate the current year & two-digit month number with a two-digit sequence number within the month. Hence the sixth version created during May 2013 would have version stamp 20130506. Multiple files with different names should share the same version stamp where appropriate.

If many files are supplied, it may be convenient to package them in a single ZIP archive with a single OMG document number; however, each separate file should nevertheless still be given its own entry in this section.

For each machine-readable file, list any other files on which it depends (e.g. by inclusion), and whether it's normative, informative or ancillary (see above).

Each normative or informative machine-readable file is given a URL that allows it to be unambiguously referenced on the OMG formal specification web site. Ancillary files do not have URLs - they are not usually placed on the formal specification page.

Description: OntoIOp/DOL revised submission - MOF metamodel

Doc Number: ad/15-10-02 Status: Normative

Description: DOL Terminology Ontology 1.0 RDF/XML-serialized OWL (informative)

Doc Number: ptc/17-11-11
Status: Informative

**Description:** DOL Terminology Ontology 1.0 ODM UMLXMI (informative)

Doc Number: ptc/17-11-12
Status: Informative

**Description:** DOL Terminology Ontology 1.0 ODM XMI (informative)

Doc Number: ptc/17-11-13

Status: Informative

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### **Additional Editing Instructions**

Add a .htaccess file in the <a href="http://www.omg.org/spec/DOL/">http://www.omg.org/spec/DOL/</a> directory to support namespace redirection for the DOL ontology, and include the following: RedirectMatch 303  $^(.)$ /DOL/(.)/\$ \$1/DOL/\$2.rdf

Even though the DOL ontology is informative, it is required for other ongoing work, and should be posted at both the versioned and non-versioned URLs, as listed above.

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### **IPR Mode**

Under OMG's IPR policy, every specification published after April 2013 must include a declaration of the terms under which anyone who contributed text to the specification must agree to license any patents that they control, and which they claim are essential to implementing the specification. This is known as the "IPR Mode" of the specification. It must be chosen from the list specified in the IPR policy, and once OMG's Board has selected the IPR Mode for a specification, it cannot subsequently be changed for any later RTF or FTF for that specification.

For RTFs or FTFs chartered before April 2013, a Legacy IPR mode must be selected for the specification being revised/finalised using the procedure in ipr/12-11-01 section 3.3.3, and listed below.

For RTFs or FTFs chartered after April 2013 for a specification without an IPR mode, the charter includes a Legacy IPR mode selected by the same procedure - that mode is listed bellow.

For a full, definitive statement of OMG's IPR policy, see: http://doc.omg.org/ipr.

IPR mode of base specification: Non-Assert

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### FTF Membership

Member	Organization	Role	Status
Cory Casanave	Model Driven Solutions	Voting Member	Charter
Manfred Koethe	88solutions	Voting Member	Charter
Conrad Bock	NIST	Voting Member	Charter
Pete Rivett	Adaptive	Voting Member	Charter
Leo Obrst	MITRE	Voting Member	Charter
Elisa Kendall	Thematix Partners LLC	Voting Member	Charter
Bobbin Teegarden	No Magic, Inc.	Voting Member	Charter
Andreas Hoffmann	Fraunhofer FOKUS	Voting Member	Charter
Fabian Neuhaus	Otto von Guericke University of Magdeburg	Chair	Charter

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### **Disposition Summary**

Disposition	Number Of Issues	Meaning Of Disposition
Resolved	43	The RTF/FTF agreed that there is a problem that needs fixing, and has proposed a resolution (which may or may not agree with any resolution the issue submitter proposed)
Deferred	1	The RTF/FTF agrees that there is a problem that needs fixing, but did not agree on a resolution and deferred its resolution to a future RTF/FTF.
Closed; No Change	8	The RTF/FTF decided that the issue report does not, in fact, identify a problem with this (or any other) OMG specification.
Closed; Out Of Scope	0	The RTF/FTF decided that the issue report is an enhancement request, and therefore out of scope for this or any future FTF or RTF working on this major version of the specification. The RTF/FTF has closed the issue without making any specification changes, but RFP or RFC submission teams may like to consider these enhancement requests when proposing future new major versions of the specification.
Duplicate or Merged	0	This issue is either an exact duplicate of another issue, or very closely related to another issue: see that issue for disposition.

Voting Record Page 16 of 76

### **Voting Record**

Note: Issue numbers shown in the tables below should be prefixed with the JIRA Project Prefix (DOL-) to form fully qualified issue numbers.

Ballot No.	Closing Date	Number of Issues	Issues Included
2	19 August 2017	44	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 43, 68, 81, 82
3	21 August 2017	4	90, 92, 94, 96
4	29 August 2017	2	20, 98
5	7 November 2017	2	101, 102

The following tables detail the vote for each member in each ballot. The vote is described as follows:

- Y Yes Positive Vote
- No Negative Vote
- A Abstain
- Member Did Not Vote

### Voting Record for Ballot No. 2

17

16

18

19

Voter	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Manfred Koethe	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pete Rivett	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Andreas Hoffmann	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Leo Obrst	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cory Casanave	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Conrad Bock	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Bobbin Teegarden	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fabian Neuhaus	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Elisa Kendall	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Doug Tolbert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
											_				

25

26

27

Voter

**30** 

31

29

28

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Manfred Koethe	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pete Rivett	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Andreas Hoffmann	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Leo Obrst	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cory Casanave	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Conrad Bock	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Bobbin Teegarden	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fabian Neuhaus	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Elisa Kendall	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Doug Tolbert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Voter	32	33	34	35	36	37	38	39	40	41	43	68	81	82
Manfred Koethe	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pete Rivett	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Andreas Hoffmann	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Leo Obrst	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cory Casanave	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Conrad Bock	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Bobbin Teegarden	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fabian Neuhaus	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Elisa Kendall	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Doug Tolbert	-	-	-	-	-	-	-	-	-	-	-	-	-	-

### **Voting Record for Ballot No. 3**

Voter	90	92	94	96
Manfred Koethe	Y	Y	Y	Y
Pete Rivett	-	-	-	-

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Andreas Hoffmann	Y	Y	Y	Y
Leo Obrst	Y	Y	Y	Y
Cory Casanave	Y	Y	Y	Y
Conrad Bock	A	A	A	A
Bobbin Teegarden	Y	Y	Y	Y
Fabian Neuhaus	Y	Y	Y	Y
Elisa Kendall	Y	Y	Y	Y
Doug Tolbert	-	-	-	-

### **Voting Record for Ballot No. 4**

Voter	20	98
Manfred Koethe	Y	Y
Pete Rivett	-	1
Andreas Hoffmann	Y	Y
Leo Obrst	Y	Y
Cory Casanave	Y	Y
Conrad Bock	A	A
Bobbin Teegarden	Y	Y
Fabian Neuhaus	Y	Y
Elisa Kendall	Y	Y
Doug Tolbert	-	-

### **Voting Record for Ballot No. 5**

Voter	101	102
Manfred Koethe	Y	Y
Pete Rivett	Y	Y
Andreas Hoffmann	-	-
Leo Obrst	Y	Y
Cory Casanave	-	-

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Conrad Bock	A	A
Bobbin Teegarden	Y	Y
Fabian Neuhaus	Y	Y
Elisa Kendall	Y	Y

Disposition: Resolved Page 20 of 76

### **Summary of Changes Made**

The FTF made changes that:

- Corrected errors in the specification
- Increased the clarity of the specification
- Corrected features in order to improve implementability and adoption of the standard

Here is the FTF's categorization of the resolutions applied to the specification according to their impact on the clarity and precision of the specification:

Note: Issue numbers shown in the tables below should be prefixed with the JIRA Project Prefix (DOL-) to form fully qualified issue numbers.

Extent of Change	Number of Issues	Issues Included
Critical/Urgent — Fixed problems with normative parts of the specification which prevented implementation work.	1	94
Significant — Fixed problems with normative parts of the specification that raised concern about implementability.	25	4, 7, 8, 9, 10, 12, 19, 23, 24, 25, 26, 28, 29, 31, 33, 34, 36, 38, 39, 81, 82, 90, 92, 96, 102
Minor — Fixed minor problems with normative parts of the specification.	17	1, 2, 3, 11, 14, 21, 22, 27, 30, 32, 37, 40, 41, 43, 68, 98, 101
Support Text — Changes to descriptive, explanatory, or supporting material.	0	

Disposition: Resolved Page 21 of 76

### **Disposition: Resolved**

**OMG Issue: DOL-1** 

### Title:

## The name of the OMS language graph class in the ontology does not match its label

### **Summary:**

The class, dol:LanguageGraph has a label of "OMS language graph", which is more explicit. If that is the intent of the class from a usage perspective, the name should be revised to dol:OMSLanguageGraph.

(API4KB team input)

#### Source:

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

• we have implemented the suggested change.\*

The class, dol:LanguageGraph has a label of "OMS language graph", which is more explicit. If that is the intent of the class from a usage perspective, the name should be revised to dol:OMSLanguageGraph.

we have implemented the suggested change.

#### **Revised Text:**

see file 304.diff

### **Extent Of Change:**

Minor

### **Disposition:**

Resolved - Approved on Ballot #2

#### Reporter

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### **Reported:**

Tue, 23 Feb 2016 22:06 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-1 - http://issues.omg.org/browse/DOL-1

### **Attachments:**

• 304.diff - ptc-17-11-16/DOL-1/304.diff 1 kB ()

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### **OMG Issue: DOL-2**

### Title:

## The definition of dol:AbstractSyntax implies that it should be a subclass of dol:Language

### **Summary:**

The definition of dol:AbstractSyntax says it is a (term) language that ... . Therefore It should be a subclass of dol:Language.

Also, the definition dol:AbstractSyntax does not capture the common notion of abstract syntax in OMG. Perhaps "platform-independent metamodel for a language"?

(API4KB team)

#### Source:

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

### definition of AbstractSyntax revised

AbstractSyntax is now a subclass of Language. The notion of metamodel occurs in a note; we have kept the definition more general.

### **Revised Text:**

(see file 305.diff)

### **Extent Of Change:**

Minor

### **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### **Reported:**

Tue, 23 Feb 2016 22:08 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-2 - http://issues.omg.org/browse/DOL-2

### **Attachments:**

• 305.diff - ptc-17-11-16/DOL-2/305.diff 0.7 kB ()

Disposition: Resolved Page 23 of 76

### **OMG Issue: DOL-3**

### Title:

### Typo in the definition of the dol:Ontology class

### **Summary:**

There is a typo in definition of ontology "shard" => "shared".

(API4KB team)

### **Source:**

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

### typo corrected

typo corrected

### **Revised Text:**

"shard" =>"shared"

### **Extent Of Change:**

Minor

### **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### **Reported:**

Tue, 23 Feb 2016 22:10 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-3 - http://issues.omg.org/browse/DOL-3

Disposition: Resolved Page 24 of 76

### **OMG Issue: DOL-4**

### Title:

### Elements described as "logical theories" are not defined as such

### **Summary:**

Each of "dol:Ontology", "dol:Specification" and "dol:MDEModel" are defined as "logical theories", but they are not subclasses of dol:LogicalTheory. Further, their definition suggests they are roles (i.e. non-rigid properties) of dol:LogicalTheory. If this is the intended meaning, then the definition should say this explicitly.

(API4KB team)

#### Source:

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

\*revised definitions of OMS, ontology, MDE model and specification \*

Indeed, the use of "logical theory" for the definitions is misleading here. We improved the definitions of OMS, ontology, MDE model, and specification both in the DOL spec and the ontology.

### **Revised Text:**

see attached diff files for changes: spec307-308-diff.pdf for the specification and 307-308.diff for the ontology

### **Extent Of Change:**

Significant

### **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### Reported:

Tue, 23 Feb 2016 22:12 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-4 - http://issues.omg.org/browse/DOL-4

### **Attachments:**

- 307-308.diff ptc-17-11-16/DOL-4/307-308.diff 4 kB ()
- spec307-308-diff.pdf ptc-17-11-16/DOL-4/spec307-308-diff.pdf 192 kB (application/pdf)

Disposition: Resolved Page 25 of 76

### **OMG Issue: DOL-7**

### Title:

### Missing concept for Symbol in the DOL ontology

### **Summary:**

There is no concept of Symbol but it is used in the definition of Language, and there is a concept of NonLogicalSymbol.

(API4KB team)

### **Source:**

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

### We have added classes Symbol and LogicalSymbol.

We have added classes Symbol and LogicalSymbol.

### **Revised Text:**

(see file 310.diff)

### **Extent Of Change:**

Significant

### **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### Reported:

Tue, 23 Feb 2016 22:19 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-7 - http://issues.omg.org/browse/DOL-7

### **Attachments:**

• 310.diff - ptc-17-11-16/DOL-7/310.diff 3 kB ()

Disposition: Resolved Page 26 of 76

### **OMG Issue: DOL-8**

### Title:

## The text definition of dol:Mapping does not agree with the way the class is specified.

### **Summary:**

The natural language definition of dol:Mapping does not agree with the formalization, in that logic mappings are not set-theoretic mappings, but are families of set-theoretic mappings. The natural language definition could be generalized to "set-theoretic mapping or family of set-theoretic mappings" (as suggested by Till), so that it would be correct to say that dol:LogicMapping is a subclass of dol:Mapping. This would still exclude dol:SignatureMorphism.

#### Source:

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

### change of definition of Mapping

We have generalized the definition of Mapping to "set-theoretic mapping or family of set-theoretic mappings".

### **Revised Text:**

see file 311.diff

### **Extent Of Change:**

Significant

### **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### **Reported:**

Tue, 23 Feb 2016 22:22 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-8 - http://issues.omg.org/browse/DOL-8

### **Attachments:**

• 311.diff - ptc-17-11-16/DOL-8/311.diff 0.9 kB ()

Disposition: Resolved Page 27 of 76

### **OMG Issue: DOL-9**

### Title:

### Need to clarify what is meant by a "construct" in the ontology

### **Summary:**

The term "construct" is used in several annotations (:isLanguageAspectOf definition, :LanguageAspect, ...). Is this a synonym for dol:Term or dol:Expression or something different? To make this more clear, either a term dol:Construct could be defined, or an existing concept could be used instead.

(API4KB team)

### Source:

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

### "Construct" added to ontology

We have now defined construct as "syntactic pattern that is part of a language".

#### **Revised Text:**

see 312.diff

### **Extent Of Change:**

Significant

### **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### Reported:

Tue, 23 Feb 2016 22:23 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-9 - http://issues.omg.org/browse/DOL-9

### **Attachments:**

• 312.diff - ptc-17-11-16/DOL-9/312.diff 0.8 kB ()

Disposition: Resolved Page 28 of 76

### **OMG Issue: DOL-10**

### Title:

### Need to clarify the role of logical symbols in the ontology

### **Summary:**

The natural language definition of Term "syntactic expression either consisting of a single non-logical symbol or recursively composed of other terms (a.k.a. its subterms)" is a little unclear, as it leaves some question as to the role of logical symbols. The intent is made more clear by the existence of the subclass Sentence, which presumably includes sentences with logical connectives, but as a stand-alone definition it is vague. Perhaps an explanatory note could be added, because in some standards the "term" class does not include sentences.

#### Source:

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

### definition of Term is clarified

We have clarified that logical symbols can be part of terms. Hopefully, this makes it more transparent. There is an axiom that states that Sentence is as subclass of Term. We are not sure what the note should say in addition to that.

### **Revised Text:**

see file 313.diff

### **Extent Of Change:**

Significant

### Disposition:

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### Reported:

Tue, 23 Feb 2016 22:24 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-10 - http://issues.omg.org/browse/DOL-10

### **Attachments:**

• 313.diff - ptc-17-11-16/DOL-10/313.diff 0.8 kB ()

Disposition: Resolved Page 29 of 76

### **OMG Issue: DOL-11**

### Title:

### Need to clarify the use of "text" in the ontology

### **Summary:**

In dol:OMSLanguageTranslation the use of "text" in the note suggests that a translation is always between texts (presumably, a coarse-grained syntactic category like Common Logic texts?), rather than between the more fine-grained syntactic "constructs". It would be more clear to either define "dol:Text" and "dol:Construct" or re-use terms that are formally defined, such as dol:Term or dol:Expression.

(API4KB team)

#### Source:

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

\*Clarification of dol:OMSLanguageTranslation \*

The syntactic category of the result of a translation entirely depends on the syntax of the target language. Thus, we have removed the term "text" in order to avoid possible confusion. It is required that the result must be well-formed in the target language, the syntactic nature of the result is not longer mentioned.

### **Revised Text:**

see file 314.diff

### **Extent Of Change:**

Minor

### **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### Reported:

Tue, 23 Feb 2016 22:26 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-11 - http://issues.omg.org/browse/DOL-11

### **Attachments:**

• 314.diff - ptc-17-11-16/DOL-11/314.diff 1.0 kB ()

Disposition: Resolved Page 30 of 76

### **OMG Issue: DOL-12**

### Title:

### There are multiple definitions for dol:OMSLanguageTranslation in the ontology which should be clarified and distilled to a single definition

### **Summary:**

dol:OMSLanguageTranslation has two definitions with slightly different wording. One says "a mapping (translation or reduction) between two OMS languages", which seems like it would be more appropriate for dol:OMSLanguageMapping, a concept that is not explicitly defined. The second says "mapping from constructs in the source OMS language to their equivalents in the target OMS language". It is not clear in what sense "equivalent" is meant here.

(API4KB team)

#### Source:

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

### Clarification of OMSLanguageTranslation

dol:OMSLanguageTranslation has two definitions with slightly different wording. One says "a mapping (translation or reduction) between two OMS languages", which seems like it would be more appropriate for dol:OMSLanguageMapping, a concept that is not explicitly defined. The second says "mapping from constructs in the source OMS language to their equivalents in the target OMS language". It is not clear in what sense "equivalent" is meant here.

The first wording has been adressed already by proposal <a href="http://issues.omg.org/browse/DOL-53">http://issues.omg.org/browse/DOL-53</a>. We have deleted the second wording, because it is imprecise and mostly inherited from Mapping already.

### **Revised Text:**

see file 315.diff, it highlights the change compared to the version in http://issues.omg.org/browse/DOL-53

### **Extent Of Change:**

Significant

### Disposition:

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### **Reported:**

Tue, 23 Feb 2016 22:27 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-12 - http://issues.omg.org/browse/DOL-12

### **Attachments:**

• 315.diff - ptc-17-11-16/DOL-12/315.diff 0.8 kB ()

Disposition: Resolved Page 31 of 76

### **OMG Issue: DOL-14**

### Title:

## There are redundant axioms for LogicTranslation and LogicReduction

### **Summary:**

There is a similar group of redundant axioms for subclasses of LogicTranslation and LogicReduction, that explicitly state they are subclasses of LogicMapping. It should be okay to delete these redundant declarations.

(API4KB team)

### Source:

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

### redundant axioms were removed

We have removed the redundant axiom for Embedding, which is a subclass of LogicTranslation. There is no subclass of LogicReduction.

### **Revised Text:**

see attachment 317.diff

### **Extent Of Change:**

Minor

### **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### Reported:

Tue, 23 Feb 2016 22:30 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-14 - http://issues.omg.org/browse/DOL-14

#### **Attachments:**

• 317.diff - ptc-17-11-16/DOL-14/317.diff 0.8 kB ()

Disposition: Resolved Page 32 of 76

### **OMG Issue: DOL-19**

### Title:

### Definition of dol:Language needs clarification

### **Summary:**

The definition of dol:Language as "collection of expressions" where dol:Expression is "a finite combination of symbols that are well-formed according to applicable rules (depending on the language)" suggests that this class does not include natural languages, only formal languages. This is supported by its usage in the definition of dol:FormalSemantics? To avoid confusion, could this concept be renamed to dol:FormalLanguage (if that is the intent)?

(API4KB team)

#### Source:

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

### We now distinguish class Language and class FormalLanguage.

We now distinguish class Language and class FormalLanguage.

### **Revised Text:**

(see file 322.diff)

### **Extent Of Change:**

Significant

### **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### Reported:

Tue, 23 Feb 2016 22:35 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-19 - http://issues.omg.org/browse/DOL-19

### **Attachments:**

• 322.diff - ptc-17-11-16/DOL-19/322.diff 2 kB ()

Disposition: Resolved Page 33 of 76

### **OMG Issue: DOL-21**

### Title:

### IRIs in the "global environment" are overly constrained

### **Summary:**

In the DOL ontology, IRIs seem to be restricted to document identifiers, networks and mappings, and the meaning of global knowledge remains unexplained.

#### Source:

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n'a

### **Resolution Summary:**

\*definition of global knowledge rephrased \*

We have changed the wording concerning global knowledge. However, we did not change anything concerning IRIs. Note that a GlobalEnvironment uses IRIs in a specific and restricted way. But this does not mean at all that IRIs (which are not defined in the DOL ontology, because there are other places to do so) are restricted.

This change affects both the glossary in the specification as well as the ontology.

### **Revised Text:**

See file 324.diff for changes in the ontology and spec324-diff.pdf for changes in the DOL specification.

### **Extent Of Change:**

Minor

### **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### **Reported:**

Wed, 13 Apr 2016 19:00 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-21 - http://issues.omg.org/browse/DOL-21

### **Attachments:**

- 324.diff ptc-17-11-16/DOL-21/324.diff 0.8 kB ()
- spec324-diff.pdf ptc-17-11-16/DOL-21/spec324-diff.pdf 167 kB (application/pdf)

Disposition: Resolved Page 34 of 76

### **OMG Issue: DOL-22**

### Title:

### Language graphs should not be limited to translations

### **Summary:**

In the DOL ontology, LanguageGraph: edges seem to be limited to language translations - why not e.g. language reductions?

The definition of OMSLanguageTranslation suggests that a language mapping can be either a translation or a reduction.

#### **Source:**

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

### We have added language reductions to the definition of LanguageGraph.

We have added language reductions to the definition of LanguageGraph.

### **Revised Text:**

(see 325.diff)

### **Extent Of Change:**

Minor

### **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### **Reported:**

Wed, 13 Apr 2016 19:01 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-22 - http://issues.omg.org/browse/DOL-22

### **Attachments:**

• 325.diff - ptc-17-11-16/DOL-22/325.diff 0.8 kB ()

Disposition: Resolved Page 35 of 76

### **OMG Issue: DOL-23**

### Title:

### Nodes and edges are not well defined

### **Summary:**

In the DOL ontology, LanguageGraph and LogicGraph: Explicitly state what the nodes and what the edges are

### **Source:**

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

### we have now explicitly stated what nodes and edges are.

We have now explicitly stated what nodes and edges are by changing the definitions of LanguageGraph and LogicGraph.

### **Revised Text:**

(see file 326.diff)

### **Extent Of Change:**

Significant

### **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### Reported:

Wed, 13 Apr 2016 19:02 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-23 - http://issues.omg.org/browse/DOL-23

### **Attachments:**

• 326.diff - ptc-17-11-16/DOL-23/326.diff 2 kB ()

Disposition: Resolved Page 36 of 76

### **OMG Issue: DOL-24**

### Title:

## Documentation is missing in the DOL ontology for the meaning of HeterogeneousEnvironment

### **Summary:**

Heterogeneous Environment: the notes from the document should also be added to the ontology class.

### Source:

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

### **Resolution Summary:**

• We have added the notes to the class HeterogeneousEnvironment of the DOL ontology.\*

We have added the notes to the class Heterogeneous Environment of the DOL ontology.

### **Revised Text:**

(see file 327.diff)

### **Extent Of Change:**

Significant

### Disposition:

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

### Reported:

Wed, 13 Apr 2016 19:04 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

### **Discussion:**

DOL-24 - http://issues.omg.org/browse/DOL-24

### **Attachments:**

• 327.diff - ptc-17-11-16/DOL-24/327.diff 1 kB ()

Disposition: Resolved Page 37 of 76

# **OMG Issue: DOL-25**

# Title:

# The text definition for Institution is incomplete

#### **Summary:**

In the DOL ontology, the natural language (text) definition for the Institution class is incomplete, and should incorporate the definition provided by the defining axioms of the class.

#### Source:

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

#### **Resolution Summary:**

\*Definition of institution changed. \*

We have extended the definition of institution in order to incorporate the definition provided by the defining axioms of the class.

#### **Revised Text:**

(see 328.diff)

#### **Extent Of Change:**

Significant

# **Disposition:**

Resolved - Approved on Ballot #2

### Reporter:

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

# Reported:

Wed, 13 Apr 2016 19:06 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-25 - http://issues.omg.org/browse/DOL-25

#### **Attachments:**

• 328.diff - ptc-17-11-16/DOL-25/328.diff 0.7 kB ()

Disposition: Resolved Page 38 of 76

# **OMG Issue: DOL-26**

# Title:

# The definition for Logic in the DOL ontology is limited to monotonic logic only and should be broader

# **Summary:**

Logic: the definition seems to be appropriate for monotonic logic only. That is, the satisfaction relation is defined for sentences, and then it appears to be assumed that satisfaction of a theory is based on satisfaction of all sentences in the theory. This would not be enough for, e.g. defeasible logic. So perhaps the name of this concept should be changed to MonotonicLogic, so if can be reused in external ontologies that also cover nonmonotonic logics.

#### Source:

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

#### **Resolution Summary:**

# We distinguish between Logic and MonotonicLogic

The former class Logic has been renamed to MonotonicLogic, and a class Logic has been added as a superclass of MonotonicLogic. Most object properties still have domain/range Logic. Only the formalises object properties has range MonotonicLogic: an Institution always formalises a MonotonicLogic.

#### **Revised Text:**

(see attached diff document 329.diff)

#### **Extent Of Change:**

Significant

#### **Disposition:**

Resolved - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### **Reported:**

Wed, 13 Apr 2016 19:07 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-26 - http://issues.omg.org/browse/DOL-26

#### **Attachments:**

• 329.diff - ptc-17-11-16/DOL-26/329.diff 3 kB ()

Disposition: Resolved Page 39 of 76

# **OMG Issue: DOL-27**

# Title:

# The DOL ontology definition of logical theory needs work

## **Summary:**

In the DOL ontology for LogicalTheory: The natural language definition is kind of awkward: "a signature together with a set of sentences" would be more appropriate.

#### Source:

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

#### **Resolution Summary:**

#### definition of LogicalTheory improved

We have changed the wording as suggested, but kept the addition "(over that signature)

#### **Revised Text:**

(see file 330.diff)

#### **Extent Of Change:**

Minor

#### **Disposition:**

Resolved - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### **Reported:**

Wed, 13 Apr 2016 19:09 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-27 - http://issues.omg.org/browse/DOL-27

#### **Attachments:**

• 330.diff - ptc-17-11-16/DOL-27/330.diff 0.7 kB ()

Disposition: Resolved Page 40 of 76

# **OMG Issue: DOL-28**

# Title:

# The concepts Reduction and Translation are lacking in the ontology **Summary**:

In the ontology, classes for Reduction and Translation (as subclasses of Mapping) would be useful (and then define logic and language reduction and translation using them).

#### Source

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

# **Resolution Summary:**

• we have added classes Reduction, Translation and OMSLanguageReduction.\*

we have added classes Reduction, Translation and OMSLanguageReduction. The definition of OMSLanguageTranslation was clarified.

## **Revised Text:**

(see file 331.diff)

#### **Extent Of Change:**

Significant

# **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

# Reported:

Wed, 13 Apr 2016 19:11 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-28 - http://issues.omg.org/browse/DOL-28

#### **Attachments:**

• 331.diff - ptc-17-11-16/DOL-28/331.diff 5 kB ()

Disposition: Resolved Page 41 of 76

# **OMG Issue: DOL-29**

# Title:

# There is a need for the concept of a mapping that is not a logic mapping

#### **Summary:**

Currently in the DOL ontology, DefaultMapping is defined as a subclass of LogicMapping. There might be a need for DefaultLanguageMappings, so it would be better to rename this class to DefaultLogicMapping and have a superclass named DefaultMapping (especially the fact that the document speaks of default language translations hints to the existence of a default language mapping).

#### **Source:**

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

#### **Resolution Summary:**

\*Introduction of DefaultLogicMapping and DefaultLanguageMapping \*

We introduced DefaultLogicMapping and DefaultLanguageMapping. DefaultMapping is a superclass of both.

#### **Revised Text:**

(see 332.diff)

#### **Extent Of Change:**

Significant

#### **Disposition:**

Resolved - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### Reported:

Wed, 13 Apr 2016 19:15 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-29 - http://issues.omg.org/browse/DOL-29

#### **Attachments:**

• 332.diff - ptc-17-11-16/DOL-29/332.diff 2 kB ()

Disposition: Resolved Page 42 of 76

**OMG Issue: DOL-30** 

# Title:

# The definition of simple theoroidal mapping is misleading

## **Summary:**

SimpleTheoroidalMapping: The definition seems to suggest that this is not a LogicMapping (the natural language definition says it maps signatures to logical theories, while a LogicMapping maps logics to logics). The definition in the document of simple theoroidal logic translation is much clearer. There is a disconnect because only simple theoroidal logic translation is defined in the document, while SimpleTheoroidalMapping as defined in the ontology is more general.

#### Source:

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

#### **Resolution Summary:**

#### clarification of definition of LogicMapping and SimpleTheoroidalMapping

We have clarified that a LogicMapping is "a mapping (translation or reduction) between two logics consisting of mappings for signatures, sentences and models".

We further clarified that a SimpleTheoridalMapping is a "logic mapping that maps signatures of the source logic to theories of the target logic"

These changes should make transparent that a SimpleTheoroidalMapping is a LogicMapping.

#### **Revised Text:**

(see file 333.diff)

# **Extent Of Change:**

Minor

#### **Disposition:**

Resolved - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### Reported:

Wed, 13 Apr 2016 19:17 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-30 - http://issues.omg.org/browse/DOL-30

#### **Attachments:**

• 333.diff - ptc-17-11-16/DOL-30/333.diff 2 kB ()

Disposition: Resolved Page 43 of 76

# **OMG Issue: DOL-31**

# Title:

# Definitions in the ontology do not match those in the document

# Summary:

Generally, there seem to be a number of concepts where the definition in the ontology diverges from the one given in the specification document. Some concepts defined in the document do not appear in the ontology, e.g. infrastructure axiom (which is referred to e.g. in the natural language definition of SimpleTheoroidalMapping). Ideally, and especially for use in other OMG specifications such as API4KP, the ontology should be able to stand alone.

#### Source:

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

#### **Resolution Summary:**

#### infrastructureAxiom was added to the ontology

We have added InfrastructureAxiom to the DOL ontology. Otherwise, we believe that we have taken all concepts from the glossary (section 4) into account when designing the DOL ontology.

#### **Revised Text:**

(see 334.diff)

#### **Extent Of Change:**

Significant

#### **Disposition:**

Resolved - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### **Reported:**

Wed, 13 Apr 2016 19:18 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-31 - http://issues.omg.org/browse/DOL-31

#### **Attachments:**

• 334.diff - ptc-17-11-16/DOL-31/334.diff 1 kB ()

Disposition: Resolved Page 44 of 76

# **OMG Issue: DOL-32**

# Title:

# Basic definitions are missing from the DOL ontology

#### **Summary:**

On page 4 of the specification document, it states that "DOL is capable of assigning identifiers to entities (symbols, axioms, modules, etc.)." Based on this, we expect to find classes for symbol, axiom and module in the ontology. Is AxiomSentence the same as "axiom"? Definitions for some of these concepts appear to be missing from the ontology, in other words.

#### Source:

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

#### **Resolution Summary:**

\*Renaming of AxiomSentence into Axiom \*

We have changed AxiomSentence into Axiom (and TheoremSentence into Theorem). Symbol occurs as NonLogicalSymbol in the ontology, in accordance to section 4.2 of the DOL document. On page 4, they are (for conciseness) mentioned as "symbols". Module is a class in the ontology.

#### **Revised Text:**

(see attached document 335.diff)

#### **Extent Of Change:**

Minor

#### **Disposition:**

Resolved - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### **Reported:**

Wed, 13 Apr 2016 19:22 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-32 - http://issues.omg.org/browse/DOL-32

#### **Attachments:**

• 335.diff - ptc-17-11-16/DOL-32/335.diff 1 kB ()

Disposition: Resolved Page 45 of 76

# **OMG Issue: DOL-33**

# Title:

# The definition of DOLLibrary does not match its specification in the ontology

#### **Summary:**

DOLLibrary is formalized as "semanticallyDenotes some GlobalEnvironment", but this doesn't seem to arise from the natural language definition.

#### **Source:**

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

#### **Resolution Summary:**

\*axioms are added to reflect the textual definition \*

A DOLLibrary is now (additionally) formalised as having OMS, OMSMappings and OMSNetworks as parts.

#### **Revised Text:**

(see attached diff file 336.diff)

#### **Extent Of Change:**

Significant

## **Disposition:**

Resolved - Approved on Ballot #2

## **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### **Reported:**

Wed, 13 Apr 2016 19:24 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-33 - http://issues.omg.org/browse/DOL-33

#### **Attachments:**

• 336.diff - ptc-17-11-16/DOL-33/336.diff 1 kB ()

Disposition: Resolved Page 46 of 76

# **OMG Issue: DOL-34**

# Title:

# The concept "sequence of correspondences" is defined but not used Summary:

In the DOL ontology, dol:SequenceOfCorrespondences doesn't appear to be used for anything. Consider deleting.

(Note that any deletions must be done prior to moving into RTF – at that stage in the specification one cannot delete or rename concepts or properties - you would need to deprecate them instead, so that your user community is not negatively impacted.)

#### Source:

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

#### **Resolution Summary:**

\*added new class Sequence \*

SequenceOfCorrespondences is actually used in Alignment, we have corrected this and also introduced a class Sequence serving as domain/range of object properties hasSequenceMember and isSequenceMemberOf.

#### **Revised Text:**

see 337.diff

#### **Extent Of Change:**

Significant

#### Disposition:

Resolved - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

# Reported:

Wed, 13 Apr 2016 19:26 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-34 - http://issues.omg.org/browse/DOL-34

#### **Attachments:**

• 337.diff - ptc-17-11-16/DOL-34/337.diff 4 kB ()

Disposition: Resolved Page 47 of 76

# **OMG Issue: DOL-36**

# Title:

# transformation tool conformance insufficient

#### **Summary:**

It says "a transformation tool is DOL-conformant if it implements one (or more) language translations, logic translations, language projections and/or logic projections." There must surely also be some DOL-related requirement here, e.g. that the tool consumes and produces DOL-conforming documents.

#### Source:

ptc/16-02-37 — Chapter/Section: 2.6 — Page Number/s: 7

#### **Resolution Summary:**

#### Conformance condition for transformation tools clarified

We have added that a transformation tool has to operate on the DOL (abstract) syntax.

#### **Revised Text:**

see file 339-diff.pdf

#### **Extent Of Change:**

Significant

#### **Disposition:**

Resolved - Approved on Ballot #2

# **Reporter:**

Steve Cook, Model Driven Solutions (steve-c@modeldriven.org)

#### Reported:

Tue, 23 Aug 2016 09:45 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-36 - http://issues.omg.org/browse/DOL-36

#### **Attachments:**

• 339-diff.pdf - ptc-17-11-16/DOL-36/339-diff.pdf 221 kB (application/pdf)

Disposition: Resolved Page 48 of 76

# **OMG Issue: DOL-37**

# Title:

# Simple typos and grammatical errors

#### **Summary:**

P11: shard -> shared

P25: "Annex M provides of DOL texts, which provide examples for all DOL constructs," clumsy. Reword "Annex M provides textual examples for all DOL constructs,"

P25: The bibliography contains Q references -> delete Q

P31: "Often is useful" -> "Often it is useful"

P35: "in this context are ask" -> "in this context ask"

P62: Table 2 should be positioned in 9.8.1.2, not in the middle of 9.8.1.1.

P125: "many-sorted first has been formalized" -> "many-sorted first-order logic has been formalized"

#### Source:

ptc/16-02-37 — Chapter/Section: several — Page Number/s: several

# **Resolution Summary:**

#### all corrections were made

all corrections were made

#### **Revised Text:**

(see issue text)

#### **Extent Of Change:**

Minor

# Disposition:

Resolved - Approved on Ballot #2

#### Keporter

Steve Cook, Model Driven Solutions (steve-c@modeldriven.org)

#### Reported:

Tue, 23 Aug 2016 09:48 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-37 - http://issues.omg.org/browse/DOL-37

Disposition: Resolved Page 49 of 76

# **OMG Issue: DOL-38**

# Title:

# **Colon inconsistency**

#### **Summary:**

P28. The textual example illustrating section 7.2 contains two inconsistent language lang:CommonLogic terms, one of which is followed by a colon while the other is not.

#### **Source:**

ptc/16-02-37 — Chapter/Section: 7.2 — Page Number/s: 28

# **Resolution Summary:**

\*change of example \*

there was no inconsistency, because the two lang:CommonLogic terms were used in different syntactic roles (global versus local language qualification). Nevertheless, we have revised the example, such that this is avoided now.

#### **Revised Text:**

see 352-diff.pdf

### **Extent Of Change:**

Significant

### **Disposition:**

Resolved - Approved on Ballot #2

#### **Reporter:**

Steve Cook, Model Driven Solutions (steve-c@modeldriven.org)

#### Reported:

Tue, 23 Aug 2016 09:49 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-38 - http://issues.omg.org/browse/DOL-38

#### **Attachments:**

• 352-diff.pdf - ptc-17-11-16/DOL-38/352-diff.pdf 264 kB (application/pdf)

Disposition: Resolved Page 50 of 76

**OMG Issue: DOL-39** 

# Title:

# Annex references to metaclasses

#### **Summary:**

C.2 refers to "the metaclass OWL Ontology" and "the metaclass OWL Universe". Presumably these refer to the classes OWLOntology and OWLUniverse from ODM; if so they should be spelt correctly (no space) and there should be a reference to NR24.

D.2 refers to the metaclasses Text and Sentence. It is not clear where these come from. Are they from an existing standard? – if so it should be referenced. Or if they are from a hypothetical metamodel inferred from the Common Logic definition, this should be made explicit.

E.2 refers to the metaclasses Document and Triple. Are these from ODM? If so there should be a reference fo NR24.

F.2 refers to the metaclasses OWL Model and OWL PackageableElement. Presumably the reference to OWL is an error, and the metaclasses are actually Model and PackageableElement from the UML metamodel – reference NR8. Also it would be more flexible to make Package rather than Model a subclass of NativeDocument: it's valid for a UML document to contain a top-level Package which is not a Model and it seems a shame to exclude such a thing from the world of DOL.

G.2 refers to the metaclasses TPTP\_file and annotated\_formula. It is not clear where these come from. Are they from an existing standard? – if so it should be referenced. Or if they are from a hypothetical metamodel inferred from the TPTP definition, this should be made explicit.

H.2 refers to the metaclasses LIBRARY and BASIC-SPEC. It is not clear where these come from. Are they from an existing standard? – if so it should be referenced. Or if they are from a hypothetical metamodel inferred from the CASL definition, this should be made explicit.

#### Source:

ptc/16-02-37 — Chapter/Section: Annexes — Page Number/s: Several

## **Resolution Summary:**

#### all proposals were implemented

we implemented all proposed changes (see diff document)

#### **Revised Text:**

see attached pdf

#### **Extent Of Change:**

Significant

# **Disposition:**

Resolved - Approved on Ballot #2

#### **Reporter:**

Steve Cook, Model Driven Solutions (steve-c@modeldriven.org)

#### Reported:

Tue, 23 Aug 2016 09:52 GMT on DOL 1.0b1

#### Updated:

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-39 - http://issues.omg.org/browse/DOL-39

#### **Attachments:**

Disposition: Resolved Page 51 of 76

• OMG\_OntoIOp\_current-diff-342.pdf - ptc-17-11-16/DOL-39/OMG\_OntoIOp\_current-diff-342.pdf 629 kB (application/pdf)

Disposition: Resolved Page 52 of 76

# **OMG Issue: DOL-40**

# Title:

# **Inaccurate footnote 35**

#### **Summary:**

Footnote 35 says "there does not seem to be default in UML 2.5". This is incorrect. UML 2.5 specifies the defaults in the Classifier description of MultiplicityElement thus:

isOrdered : Boolean [1..1] = false
isUnique : Boolean [1..1] = true

#### **Source:**

ptc/16-02-37 — Chapter/Section: F.4.2 — Page Number/s: 117

#### **Resolution Summary:**

\*changed footnote \*

We removed the sentence ""there does not seem to be default in UML 2.5"

#### **Revised Text:**

The default is ``not ordered'' and ``unique''.Footnote-35

Footnote-35: [63, p. 33].

### **Extent Of Change:**

Minor

## **Disposition:**

Resolved - Approved on Ballot #2

#### **Reporter:**

Steve Cook, Model Driven Solutions (steve-c@modeldriven.org)

#### Reported:

Thu, 25 Aug 2016 08:31 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-40 - http://issues.omg.org/browse/DOL-40

Disposition: Resolved Page 53 of 76

# **OMG Issue: DOL-41**

# Title:

# Replace "view" by "refinement"

```
Summary:
```

```
Replace "view" by "refinement" in example 7.11 on page 37
```

**Source:** 

```
ptc/2016-02-37 — Chapter/Section: 7,11 — Page Number/s: 37
```

**Resolution Summary:** 

```
"view" replaced by "refinement"
```

Simple replacement of one term by another.

Original text:

view cd2stm = cd refined to

{ atm hide along stm2cd}

end

view cd2psm = cd refined to

{ psm hide along psm2cd}

end

#### **Revised Text:**

```
refinement cd2stm = cd refined to
```

{ atm hide along stm2cd}

end

refinement cd2psm = cd refined to

{ psm hide along psm2cd}

end

# **Extent Of Change:**

Minor

#### **Disposition:**

Resolved - Approved on Ballot #2

Reporter:

Fabian Neuhaus, Otto von Guericke University of Magdeburg (fneuhaus@iws.cs.uni-magdeburg.de)

**Reported:** 

Wed, 12 Apr 2017 14:08 GMT on DOL 1.0b1

**Updated:** 

Sun, 20 Aug 2017 00:27 GMT

**Discussion:** 

DOL-41 - http://issues.omg.org/browse/DOL-41

Disposition: Resolved Page 54 of 76

# **OMG Issue: DOL-43**

# Title:

# typo

#### **Summary:**

typo on page 53 satisfiable -> satisfiable

# **Resolution Summary:**

## trivial spelling error corrected

see summary

#### **Revised Text:**

%satisfiable

#### **Extent Of Change:**

Minor

## **Disposition:**

Resolved - Approved on Ballot #2

#### **Reporter:**

Fabian Neuhaus, Otto von Guericke University of Magdeburg (fneuhaus@iws.cs.uni-magdeburg.de)

# Reported:

Wed, 31 May 2017 18:38 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-43 - http://issues.omg.org/browse/DOL-43

Disposition: Resolved Page 55 of 76

# **OMG Issue: DOL-68**

# Title:

# The label for supportsLogic in the ontology is duplicated.

#### **Summary:**

The label for supportsLogic in the ontology is duplicated.

#### Source:

ad/15-10-03

#### **Resolution Summary:**

\*The duplication has been deleted. \*

we have deleted the duplication.

#### **Revised Text:**

see file 353.diff

#### **Extent Of Change:**

Minor

## **Disposition:**

Resolved - Approved on Ballot #2

### **Reporter:**

Fabian Neuhaus, Otto von Guericke University of Magdeburg (fneuhaus@iws.cs.uni-magdeburg.de)

#### **Reported:**

Wed, 9 Aug 2017 18:16 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-68 - http://issues.omg.org/browse/DOL-68

#### **Attachments:**

• 353.diff - ptc-17-11-16/DOL-68/353.diff 0.7 kB ()

Disposition: Resolved Page 56 of 76

# **OMG Issue: DOL-81**

# Title:

# Minor bugs in the translation from OWL to FOL

#### **Summary:**

I.5.7.2 Translation of sentences: \$\top\$ and \$\bot\$ are missing!

I.5.7.3 Translation of models:

\$M'\_\Thing\$ does not make sense, because this is unsorted first-order logic.

\$\I\$ has not been introduced. Sometimes, \$I\$ is used.

Typo: By Induction (should be: by induction).

As last item, add: The other cases are similar.

The satisfaction condition holds as well. --> The satisfaction condition now follows easily.

#### Source:

ptc/16-02-37 — Chapter/Section: I.5.7 — Page Number/s: 133,134

## **Resolution Summary:**

#### Minor technical corrections to OWL -> FOL translation

We have made minor technical corrections in the mathematical definition of the translation of OWL to first-order logic. For details see diff file.

#### **Revised Text:**

see file 301-diff.pdf

#### **Extent Of Change:**

Significant

#### **Disposition:**

Resolved - Approved on Ballot #2

#### **Reporter:**

Fabian Neuhaus, Otto von Guericke University of Magdeburg (fneuhaus@iws.cs.uni-magdeburg.de)

# Reported:

Thu, 10 Aug 2017 19:31 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-81 - http://issues.omg.org/browse/DOL-81

#### **Attachments:**

• 301-diff.pdf - ptc-17-11-16/DOL-81/301-diff.pdf 445 kB (application/pdf)

Disposition: Resolved Page 57 of 76

# **OMG Issue: DOL-82**

# Title:

# change terminology from "model" to "realisation"

#### **Summary:**

Across the DOL spec "model" is used both for models in the UML sense and models in the mathematical model theory sense. This can lead to confusion. Better replace "model" in the mathematical sense by "realisation"

#### Source:

ptc/2016-02-37

#### **Resolution Summary:**

\*terminological clarification of "model", introduction of "realization" \*

we have changed the term "model" into "realization" and the term "MDE model" into "model", because in the OMG community, the term "model" will be unterstood in the sense of MDE and not in the sense of logical model theory. This makes certain sentences much clearer, e.g. on p. 119, "models (in the sense of the term defined in clause 4) of UML class models" now becomes "realisations of UML class models".

#### **Revised Text:**

see file 302-diff.pdf

#### **Extent Of Change:**

Significant

#### **Disposition:**

Resolved - Approved on Ballot #2

#### **Reporter:**

Fabian Neuhaus, Otto von Guericke University of Magdeburg (fneuhaus@iws.cs.uni-magdeburg.de)

#### **Reported:**

Thu, 10 Aug 2017 19:56 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-82 - http://issues.omg.org/browse/DOL-82

#### **Attachments:**

• 302-diff.pdf - ptc-17-11-16/DOL-82/302-diff.pdf 1.09 MB (application/pdf)

Disposition: Resolved Page 58 of 76

# **OMG Issue: DOL-90**

# Title:

# minimize can be used to express reachability models

#### **Summary:**

If applied to algebraic signatures (sorts + operation symbols), minimize can be used to express reachability (i.e. term-generatedness) of first-order models. This should be clarified in the standard.

#### Source

ptc/2016-02-37 — Chapter/Section: 9.5 — Page Number/s: 49

#### **Resolution Summary:**

\*Added footnote to explain use of minimize \*

We added a footnote mentioning the use use minimize for expressing term-generatedness, and provided some datatype example (and corrected some other datatype example).

#### **Revised Text:**

see file 348-diff.pdf

#### **Extent Of Change:**

Significant

#### **Disposition:**

Resolved - Approved on Ballot #3

#### **Reporter:**

Fabian Neuhaus, Otto von Guericke University of Magdeburg (fneuhaus@iws.cs.uni-magdeburg.de)

#### Reported:

Thu, 10 Aug 2017 21:22 GMT on DOL 1.0b1

#### **Updated:**

Tue, 22 Aug 2017 00:48 GMT

#### **Discussion:**

DOL-90 - http://issues.omg.org/browse/DOL-90

## **Attachments:**

• 348-diff.pdf - ptc-17-11-16/DOL-90/348-diff.pdf 269 kB (application/pdf)

Disposition: Resolved Page 59 of 76

# **OMG Issue: DOL-92**

# Title:

# missing parenthesis in the concrete grammar

#### **Summary:**

Because of an error in a Latex declaration, some parentheses aren't visible in the abstract grammar. These omissions change the grammar in unintended ways. This bug affects EBNF grammar expression across chapter 9 and in annex K.

#### Source:

ptc/2016-02-37 — Chapter/Section: chapter 9, annex K

#### **Resolution Summary:**

\*parenthesis now visible \*

We fixed the bug in the latex that was responsible for hiding some of the parenthesis in EBNF code. While we were making these changes we also harmonized the use of whitespace in the EBNF grammars (this is a purely cosmetic change).

This affected the EBNF code on page 48, 52, 53, 57, 60, 138, 142.

#### **Revised Text:**

see file 350-diff.pdf

#### **Extent Of Change:**

Significant

#### **Disposition:**

Resolved - Approved on Ballot #3

#### **Reporter:**

Fabian Neuhaus, Otto von Guericke University of Magdeburg (fneuhaus@iws.cs.uni-magdeburg.de)

#### Reported:

Fri, 11 Aug 2017 19:14 GMT on DOL 1.0b1

#### **Updated:**

Tue, 22 Aug 2017 00:48 GMT

#### **Discussion:**

DOL-92 - http://issues.omg.org/browse/DOL-92

#### **Attachments:**

• 350-diff.pdf - ptc-17-11-16/DOL-92/350-diff.pdf 495 kB (application/pdf)

Disposition: Resolved Page 60 of 76

# **OMG Issue: DOL-94**

# Title:

# BasicOMS may need to be included in delimiters

#### **Summary:**

```
We have
OMS = ... | OMS OMSTranslation | ...
OMSTranslation = ... | 'with' LanguageTranslation+
```

Assuming our OMS language contains an opitonal syntax element 'with' IRI, we could have something like

```
ontology foo =
...
with <www.example.com>
```

this would be ambiguous, since it would not be clear whether the "with <www.example.com>" would be part of the basic OMS or not.

#### Source:

```
ptc/2016-02-37 — Chapter/Section: 9.5 — Page Number/s: 52
```

# **Resolution Summary:**

\*Curly Braces for Basic OMS within DOL documents \*

We have added the restriction that inside DOL documents, a Basic OMS must not use any DOL keywords, unless it is enclosed in curly braces.

#### **Revised Text:**

see file 351-diff.pdf

#### **Extent Of Change:**

Critical/Urgent

#### **Disposition:**

Resolved - Approved on Ballot #3

#### **Reporter:**

Fabian Neuhaus, Otto von Guericke University of Magdeburg (fneuhaus@iws.cs.uni-magdeburg.de)

## Reported:

Fri, 11 Aug 2017 19:50 GMT on DOL 1.0b1

#### **Updated:**

Tue, 22 Aug 2017 00:48 GMT

#### **Discussion:**

DOL-94 - http://issues.omg.org/browse/DOL-94

#### **Attachments:**

• 351-diff.pdf - ptc-17-11-16/DOL-94/351-diff.pdf 243 kB (application/pdf)

Disposition: Resolved Page 61 of 76

# **OMG Issue: DOL-96**

# Title:

# Don't include version number of cited standard unless it is required.

#### **Summary:**

Cite the versionless reference and URL of standards. This will always refer to the lastest released version. Only in cases where we definitely rely on a specific version, we should cite that one.

#### Source:

ptc/2016-02-37 — Chapter/Section: chapter 3 (normative references) — Page Number/s: 9,10

#### **Resolution Summary:**

#### Citation have been updated

We have changed several references from "versioned" to "unversioned".

We left the following normative references versioned because we are referring to a specific section of the standard document: RDF, RDFa, XMLns, OWL2RDF.

#### **Revised Text:**

see file 288-diff.pdf

#### **Extent Of Change:**

Significant

# **Disposition:**

Resolved - Approved on Ballot #3

#### **Reporter:**

Fabian Neuhaus, Otto von Guericke University of Magdeburg (fneuhaus@iws.cs.uni-magdeburg.de)

#### **Reported:**

Fri, 11 Aug 2017 20:18 GMT on DOL 1.0b1

#### **Updated:**

Tue, 22 Aug 2017 00:48 GMT

#### **Discussion:**

DOL-96 - http://issues.omg.org/browse/DOL-96

#### **Attachments:**

• 288-diff.pdf - ptc-17-11-16/DOL-96/288-diff.pdf 163 kB (application/pdf)

Disposition: Resolved Page 62 of 76

**OMG Issue: DOL-98** 

# Title:

# update the copyright to 2017

# **Summary:**

change the copyright information on page i (directly after title page) from Copyright ©2014-15 to

Copyright ©2014-17

#### **Source:**

ptc/2016-02-37 — Page Number/s: i

#### **Resolution Summary:**

#### copyright information is updated

All occurrences of "Copyright ©2014-15" are replaced by "Copyright ©2014-17"

#### **Revised Text:**

"Copyright ©2014-15" -> "Copyright ©2014-17"

### **Extent Of Change:**

Minor

#### **Disposition:**

Resolved - Approved on Ballot #4

#### **Reporter:**

Fabian Neuhaus, Otto von Guericke University of Magdeburg (fneuhaus@iws.cs.uni-magdeburg.de)

#### **Reported:**

Sat, 12 Aug 2017 13:41 GMT on DOL 1.0b1

#### **Updated:**

Tue, 29 Aug 2017 04:22 GMT

#### **Discussion:**

DOL-98 - http://issues.omg.org/browse/DOL-98

Disposition: Resolved Page 63 of 76

# **OMG Issue: DOL-101**

# Title:

# Cleanup of encoding and markups

#### **Summary:**

Because of its original source, many of the definitions and comments contain Latex markup and symbols that are not properly encoded. This needs to be cleaned up.

#### Source:

ptc-16-02-37 — Chapter/Section: global — Page Number/s: global

# **Resolution Summary:**

#### Encoding corrected, latex annotations removed

non-UTF 8 symbols were replaced by UTF 8 symbols (e.g., non-UTF quotation marks).

Latex markup was replaced by equivalent text. Citations were removed, since they are available in the specification text.

For example the following text:

AnnotationAssertion(<a href="http://www.w3.org/2004/02/skos/core#note">http://www.w3.org/2004/02/skos/core#note</a>

<a href="http://www.omg.org/spec/DOL/DOL-terms/LinkedData">http://www.omg.org/spec/DOL/DOL-terms/LinkedData</a> " The linked data principles (adapted from cite

{BernersLee:LinkedData2006}

and its paraphrase at

cite

{Wikipedia:LinkedData2011}

) are the following: begin

{enumerate}

item Use IRIs as names for things.

item Use HTTP IRIs so that these things can be referred to and looked up (``dereferenced'') by people and user agents.

footnote{I.e., the IRI is treated as a URL (uniform resource locator).}

item Provide useful machine-processable (plus optionally human-readable) information about the thing when its IRI is dereferenced, using standard formats.

item Include links to other, related IRIs in the exposed data to improve discovery of other related information on the Web.

end{enumerate}

"@en)

was replaced by

AnnotationAssertion(<a href="http://www.w3.org/2004/02/skos/core#note">http://www.w3.org/2004/02/skos/core#note</a>

<a href="http://www.omg.org/spec/DOL/DOL-terms/LinkedData">http://www.omg.org/spec/DOL/DOL-terms/LinkedData</a> "Linked data principles, as interpreted herein, are as follows: (a) Use IRIs as names for things; (b) Use HTTP IRIs so that these things can be referred to and looked up (dereferenced) by people and user agents; i.e., the IRI is treated as a URL (uniform resource locator); (c) Provide useful machine-processable (plus optionally human-readable) information about the thing when its IRI is dereferenced, using standard formats; (d) Include links to other, related IRIs in the exposed data to improve discovery of other related information on the

Disposition: Resolved Page 64 of 76

Web."^^xsd:string)

Note that change from language tagged strings to xsd:string is the result of the resolution of ticket DOL-102 - http://issues.omg.org/browse/DOL-102

The OWL file is attached to the resolution of DOL-102 - http://issues.omg.org/browse/DOL-102. The resolution does not affect the specification.

#### **Revised Text:**

(see description)

## **Extent Of Change:**

Minor

#### Disposition:

Resolved - Approved on Ballot #5

#### Reporter:

Fabian Neuhaus, Otto von Guericke University of Magdeburg (fneuhaus@iws.cs.uni-magdeburg.de)

# Reported:

Fri, 3 Nov 2017 15:27 GMT on DOL 1.0b1

#### **Updated:**

Tue, 7 Nov 2017 05:44 GMT

#### **Discussion:**

DOL-101 - http://issues.omg.org/browse/DOL-101

Disposition: Resolved Page 65 of 76

# **OMG Issue: DOL-102**

# Title:

# Improvement of definitions and comments in the ontology

### **Summary:**

- (1) when possible rephrase definitions in order to improve ISO 704 compliance,
- (2) replace rdf:comment with skos:definition where appropriate,
- (3) when appropriate spit definitions into a definition and related explanatory note,
- (4) revise some comments as more specifically usage notes
- (5) change the label "model" to "realization" in order to avoid potential confusion of "model" in the logic sense and "model" in the engineering sense
- (6) address formatting issues

#### Source:

ptc/2017-08-04

#### **Resolution Summary:**

#### adressed all issues

We addressed all issues.

For example

"AnnotationAssertion(rdfs:comment <a href="http://www.omg.org/spec/DOL/DOL-terms/propagatesToAdjoint">http://www.omg.org/spec/DOL/DOL-terms/propagatesToAdjoint</a> "The subject class denotes a kind of mapping that, if it holds for a translation, also holds for the adjoint reduction."@en)"

was replaced by

"AnnotationAssertion(<a href="http://www.w3.org/2004/02/skos/core#definition">http://www.omg.org/spec/DOL/DOL-terms/propagatesToAdjoint">http://www.omg.org/spec/DOL/DOL-terms/propagatesToAdjoint</a> "subject class denotes a kind of mapping that, if it holds for a translation, also holds for the adjoint reduction"^^xsd:string)"

#### Another example:

"ObjectPropertyDomain(<a href="http://www.omg.org/spec/DOL/DOL-terms/satisfies>">http://www.omg.org/spec/DOL/DOL-terms/Realization>">was replaced by

"ObjectPropertyDomain(<a href="http://www.omg.org/spec/DOL/DOL-terms/satisfies">http://www.omg.org/spec/DOL/DOL-terms/Model</a>)"

All of these changes improved the readability of the ontology, but did not change the content of the ontology. The terminological change from "model" to "realization" was necessary in order to synchronise the terminology in the ontology with the terminology in the specification.

#### **Revised Text:**

(see description)

#### **Extent Of Change:**

Significant

#### **Disposition:**

Resolved - Approved on Ballot #5

#### **Reporter:**

Fabian Neuhaus, Otto von Guericke University of Magdeburg (fneuhaus@iws.cs.uni-magdeburg.de)

#### **Reported:**

Fri, 3 Nov 2017 15:30 GMT on DOL 1.0b1

#### **Updated:**

Tue, 7 Nov 2017 05:44 GMT

Disposition: Deferred Page 66 of 76

# **Discussion:**

DOL-102 - http://issues.omg.org/browse/DOL-102

# **Attachments:**

• DOL-terms.rdf - ptc-17-11-16/DOL-102/DOL-terms.rdf 181 kB (application/rdf+xml)

# **Disposition: Deferred**

**OMG Issue: DOL-20** 

# Title:

# The DOL ontology should be documented properly in the specification

# **Summary:**

While aspects of the ontology are incorporated in definitions in the body of the specification, the ontology itself should be documented via ODM-compliant diagrams, and both ODM/UML XMI and ODM XMI forms for the ontology should be included as deliverables with the specification.

#### Source:

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

#### **Resolution Summary:**

#### The DOL ontology should be documented properly in the specification

The resolution to this issue requires (1) production of the ODM UML XMI according to the latest version of the ontology, (2) production of the ODM XMI according to the latest version of the ontology, and (3) documentation of the ontology in an informative annex, including all header metadata describing the ontology as well as its contents in DL notation (see the LCC and FIBO specifications for examples).

This issue is being deferred to the DOL 1.1 RTF due to the fact that the modifications required to the ontology by other issues documented in this report were completed close to the delivery deadline, and the process of documenting the ontology, which is informative, will take more than the available time remaining.

Because the ontology is available in RDF/XML serialized OWL, adopters of this specification can use it as is, and leverage tools to automate the transformations to UML XMI or ODM XMI as required for other work. The definitions used in the ontology for the various concepts defined therein are also provided as normative terms and definitions in the body of the specification. The other artifacts should be provided for the sake of completeness by the DOL 1.1 RTF, however, as other emerging specifications at OMG, such as the API4KBs specification, will depend on them.

## Disposition:

Deferred - Approved on Ballot #4

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### **Reported:**

Tue, 23 Feb 2016 22:37 GMT on DOL 1.0b1

#### **Updated:**

Tue, 29 Aug 2017 04:22 GMT

#### **Discussion:**

DOL-20 - http://issues.omg.org/browse/DOL-20

# **Disposition: Closed; No Change**

**OMG Issue: DOL-5** 

# Title:

# Potential misclassification of several classes

# **Summary:**

The definition of dol:OMS suggests it should be a disjoint union of dol:Ontology, dol:Specification and dol:MDEModel, while formally they are subclasses. It is not clear if dol:OMS should be considered a role, or a subclass of logical theory. Based on the note attached to OMS, which says "an OMS is a collection of expressions, like ...", I would expect that OMS is a subclass of logical theory, not a role. Therefore, dol:Ontology, dol:Specification and dol:MDEModel would not be subclasses of OMS, but roles that an OMS can play.

(API4KB team)

#### Source:

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

## **Resolution Summary:**

\*already covered by http://issues.omg.org/browse/DOL-83\*

This issue is already covered by proposal http://issues.omg.org/browse/DOL-83

#### **Disposition:**

Closed; No Change - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### **Reported:**

Tue, 23 Feb 2016 22:13 GMT on DOL 1.0b1

# **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-5 - http://issues.omg.org/browse/DOL-5

# Title:

# Need for intermediate class to disambiguate OWL 2 profiles

#### **Summary:**

There appears to not be an intermediate concept between dol:OMSLanguage and dol:Profile for a dol:OMSLanguage with a particular logic (e.g. OWL2 with Direct Semantics).

While this is not an error of the DOL ontology, this is a concept that would be useful for API4KB.

We are surprised that this concept is not needed in DOL, because e.g. this concept enables the distinction between OWL 2 (in general) and OWL DL or OWL Full, It would also potentially be needed to distinguish between OWL 2 profiles.

(API4KB team)

#### **Source:**

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

#### **Resolution Summary:**

#### no intermediate concept between dol:OMSLanguage and dol:Profile needed

There appears to not be an intermediate concept between dol:OMSLanguage and dol:Profile for a dol:OMSLanguage with a particular logic (e.g. OWL2 with Direct Semantics). While this is not an error of the DOL ontology, this is a concept that would be useful for API4KB.

We are surprised that this concept is not needed in DOL, because e.g. this concept enables the distinction between OWL 2 (in general) and OWL DL or OWL Full, It would also potentially be needed to distinguish between OWL 2 profiles.

The philosophy of DOL is different here: an OMSLanguage can support (via the object property supportsLogic) different Logics. What you are after is a pair of an OMSLanguage and a Logic (such that the supportsLogic relation holds). We do not have such a thing in DOL as a concept of its own, although implicitly it is there: a user can select an OMSLanguage and a Logic, for example OWL2 EL with RDF logic (i.e. RDF semantics, aka OWL full).

#### **Disposition:**

Closed; No Change - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### Reported:

Tue, 23 Feb 2016 22:16 GMT on DOL 1.0b1

## **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-6 - http://issues.omg.org/browse/DOL-6

# Title:

# Redundant declaration of dol:OMSLanguageTranslation in the ontology

#### **Summary:**

There is a redundant declaration of dol:OMSLanguageTranslation as a subclass of dol:Mapping, in addition to it being a subclass of dol:LanguageMapping, which could be deleted.

#### **Source:**

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

#### **Resolution Summary:**

\*See proposal http://issues.omg.org/browse/DOL-53\*

The redundant declaration has been taken care of as part of the rewrite in proposal http://issues.omg.org/browse/DOL-53.

#### **Disposition:**

Closed; No Change - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### Reported:

Tue, 23 Feb 2016 22:28 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-13 - http://issues.omg.org/browse/DOL-13

# Title:

# Clarify the definition of dol:OMSLanguageTranslation

#### **Summary:**

Add a note (if it is true) that an dol:OMSLanguageTranslation could also be called an dol:OMSLanguageMapping, since the formalization simply requires that the mapping be from and to OMS Languages.

(API4KB team)

#### **Source:**

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

# **Resolution Summary:**

\*see proposal http://issues.omg.org/browse/DOL-53\*

this is covered by http://issues.omg.org/browse/DOL-53

#### **Disposition:**

Closed; No Change - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

## Reported:

Tue, 23 Feb 2016 22:31 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-15 - http://issues.omg.org/browse/DOL-15

# Title:

# Missing definition for dol:OMSLanguageReduction

#### **Summary:**

There is no definition of a dol:OMSLanguageReduction, but reduction is mentioned in the definition of dol:OMSLanguageTranslation.

(API4KB team)

#### Source:

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

## **Resolution Summary:**

\*see proposal http://issues.omg.org/browse/DOL-53\*

this has been covered by http://issues.omg.org/browse/DOL-53

## Disposition:

Closed; No Change - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### **Reported:**

Tue, 23 Feb 2016 22:32 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-16 - http://issues.omg.org/browse/DOL-16

# Title:

# Clarify the definition of dol:LogicMapping in the ontology

# **Summary:**

The definition of Logic Mapping suggests that it can be any kind of mapping between logics, but the comment says it should be either a translation or reduction, which seems to be more specific. Should LogicMapping be the disjoint union of LogicTranslation and LogicReduction?

(API4KB team)

#### **Source:**

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

# **Resolution Summary:**

#### translations or reductions are kinds of LogicMapping, but there could be more

LogicTranslation and LogicReduction are not disjoint. The extreme case of a LogicMapping that leaves everything unchanged (the identity mapping) is both a LogicTranslation and a LogicReduction. Moreover, in the future, there could be LogicMappings that are neither LogicTranslations nor LogicReductions (although it is presently not clear how they would look). Hence, we prefer to leave the ontology unchanged here.

#### **Disposition:**

Closed; No Change - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### **Reported:**

Tue, 23 Feb 2016 22:33 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-17 - http://issues.omg.org/browse/DOL-17

# Title:

# Revise/clarify the definition and related notes for dol:LogicReduction in the ontology

#### **Summary:**

LogicReduction has a note "mapping between logics forgetting parts of the structure, projection to a smaller logic, in contrast to reduction". Should be "mapping between logics forgetting parts of the structure, projection to a smaller logic, in contrast to translation"

(API4KB team)

#### **Source:**

ad/15-10-03 — Chapter/Section: n/a — Page Number/s: n/a

## **Resolution Summary:**

\*see http://issues.omg.org/browse/DOL-53\*

This has been covered by the proposal http://issues.omg.org/browse/DOL-53

#### **Disposition:**

Closed; No Change - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### **Reported:**

Tue, 23 Feb 2016 22:34 GMT on DOL 1.0b1

### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-18 - http://issues.omg.org/browse/DOL-18

# Title:

# The definition of union is misleading

#### **Summary:**

In the DOL ontology, dol:Union is defined in terms of the combination of all ..., and then refers to a sequence of OMS. Is the sequence order actually relevant? If not, would it be better to define this through a set of OMS rather than a sequence?

#### Source:

ptc/16-02-37 — Chapter/Section: n/a — Page Number/s: n/a

## **Resolution Summary:**

## No change

Sequence is used here in the sense of syntactic sequence. Since a union is a syntactic entity, we would prefer to stay with sequence here.

### **Disposition:**

Closed; No Change - Approved on Ballot #2

#### **Reporter:**

Elisa Kendall, Thematix Partners LLC (ekendall@thematix.com)

#### Reported:

Wed, 13 Apr 2016 19:28 GMT on DOL 1.0b1

#### **Updated:**

Sun, 20 Aug 2017 00:27 GMT

#### **Discussion:**

DOL-35 - http://issues.omg.org/browse/DOL-35

# **Disposition: Closed; Out Of Scope**

No issues in this report.

# **Disposition: Duplicate or Merged**

No issues in this report.