4 Terms and Definitions

4.1 Distributed Ontology, Modeling and Specification Language

Distributed Ontology, Modeling and Specification Language
DOL unified metalanguage for the structured and heterogeneous expression of ontologies, specifications, and MDE models, using DOL libraries of OMS, OMS mappings and OMS networks, whose syntax and semantics are specified in this OMG Specification.

DOL library collection of named OMS and OMS networks, possibly written in different OMS languages, linked by named OMS mappings.

4.2 Native OMS, OMS, and OMS Languages

native OMS collection of expressions (like non-logical symbols, sentences and structuring elements) from a given OMS language.
EXAMPLE   A UML class model, an ontology written in OWL 2 EL, and a specification written in CASL are three different native OMS.
NOTE   An OMS can be written in different OMS language serializations.

native document document containing a native OMS.

DOL document document containing a DOL library.

OMS language language equipped with a formal, declarative, logic-based semantics, plus non-logical annotations.
EXAMPLE   OMS languages include OWL 2 DL, Common Logic, F-logic, UML class models, RDF Schema, and OBO.
NOTE   An OMS language is used for the formal specification of native OMS.
NOTE   An OMS language has a logical language aspect, a structuring language aspect, and an annotation language aspect.

DOL structured OMS syntactically valid DOL expression denoting an OMS that is built from smaller OMS as building blocks.

NOTE   DOL structured OMS, typically, use basic OMS as building blocks for defining other structured OMS, OMS mappings or OMS networks.
NOTE   All DOL structured OMS are structured OMS.

ontology ~~logical theory that is used as a shard conceptualization~~ explicit and shared formal representation of a conceptualisation of a domain or of fundamental notions, including a controlled vocabulary and a taxonomy

MDE model ~~logical theory that is used as an abstract representation of a domain or of a system, in the sense of~~ representation of (the development of) a system (e.g. hardware, software or information system or organisation), or a domain related to a system, used in model-driven engineering (MDE)
NOTE   Not to be confused with the term model in the sense of logic (model theory).

specification ~~logical theory that is used to express formal constraint in mathematical structures, software systems and/or hardware systems formal representation of (requirements of) a data structure, an algorithm or a hardware or software system used in systems analysis, requirements analysis and systems design~~

OMS (ontology, specification or MDE model) ~~basic OMS or structured OMS~~ collection of expressions (like non-logical symbols, sentences and structuring elements) in a given OMS language (or several such languages) and denoting a class of models and, possibly, a logical theory.
NOTE