

XML Namespace for the OMG SysML Standard

The OSLC4MBSE Working Group has been initiated as a collaborative effort between members of the OMG Systems Engineering and OSLC communities as part of the OMG SE DSIG. The aim of this working group is to investigate and develop an approach for multidisciplinary life-cycle integration in systems engineering, in order to support interoperability between the domains and their data. The graphical modeling language OMG SysML™ and its concepts represent a subset of the systems engineering domain which supports general-purpose modeling of systems. The Open Services for Lifecycle Collaboration (OSLC) is a tool interoperability approach based on standardized and open Web technologies that enables common interoperability across various domains. The initial focus of this working group is to investigate how SysML concepts can be implemented using OSLC to achieve life-cycle integration.

Issue Statement

OSLC uses a simple model of resources with property values intended to be consistent with the Resource Description Framework (RDF) data model. OSLC also builds upon the Extensible Markup Language (XML) namespace mechanism. In order to use concepts which are specified by a standardization body, such as the OMG, the concepts shall be uniquely identifiable within the namespace URI of the corresponding standardization organization. When specifying a resource or a property, OSLC Specifications define its type as a URI which can be decomposed into a namespace URI and a name. We abbreviate type URIs as Prefixed Names (reference: Prefixed Names), which are represented in XML as QNames. As an example, the namespace used for resources defined in the OSLC Core specification is defined as follows: **Namespace URI:** <http://open-services.net/ns/core#>

When defining a new Resource type, a specification must provide the following information:

- **Name (as String):** Name of the resource which must be valid as the Local Name part of a QName.
- **URI (as URI):** The URI of the resource definition. Per the rules of Prefixed Names, this URI is formed by appending the Name to the end of the Namespace URI in the specification that defines the resource. For example, the resource named “Block” gets the Type URI of <http://omg.org/ns/uml/sysml/1.3#Block>

Note: The namespace URI is not used by the parser to look up information. The purpose is to give the namespace a unique name. However, it may also be used as a pointer to a web page containing namespace information.

Proposed Solution

In order to ensure a sustainable and consistent implementation of the concepts defined in a specification, the corresponding namespace shall be owned by the standardization body itself, in this case the OMG.

The OMG may host the RDF vocabulary and the OSLC resource shapes describing SysML concepts.

Furthermore a governing principal of ontologies is that they should be resolvable. This means if the OMG defines a vocabulary to support the use of SysML in linked data (of which OSLC is included), then the namespace should be hosted by the governing body (For more Information see: <https://dvcs.w3.org/hg/ldpwg/raw-file/default/ldp.html>)

The OSLC4MBSE working group will offer support in investigating the issue further, as well as defining and implementing such namespace for OMG in collaboration with the OMG.

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http://www.omgwiki.org/OMGSysML/doku.php?id=sysml-osl:osl4mbse_working_group