**Comment: plcslib-infrastructure-178**

*The Conformance section should have more clearer Conformance Clause(s)*

*(see http://docs.oasis-open.org/templates/TCHandbook/ConformanceGuidelines.html):*

*- In 2.1: what constitutes an "implementation" should be more clearly defined.*

*Some representation of the PLCS PSM appears to be the target implementation here, and that representation should be given a name - e.g. a "PSM instance", or "PSM data exchange file"?*

*- Conformance rule: should I infer neither the EXPRESS or SysML but only the derived XML schema is necessary to validate an implementation?*

*Does the sentence "The following models are provided for explanatory purposes" mean that these models are NOT normative i.e. any form of representations of these (models) are NOT conformance targets? should be clarified.*

*Also in last paragraph of 2.1, appears Schematron: now is it sufficient for an implementation to validate against the XML schema above, or should it also satisfy Schematron rules? Not clearly stated.*

*- In 2.2: "implementations shall conform to them (to OWL ontologies)": can you be more specific where such ontologies are supposed / required to be used in the implementation?*

*- in 2.3: COnforming to Templates: isn't that implied by validating against the XML schema? Or is there more precise and additional requirements? Is there a minimal set of Templates that must always be present? Or groups of templates that must always be used together?*

**2           Conformance**

This edition of the OASIS PLCS standardizes the following components:

* The [PLCS Platform Specific Model](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\model_base.html) ([PLCS PSM](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\sys\plcslib_terms_content_short.html#PLCS_PSM)) that is used as the data exchange form. The PLCS PSM is represented in EXPRESS, SysML and XML Schema with the XML Schema being derived from the EXPRESS and SysML models.
* [Reference data](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\sys\refdata_index_base.html) that provides a tailorable vocabulary that adds business specific semantics to the information model. The Reference Data is represented in OWL.
* Templates that provide a precise specification of how the [PLCS Platform Specific Model](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\model_base.html) ([PLCS PSM](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\sys\plcslib_terms_content_short.html#PLCS_PSM)) is used to represent a given concept.

Not every implementation will use all the components.

An implementation is a conforming PLCS Platform Specific Model (PLCS PSM) data exchange application that can read and write XML data (a PSM data exchange file), such that the PSM data exchange file is in accordance with the conditions specified in the following sections. Namely that PSM data exchange file:

1. Conforms to the PLCS Platform Specific Model XML Schemata: [common.xsd](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\common.xsd), [plcs\_psm.xsd](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\plcs_psm.xsd); (Section 2.1)
2. Conforms to the PLCS Platform Specific Model [Schematron](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\plcs_psm.sch) (Section 2.1);
3. Is structured according to the patterns specified in the Templates (Section 2.3);
4. Contains references to the OWL classes or objects specified in the following OWL ontologies (Section 2.1):
   * PLCS PSM Reference Data [plcs-psm-en.owl](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\refdata\plcs-psm-en.owl)
   * PLCS Reference Data [plcs-rdl-en.owl](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\refdata\plcs-rdl-en.owl)

**2.1 PLCS Platform Specific Model (PLCS PSM)**

The [PLCS Platform Specific Model](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\model_base.html) ([*PLCS PSM*](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\sys\plcslib_terms_content_short.html#PLCS_PSM)) is a specification of the data exchange form.

The PLCS PSM is represented in EXPRESS, SysML and XML Schema with the XML Schema being derived from the EXPRESS and SysML models.

The following models are non-normative and are provided for explanatory purposes:

* PLCS Platform Specific Model [EXPRESS](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\plcs_psm.exp);
* PLCS Platform Specific Model canonical [SysML XMI](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\plcs_psm.xmi).

The PLCS PSM exchange format, to which implementations shall conform, is represented as the following XML Schema with an associated set of Schematron rules:

* PLCS Platform Specific Model XML Schema: [common.xsd](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\common.xsd), [plcs\_psm.xsd](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\plcs_psm.xsd);
* PLCS Platform Specific Model [Schematron](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\plcs_psm.sch).

An implementation is a conforming PLCS Platform Specific Model (PLCS PSM) data exchange application that can read and write XML data (a PSM data exchange file). The PSM data exchange file must conform to:

1. the PLCS Platform Specific Model XML Schema: [common.xsd](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\common.xsd), [plcs\_psm.xsd](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\plcs_psm.xsd);
2. the PLCS Platform Specific Model [Schematron](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\plcs_psm.sch);

**2.2 Reference Data Ontologies**

[Reference data](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\sys\refdata_index_base.html) provides a tailorable vocabulary that adds business specific semantics to the information model.

The Reference Data is represented in OWL.

The following OWL ontologies are standardized and implementations must conform to them:

* PLCS PSM Reference Data [plcs-psm-en.owl](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\refdata\plcs-psm-en.owl)
* PLCS Reference Data [plcs-rdl-en.owl](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\refdata\plcs-rdl-en.owl)

An implementation is a conforming PLCS Platform Specific Model (PLCS PSM) data exchange application that can read and write XML data (a PSM data exchange file). The PSM data exchange file may contain references to OWL classes or objects. When such references occur they must refer to OWL classes or objects in the following OWL ontologies:

* PLCS PSM Reference Data [plcs-psm-en.owl](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\PLCS\psm_model\refdata\plcs-psm-en.owl)
* PLCS Reference Data [plcs-rdl-en.owl](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\refdata\plcs-rdl-en.owl)

**2.3 PLCS Templates**

The usage of the PLCS information model by a DEX is defined through [Templates](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\sys\template_index_base.html). The Templates provide a precise specification of how the model is used to represent a given concept.

Implementations shall conform to the specific Templates used.

An implementation is a conforming PLCS Platform Specific Model (PLCS PSM) data exchange application that can read and write XML data (a PSM data exchange file) and that data is structured according to the patterns specified in the Templates.

Where XML elements in a PSM data exchange file correspond to element referenced in a Template, the instantiation pattern specified in that Template must be followed.

The following Templates are standardized:

* Template: [ActualActivity](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\ActualActivity\template.html)
* Template: [ActualMission](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\ActualMission\template.html)
* Template: [ActualMissionItem](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\ActualMissionItem\template.html)
* Template: [ActualProductUsage](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\ActualProductUsage\template.html)
* Template: [Applicability](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Applicability\template.html)
* Template: [Approval](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Approval\template.html)
* Template: [Baseline](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Baseline\template.html)
* Template: [Breakdown](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Breakdown\template.html)
* Template: [BreakdownElement](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\BreakdownElement\template.html)
* Template: [BreakdownElementRealization](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\BreakdownElementRealization\template.html)
* Template: [BreakdownStructure](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\BreakdownStructure\template.html)
* Template: [Catalog](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Catalog\template.html)
* Template: [CatalogItem](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\CatalogItem\template.html)
* Template: [CatalogItemRealization](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\CatalogItemRealization\template.html)
* Template: [CatalogItemStructure](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\CatalogItemStructure\template.html)
* Template: [Certification](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Certification\template.html)
* Template: [ClassCode](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\ClassCode\template.html)
* Template: [Classifier](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Classifier\template.html)
* Template: [Collection](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Collection\template.html)
* Template: [Contract](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Contract\template.html)
* Template: [DatedEffectivity](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\DatedEffectivity\template.html)
* Template: [Descriptor](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Descriptor\template.html)
* Template: [DirectedActivity](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\DirectedActivity\template.html)
* Template: [Document](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Document\template.html)
* Template: [EffectivityAssertion](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\EffectivityAssertion\template.html)
* Template: [Envelope](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Envelope\template.html)
* Template: [EnvironmentDefinition](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\EnvironmentDefinition\template.html)
* Template: [EnvironmentObserved](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\EnvironmentObserved\template.html)
* Template: [EventReport](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\EventReport\template.html)
* Template: [EventReportItem](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\EventReportItem\template.html)
* Template: [Fleet](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Fleet\template.html)
* Template: [FleetItem](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\FleetItem\template.html)
* Template: [FunctionalBreakdown](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\FunctionalBreakdown\template.html)
* Template: [FunctionalBreakdownStructure](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\FunctionalBreakdownStructure\template.html)
* Template: [FunctionalElement](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\FunctionalElement\template.html)
* Template: [Identification](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Identification\template.html)
* Template: [IndividualCode](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\IndividualCode\template.html)
* Template: [Justification](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Justification\template.html)
* Template: [MeasuredProperty](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\MeasuredProperty\template.html)
* Template: [Message](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Message\template.html)
* Template: [Name](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Name\template.html)
* Template: [Observation](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Observation\template.html)
* Template: [Organization](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Organization\template.html)
* Template: [Part](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Part\template.html)
* Template: [PartAssembly](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\PartAssembly\template.html)
* Template: [Person](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Person\template.html)
* Template: [PersonInOrganization](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\PersonInOrganization\template.html)
* Template: [PhysicalBreakdown](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\PhysicalBreakdown\template.html)
* Template: [PhysicalBreakdownStructure](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\PhysicalBreakdownStructure\template.html)
* Template: [PhysicalElement](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\PhysicalElement\template.html)
* Template: [PlannedActivity](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\PlannedActivity\template.html)
* Template: [ProductConfiguration](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\ProductConfiguration\template.html)
* Template: [ProductConfigurationOptionRelationship](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\ProductConfigurationOptionRelationship\template.html)
* Template: [ProductConfigurationStructure](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\ProductConfigurationStructure\template.html)
* Template: [Project](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\Project\template.html)
* Template: [PropertyValueNumeric](file:///C:\Users\rbn\Documents\sforge\plcs\plcslib\plcslib\publications\OASIS\plcs-plcslib-v1.0-csd02\build\data\contexts\OASIS\templates\PropertyValueNumeric\template.html)