**Structural Mappings**

* **Map the Standards’ Structural Models to the Core Ontologies**

|  |  |  |  |
| --- | --- | --- | --- |
| **Core Ontology Concept** | **CMMI Element** | **ISO 12207 Element** | **ISO 20110 Element** |
| Performed Process (event) | Process Area (event)  Specific Goal\* (event)  Generic Goal (event) | Process (event)  Activity (event) | Process (event)  Activity (event) |
| Performed Activity (event) | Specific Goal (event)  Generic Goal\* (event)  Specific Practice (event)  Generic Practice (event) | Process (event)  Activity (event)  Task (event)\*\* | Activity (event)  Task (event)\*\* |
| Performed Process (event)  Performed Activity (event) | Work Unit (event) | Work Unit (event) | Work Unit (event) |
| Artifact (object) | Work Product (object) | Artifact (object) | Product (object) |
| Stakeholder (agent) | Stakeholder (agent) | Stakeholder (agent) | Role (agent) |
| - | Purpose (moment) | Purpose (moment) | Purpose (moment) |

* **Map the Standards’ Elements between them**

|  |  |  |  |
| --- | --- | --- | --- |
| **New Harmonized Element** | **CMMI Element** | **ISO 12207 Element** | **ISO 29110 Element** |
| Purpose (moment) | Purpose (moment) | Purpose (moment) | Purpose (moment) |

**Coverage Relations**

Some symbols are used to establish a relation between a **Standard’s Element** and an **Ontology’s Concept** (or between two Elements from different Standards). It is always a binary relation comparing the **notions coverage**, i.e. *how the domain portion covered by an Element is related to the domain portion covered by a Concept (or another Element*). For example, **A [P] O** (A is part of O), means that “*Element A covers a portion of the domain that* ***is part of*** *the portion covered by Concept O*”.

For each relation type there is a symbol represented as a pair of brackets with a character inside as shown in the table.

For the cases where an Element remains with non-covered portions (WIDER or INTERSECTION relations), a comment is required for explaining such portions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coverage** | **Symbol** | **Meaning** | **View** | **Example** |
| **[E] EQUIVALENT** | **A [E] O** | A is Equivalent to O.  Element A covers a portion of the domain that is equivalent to the portion covered by Concept O. |  | (Element) Risk Plan **[E]** (Concept) Plan of Risks |
| **[P] PART OF** | **A [P] O** | A is Part of O  Element A covers a portion of the domain that is part of the portion covered by Concept O (O includes A). |  | (Element) Risk Plan **[P]** (Concept) Project Plan |
| **[W] WIDER** | **A [W] O** | A is Wider than O.  Element A covers a portion of the domain that is wider than the portion covered by Concept O (A includes O). |  | (Element) Risk Plan **[W]** (Concept) Mitigation Plan  **{contingency actions not covered}** |
| **[I] INTERSECTION** | **A [I] O** | A has Intersection with O.  Element A covers a portion of the domain that has intersection with the portion covered by Concept O. |  | (Element) Risk Plan **[I]** (Concept) Internal Project Plan  **{external risks not covered}** |