MODEM

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1. MODEM document summary

1.1 Introduction

This document is an extraction from the MODEM model and should be used as a dictionary of MODEM. Descriptive reports can be found in:

- **MODAF_M3_and_IDEAS_integration_version_2.00.pdf**
  This report deals with the mapping between MODEM and the MODAF M3 meta-model.

- **MODAF_M3_and_IDEAS_integration_examplification_version_2.00.pdf**
  This report contains modelling examples both of the IDEAS foundation directly as well as models created by the use of MODEM directly, i.e. not filtered through a tool implementation. This is required for verification purposes in order to ensure that the MODEM meta-model can be used directly to create enterprise architecture models. It should be emphasised that this it is not intended that the MODEM model should be used in this manner by modellers. In order for tool manufacturers to implement MODEM properly, the examples shown here are a requirement.

1.1.1 MODEM benefits

- MODEM provides a truly EA tool agnostic representation of MODAF.
- This allows both general EA tools as well as UML based tools to work with a common basis, something that in time will increase the number of different tools that can interwork.
- The semantic created by MODEM underpinning improves the MODAF concepts in a number of areas.
  - Common patterns have also been identified as a result of the MODEM work, something that leads, in a number of areas, to a clearer understanding of the model as well as similarity between different aspects of the model since the patterns are reused throughout the model.
- MODEM is grounded in real-world semantics and provides proper handling of individuals, something that MODAF never did. This also implies that the meta-model has a formalism required to ensure that data can be maintained in a semantically consistent and coherent manner. MODEM can therefore be used to deal with the grave semantic issues that plague the proprietary meta-model that the generic EA tools use (1) as well as the ones identified for the UML based tools (2).
- MODAF M3 was based on UML and this was, at the time, a good decision. UML is a common standard and has had an enormous amount of work invested in it. MODEM has been created by harvesting all of the good points of MODAF and UML and winnowing out all the less good parts by means of the BORO methodology that underpins the work effort to create MODEM.
- The origins of UML are primarily technical and devoted to the design of software systems and this is one of the reasons that UML use brings with it a lot of baggage.
- The UML baggage which in many cases distorts the MODAF meta-model is therefore removed in MODEM and a more enterprise architecture approach has been achieved.
- MODEM development has had the primary objective of covering MODAF, i.e. it is by and large backward compatible to MODAF architectures developed based on the M3 meta-model.

- **MODEM, it is felt, answers the need of NATO to have a NAF model without UML dependencies.**
- **MODEM provides a vehicle for discussions and development of a common enterprise architecture framework for defence (and even outside defence) since it will be based on the same concepts as DoDAF 2.**

1.1.2 Document structure

This document is structured in the following manner:

- For each viewpoint (AV, StV, OV, SOV, SV. TV and AcV) the M3 meta-model view **MODEM** counterparts are contained. In some viewpoints there are some additional view representations that were not contained in MODAF M3 but this is rare.

- The above viewpoint descriptions are followed by by a list of all of the elements owned by a particular viewpoint. It should be noted that there will aften be more elements in this list than the ones that are shown in the above viewpoint views.

- The elements list is followed by a set of figures that show relevant features of the MODEM model in greater detail.

- At the end of the document, the same structure is repeated for the IDEAS foundation, additions made to the Foundation to accommodate MODEM and also the patterns defined in order to bridge the gap between the IDEAD foundation and MODAF.

2.   MODEM

2.1   Modelling Notation

The UML model for MODEM uses a slightly enhance colour scheme from the usual IDEAS approach. The fill colours of each element remain the same:

- Sky-blue = Type
- Orange = IndividualType
- Lilac = Powertype
- Light-green = TupleType
- Dark-grey = Individual
- Yellow = NamingScheme

For MODEM, in addition to, the border colour is used to indicate the MODAF viewpoint, using the standard MODAF colours:

- Yellow = All Views
- Green = Strategic Views
- Purple = Service-Oriented Views
- Blue = Operational Views
- Orange = Systems Views
- Pink = Acquisition Views
- Grey = Technology & Standards Views

Examples are:

Type   Systems Views   Powertype   All Views
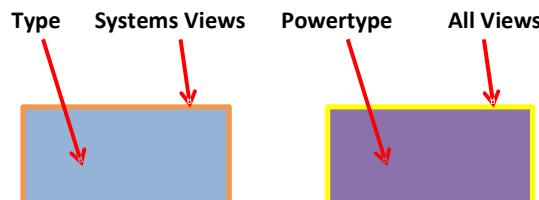
In addition, placeable types (Tuples, TupleTypes, TupleTypeTypes, etc.) are displayed with thin borders whilst all other elements have thick borders.

As noted later in this document, some additions to the IDEAS Foundation were necessary. Where these additions are used, they are shown with a red border.

2.2 All Views

2.2.1 AV-1: Overview and summary information
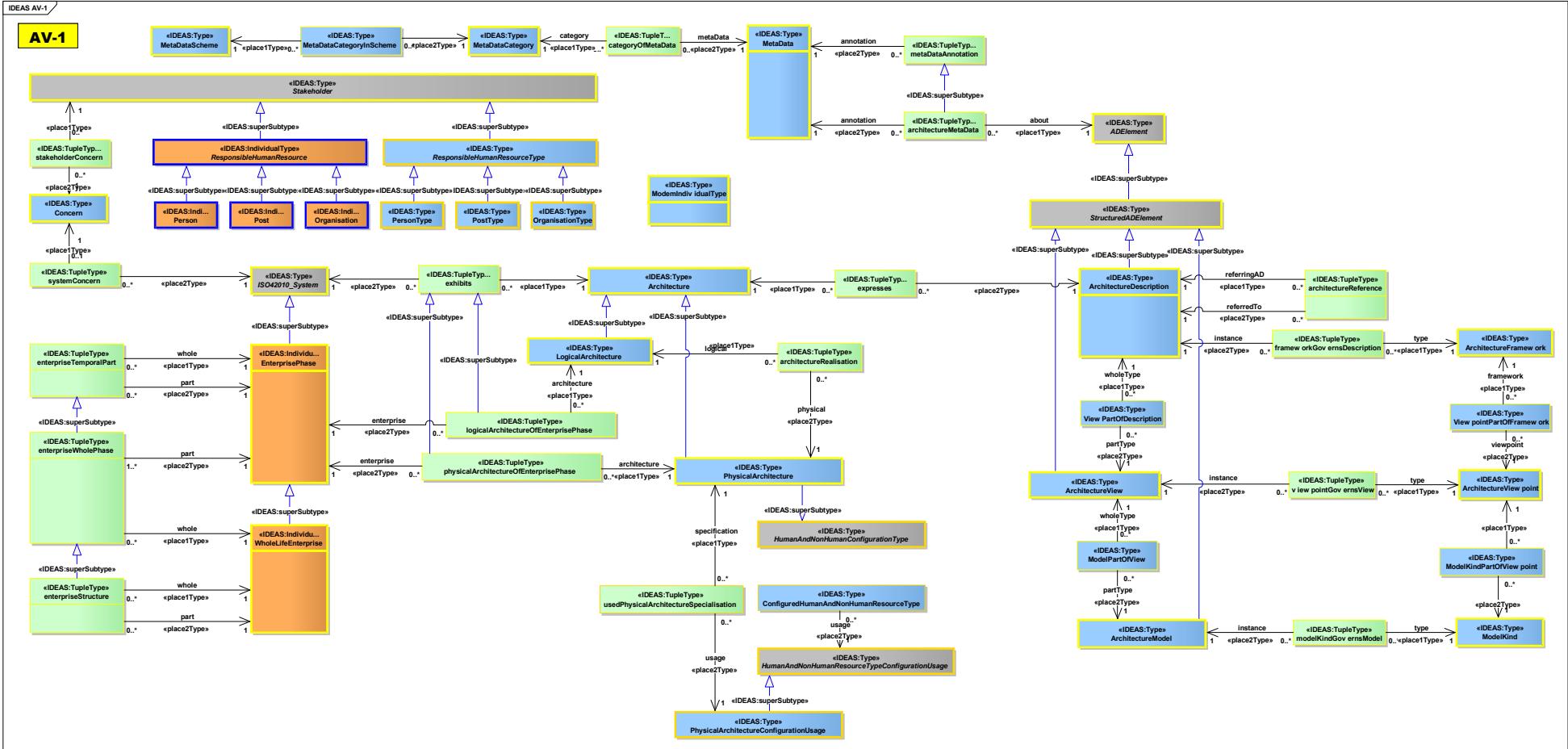
Figure 1 : AV-1

This document is no longer extant and has been withdrawn.
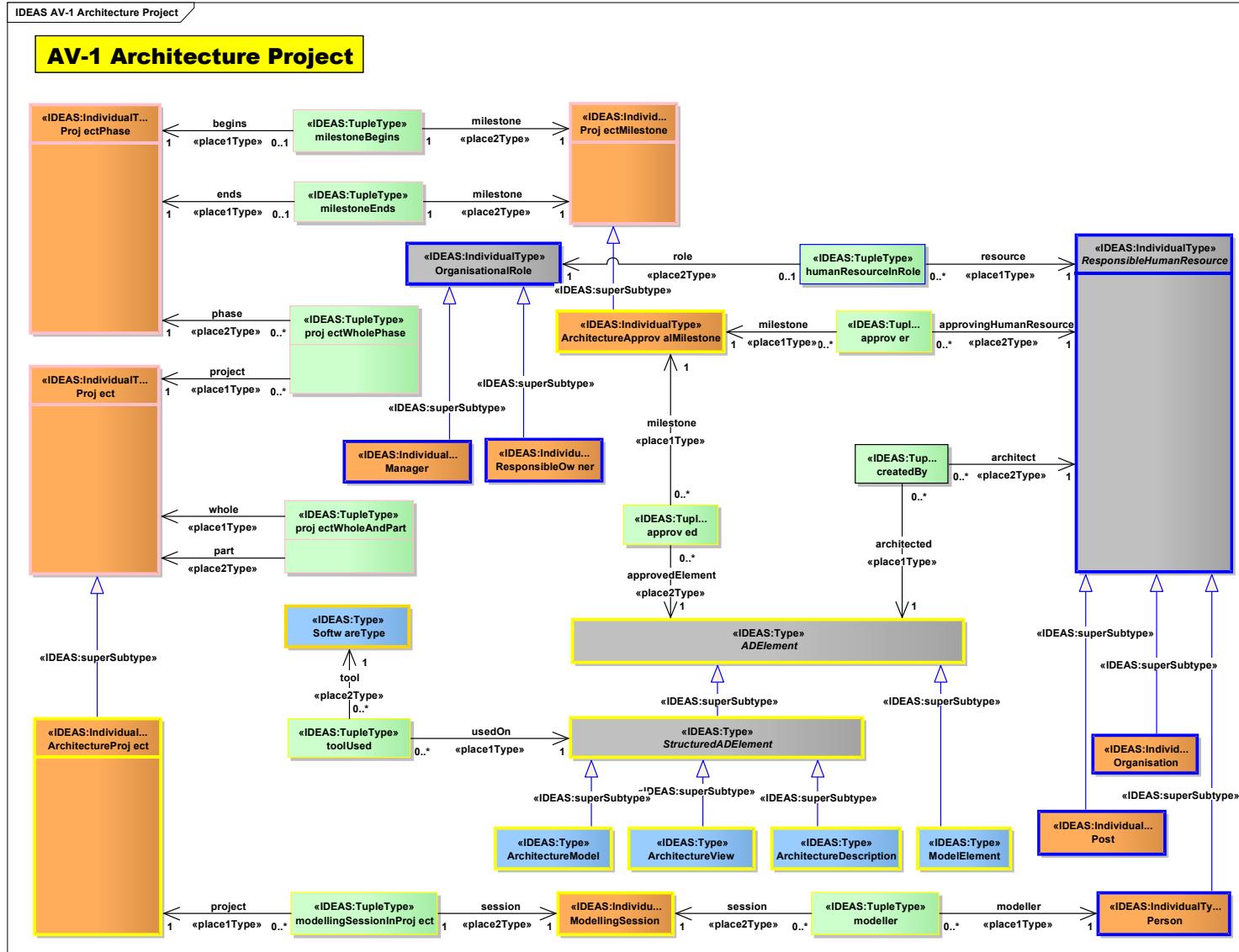
Figure 2 : AV-1 Architecture Project

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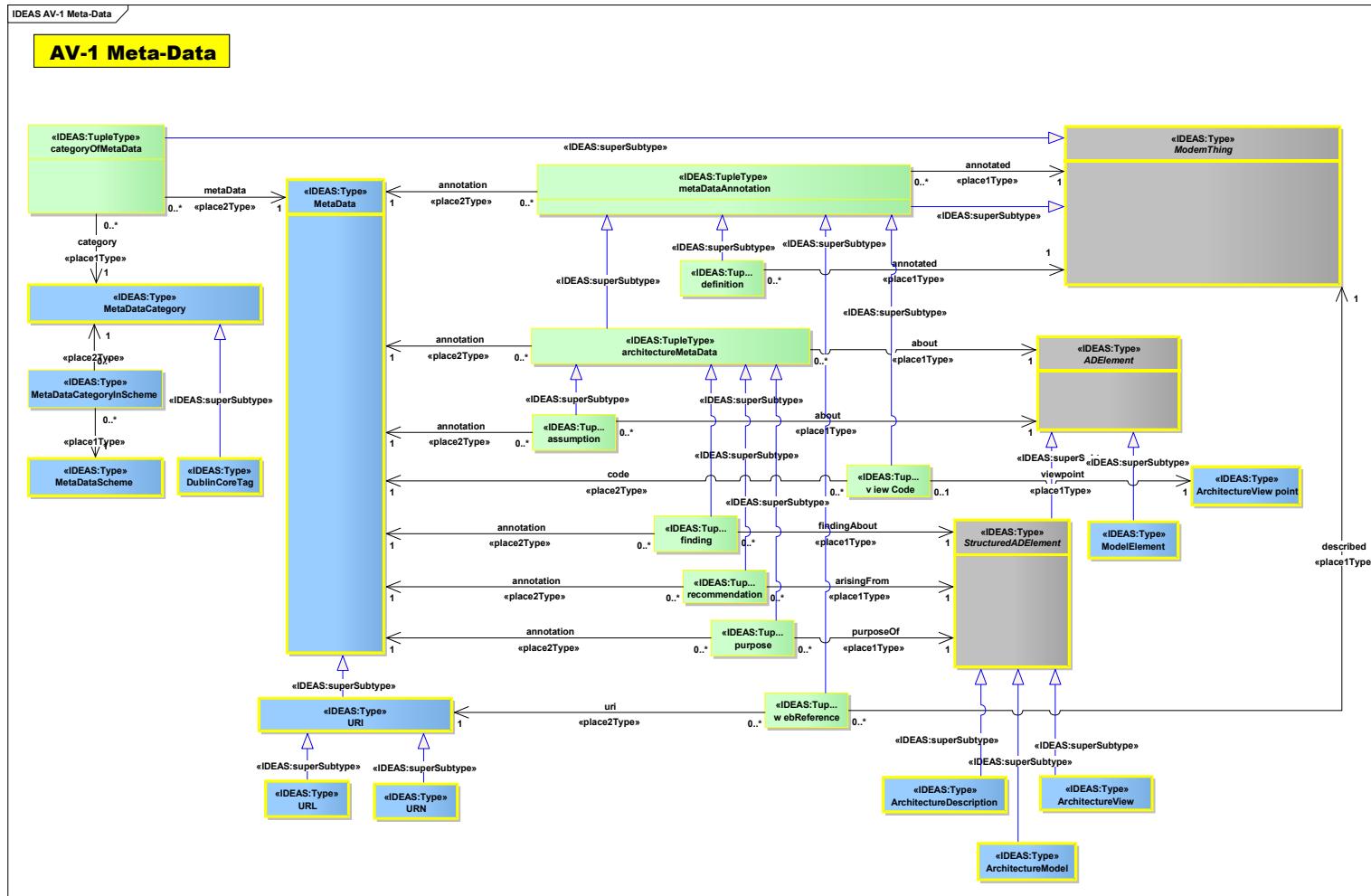
Figure 3 : AV-1 Meta-Data
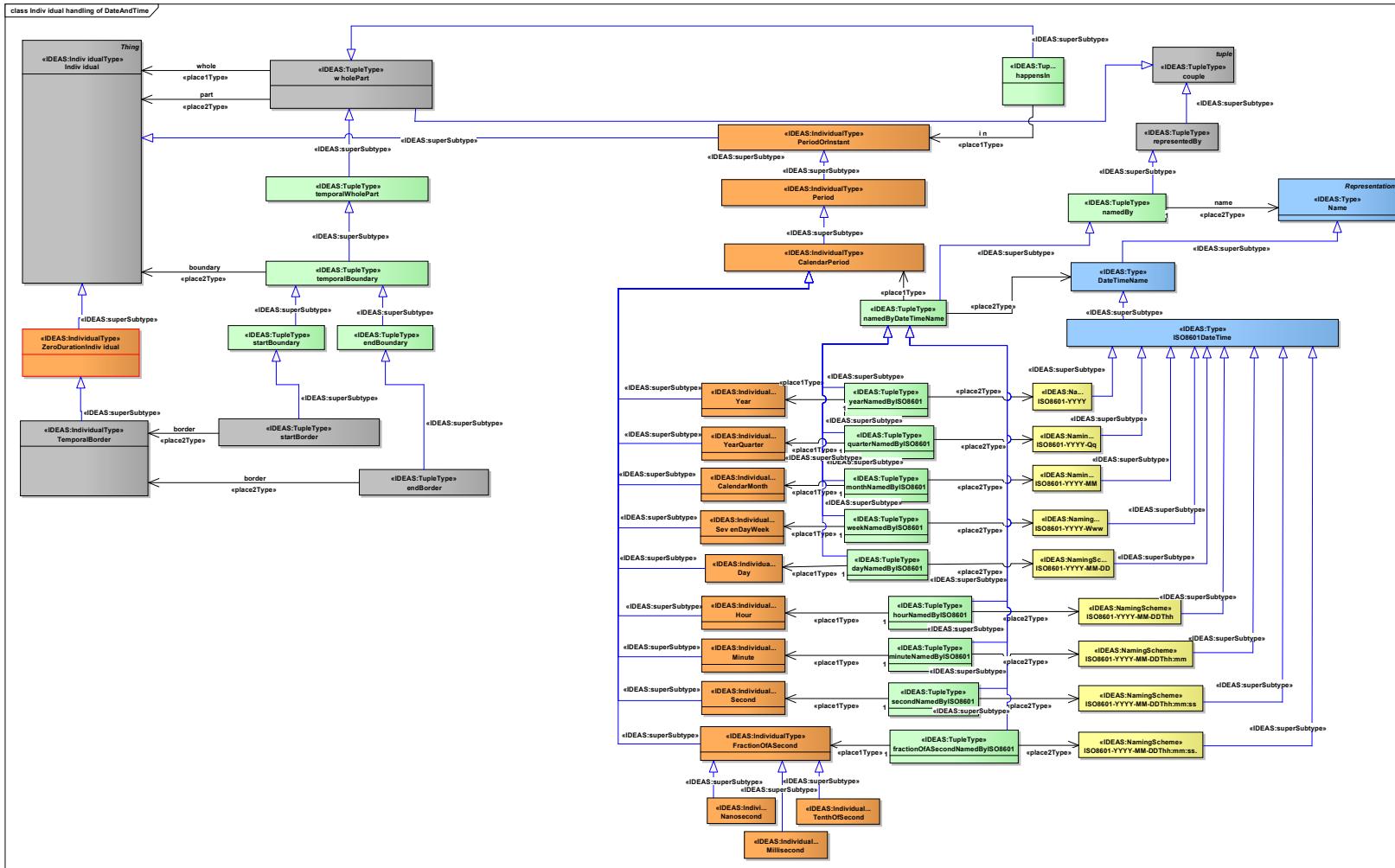
Figure 4 : Individual handling of DateAndTime

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2.2.2 AV-2: Integrated dictionary
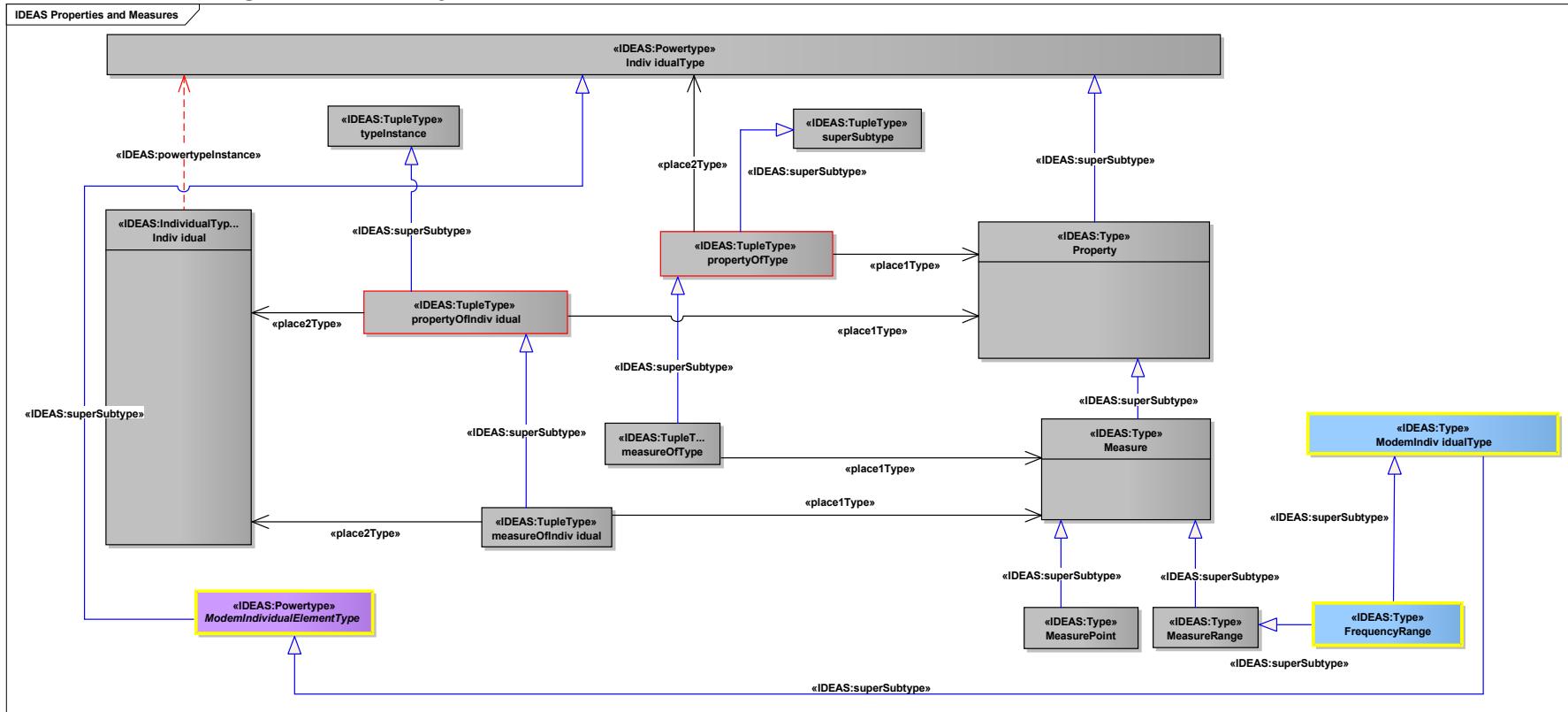
Figure 5 : Properties and Measures

This document is no longer extant and has been withdrawn.
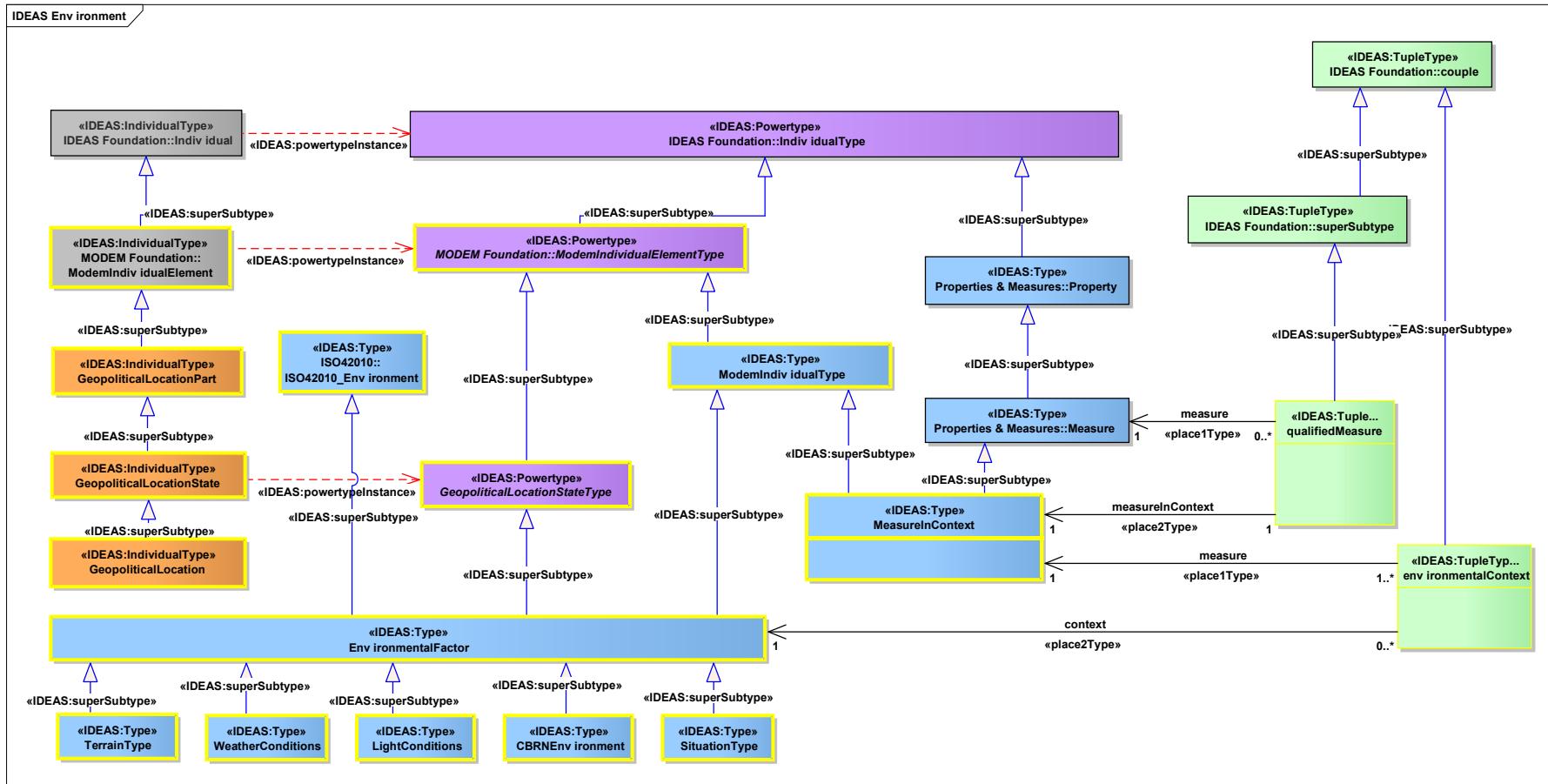
Figure 6 : Environment

2.2.3 All Views elements list

MODEM All Views
After «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **After - BeforeAfterType** *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **After - StartsAfter** *Association (source - target):***«place2Type»** **After - TriggerItem** *Association (source - target):***«place1Type»** **After - TriggerItem** *Attributes:* - **A BeforeAfterType where one TriggerItem starts after another has ended.** **Note: the TriggerItem that happens after may happen at any point in time after the one that comes before it (i.e. there may be an interval of time between them).**
AgentCapableOfResponsibilityOrAgentCapableOfResponsibilityType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **AgentCapableOfResponsibilityOrAgentCapableOfResponsibilityType - Type** *Attributes:* - **The union of AgentCapableOfResponsibility and AgentCapableOfResponsibilityType.**
ArchitectureApprovalMilestone «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **ArchitectureApprovalMilestone - ProjectMilestone** *Attributes:* - **A ProjectMilestone where an ADElement is approved by a ResponsibleHumanResource. Note: this replaces the dateCompleted tag on ArchitecturalDescription in M3.**
ArchitectureProject «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **ArchitectureProject - Project** *Attributes:* - **A Project that delivers an ArchitectureDescription.**
ArtefactPowertype «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ArtefactPowertype - NonHumanResourcePowertype** *Attributes:* - **The powertype of Artefact.**

CBRNEnvironment «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **CBRNEnvironment - EnvironmentalFactor**   *Attributes:*   **-**   **An EnvironmentalFactor that defines the type of chemical, biological, radiological and nuclear environment in which an Enterprise may operate.**
Constraint «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **Constraint - ModemIndividualType**   *Attributes:*   **-**   **A ModemIndividualType that is the collection of all the objects subject to a particular constraint.**
Delay «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **Delay – TriggerItem**   **Attributes:**   **-**   **A TriggerItem that is a pause between Processes, Events, etc.**
DublinCoreTag «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **DublinCoreTag - MetaDataCategory**   *Attributes:*   **-**   **A MetaDataCategory that is a DublinCore tag.**
EnduringTaskPart «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **EnduringTaskPart - UndertakingPart**   *Attributes:*   **-**   **An UndertakingPart where the whole is an EnduringTask.**
EnterprisePart «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **EnterprisePart - AgentPart**   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **EnterprisePart - UndertakingPart**   *Attributes:*   **-**   **A part of a WholeLifeEnterprise**

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EnterprisePhase «IDEAS:IndividualType»
Connectors:
Dependency (element - is instance of): «IDEAS:powertypeInstance»
EnterprisePhase - EnteprisePhaseType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
EnterprisePhase - UndertakingState
Generalization (element - is a subtype of): «IDEAS:superSubtype»
EnterprisePhase - EnterprisePart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
EnterprisePhase - AgentState
Generalization (element - is a subtype of): «IDEAS:superSubtype»
EnterprisePhase - ISO42010_System
Attributes:
-
An UndertakingState that is a current or future state of a WholeLifeEnterprise or another EnterprisePhase.

EnteprisePhaseType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
EnteprisePhaseType - UndertakingStateType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
EnteprisePhaseType - AgentStateType
Attributes:
-
The powertype of EnterprisePhase

EnvironmentalFactor «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
EnvironmentalFactor - GeopoliticalLocationStateType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
EnvironmentalFactor - ISO42010_Environment
Generalization (element - is a subtype of): «IDEAS:superSubtype»
EnvironmentalFactor - ModemIndividualType
Attributes:
-
A GeopoliticalLocationStateType that defines some aspect of the environment in which an Enterprise may operate.

Event «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Event - TemporalBorderType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Event - TriggerItem
Attributes:
-
A TemporalBorderType whose instances are instants the mark the temporal beginning or end of an Individual.

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FrequencyRange «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
FrequencyRange - ModemIndividualType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
FrequencyRange - MeasureRange
Attributes:
-
A MeasureRange that specifies maximum and minimum frequencies, measured in Hertz as real numbers.

GeoName «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
GeoName - StringName
Attributes:
-
A MeasureRange that specifies maximum and minimum frequencies, measured in Hertz as real numbers.

GeopoliticalLocation «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
GeopoliticalLocation - Location
Generalization (element - is a subtype of):«IDEAS:superSubtype»
GeopoliticalLocation - IntentionallyConstructedIndividual
Dependency (element - is instance of):«IDEAS:powertypeInstance»
GeopoliticalLocation - GeopoliticalLocationType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
GeopoliticalLocation - GeopoliticalLocationState

Attributes:
-
A Location and a GeoPoliticalArea.

GeopoliticalLocationPart «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
GeopoliticalLocationPart - ModemIndividualElement
Attributes:
-
A ModemIndividualElement that is a part of a GeopoliticalLocation.

GeopoliticalLocationState «IDEAS:IndividualType»
Connectors:
Dependency (element - is instance of):«IDEAS:powertypeInstance»
GeopoliticalLocationState - GeopoliticalLocationStateType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
GeopoliticalLocationState - GeopoliticalLocationPart
Attributes:
-
A GeopoliticalLocationPart that is a temporal state of a GeopoliticalLocation - i.e. all of the location for a period of time.

GeopoliticalLocationStateType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **GeopoliticalLocationStateType - ModemIndividualElementType**   *Attributes:*   **-**   **The powertype of GeopoliticalLocationState.**
GeopoliticalLocationType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **GeopoliticalLocationType - GeopoliticalLocationStateType**   *Attributes:*   **-**   **The powertype of GeopoliticalLocation.**
ISO6709Representation «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ISO6709Representation - GeoName**   *Attributes:*   **-**   **A GeoName expressed using the ISO6709:2008 standard notaton**   **Examples: "-90+000+2800CRSWGS_84/" "+48.8577+002.295/"**
ImmediatelyAfter «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ImmediatelyAfter - ImmediateBeforeAfterType**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ImmediatelyAfter - After**   *Association (source - target):«place2Type»*   **ImmediatelyAfter - TriggerItem**   *Association (source - target):«place1Type»*   **ImmediatelyAfter - TriggerItem**   *Attributes:*   **-**   **An After where the subsequent TriggerItem starts immediately as the preceeding TriggerItem ends.**
InformationInstance «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **InformationInstance - Sign**   *Dependency (element - is instance of): «IDEAS:powertypeInstance»*   **InformationInstance - InformationInstanceType**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **InformationInstance - ModemIndividualElement**   *Attributes:*   **-**   **A Sign that is an individual item of information (e.g. an utterance, an individual instance of a paper or electronic document).**

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InformationInstanceType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
InformationInstanceType - SignType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
InformationInstanceType - ModemIndividualElementType
Attributes:
-
The powertype of InformationInstance.
ItemInScenario «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ItemInScenario – TypicalWholePart
Association (source - target): «place1Type»
ItemInScenario - Scenario
Attributes:
-
A TypicalWholePart where the whole is a Scenario.
LightConditions «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
LightConditions - EnvironmentalFactor
Attributes:
-
An EnvironmentmentalFactor that defines the types of light (e.g. broad daylight, dusk, moonlit, etc.) in which an Enterprise may operate.
Location «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Location - ModemIndividualElement
Attributes:
-
A location anywhere on the earth. The means of describing the location is a string (locationDescription). The information contained in that string is governed by the taxonomy reference - e.g. if the Location is a "GPS reference", the string will contain the GPS coordinates.
Note: was called "ActualLocation" in M3 v1.2
LogicalArchitecture «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
LogicalArchitecture - Architecture
Generalization (element - is a subtype of): «IDEAS:superSubtype»
LogicalArchitecture - NodeParent
Generalization (element - is a subtype of): «IDEAS:superSubtype»
LogicalArchitecture - EnteprisePhaseType
Attributes:
-
A NodeParent whose parts are either Nodes, KnownResources or LogicalDomains.

MeasureInContext «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
MeasureInContext - ModemIndividualType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
MeasureInContext - Measure
Attributes:
-
A ModemIndividualType that brings together EnvironmentalFactors with a Measure in order to qualify the measure. Examples: 40mph in desert, 1km range in cloudy conditions.

MetaData «IDEAS:Type»
Connectors:
Dependency (element - is instance of):«IDEAS:powertypeInstance»
MetaData - MetaDataType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
MetaData - StringRepresentation
Attributes:
-
A StringRepresentation that can be applied to any element in the architecture. Note: wherever possible, standard Meta-Data types should be used - e.g. conforming to Dublin Core. Note for MOD Users: The MOD Meta Data Standard categories shall be used.

MetaDataCategory «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
MetaDataCategory - MetaDataType
Attributes:
-
A MetaDataType that defines the category of a MetaData element
example: http://purl.org/dc/terms/abstract

MetaDataCategoryInScheme «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
MetaDataCategoryInScheme - WholePartTypeType
Association (source - target):«place2Type»
MetaDataCategoryInScheme - MetaDataCategory
Association (source - target):«place1Type»
MetaDataCategoryInScheme - MetaDataScheme
Attributes:
-
A WholePartTypeType that asserts a MetaDataCategory belongs to a MetaDataScheme.

MetaDataScheme «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
MetaDataScheme - RepresentationScheme
Attributes:
-
A RepresentationScheme that defines a set of MetaData

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MetaDataType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **MetaDataType - RepresentationType** *Attributes:* **-** **The powertype of MetaData.**
ModellingSession «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **ModellingSession - AgentPart** *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **ModellingSession - ProjectPart** *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **ModellingSession - ParticipationExtent** *Attributes:* **-** **A ProjectPart where ArchitectureDescriptions are worked on.**
ModemIndividualType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **ModemIndividualType - ModemIndividualElementOrModemIndividualType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ModemIndividualType - ModafIndividualElementType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ModemIndividualType - ModemThing** *Attributes:* **-** **The parent (supertype) of all MODEM elements that are types of Individuals** **e.g. tank, computer, etc.**
ModemTemporalWholePartType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ModemTemporalWholePartType - ModemWholePartType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ModemTemporalWholePartType - TemporalWholePartType** *Association (source - target):* **«place2Type»** **ModemTemporalWholePartType - ModemIndividualElementType** *Association (source - target):* **«place1Type»** **ModemTemporalWholePartType - ModemIndividualElementType** *Attributes:* **-** **The powertype of modemTemporalWholePart.**

ModemWholePartType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ModemWholePartType - WholePartType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ModemWholePartType - ModemThing
Association (source - target): «place2Type»
ModemWholePartType - ModafIndividualElementType
Association (source - target): «place1Type»
ModemWholePartType - ModafIndividualElementType
Attributes:
-
The powertype of modemWholePart.

PhysicalArchitecture «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
PhysicalArchitecture - HumanAndNonHumanConfigurationType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PhysicalArchitecture - PhysicalArchitecturePowertype
Generalization (element - is a subtype of): «IDEAS:superSubtype»
PhysicalArchitecture - Architecture
Attributes:
-
A HumanAndNonHumanConfigurationType that specifies the structure and behaviour of an EnteprisePhase.

PointLocation «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PointLocation - GeopoliticalLocationPart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
PointLocation - Location
Attributes:
-
A Location expressed as a point on a ReferenceEllipsoidOrGeoid.

ProjectPartType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ProjectPartType - UndertakingPartType
Attributes:
-
The powertype of ProjectPart.

ProjectPhaseType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProjectPhaseType - ProjectPartType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProjectPhaseType - UndertakingStateType
Attributes:
-

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The powertype of ProjectPhase
ProjectPowertype «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* «IDEAS:superSubtype» ProjectPowertype - ProjectPhaseType *Generalization (element - is a subtype of):* «IDEAS:superSubtype» ProjectPowertype - UndertakingType *Attributes:* - The powertype of Project
ProjectThreadPowertype «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» ProjectThreadPowertype - ProjectPartType *Attributes:* - The powertype of ProjectThread.
ResourcePackageType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» ResourcePackageType - IndividualResourcePowertype *Attributes:* - The powertype of ResourcePackage.
Scenario «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* «IDEAS:superSubtype» Scenario - ModemIndividualType *Attributes:* - A ModemIndividualType whose typical parts are other ModemIndividualTypes that are organised into a typical temporal sequence.
ServiceDelivery «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):* «IDEAS:superSubtype» ServiceDelivery - ServiceDeliveryState *Dependency (element - is instance of):* «IDEAS:powertypeInstance» ServiceDelivery - ServiceDeliveryType *Attributes:* - An Undertaking that is a realization of a ServiceSpecification - i.e. the delivery of Service according to that specification. Note a ServiceDelivery is an Individual whose extent is the fusion of all the processes, people, systems that go into delivering a service. Example: the ongoing building management service provided to MOD by Amey for Main Building.
ServiceDeliveryPart «IDEAS:IndividualType» *Connectors:* *GGeneralization (element - is a subtype of):*«IDEAS:superSubtype» ServiceDeliveryPart - ModemIndividualElement *Dependency (element - is instance of):*«IDEAS:powertypeInstance» ServiceDeliveryPart - ServiceDeliveryPartType *Attributes:*

- A ModemIndividualType that is part of a ServiceDelivery.
ServiceDeliveryPartType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** ServiceDeliveryPartType - ModemIndividualElementType *Attributes:* - The powertype of ServiceDeliveryPart.
ServiceDeliveryState «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** ServiceDeliveryState - ServiceDeliveryPart *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»** ServiceDeliveryState - ServiceDeliveryStateType *Attributes:* - A ServiceDeliveryPart that is a temporal part of a ServiceDelivery - i.e. all of the ServiceDelivery for a period of time.
ServiceDeliveryStateType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** ServiceDeliveryStateType - ServiceDeliveryPartType *Attributes:* - The powertype of ServiceDeliveryState.
ServiceDeliveryType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** ServiceDeliveryType - ServiceDeliveryStateType *Attributes:* - The powertype of ServiceDelivery.
ServiceDeliveryWholeAndPartType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** ServiceDeliveryWholeAndPartType - ServiceDeliveryWholeStateType *Association (source - target):***«place2Type»** ServiceDeliveryWholeAndPartType - ServiceDeliveryType *Attributes:* - The Powertype of serviceDeliveryWholeAndPart.

ServiceDeliveryWholeFacadeType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ServiceDeliveryWholeFacadeType - ServiceDeliveryWholePartType
Association (source - target): «place2Type»
ServiceDeliveryWholeFacadeType - ServiceFacadeType
Attributes:
-
The powertype of serviceDeliveryWholeFacade.

ServiceDeliveryWholePartType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ServiceDeliveryWholePartType - ModemWholePartType
Association (source - target): «place2Type»
ServiceDeliveryWholePartType - ServiceDeliveryPartType
Association (source - target): «place1Type»
ServiceDeliveryWholePartType - ServiceDeliveryType
Attributes:
-
The powertype of serviceDeliveryWholePart.

ServiceDeliveryWholeStateType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ServiceDeliveryWholeStateType - ModemTemporalWholePartType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ServiceDeliveryWholeStateType - ServiceDeliveryWholePartType
Association (source - target): «place2Type»
ServiceDeliveryWholeStateType - ServiceDeliveryStateType
Attributes:
-
The powertype of serviceDeliveryWholeState.

ServiceFacade «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ServiceFacade - ServiceDeliveryPart
Dependency (element - is instance of): «IDEAS:powertypeInstance»
ServiceFacade - ServiceFacadeType
Attributes:
-
A ServiceDeliveryPart that is the extent of all the parts of a ServiceDelivery that are concerned with communication with consumers. A ServiceFacade may be specified by a ServiceInterface.

ServiceFacadeType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ServiceFacadeType - ServiceDeliveryPartType
Attributes:
-
The powertype of ServiceFacade.

SituationType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
SituationType - EnvironmentalFactor
Attributes:
-
An EnvironmentalFactor used to describe the types and levels of threat under which an Enterprise may operate. Examples: Corrosive, Fire, Smoke, Peaceful, Under Fire, Under Heavy Fire, etc.

StartsAfter «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
StartsAfter - WeakTemporalOrderingType
Association (source - target):«place2Type»
StartsAfter - TriggerItem
Association (source - target):«place1Type»
StartsAfter - TriggerItem
Attributes:
-
A WeakTemporalOrderingType that asserts one TriggerItem starts before another. Note: there is constraint on when either TriggerItem ends - hence if A starts before B, it is possible that B ends before A and indeed that A ends before B.

StartsImmediatelyAfter «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
StartsImmediatelyAfter - StartsAfter
Association (source - target):«place2Type»
StartsImmediatelyAfter - TriggerItem
Association (source - target):«place1Type»
StartsImmediatelyAfter - TriggerItem
Attributes:
-
A StartsAfter where the subsequent TriggerItem starts immediately after the preceeding TriggerItem.

StateMachine «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
StateMachine - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
StateMachine - StateMachineViews
Attributes:
-
A StateMachineViews used to model typical states and transitions for ModemIndividualElementTypes.

StateMachineRegion «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
StateMachineRegion - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
StateMachineRegion - StateMachineRegions
Attributes:
-
A StateMachineRegions which is part of a StateMachine.

StateSpecification «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
StateSpecification - TriggerItem
Generalization (element - is a subtype of):«IDEAS:superSubtype»
StateSpecification - OwnedStateSets
Attributes:
-
An OwnedStateSets used in a MODEM state machine.

StateTransition «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
StateTransition - StateSetTransitions
Association (source - target):«place2Type»
StateTransition - StateSpecification
Association (source - target):«place1Type»
StateTransition - StateSpecification
Attributes:
-
A StateSuccessionType indicating there is a possible transition between StateSpecifications.

StatusOfThreadType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
StatusOfThreadType - ModemTemporalWholePartType
Attributes:
-
The powertype of statusOfThread.

TerrainType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
TerrainType - EnvironmentalFactor
Attributes:
-
An EnvironmentalFactor that defines the type of ground conditions that an Enterprise may operate in.
Note: TerrainType is a subtype of GeopoliticalLocationStateType as the terrain may change over time (e.g. muddy, frozen ground, deep snow, etc.)

ThreadStatusType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ThreadStatusType - ProjectPartType
Attributes:
-
The powertype of ThreadStatus.

TriggerItem «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
TriggerItem - ModemIndividualType
Attributes:
-

A ModafIndividualType that can be the cause or effect of a Trigger.
TypicalTemporalWholePart «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **TypicalTemporalWholePart - ModemTemporalWholePartType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **TypicalTemporalWholePart - TypicalWholePart** *Association (source - target):* **«place2Type»** **TypicalTemporalWholePart - ModemIndividualType** *Association (source - target):* **«place1Type»** **TypicalTemporalWholePart - ModemIndividualType** *Attributes:* **-** **A TypicalWholePart where the instances of the partType are temporal parts of instances of the wholeType.**
TypicalWholePart «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **TypicalWholePart - ModemWholePartType** *Association (source - target):* **«place2Type»** **TypicalWholePart - ModemIndividualType** *Association (source - target):* **«place1Type»** **TypicalWholePart - ModemIndividualType** *Attributes:* **-** **A ModafWholePartType where types of whole and part are ModafIndividalTypeElements** **Note : this is used in AV-2 to model typical whole-part relationships between ModafIndividualTypeElements**
URI «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **URI - MetaData** *Attributes:* **-** **A MetaData that is a uniform resource identifier.**
URL «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **URL - URI** *Attributes:* **-** **A URI that is a uniform resource location.**
URN «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **URN - URI** *Attributes:* **-** **A URI that is a uniform resource name.**

Undertaking «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
Undertaking - Process
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
Undertaking - UndertakingState
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
Undertaking - UndertakingType
Attributes:
-
A Process that is intended to deliver something.

UndertakingPart «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
UndertakingPart - ModemIndividualElement
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
UndertakingPart - ProcessPart
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
UndertakingPart - UndertakingPartType
Attributes:
-
A ModemIndividualElement that is part of an Undertaking.

UndertakingPartType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
UndertakingPartType - ProcessPartType
Attributes:
-
The powertype of UndertakingPart.

UndertakingState «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
UndertakingState - UndertakingPart
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
UndertakingState - ProcessState
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
UndertakingState - UndertakingStateType
Attributes:
-
An UndertakingPart that is a temporal part of an Undertaking.

UndertakingStateType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
UndertakingStateType - UndertakingPartType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
UndertakingStateType - ProcessStateType
Attributes:
-

The powertype of UndertakingState.
UndertakingType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **UndertakingType - ProcessType**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **UndertakingType - UndertakingStateType**   *Attributes:*   **-**   The powertype of Undertaking.
UndertakingWholeAndPartType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **UndertakingWholeAndPartType - UndertakingWholeStateType**   *Association (source - target): «place2Type»*   **UndertakingWholeAndPartType - UndertakingType**   *Attributes:*   **-**   The powertype of undertakingWholeAndPart.
UndertakingWholePartType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **UndertakingWholePartType - ModemWholePartType**   *Association (source - target): «place2Type»*   **UndertakingWholePartType - UndertakingPartType**   *Association (source - target): «place1Type»*   **UndertakingWholePartType - UndertakingType**   *Attributes:*   **-**   The powertype of undertakingWholePart.
UndertakingWholeStateType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **UndertakingWholeStateType - UndertakingWholePartType**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **UndertakingWholeStateType - ModemTemporalWholePartType**   *Association (source - target): «place2Type»*   **UndertakingWholeStateType - UndertakingStateType**   *Attributes:*   **-**   The powertype of undertakingWholeState.
WeatherConditions «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **WeatherConditions - EnvironmentalFactor**   *Attributes:*   **-**   An EnvironmentalFactor that defines the type of weather in which an Enterprise may operate.

WholeLifeEnterprise «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
WholeLifeEnterprise - EnterprisePhase
Generalization (element - is a subtype of): «IDEAS:superSubtype»
WholeLifeEnterprise - Undertaking
Generalization (element - is a subtype of): «IDEAS:superSubtype»
WholeLifeEnterprise - Agent
Attributes:
-
An EnterprisePhase that represents the whole existance of an enterprise.

appliedStateMachine «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
appliedStateMachine - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
appliedStateMachine - stateMachineViewStateTypeOwners
Association (source - target):«place1Type»
appliedStateMachine - ModemIndividualElementType
Association (source - target):«place2Type»
appliedStateMachine - StateMachine
Attributes:
-
A stateMachineViewStateTypeOwners that relates a ModemIndividualElemetType to its state machine.

approved «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
approved - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
approved - couple
Association (source - target):«place2Type»
approved - ADElement
Association (source - target):«place1Type»
approved - ArchitectureApprovalMilestone
Attributes:
-
A couple that relates an ArchitectureApprovalMilestone to the ADElement that is approved.

approver «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
approver - couple
Generalization (element - is a subtype of):«IDEAS:superSubtype»
approver - ModemThing
Association (source - target):«place2Type»
approver - ResponsibleHumanResource
Association (source - target):«place1Type»
approver - ArchitectureApprovalMilestone
Attributes:
-

A couple that relates an ArchitectureApprovalMilestone to the ResponsibleHumanResource that approved it.
architectureMetaData «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **architectureMetaData - metaDataAnnotation**   *Association (source - target):*«place1Type»   **architectureMetaData - ADElement**   *Association (source - target):*«place2Type»   **architectureMetaData - MetaData**   *Attributes:*   **-**   **A metaDataAnnotation that relates a MetaData element to the ArchitectureDescription it annotates.**
architectureRealisation «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **architectureRealisation - modemIndividualTypeSpecialisation**   *Association (source - target):* «place1Type»   **architectureRealisation - LogicalArchitecture**   *Association (source - target):* «place2Type»   **architectureRealisation - PhysicalArchiutecture**   *Attributes:*   **-**   **A modemIndividualTypeSpecialisation that asserts that a PhysicalArchitecture is a realisation of a LogicalArchitecture**
architectureReference «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **architectureReference - ModemThing**   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **architectureReference - couple**   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **architectureReference - correspondence**   *Association (source - target):*«place2Type»   **architectureReference - ArchitectureDescription**   *Association (source - target):*«place1Type»   **architectureReference - ArchitectureDescription**   *Attributes:*   **-**   **A couple that relates an ArchitectureDescription to another ArchitectureDescription it refers to.**
assumption «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **assumption - architectureMetaData**   *Association (source - target):*«place1Type»   **assumption - ADElement**   *Association (source - target):*«place2Type»   **assumption - MetaData**   *Attributes:*   **-**

A describedBy that states an assumption about an ADElement. Note: Any given ADElement may have zero to many assumptions.

categoryOfMetaData «IDEAS:TupleType»
Connectors:
Association (source - target):«place2Type»
categoryOfMetaData - MetaData
Generalization (element - is a subtype of):«IDEAS:superSubtype»
categoryOfMetaData - typeInstance
Generalization (element - is a subtype of):«IDEAS:superSubtype»
categoryOfMetaData - ModemThing
Association (source - target):«place1Type»
categoryOfMetaData - MetaDataCategory
Attributes:
-
A typeInstance that relates a MetaData element to its category.

constraintOnIndividual «IDEAS:TupleType»
Connectors:
Association (source - target):«place2Type»
constraintOnIndividual - ModemIndividualElement
Association (source - target):«place1Type»
constraintOnIndividual - Constraint
Generalization (element - is a subtype of):«IDEAS:superSubtype»
constraintOnIndividual - modemIndividualTypeInstance
Attributes:
-
A couple that asserts a constraint placed upon a ModemThing related to a ModemThing.

constraintOnType «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
constraintOnType - modemIndividualTypeSpecialisation
Association (source - target):«place2Type»
constraintOnType - ModemIndividualType
Association (source - target):«place1Type»
constraintOnType - Constraint
Attributes:
-
A superSubtype that asserts all the instances of the subType object are subject to the constraint.

createdBy «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
createdBy - couple
Association (source - target):«place2Type»
createdBy - ResponsibleHumanResource
Association (source - target):«place1Type»
createdBy - ADElement
Attributes:
-
A couple that asserts a ResponsibleHumanResource is the creator of an ADElement. Note: this covers the creatingOrganisation and architect tags that were applied to ArchitectureDescription in M3.

This document is no longer extant and has been withdrawn.

definition «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **definition - metaDataAnnotation**   *Association (source - target):*«place1Type»   **definition - ModemThing**   *Attributes:*   **-**   **A metaDataAnnotation that provides the definition for a ModemThing.**
delayRange «IDEAS:TupleType»   *Connectors:*   *Association (source - target): *«place2Type»   **delayRange - Delay**   *Generalization (element - is a subtype of): *«IDEAS:superSubtype»   **delayRange - measureOfType**   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **delayRange - ModemThing**   *Association (source - target): *«place1Type»   **delayRange - TimeRange**   *Attributes:*   **-**   **A measureOfType that relates a LogicalDelay to the TimeRange in which it falls.**
delayTime «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **delayTime - ModemThing**   *Association (source - target): *«place2Type»   **delayRange - Delay**   *Generalization (element - is a subtype of): *«IDEAS:superSubtype»   **delayRange - measureOfType**   *Association (source - target): *«place1Type»   **delayRange - Time**   *Attributes:*   **-**   **A measureOfType that relates a LogicalDelay to its Time.**
designReleasedAtMilestone «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **designReleasedAtMilestone - couple**   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **designReleasedAtMilestone - ModemThing**   *Association (source - target):*«place1Type»   **designReleasedAtMilestone - ResourceType**   *Association (source - target):*«place2Type»   **designReleasedAtMilestone - ProjectMilestone**   *Attributes:*   **-**   **A couple that indicates a ResourceType is released as a design at a ProjectMilestone.**

This document is no longer extant and has been withdrawn.

designWithdrawnAtMilestone «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
designWithdrawnAtMilestone - couple
Generalization (element - is a subtype of):«IDEAS:superSubtype»
designWithdrawnAtMilestone - ModemThing
Association (source - target):«place1Type»
designWithdrawnAtMilestone - ResourceType
Association (source - target):«place2Type»
designWithdrawnAtMilestone - ProjectMilestone
Attributes:
-
A couple that indicates a ResourceType was withdrawn as a design at a ProjectMilestone.

enduringTaskWholePart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
enduringTaskWholePart - undertakingWholePart
Association (source - target): «place2Type»
enduringTaskWholePart - EnduringTaskPart
Association (source - target): «place1Type»
enduringTaskWholePart - EnduringTask
Attributes:
-
An undertakingWholePart where the whole is an EnduringTask.

enterpriseStructure «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
enterpriseStructure - agentWholeAndPart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
enterpriseStructure - undertakingWholeAndPart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
enterpriseStructure - enterpriseWholePhase
Association (source - target): «place2Type»
enterpriseStructure - WholeLifeEnterprise
Association (source - target): «place1Type»
enterpriseStructure - WholeLifeEnterprise
Attributes:
-
A wholePart that asserts that one EnterprisePhase is a spatial part of another.

enterpriseTemporalPart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
enterpriseTemporalPart - undertakingWholeState
Generalization (element - is a subtype of): «IDEAS:superSubtype»
enterpriseTemporalPart - agentWholeState
Generalization (element - is a subtype of): «IDEAS:superSubtype»
enterpriseTemporalPart - enterpriseWholePart
Association (source - target): «place2Type»
enterpriseTemporalPart - EnterprisePhase

Association (source - target): «place1Type» enterpriseTemporalPart - EnterprisePhase *Attributes:* - An enterpriseStructure and a temporalWholePart that asserts that one EnterprisePhase is a temporal part of another (i.e. it is a phase of the other).
enterpriseWholePart «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* enterpriseWholePart - agentWholePart *Generalization (element - is a subtype of): «IDEAS:superSubtype»* enterpriseWholePart - undertakingWholePart *Association (source - target): «place2Type»* enterpriseWholePart - EnterprisePart *Association (source - target): «place1Type»* enterpriseWholePart - WholeLifeEnterprise *Attributes:* - An agentWholePart where the whole is a WholeLifeEnterprise and the part is an EnterprisePart.
enterpriseWholePhase «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* enterpriseWholePhase - enterpriseTemporalPart *Association (source - target): «place2Type»* enterpriseWholePhase - EnterprisePhase *Association (source - target): «place1Type»* enterpriseWholePhase - WholeLifeEnterprise *Attributes:* - An enterpriseTemporalPart where whole is a WholeLifeEnterprise.
environmentalContext «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* environmentalContext - couple *Generalization (element - is a subtype of):«IDEAS:superSubtype»* environmentalContext - ModemThing *Association (source - target):«place2Type»* environmentalContext - EnvironmentalFactor *Association (source - target):«place1Type»* environmentalContext - MeasureInContext *Attributes:* - A couple that relates a MeasureInContext to an EnvironmentalFactor in order to qualify the measure.
finding «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* finding - architectureMetaData *Association (source - target):«place2Type»* finding - MetaData

Association (source - target):«place1Type» **finding - StructuredADElement** <u>*Attributes:*</u> **-** **A describedBy that describes a finding about an ArchitectureDescription. Note: Any given ADElement may have zero to many findings.**
individualFacade «IDEAS:TupleType» <u>*Connectors:*</u> *Dependency (element - is instance of):*«IDEAS:powertypeInstance» **individualFacade - IndividualFacadeType** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **individualFacade - modemWholePart** <u>*Attributes:*</u> **-** **A modemWholePart where the part is an outer part of another ModemIndividualElement.**
locatedAt «IDEAS:TupleType» <u>*Connectors:*</u> *Generalization (element - is a subtype of):* «IDEAS:superSubtype» **locatedAt - modemWholePart** *Association (source - target):* «place1Type» **locatedAt - ModemIndividualElement** *Association (source - target):* «place2Type» **locatedAt - PointLocation** <u>*Attributes:*</u> **-** **A modafWholePart relating an MODAIndividualElement to a PointLocation that is within the extent of the MODAIndividualElement.**
locatedIn «IDEAS:TupleType» <u>*Connectors:*</u> *Generalization (element - is a subtype of):* «IDEAS:superSubtype» **locatedIn - modemWholePart** *Association (source - target):* «place2Type» **locatedIn - ModemIndividualElement** *Association (source - target):* «place1Type» **locatedIn - GeopoliticalLocation** <u>*Attributes:*</u> **-** **A modafWholePart that relates a ModafIndividualElement to the GeopoliticalLocation it is in.**
locationNamedBy «IDEAS:TupleType» <u>*Connectors:*</u> *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **locationNamedBy - namedBy** *Association (source - target):*«place1Type» **locationNamedBy - Location** *Association (source - target):*«place2Type» **locationNamedBy - GeoName** <u>*Attributes:*</u> **-** **A namedBy that identifies a Location.**

logicalArchitectureOfEnterprisePhase «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
logicalArchitectureOfEnterprisePhase - exhibits
Generalization (element - is a subtype of): «IDEAS:superSubtype»
logicalArchitectureOfEnterprisePhase - modemIndividualTypeInstance
Association (source - target): «place1Type»
logicalArchitectureOfEnterprisePhase - LogicalArchitecture
Association (source - target): «place2Type»
logicalArchitectureOfEnterprisePhase - EnterprisePhase
Attributes:
-
Relates an EnterprisePhase to a LogicalArchitecture that specifies its (logical) structure and behaviour.

metaDataAnnotation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
metaDataAnnotation - ModemThing
Generalization (element - is a subtype of): «IDEAS:superSubtype»
metaDataAnnotation - representedBy
Association (source - target): «place1Type»
metaDataAnnotation - ModemThing
Association (source - target): «place2Type»
metaDataAnnotation - MetaData
Attributes:
-
A representedBy that relates a MetaData element to the ModafThing it describes.

modeller «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
modeller - modemWholePart
Generalization (element - is a subtype of):«IDEAS:superSubtype»
modeller - agentParticipation
Association (source - target):«place1Type»
modeller - Person
Association (source - target):«place2Type»
modeller - ModellingSession
Attributes:
-
An agentParticipation where a Person conducts a ModellingSession.

modellingSessionInProject «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
modellingSessionInProject - processWholeRoleExtentPart
Generalization (element - is a subtype of):«IDEAS:superSubtype»
modellingSessionInProject - projectWholePart
Association (source - target):«place1Type»
modellingSessionInProject - ArchitectureProject
Association (source - target):«place2Type»
modellingSessionInProject - ModellingSession

Attributes: -   **A projectWholePart relating a ModellingSession to the ArchitectureProject it is part of.**
modemIndividualTypeInstance «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **modemIndividualTypeInstance - ModemThing**   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **modemIndividualTypeInstance - typeInstance**   *Association (source - target):* **«place2Type»**   **modemIndividualTypeInstance - ModemIndividualElement**   *Association (source - target):* **«place1Type»**   **modemIndividualTypeInstance - ModemIndividualType**   *Attributes:*   -   **A typeInstance used to assert that a ModemIndividualElement is an instance of a ModemIndividualType.**
modemIndividualTypeSpecialisation «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **modemIndividualTypeSpecialisation - superSubtype**   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **modemIndividualTypeSpecialisation - ModemThing**   *Association (source - target):* **«place2Type»**   **modemIndividualTypeSpecialisation - ModemIndividualType**   *Association (source - target):* **«place1Type»**   **modemIndividualTypeSpecialisation - ModemIndividualType**   *Attributes:*   -   **A superSubtype that expresses a specialisation relationship between ModemIndividualTypeElements.**   **Note: This relationship is used to build specialisation hierarchies of ModemIndividualTypeElements in an AV-2.**
modemTemporalWholePart «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **modemTemporalWholePart - modemWholePart**   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **modemTemporalWholePart - temporalWholePart**   *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»**   **modemTemporalWholePart - ModemTemporalWholePartType**   *Association (source - target):* **«place2Type»**   **modemTemporalWholePart - ModemIndividualElement**   *Association (source - target):* **«place1Type»**   **modemTemporalWholePart - ModemIndividualElement**   *Attributes:*   -   **A temporalWholePart relationship between two ModemIndividualElements.**

modemWholePart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
modemWholePart - wholePart
Dependency (element - is instance of): «IDEAS:powertypeInstance»
modemWholePart - ModemWholePartType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
modemWholePart - ModemThing
Association (source - target): «place2Type»
modemWholePart - ModemIndividualElement
Association (source - target): «place1Type»
modemWholePart - ModemIndividualElement
Attributes:
-
A wholePart relationship between ModemIndividualElements.

organisationWholePart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
organisationWholePart - undertakingWholePart
Generalization (element - is a subtype of):«IDEAS:superSubtype»
organisationWholePart - responsibleHumanResourceWholePart
Association (source - target): «place2Type»
organisationWholePart - OrganisationPart
Association (source - target): «place1Type»
organisationWholePart - Organisation
Attributes:
-
A modafWholePart where the whole is an Organisation and the part is an OrganisationPart (i.e. a Post or Organisation).

physicalArchitectureOfEnterprisePhase «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
physicalArchitectureOfEnterprisePhase - modemIndividualTypeInstance
Generalization (element - is a subtype of): «IDEAS:superSubtype»
physicalArchitectureOfEnterprisePhase - exhibits
Association (source - target): «place1Type»
physicalArchitectureOfEnterprisePhase - PhysicalArchitecture
Association (source - target): «place2Type»
physicalArchitectureOfEnterprisePhase - EnterprisePhase
Attributes:
-
Relates an EnterprisePhase to a ResourceType that specifies its structure and behaviour.

projectTypeSpecialisation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
projectTypeSpecialisation - modemIndividualTypeSpecialisation
Association (source - target): «place2Type»
projectTypeSpecialisation - ProjectType
Association (source - target): «place1Type»
projectTypeSpecialisation - ProjectType

Attributes: - **A modafIndividualTypeSpecialisation that asserts one ProjectType (subtype) is a special type of another (supertype).**
purpose «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **purpose - architectureMetaData** *Association (source - target):«place2Type»* **purpose - MetaData** *Association (source - target):«place1Type»* **purpose - StructuredADElement** *Attributes:* - **An architectureMetaData that describes the purpose of a StructuredADElement.**
qualifiedMeasure «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **qualifiedMeasure - superSubtype** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **qualifiedMeasure - ModemThing** *Association (source - target):«place1Type»* **qualifiedMeasure - Measure** *Association (source - target):«place2Type»* **qualifiedMeasure - MeasureInContext** *Attributes:* - **A superSubtype that relates a MeasureInContext to the measure it qualifies.**
recommendation «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **recommendation - architectureMetaData** *Association (source - target):«place2Type»* **recommendation - MetaData** *Association (source - target):«place1Type»* **recommendation - StructuredADElement** *Attributes:* - **An architectureMetaData that expresses a recommendation arising from a StructuredADElement.**
regionOfStateMachine «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **regionOfStateMachine - ModemThing** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **regionOfStateMachine - stateMachineViewTypesRegionInstances** *Association (source - target):«place2Type»* **regionOfStateMachine - StateMachineRegion** *Association (source - target):«place1Type»* **regionOfStateMachine - StateMachine**

This document is no longer extant and has been withdrawn.

Attributes: - **A stateMachineViewTypesRegionInstances which relates a StateMachineRegion to a StateMachine.**
serviceDeliveryWholeAndPart «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **serviceDeliveryWholeAndPart - serviceDeliveryWholeState** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **serviceDeliveryWholeAndPart - ServiceDeliveryWholeAndPart** *Association (source - target): «place2Type»* **serviceDeliveryWholeAndPart - ServiceDelivery** *Attributes:* - **A ServiceDeleiveryWholeState where both the whole and part are ServiceDeliveries.**
serviceDeliveryWholeFacade «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **serviceDeliveryWholeFacade - serviceDeliveryWholePart** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **serviceDeliveryWholeFacade - ServiceDeliveryWholeFacadeType** *Association (source - target): «place2Type»* **serviceDeliveryWholeFacade - ServiceFacade** *Attributes:* - **A serviceDeliveryWholePart where the part is a ServiceFacade.**
serviceDeliveryWholePart «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **serviceDeliveryWholePart - modemWholePart** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **serviceDeliveryWholePart - ServiceDeliveryWholePartType** *Association (source - target): «place2Type»* **serviceDeliveryWholePart - ServiceDeliveryPart** *Association (source - target): «place1Type»* **serviceDeliveryWholePart - ServiceDelivery** *Attributes:* - **A modemWholePart where the whole is a ServiceDelivery and the part is a ServiceDeliveryPart.**
serviceDeliveryWholeState «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **serviceDeliveryWholeState - modemTemporalWholePart** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **serviceDeliveryWholeState - serviceDeliveryWholePart** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **serviceDeliveryWholeState - ServiceDeliveryWholeStateType** *Association (source - target): «place2Type»* **serviceDeliveryWholeState - ServiceDeliveryState**

Attributes:

-

A serviceDeliveryWholePart where the part is a temporal part and is a ServiceDeliveryState.

stateInRegion «IDEAS:TupleType»

Connectors:

Generalization (element - is a subtype of):«IDEAS:superSubtype»

stateInRegion - regionTypeInstances

Generalization (element - is a subtype of):«IDEAS:superSubtype»

stateInRegion - ModemThing

Association (source - target):«place1Type»

stateInRegion - StateMachineRegion

Association (source - target):«place2Type»

stateInRegion - StateSpecification

Attributes:

-

A regionTypeInstance that asserts a StateSpecification features in a StateMachineRegion.

stateTransitionInRegion «IDEAS:TupleType»

Connectors:

Generalization (element - is a subtype of):«IDEAS:superSubtype»

stateTransitionInRegion - regionTypeInstances

Generalization (element - is a subtype of):«IDEAS:superSubtype»

stateTransitionInRegion - ModemThing

Association (source - target):«place1Type»

stateTransitionInRegion - StateMachineRegion

Association (source - target):«place2Type»

stateTransitionInRegion - StateTransition

Attributes:

-

A regionTypeInstance that asserts a StateTransition features in a StateMachineRegion.

toolUsed «IDEAS:TupleType»

Connectors:

Generalization (element - is a subtype of):«IDEAS:superSubtype»

toolUsed - couple

Association (source - target):«place2Type»

toolUsed - SoftwareType

Association (source - target):«place1Type»

toolUsed - StructuredADElement

Attributes:

-

A couple that asserts a SoftwareType was used in the production of a StructuredADElement.

undertakingWholeAndPart «IDEAS:TupleType»

Connectors:

Generalization (element - is a subtype of): «IDEAS:superSubtype»

undertakingWholeAndPart - undertakingWholeState

Generalization (element - is a subtype of): «IDEAS:superSubtype»

undertakingWholeAndPart - processWholeAndPart

Dependency (element - is instance of): «IDEAS:powertypeInstance»

undertakingWholeAndPart - UndertakingWholeAndPartType

Association (source - target): «place2Type» **undertakingWholeAndPart - Undertaking** <u>*Attributes:*</u> **-** **An UndertakingWholeState where both the whole and part are Undertakings.**
undertakingWholePart «IDEAS:TupleType» <u>*Connectors:*</u> *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **undertakingWholePart - modemWholePart** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **undertakingWholePart - processWholePart** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **undertakingWholePart - UndertakingWholePartType** *Association (source - target): «place2Type»* **undertakingWholePart - UndertakingPart** *Association (source - target): «place1Type»* **undertakingWholePart - Undertaking** <u>*Attributes:*</u> **-** **A modemWholePart where an UndertakingPart is part of an Undertaking.**
undertakingWholeState «IDEAS:TupleType» <u>*Connectors:*</u> *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **undertakingWholeState - undertakingWholePart** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **undertakingWholeState - modemTemporalWholePart** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **undertakingWholeState - processWholeState** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **undertakingWholeState - UndertakingWholeStateType** *Association (source - target): «place2Type»* **undertakingWholeState - UndertakingState** <u>*Attributes:*</u> **-** **An undertakingWholePart where the part is a temporal part of an Undertaking.**
viewCode «IDEAS:TupleType» <u>*Connectors:*</u> *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **viewCode - metaDataAnnotation** *Association (source - target):«place2Type»* **viewCode - MetaData** *Association (source - target):«place1Type»* **viewCode - ArchitectureViewpoint** <u>*Attributes:*</u> **-** **A metaDataAnnotation that uses MetaData to represent the short code that identifies an ArchitectureViewpoint. Note that viewCode and viewDescription from M3 are handled using the core IDEAS description and naming patterns.**

This document is no longer extant and has been withdrawn.

webReference «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
webReference - metaDataAnnotation
Association (source - target):«place1Type»
webReference - ModemThing
Association (source - target):«place2Type»
webReference - URI
Attributes:
-
A metaDataAnnotation that asserts URI contains information about a ModemThing.

All Views Foundation

ModemIndividualElement «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ModemIndividualElement - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ModemIndividualElement - ModemIndividualElementOrModemIndividualType
Dependency (element - is instance of): «IDEAS:powertypeInstance»
ModemIndividualElement - ModafIndividualElementType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ModemIndividualElement - Individual
Attributes:
-
An Individual that can feature in a MODEM architecture.

ModafIndividualElementType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ModafIndividualElementType - IndividualType
Attributes:
-
The powertype of ModafIndividualElement. Note - this is simply used to specify the set-theretic logic at the top of MODA. It should never be used in an architecture.

ModemThing «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ModemThing - Thing
Attributes:
-
Any Thing that can feature in a MODEM Architecture. Note: things that appear in the MODEM metamodel will not necessarily be instances, unless they appear in an architecture.

All Views ISO42010
ADElement «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   ADElement - Representation   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   ADElement - ISO42010_Thing   *Attributes:*   -   **From ISO42010:**   An AD element is any construct in an architecture description. AD elements are the most primitive constructs discussed in this International Standard. Every stakeholder, concern, architecture viewpoint, architecture view, model kind, architecture model, architecture decision and rationale (see 4.2.7) is considered an AD element. When viewpoints and model kinds are defined and their models are populated, additional AD elements are introduced.
Architecture «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   Architecture - ISO42010_Thing   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   Architecture - IndividualType   *Attributes:*   -   Fundamental concepts or properties of a system in its environment embodied in its elements, relationships, and in the principles of its design and evolution.
ArchitectureDescription «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   ArchitectureDescription - StructuredADElement   *Dependency (element - is instance of):* «IDEAS:powertypeInstance»   ArchitectureDescription - ArchitectureDescriptionType   *Attributes:*   -   A work product used to express an architecture.
ArchitectureDescriptionType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   ArchitectureDescriptionType - ISO42010_Thing   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   ArchitectureDescriptionType - RepresentationType   *Attributes:*   -   The powertype of ArchitectureDescription.
ArchitectureFramework «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   ArchitectureFramework - ArchitectureDescriptionType   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   ArchitectureFramework - RepresentationScheme   *Attributes:*   -

This document is no longer extant and has been withdrawn.

From ISO42010: **Uses of architecture frameworks include, but are not limited to: creating architecture descriptions; developing architecture modelling tools and architecting methods; and establishing processes to facilitate communication, commitments and interoperation across multiple projects and/or organizations.** **NOTE 1 Architecture frameworks frequently encompass both provisions for architecture description and additional architecting practices.** **EXAMPLES The following are architecture frameworks in the terms of this International Standard: Zachman's information systems architecture framework [44], UK Ministry of Defence Architecture ramework [27], The Open Group's Architecture Framework (TOGAF) [41], Kruchten's "4+1" view model [23], Siemens' 4 views method [10], Reference Model for Open Distributed Processing (RM-ODP), [ISO/IEC 10746] and Generalized Enterprise Reference Architecture (GERA) [ISO 15704].**
ArchitectureModel «IDEAS:Type» _**Connectors:**_ _**Dependency (element - is instance of):**_ **«IDEAS:powertypeInstance»** **ArchitectureModel - ArchitectureModelType** _**Generalization (element - is a subtype of):**_ **«IDEAS:superSubtype»** **ArchitectureModel - StructuredRepresentation** _**Generalization (element - is a subtype of):**_ **«IDEAS:superSubtype»** **ArchitectureModel - StructuredADElement** _**Attributes:**_ **-** **There is no no specific definition provided in ISO42010.**
ArchitectureModelType «IDEAS:Powertype» _**Connectors:**_ _**Generalization (element - is a subtype of):**_**«IDEAS:superSubtype»** **ArchitectureModelType - ISO42010_Thing** _**Generalization (element - is a subtype of):**_ **«IDEAS:superSubtype»** **ArchitectureModelType - RepresentationType** _**Attributes:**_ **-** **The powertype of ArchitectureModel.**
ArchitectureView «IDEAS:Type» _**Connectors:**_ _**Dependency (element - is instance of):**_ **«IDEAS:powertypeInstance»** **ArchitectureView - ArchitectureViewType** _**Generalization (element - is a subtype of):**_ **«IDEAS:superSubtype»** **ArchitectureView - StructuredADElement** _**Attributes:**_ **-** **work product expressing the architecture of a system from the perspective of specific system concerns**
ArchitectureViewType «IDEAS:Powertype» _**Connectors:**_ _**Generalization (element - is a subtype of):**_ **«IDEAS:superSubtype»** **ArchitectureModelType - RepresentationType** _**Generalization (element - is a subtype of):**_**«IDEAS:superSubtype»** **ArchitectureViewType - ISO42010_Thing** _**Attributes:**_ **-** **The powertype of ArchitectureView.**

ArchitectureViewpoint «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ArchitectureViewpoint - ArchitectureViewType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ArchitectureViewpoint - ISO42010_Thing
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ArchitectureViewpoint - RepresentationScheme
Attributes:
-
Work product establishing the conventions for the construction, interpretation and use of architecture views to frame specific system concerns

Concern «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Concern - ISO42010_Thing
Attributes:
-
From ISO42010:
A concern could be held by one or more stakeholders. Concerns arise throughout the life cycle from system needs and requirements, from design choices and from implementation and operating considerations. A concern could be manifest in many forms, such as in relation to one or more stakeholder needs, goals, expectations, responsibilities, requirements, design constraints, assumptions, dependencies, quality attributes, architecture decisions, risks or other issues pertaining to the system.
EXAMPLES The following are concerns in the terms of this International Standard: functionality, feasibility, usage, system purposes, system features, system properties, known limitations, structure, behavior, performance, resource utilization, reliability, security, information assurance, complexity, evolvability, openness, concurrency, autonomy, cost, schedule, quality of service, flexibility, agility, modifiability, modularity, control, inter-process communication, deadlock, state change, subsystem integration, data accessibility, privacy, compliance to regulation, assurance, business goals and strategies, customer experience, maintainability, affordability and disposability. The distribution transparencies described in the Reference Model of Open Distributed Processing [ISO/IEC 10746-1] are concerns in the terms of this International Standard. Software properties as described in SQUARE [ISO/IEC 25010:2011, 4.2] name concerns in the terms of this International Standard.

CorrespondenceRule «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
CorrespondenceRule - ISO42010_Thing
Dependency (element - is instance of): «IDEAS:typeInstance»
CorrespondenceRule - PlaceableType
Attributes:
-
From ISO42010:
Correspondence rules are used to enforce relations within an architecture description (or between architecture descriptions).

ISO42010_Environment «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ISO42010_Environment - ISO42010_Thing
Attributes:
--
Context determining the setting and circumstances of all influences upon a system

ISO42010_System «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ISO42010_System - ISO42010_Thing
Attributes:

This document is no longer extant and has been withdrawn.

-
The term system is used in this International Standard to refer to entities whose architectures are of interest. The term is intended to encompass, but is not limited to, entities within the following domains:
- systems as described in [ISO/IEC 15288]: "systems that are man-made and may be configured with one or more of the following: hardware, software, data, humans, processes (e.g., processes for providing service to users), procedures (e.g. operator instructions), facilities, materials and naturally occurring entities";
- software products and services as described in [ISO/IEC 12207];
- software-intensive systems as described in [IEEE Std 1471TM:2000]: "any system where software contributes essential influences to the design, construction, deployment, and evolution of the system as a whole" to encompass "individual applications, systems in the traditional sense, subsystems, systems of systems, product lines, product families, whole enterprises, and other aggregations of interest".
This International Standard takes no position on what constitutes a system within those domains—or elsewhere. The nature of systems is not defined by this International Standard.

ISO42010_Thing «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ISO42010_Thing - Thing
Attributes:
-
A Thing that is described by the standard ISO 421010.

ModelKind «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ModelKind - ArchitectureModelType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ModelKind - RepresentationScheme
Attributes:
-
Conventions for a type of modelling.
NOTE Examples of model kinds include: data flow diagrams, class diagrams, Petri nets, balance sheets, organization charts and state transition models.

ModelKindPartOfViewpoint «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ModelKindPartOfViewpoint - ModelPartOfViewType
Association (source - target): «place1Type»
ModelKindPartOfViewpoint - ArchitectureViewpoint
Association (source - target): «place2Type»
ModelKindPartOfViewpoint - ModelKind
Attributes:
-
A ModelPartOfViewType where a ModelKind is a typical part of an ArchitectureViewpoint.

ModelPartOfView «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ModelPartOfView - ISO42010_Thing
Dependency (element - is instance of): «IDEAS:powertypeInstance»
ModelPartOfView - ModelPartOfViewType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ModelPartOfView - WholePartType
Association (source - target): «place2Type»
ModelPartOfView - ArchitectureModel
Association (source - target): «place1Type»
ModelPartOfView - ArchitectureView

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Attributes: -   **A WholePartType where an ArchitectureModel is part of an ArchitectureView.**
ModelPartOfViewType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **ModelPartOfViewType - WholePartTypeType**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ModelPartOfViewType - ISO42010_Thing**   *Attributes:*   -   **The powertype of ModelPartOfView**
Stakeholder «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **Stakeholder - AgentCapableOfResponsibilityOrAgentCapableOfResponsibilityType**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **Stakeholder - ISO42010_Thing**   *Attributes:*   -   **An individual, team, organization, or classes thereof, having an interest in a system.**
StructuredADElement «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **StructuredADElement - ADElement**   *Attributes:*   -   **An ADElement that has other ADElements as part of it. Note: this is not in ISO42010, but is required if the model is to be useful.**
ViewPartOfDescription «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ViewPartOfDescription - ISO42010_Thing**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **ViewPartOfDescription - WholePartType**   *Dependency (element - is instance of): «IDEAS:powertypeInstance»*   **ViewPartOfDescription - ViewPartOfDescriptionType**   *Association (source - target): «place2Type»*   **ViewPartOfDescription - ArchitectureView**   *Association (source - target): «place1Type»*   **ViewPartOfDescription - ArchitectureDescription**   *Attributes:*   -   **A WholePartType where an ArchitectureView is part of an ArchitectureDescription.**
ViewPartOfDescriptionType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ViewPartOfDescriptionType - ISO42010_Thing**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*

ViewPartOfDescriptionType - WholePartTypeType   _**Attributes:**_   **-**   **The powertype of ViewPartOfDescription.**
ViewpointPartOfFramework «IDEAS:Type»   _**Connectors:**_   _**Generalization (element - is a subtype of): «IDEAS:superSubtype»**_   **ViewpointPartOfFramework - ViewPartOfDescriptionType**   _**Generalization (element - is a subtype of): «IDEAS:superSubtype»**_   **ViewpointPartOfFramework - WholePartTypeType**   _**Association (source - target): «place1Type»**_   **ViewpointPartOfFramework - ArchitectureFramework**   _**Association (source - target): «place2Type»**_   **ViewpointPartOfFramework - ArchitectureViewpoint**   _**Attributes:**_   **-**   **A WholePartTypeType that asserts an ArchitectureViewpoint is part of an ArchitectureFramework.**
correspondence «IDEAS:Type»   _**Connectors:**_   _**Association (source - target): «place1Type»**_   **correspondence - ADElement**   _**Dependency (element - is instance of): «IDEAS:typeInstance»**_   **correspondence - PlaceableType**   _**Generalization (element - is a subtype of): «IDEAS:superSubtype»**_   **correspondence - ISO42010_Thing**   _**Association (source - target): «place2Type»**_   **correspondence - ADElement**   _**Attributes:**_   **-**   **From ISO42010:**   **A correspondence defines a relation between AD elements. Correspondences are used to express architecture relations of interest within an architecture description (or between architecture descriptions). Correspondences can be governed by correspondence rules. Correspondence rules are used to enforce relations within an architecture description (or between architecture descriptions).**
exhibits «IDEAS:TupleType»   _**Connectors:**_   _**Generalization (element - is a subtype of):«IDEAS:superSubtype»**_   **exhibits - ISO42010_Thing**   _**Generalization (element - is a subtype of): «IDEAS:superSubtype»**_   **exhibits - couple**   _**Association (source - target): «place2Type»**_   **exhibits - ISO42010_System**   _**Association (source - target): «place1Type»**_   **exhibits - Architecture**   _**Attributes:**_   **-**   **A couple that asserts an ISO42010_System has an Architecture.**

expresses «IDEAS:TupleType»
Connectors:
Association (source - target): «place1Type»
expresses - Architecture
Association (source - target): «place2Type»
expresses - ArchitectureDescription
Generalization (element - is a subtype of):«IDEAS:superSubtype»
expresses - ISO42010_Thing
Generalization (element - is a subtype of): «IDEAS:superSubtype»
expresses - representedBy
Attributes:
-
A representedBy that asserts and an ArchitectureDescription represents an Architecture.

frameworkGovernsDescription «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
frameworkGovernsDescription - ISO42010_Thing
Generalization (element - is a subtype of): «IDEAS:superSubtype»
frameworkGovernsDescription - typeInstance
Association (source - target): «place2Type»
frameworkGovernsDescription - ArchitectureDescription
Association (source - target): «place1Type»
frameworkGovernsDescription - ArchitectureFramework
Attributes:
-
A typeInstance relating an ArchitectureDescription to the ArchitectureFramework it conforms to.

modelKindGovernsModel «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
modelKindGovernsModel - ISO42010_Thing
Generalization (element - is a subtype of): «IDEAS:superSubtype»
modelKindGovernsModel - typeInstance
Association (source - target): «place2Type»
modelKindGovernsModel - ArchitectureModel
Association (source - target): «place1Type»
modelKindGovernsModel - ModelKind
Attributes:
-
A typeInstance where an ArchitecturalModel conforms to a ModelKind.

ruleGovernsCorrespondence «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ruleGovernsCorrespondence - ISO42010_Thing
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ruleGovernsCorrespondence - typeInstance
Association (source - target): «place2Type»
ruleGovernsCorrespondence - correspondence
Association (source - target): «place1Type»
ruleGovernsCorrespondence - CorrespondenceRule

This document is no longer extant and has been withdrawn.

Attributes: - **A typeInstance relating a correspondence to the CorrespondenceRule that governs it.**
situatedIn «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **situatedIn - ISO42010_Thing** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **situatedIn - couple** *Association (source - target):«place1Type»* **situatedIn - ISO42010_Environment** *Association (source - target):«place2Type»* **situatedIn - ISO42010_System** *Attributes:* - **A couple that relates an ISO42010_Environment toa ISO42010_system. Note: This is probably a subtype of the union of wholePart and WholePartType.**
stakeholderConcern «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **stakeholderConcern - couple** *Association (source - target): «place2Type»* **stakeholderConcern - Concern** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **stakeholderConcern - ISO42010_Thing** *Association (source - target): «place1Type»* **stakeholderConcern - Stakeholder** *Attributes:* - **A couple that relates a Concern to a stakeholder that have the Concern. Note: a concern may be held by more than one Stakeholder, hence there maybe multiple stakeholderConcerns.**
systemConcern «IDEAS:TupleType» *Connectors:* *Association (source - target): «place1Type»* **systemConcern - Concern** *Association (source - target): «place2Type»* **systemConcern - ISO42010_System** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **systemConcern - ISO42010_Thing** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **systemConcern - couple** *Attributes:* - **A couple that relates an ISO42010_System to a Concern that is held against the system. NOTE A concern pertains to any influence on a system in its environment including: developmental, technological, business, operational, organizational, political, economic, legal, regulatory, ecological and social influences.**

viewpointGovernsView «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
viewpointGovernsView - ISO42010_Thing
Generalization (element - is a subtype of): «IDEAS:superSubtype»
viewpointGovernsView - typeInstance
Association (source - target): «place2Type»
viewpointGovernsView - ArchitectureView
Association (source - target): «place1Type»
viewpointGovernsView - ArchitectureViewpoint
Attributes:
-
A typeInstance where an ArchitectureView conforms to an ArchitectureViewpoint.

All Views Representation

ElementInModel «IDEAS:Type»
Connectors:
Association (source - target): «place1Type»
ElementInModel - ArchitectureModel
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ElementInModel - RepresentationInStructure
Association (source - target): «place2Type»
ElementInModel - ModelElement
Attributes:
-
A WholePartType relating a RepresentationElement to the ArchitecuralModel it is shown in.

ModelElement «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ModelElement - ADElement
Attributes:
-
A graphical element in an ArchitectureModel.

ModemIndividualElementOrModemIndividualType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ModemIndividualElementOrModemIndividualType - ModemThing
Attributes:
-
A ModemThing that collects all ModemIndividualElements and all ModemIndividualType elements.

SvgCanvas «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SvgCanvas - ArchitectureModel
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SvgCanvas - SvgRepresentation
Attributes:
-

An ArchitectureModel which uses the Scalable Vector Graphics (1.1) standard to encode the model canvas. The exemplar attribute is used to store the XML SVG code that defines the canvas - e.g.
<svg:svg width="4cm" height="8cm" version="1.1">.
  </svg:svg>

SvgElement «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SvgElement - SvgRepresentation
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SvgElement - ModelElement
Attributes:
-
A ModelElement that is encoded using the Scaleable Vector Graphics (1.1) standard. An SvgElement can be any graphical element that is allowed by SVG v1.1 - e.g.
The 'rect' element
The 'circle' element
The 'ellipse' element
The 'line' element
The 'polyline' element
The 'polygon' element
If the element is a group of other elements, then the SvgElementGroup should be used.

SvgElementGroup «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SvgElementGroup - SvgElement
Attributes:
-
An SvgElement that groups together other SvgElements. This corresponds to the <g> element in the Scaleable Vector Graphics Standard (v1.1).

SvgElementInGroup «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SvgElementInGroup - RepresentationInStructure
Association (source - target): «place2Type»
SvgElementInGroup - SvgElement
Association (source - target): «place1Type»
SvgElementInGroup - SvgElementGroup
Attributes:
-
A RepresentationStructure.

SvgElementOnCanvas «IDEAS:Type»
Connectors:
Association (source - target): «place1Type»
SvgElementOnCanvas - SvgCanvas
Association (source - target): «place2Type»
SvgElementOnCanvas - SvgElement
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SvgElementOnCanvas -ElementInModel
Attributes:
-
An ElementInModel relating an SvgElement to the SvgCanvas on which it is displayed.

This document is no longer extant and has been withdrawn.

SvgRepresentation «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SvgRepresentation - Representation
Attributes:
exemplar
A Representation where the exemplar text for the representation is and encoding in SVG XML that represents a graphical symbol.

representedModemThing «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
representedModemThing - ModemIndividualElementOrModemIndividualType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
representedModemThing - representedBy
Association (source - target): «place2Type»
representedModemThing - ModelElement
Attributes:
-
A representedBy relating a ModemIndividualElementOrModemIndividualType to the ModelRepresentation that depicts it.

2.2.4   All Views additional diagrams
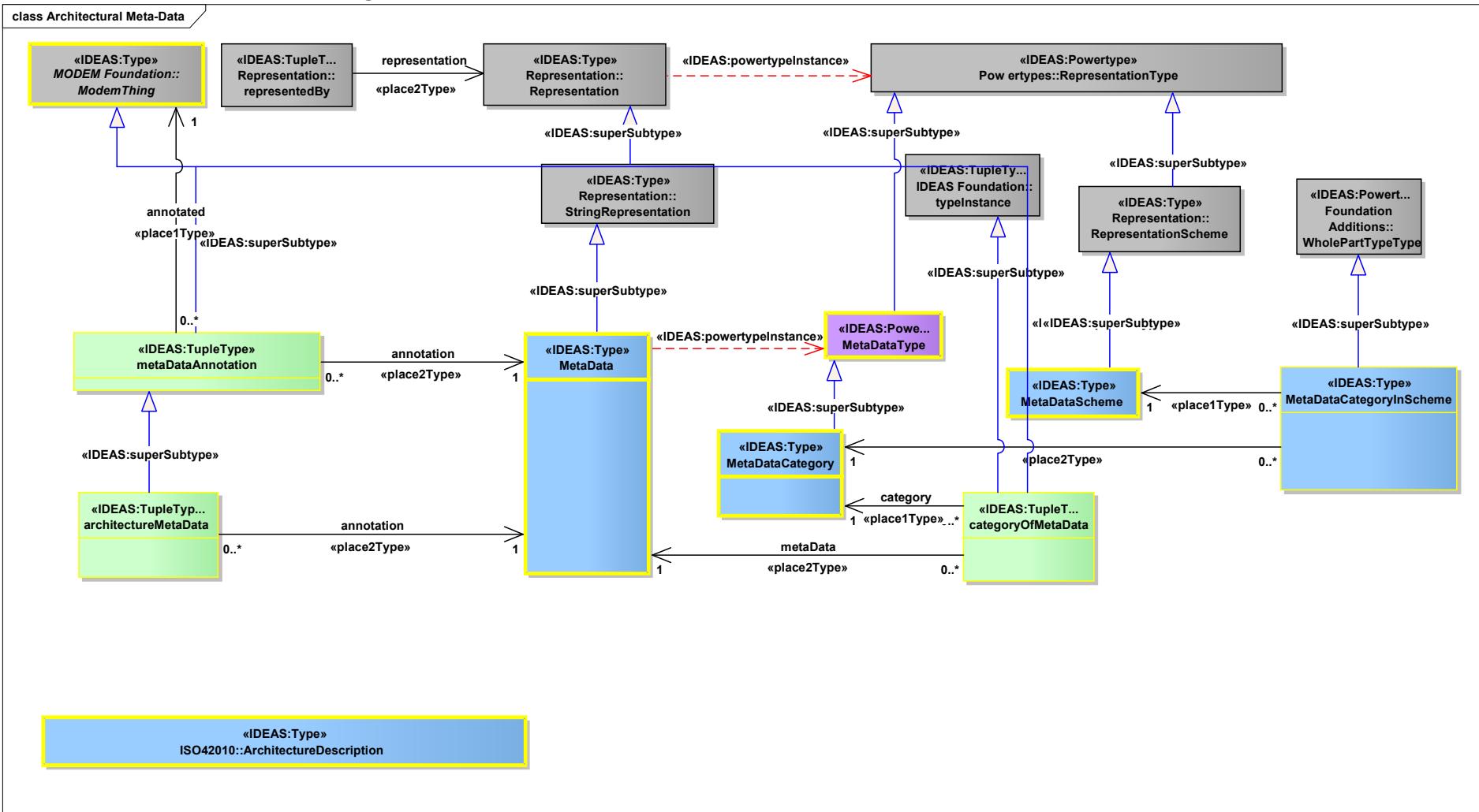
Figure 7 : Architectural Meta-Data
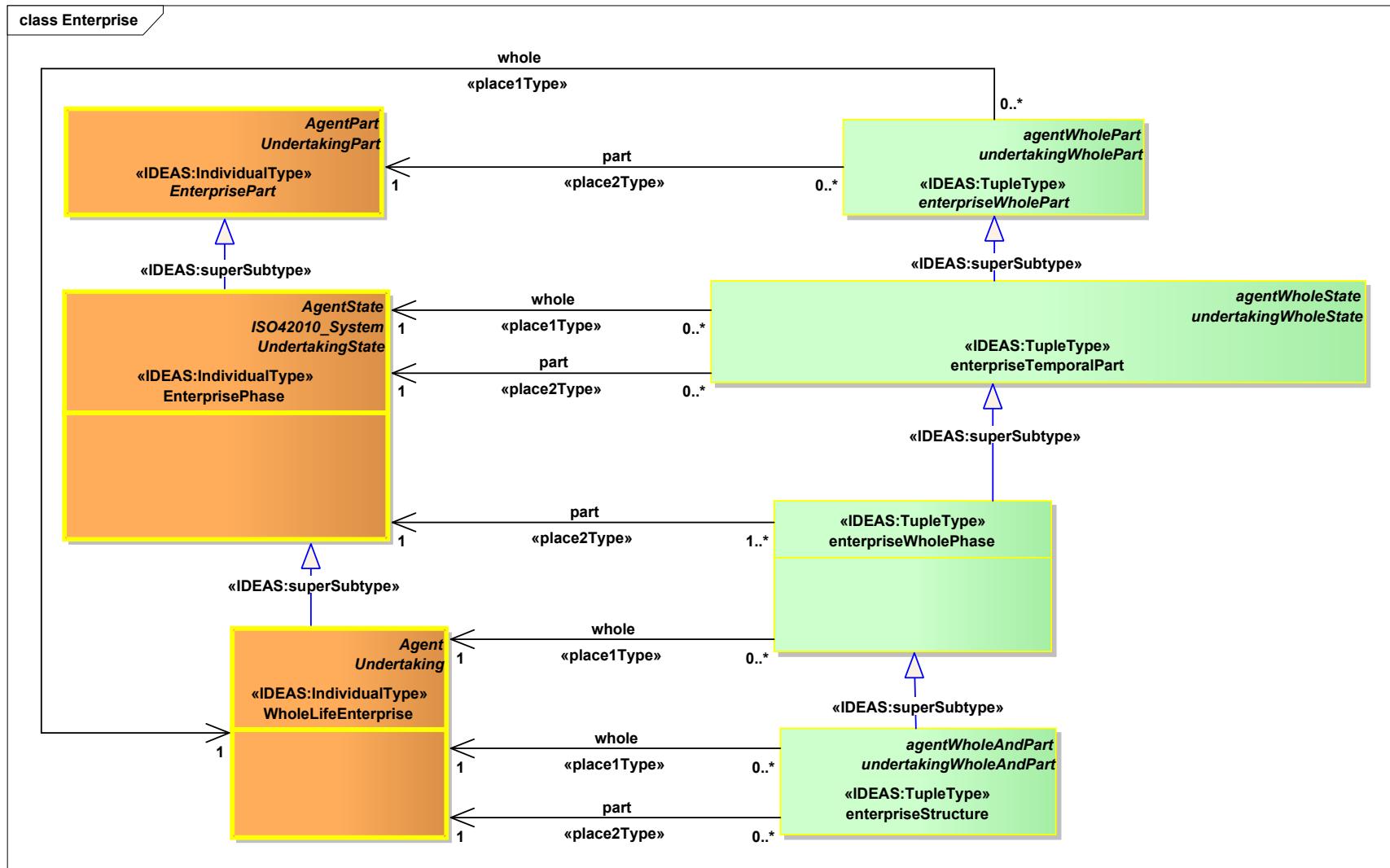
Figure 8 : Enterprise
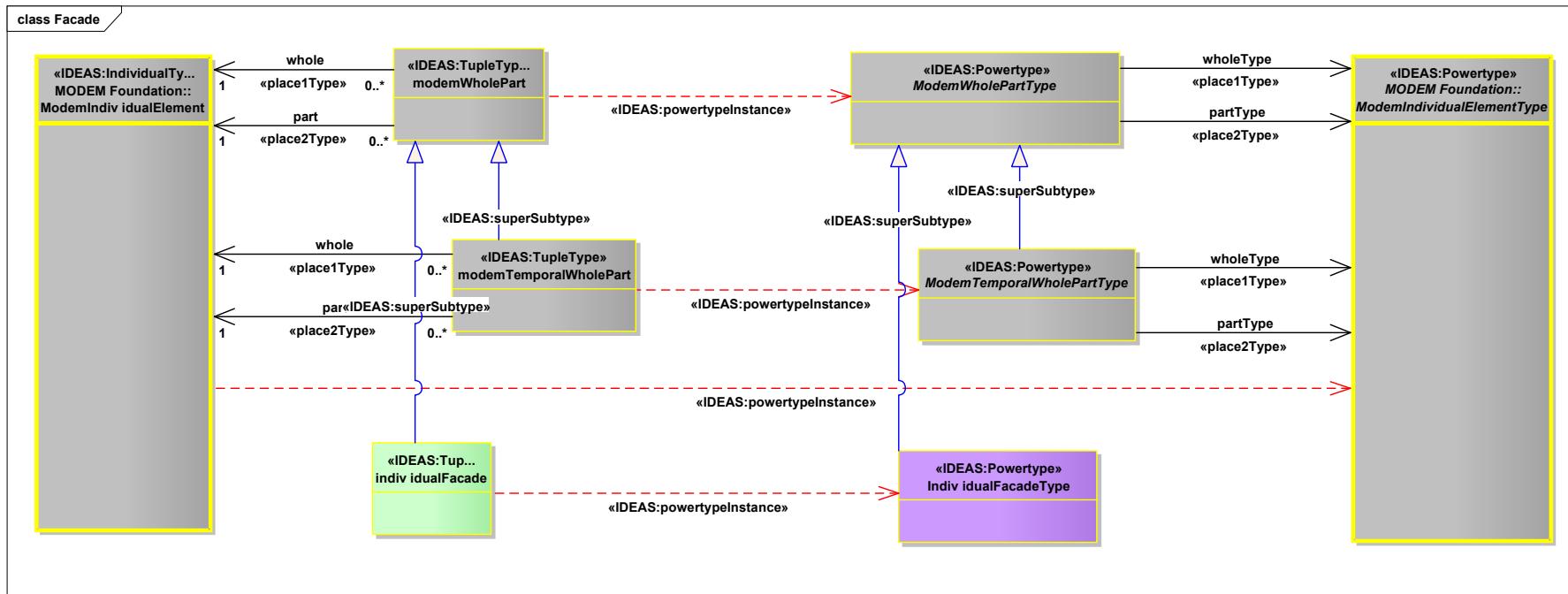
Figure 9 : Facade

This document is no longer extant and has been withdrawn.
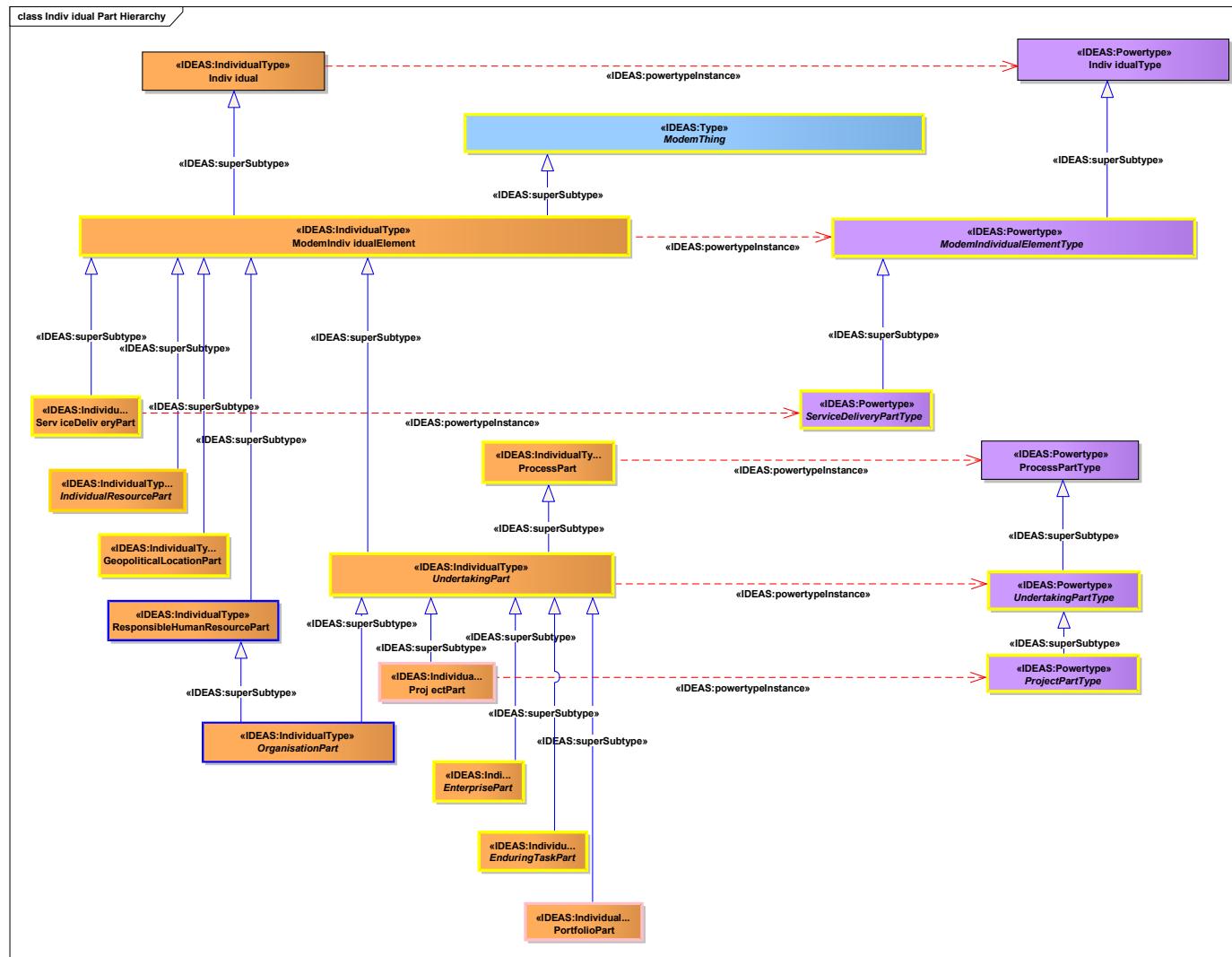
Figure 10 : Individual Part Hierarchy
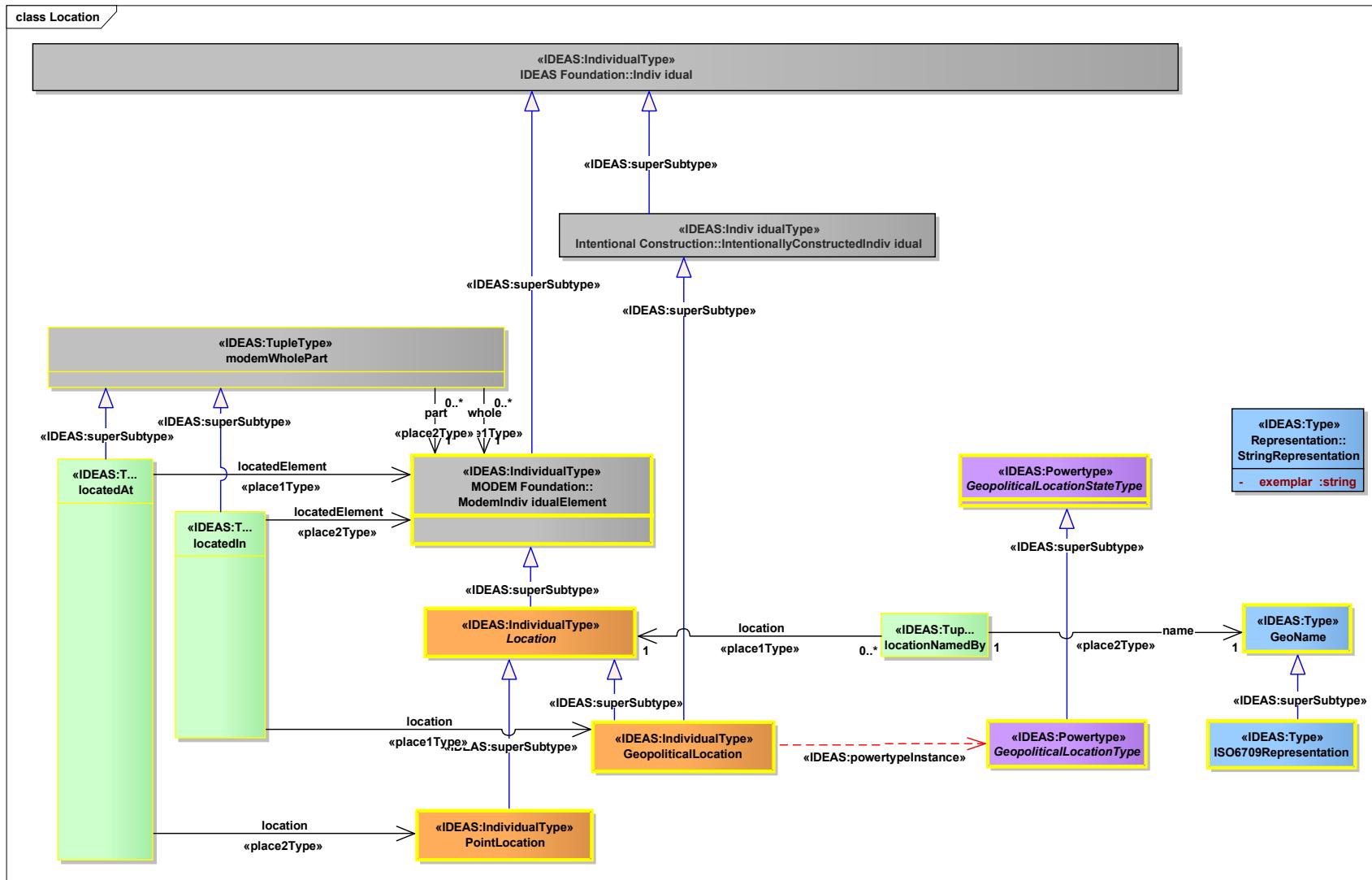
Figure 11 : Location
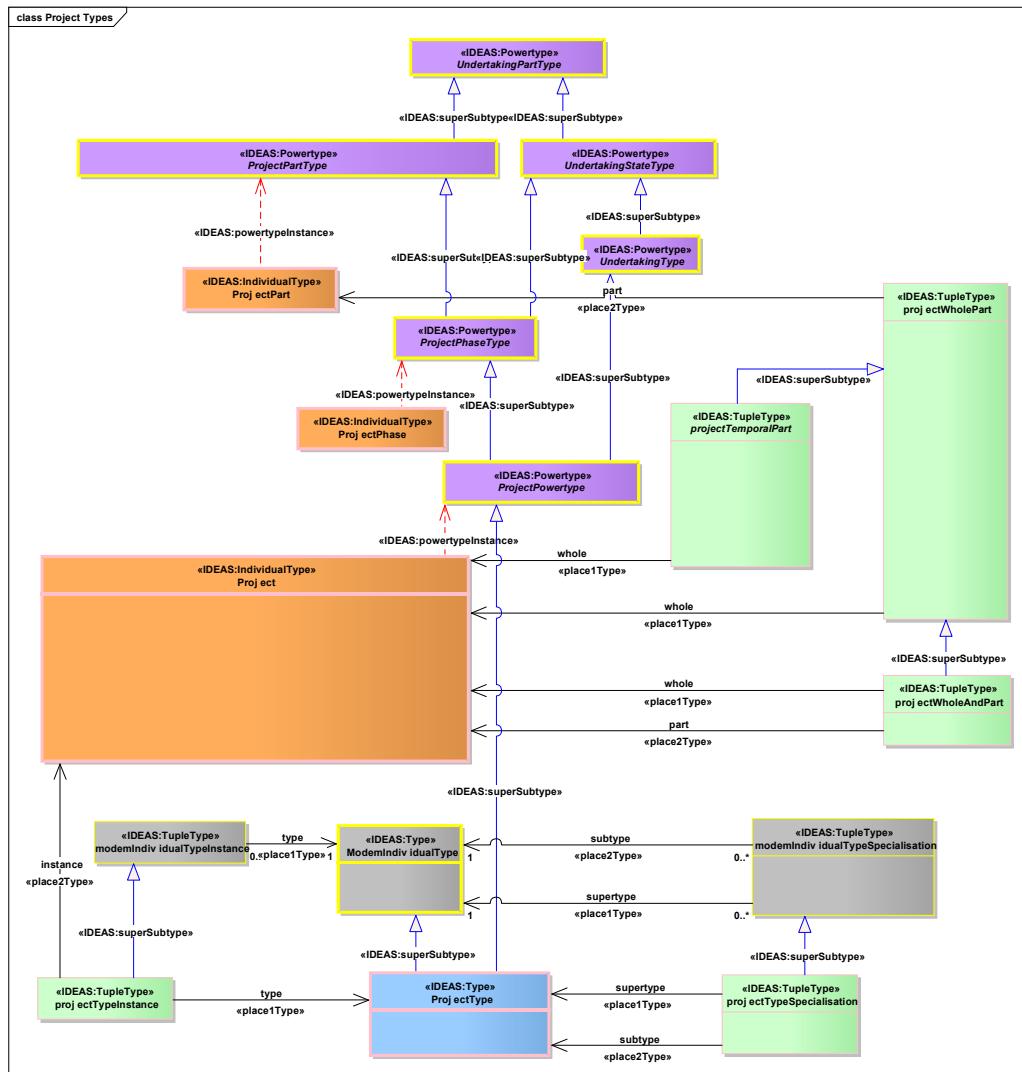
Figure 12 : Project Types
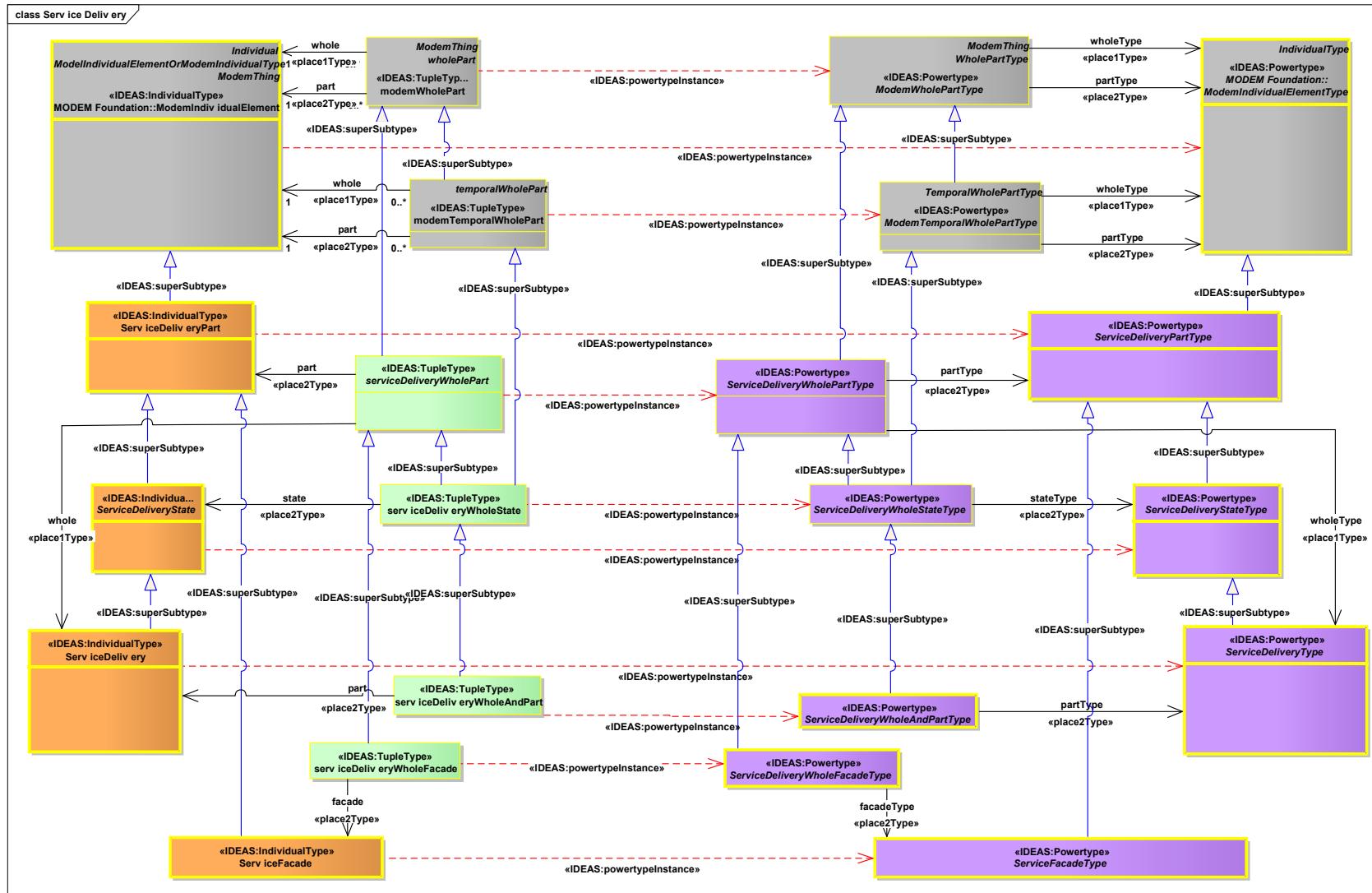
Figure 13 : Service Delivery
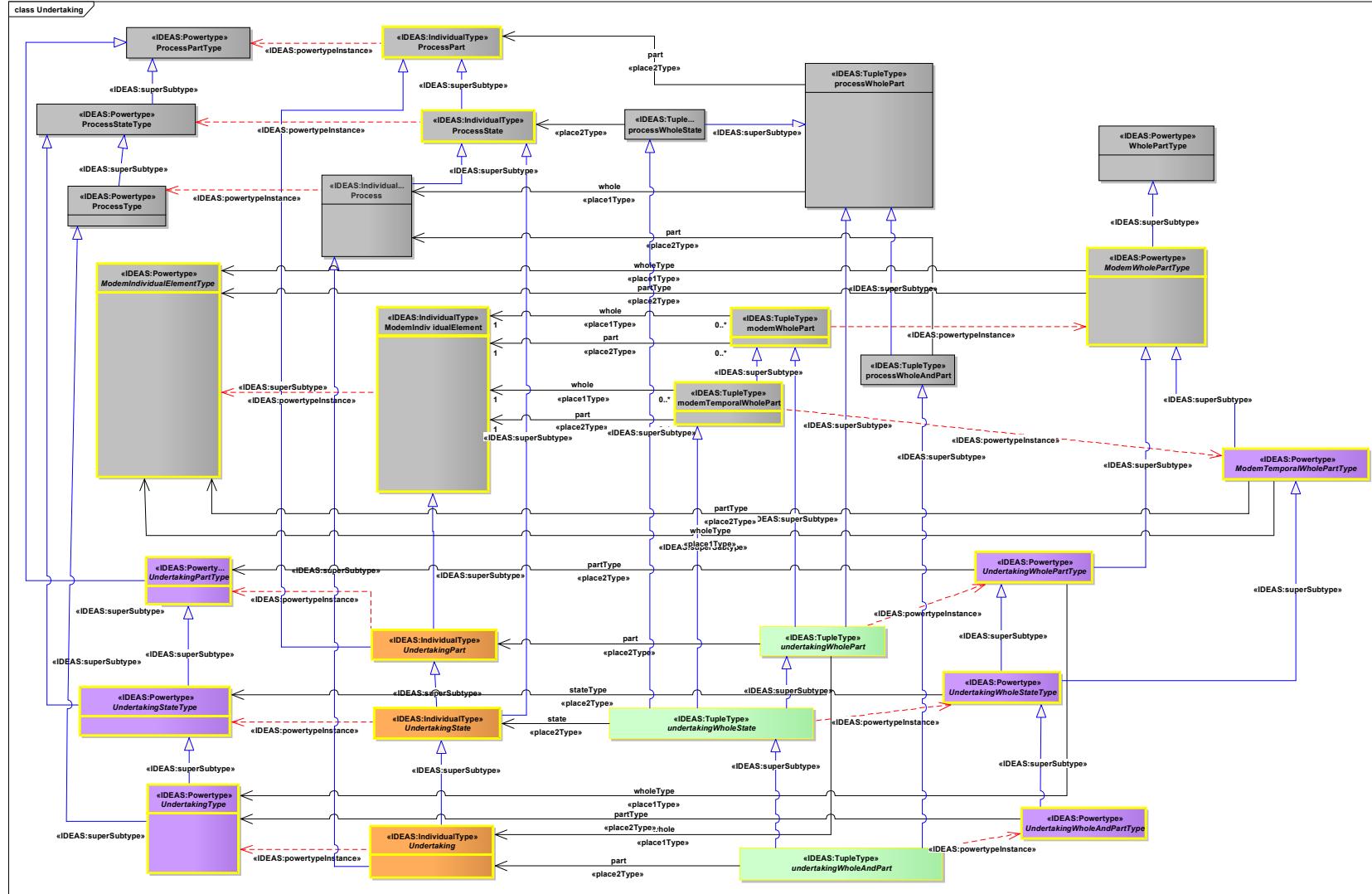
Figure 14 : Undertaking
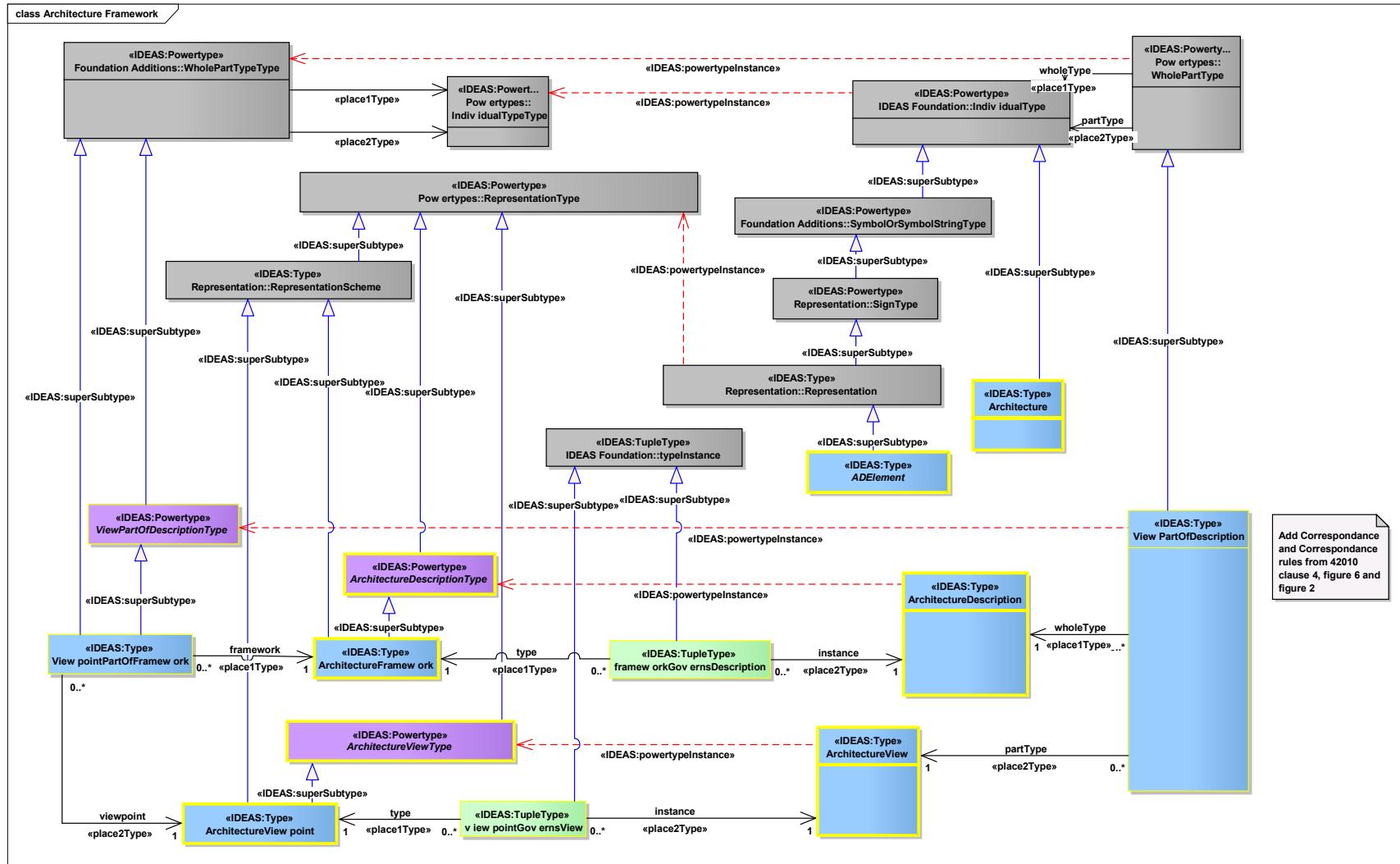
Figure 15 : Architecture Framework
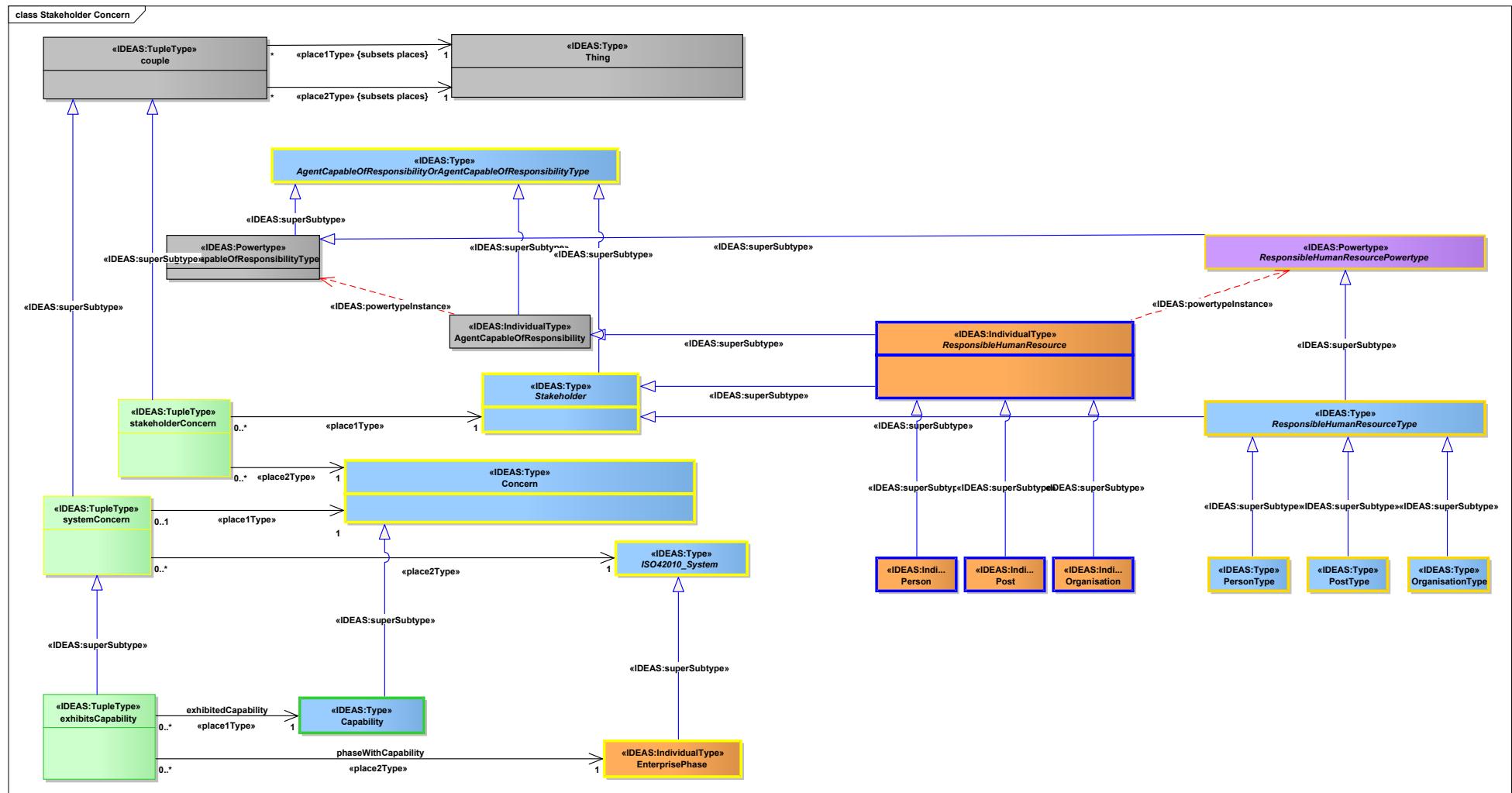
Figure 16 : Stakeholder Concern
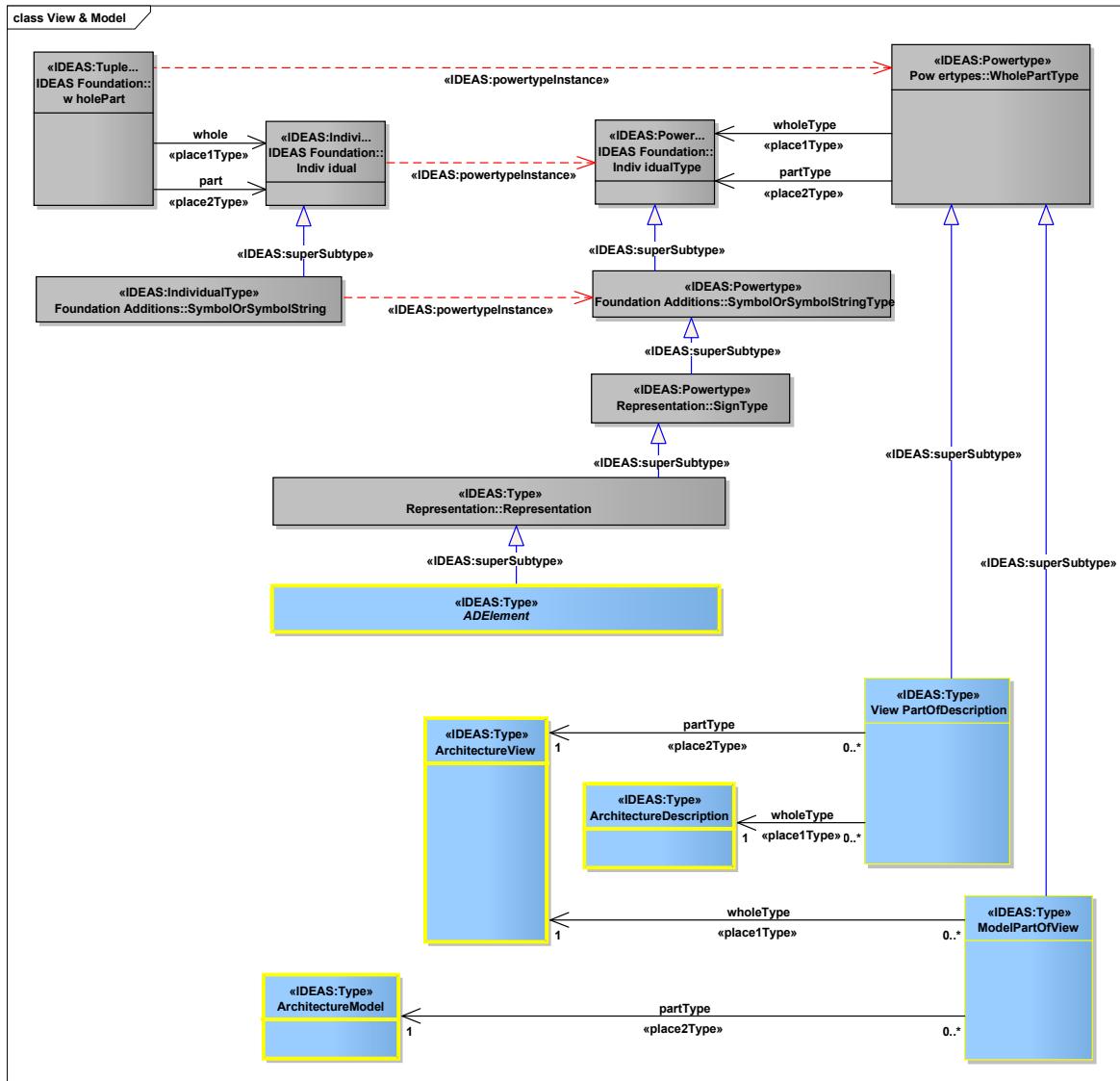
Figure 17 : View and model
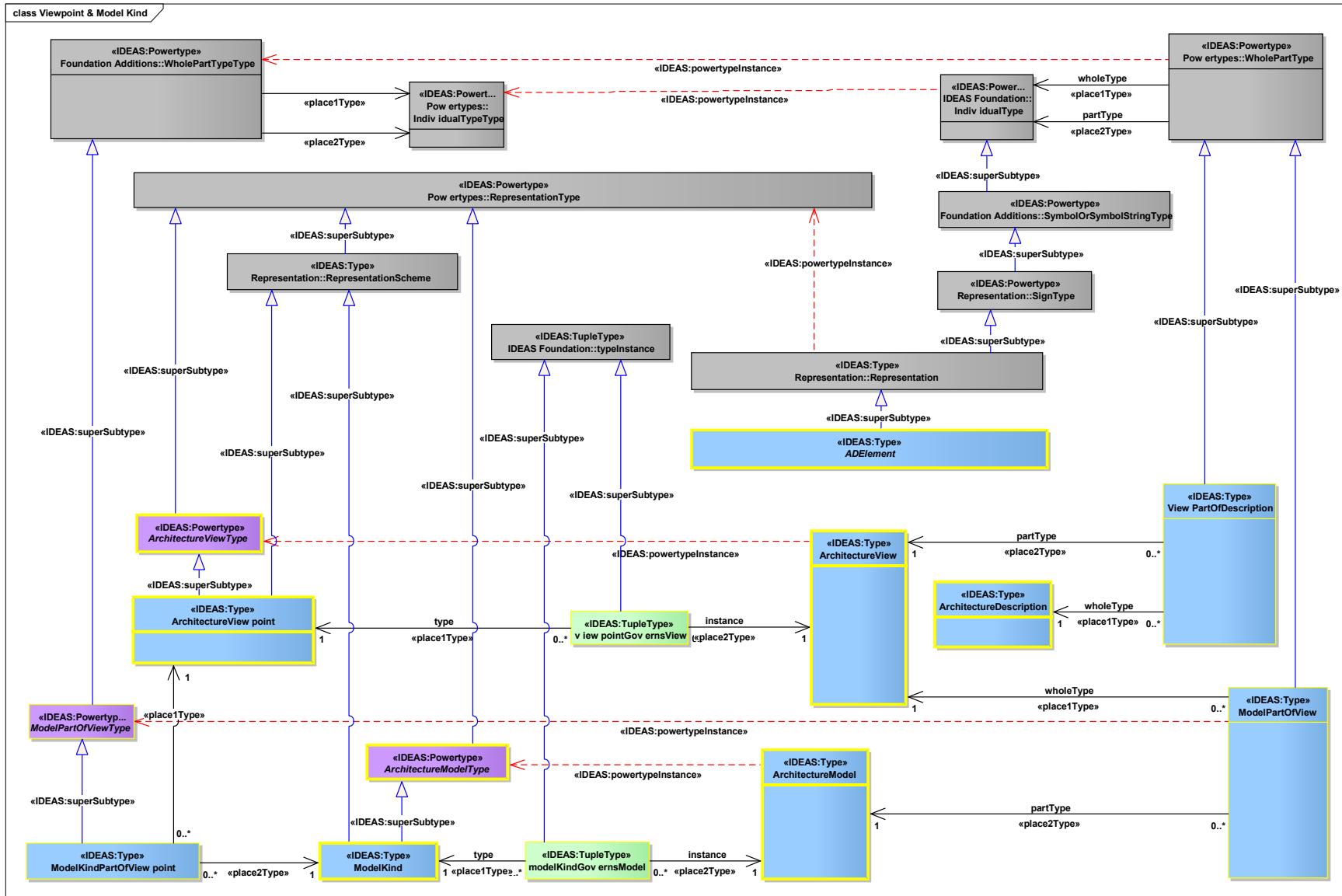
Figure 18 : Viewpoint & Model kind

This document is no longer extant and has been withdrawn.

class MODEM Thing

«IDEAS:Type»
IDEAS Foundation::Thing

«IDEAS:superSubtype»

«IDEAS:Type»
ModemThing

«IDEAS:superSubtype»

«IDEAS:superSubtype»

«IDEAS:IndividualType»
ModemIndiv idualElement

«IDEAS:powertypeInstance»

«IDEAS:Powertype»
ModemIndividualElementType

«IDEAS:superSubtype»

«IDEAS:Type»
All Views::ModemIndiv idualType
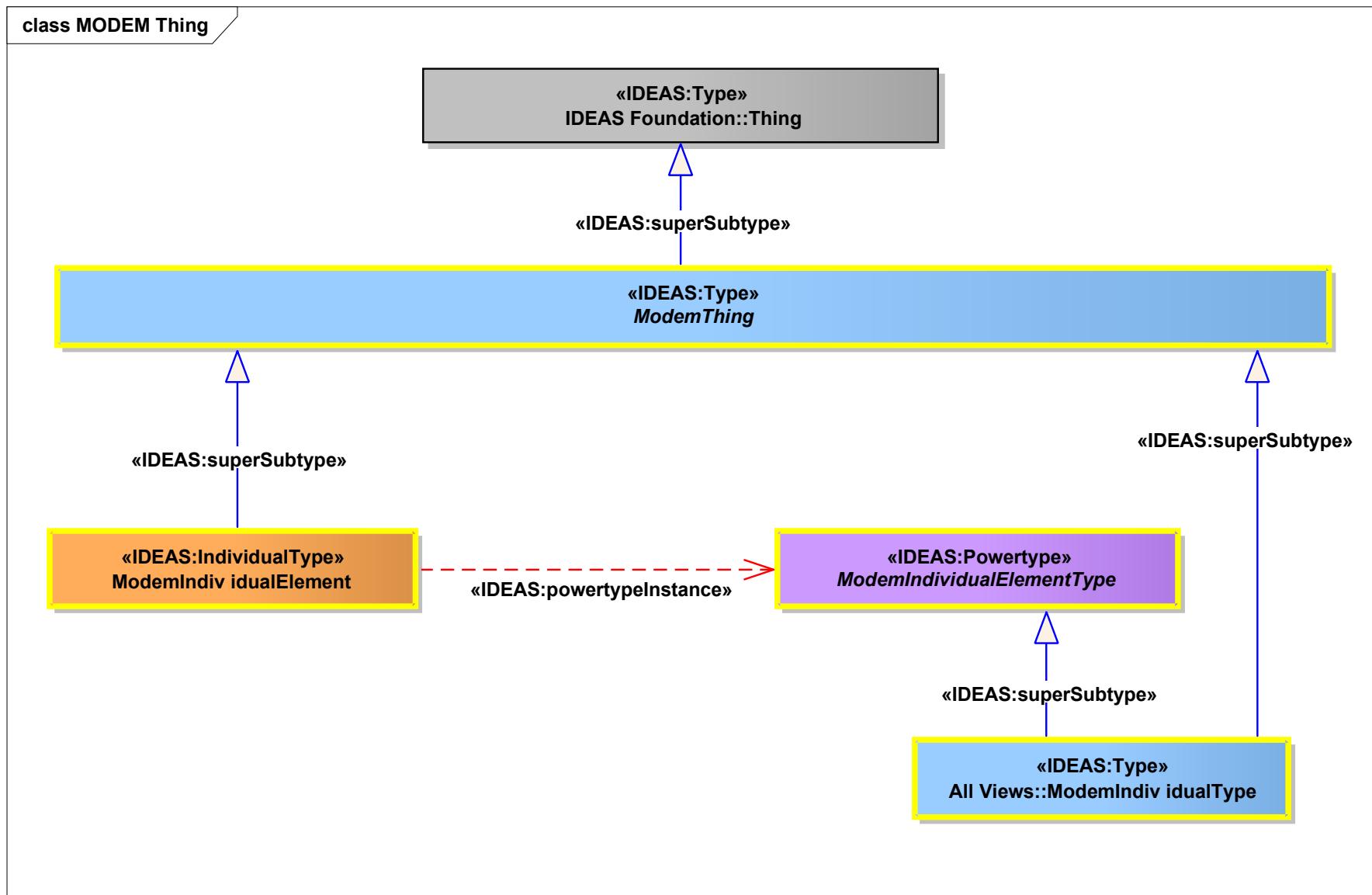
Figure 19 : Modem Thing

This document is no longer extant and has been withdrawn.
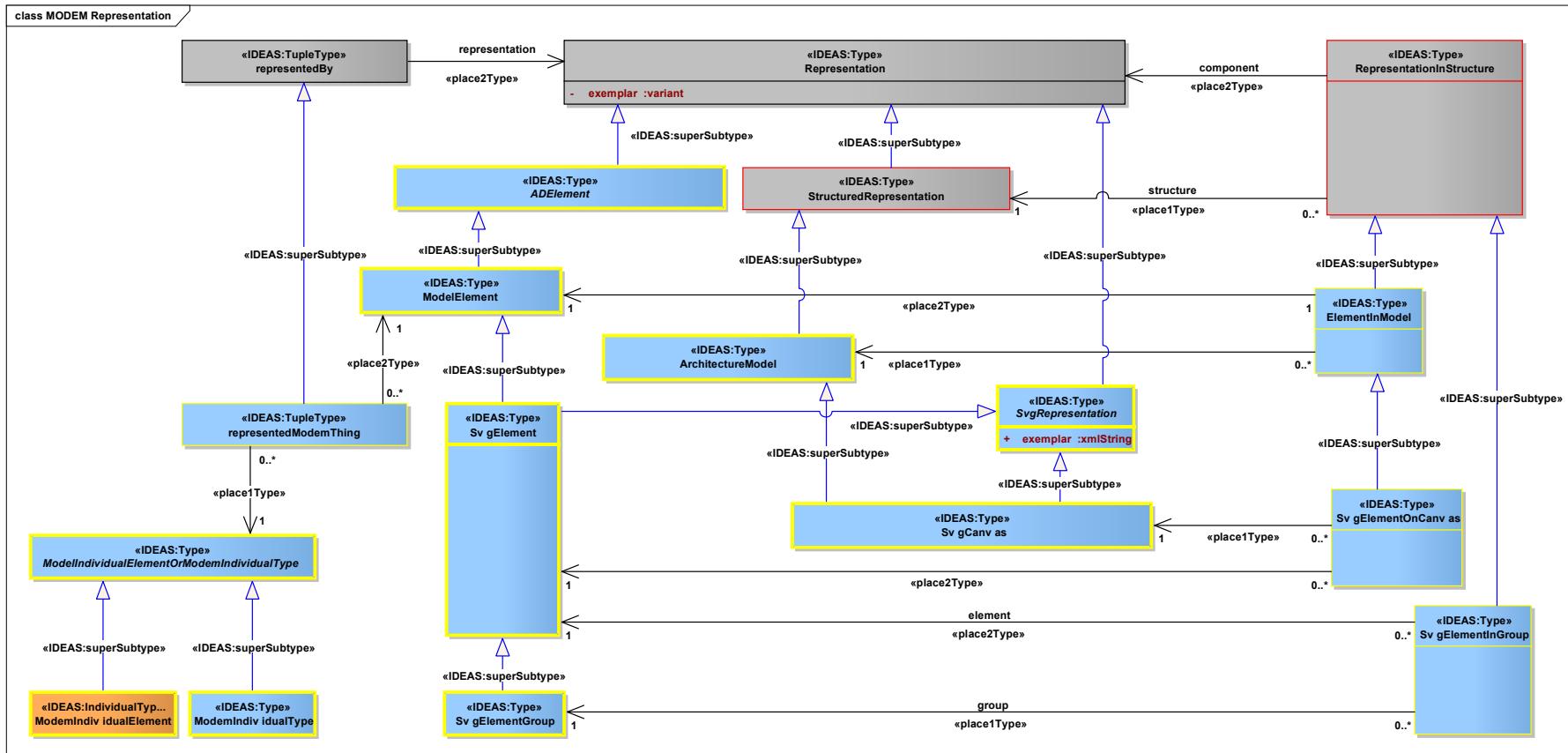
Figure 20 : Modem representation

2.3 Strategic views

2.3.1 StV-1: Enterprise vision
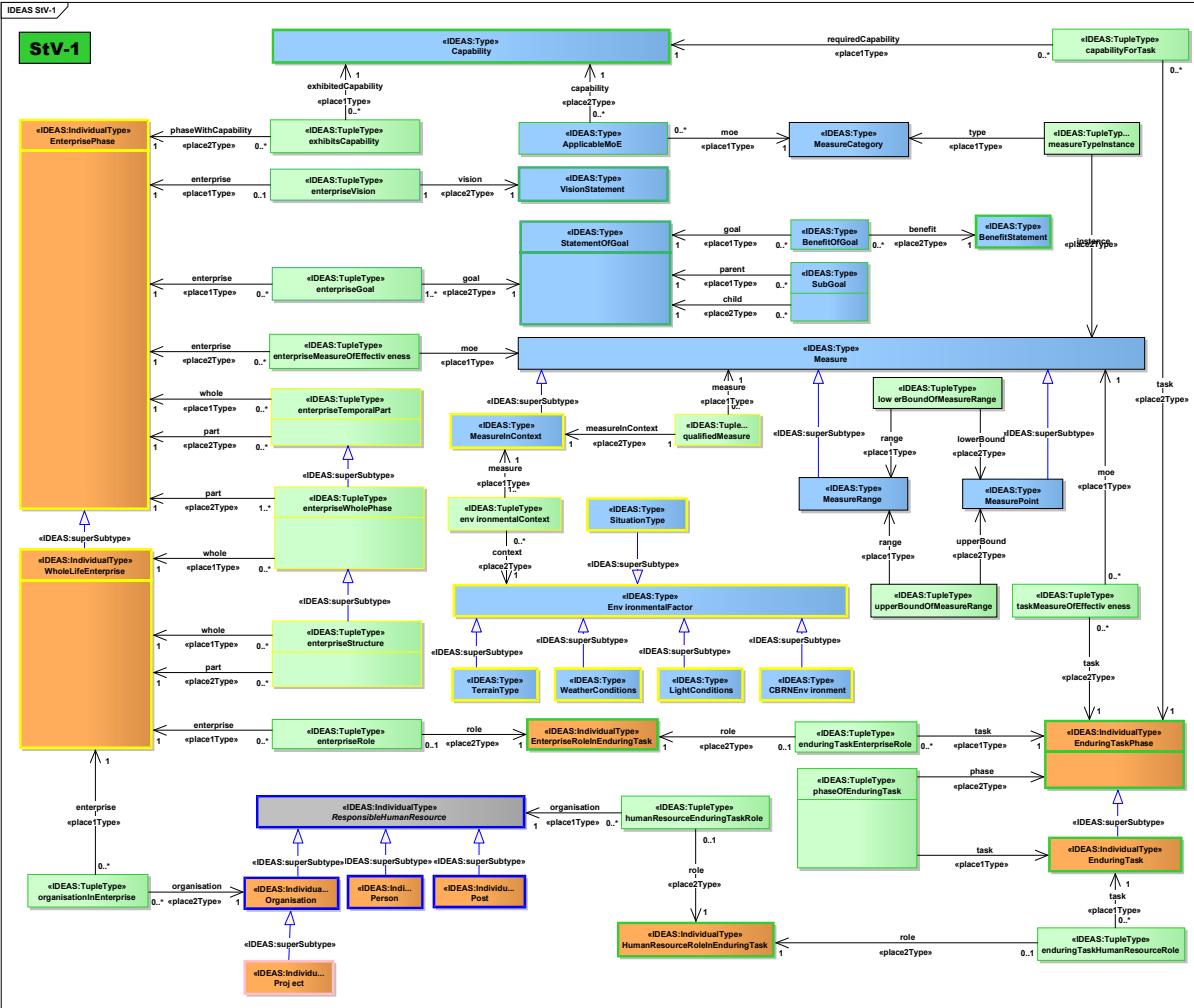
Figure 21 : StV-1

2.3.2   StV-2: Capability taxonomy

IDEAS StV-2

StV-2

«IDEAS:Type»
Capability

exhibitedCapability
«place1Type»
1   0..*

«IDEAS:TupleType»
exhibitsCapability

phaseWithCapability
«place2Type»
0..*   1

«IDEAS:IndividualType»
EnterprisePhase

parentCapability
«place1Type»

«IDEAS:Type»
CapabilityComposition

componentCapability
«place2Type»

Note change from M3 here.

In StV-2 capabilities are now just associated with *types* of MoE (measure categories). Only when a capability is applied do any metrics become associated with it. For example, when an EnterprisePhase maps to capability in StV-1, the EnterprisePhase may have a measure (with value or range) that corresponds to the measure category expressed against the capability.

capability
«place2Type»
1   0..*

«IDEAS:Type»
ApplicableMoE

0..*   moe
«place1Type»
1

«IDEAS:Type»
MeasureCategory

general
«place1Type»

«IDEAS:TupleType»
capabilitySpecialisation

specific
«place2Type»

Figure 22 : StV-2

2.3.3   StV-3: Capability phasing
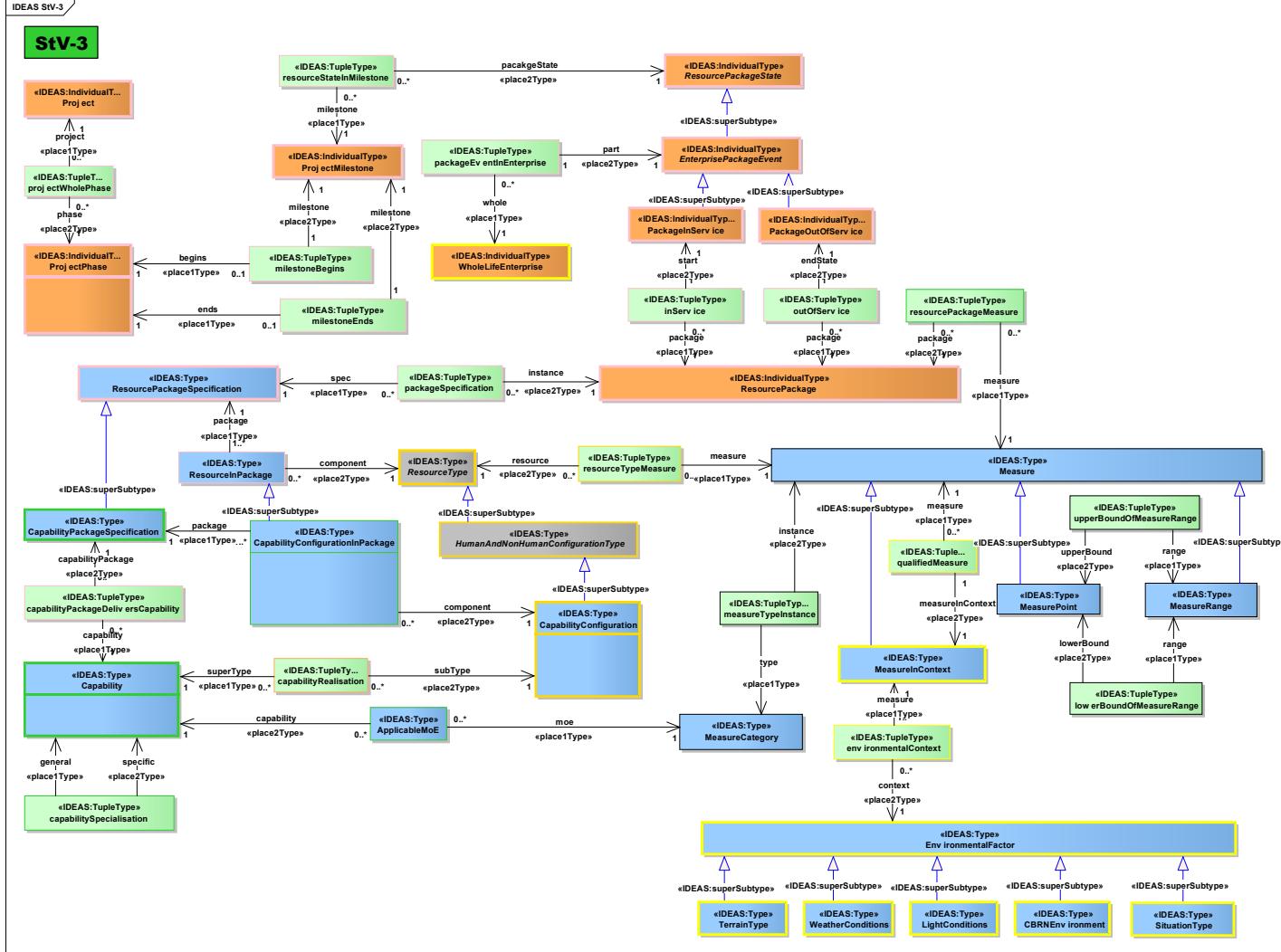
Figure 23 : StV-3

2.3.4   StV-4: Capability dependencies
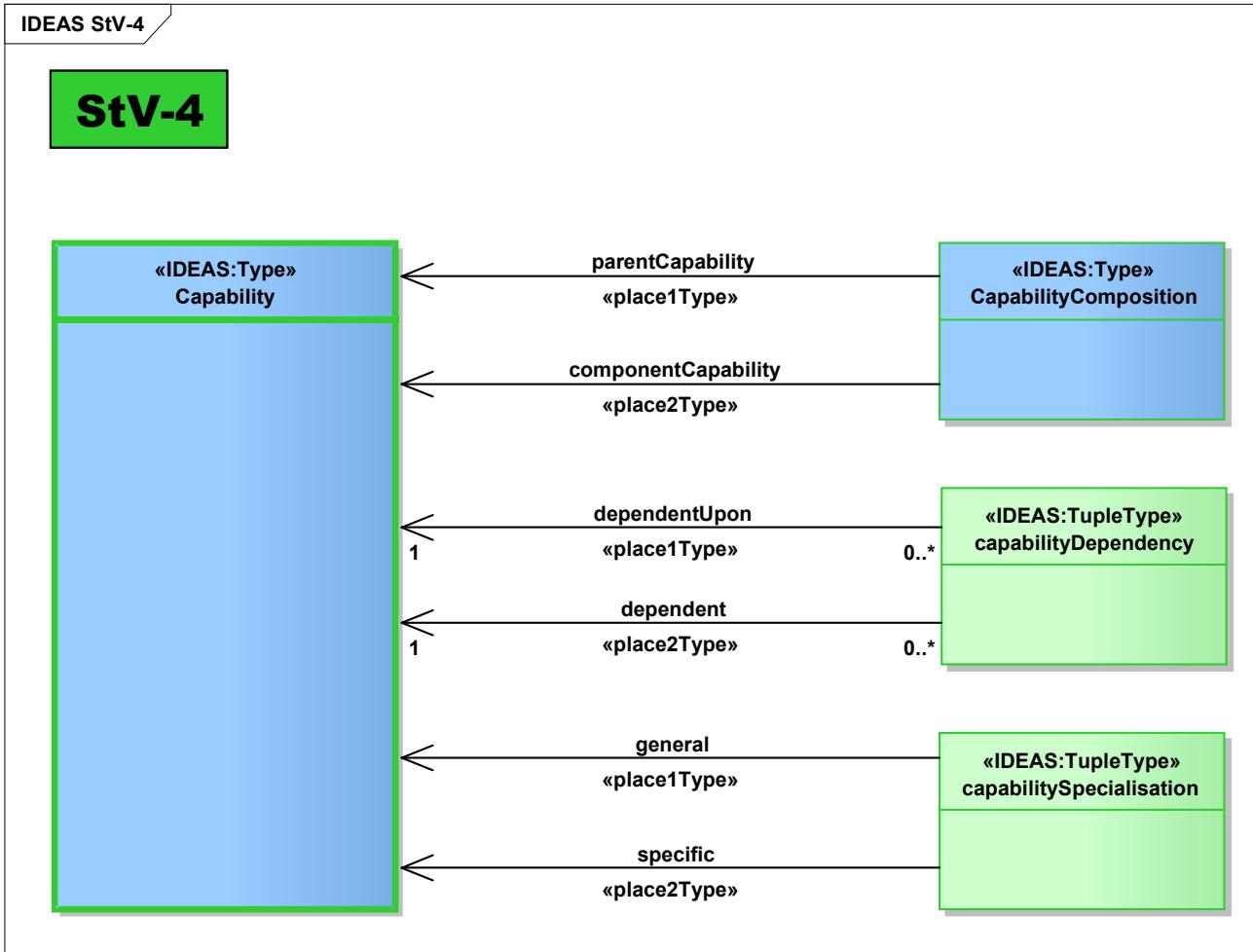
Figure 24 : StV-4

2.3.5   StV-5: Capability to organisational deployment mapping
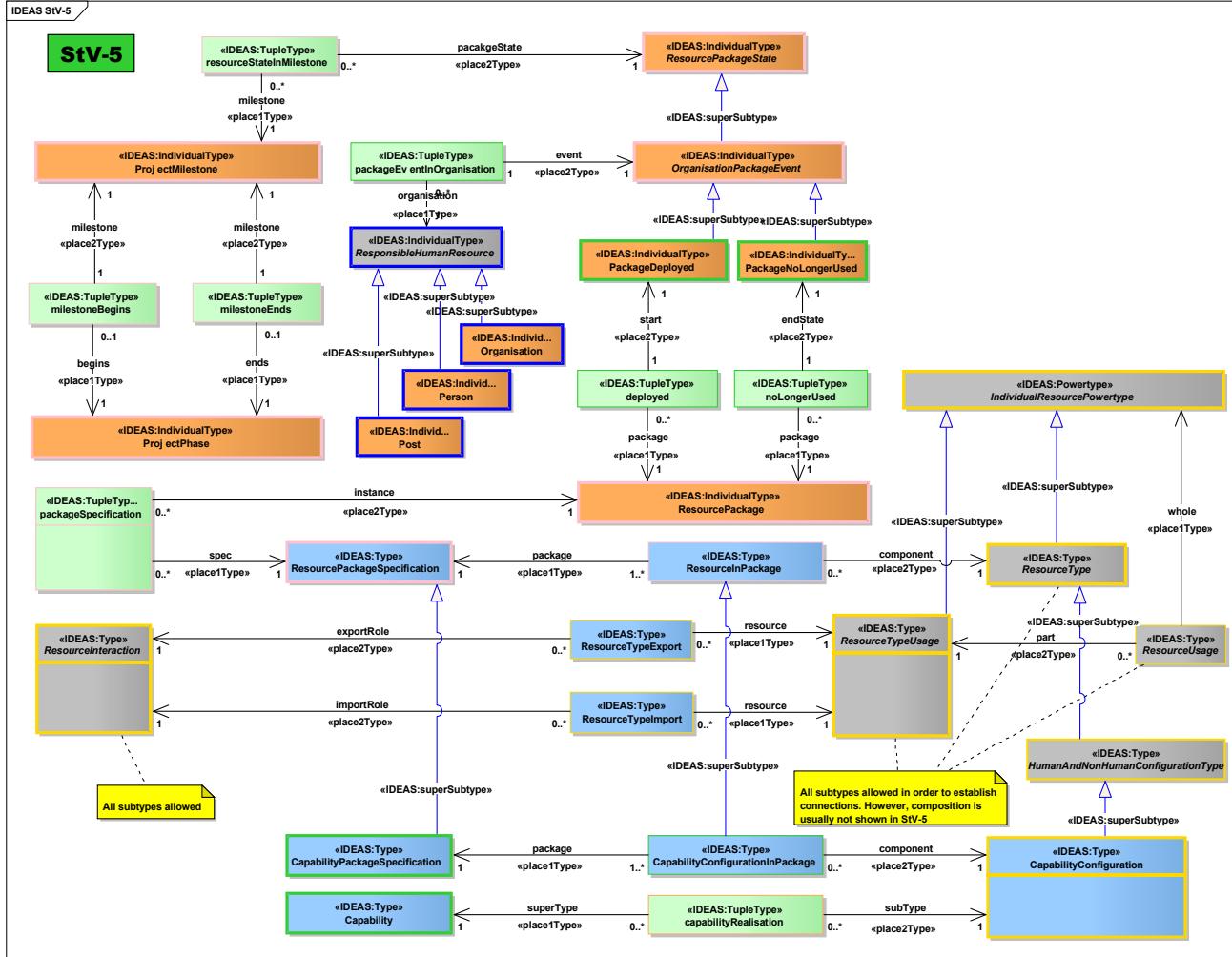
Figure 25 : StV-5

2.3.6 StV-6: Operational activity to capability mapping
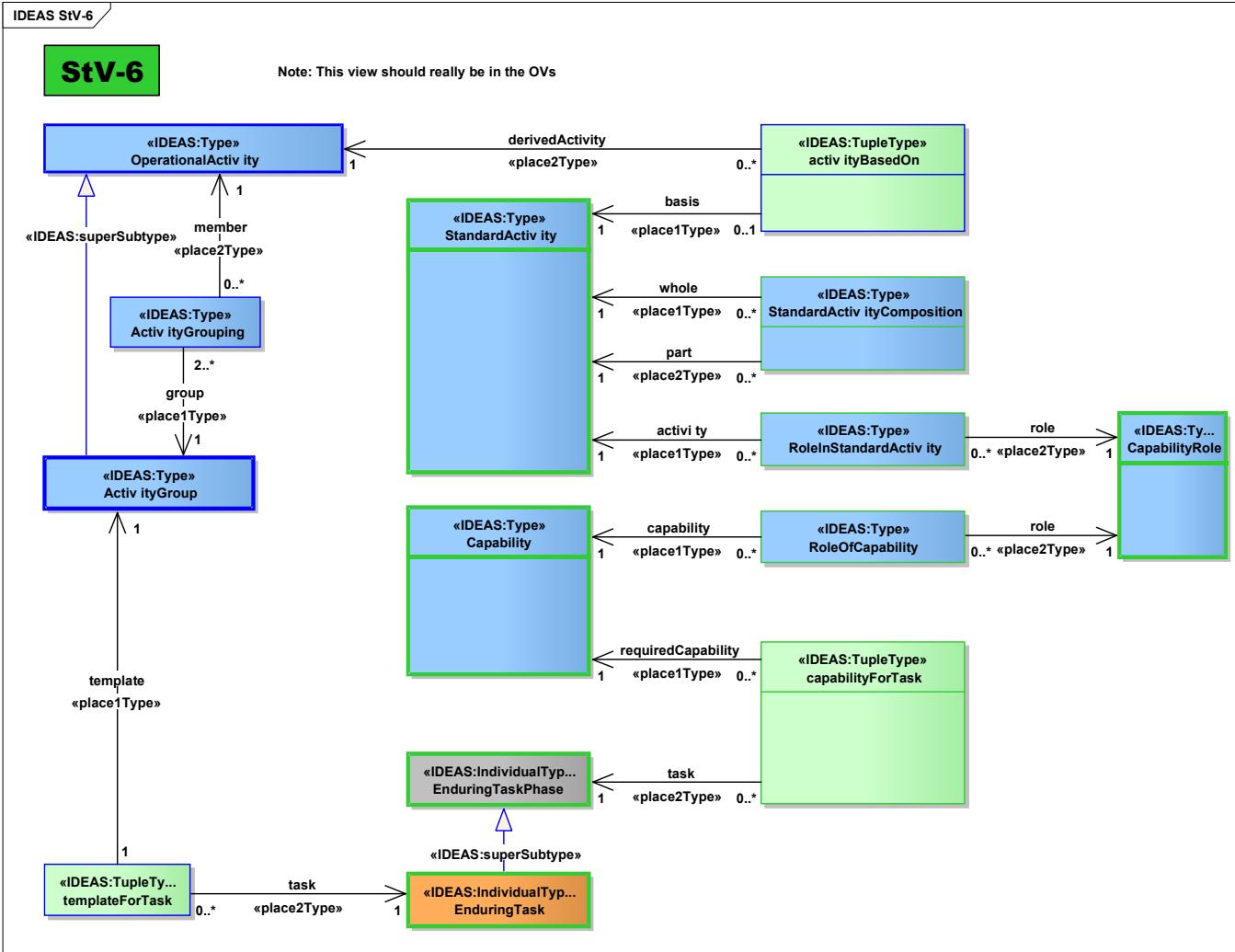
Figure 26 : StV-6

2.3.7 Strategic Views elements list

ApplicableMoE «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ApplicableMoE - ApplicableMeasureCategory
Association (source - target):«place2Type»
ApplicableMoE - Capability
Association (source - target):«place1Type»
ApplicableMoE - MeasureCategory
Attributes:
-
An ApplicableMeasureCategory where the categories are MeasureOfEffectivenessCategories and the things being measured are Capabilities.

BenefitOfGoal «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
BenefitOfGoal - RepresentationInStructure
Association (source - target):«place2Type»
BenefitOfGoal - BenefitStatement
Association (source - target):«place1Type»
BenefitOfGoal - StatementOfGoal
Attributes:
-
A RepresentationInStructure where a BenefitStatement is part of a StatementOfGoal.

BenefitStatement «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
BenefitStatement - ModemIndividualType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
BenefitStatement - StringDescription
Generalization (element - is a subtype of):«IDEAS:superSubtype»
BenefitStatement - StructuredRepresentation
Attributes:
-
A StringDescription that is part of a StatementOfGoal which describes a benefit realised by achieving the goal.

Capability «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Capability - Concern
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Capability - DispositionalProperty
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Capability - StrategicIndividualType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Capability - AgentType
Attributes:
-
A DispositionalProperty that is the set of all things that are capable of achieving a particular outcome.

CapabilityComposition «IDEAS:Type»
Connectors:

Generalization (element - is a subtype of): «IDEAS:superSubtype»
CapabilityComposition - TypicalWholePart
Association (source - target): «place2Type»
CapabilityComposition - Capability
Association (source - target): «place1Type»
CapabilityComposition - Capability
<u>*Attributes:*</u>
-
A WholePartType that asserts one Capability is part of another.

CapabilityConfigurationInPackage «IDEAS:Type»
<u>*Connectors:*</u>
Generalization (element - is a subtype of): «IDEAS:superSubtype»
CapabilityConfigurationInPackage - ResourceInPackage
Association (source - target): «place2Type»
CapabilityConfigurationInPackage - CapabilityConfiguration
Association (source - target): «place1Type»
CapabilityConfigurationInPackage - CapabilityPackageSpecification
<u>*Attributes:*</u>
-
A ResourceInPackage where the ResourceType is a CapabilityConfiguration and the package is a ResourcePackageSpecification.

CapabilityPackageSpecification «IDEAS:Type»
<u>*Connectors:*</u>
Generalization (element - is a subtype of): «IDEAS:superSubtype»
CapabilityPackageSpecification - ResourcePackageSpecification
<u>*Attributes:*</u>
-
A ResourcePackageSpecification that contains at least one CapabilityConfiguration.

CapabilityRole «IDEAS:Type»
<u>*Connectors:*</u>
Generalization (element - is a subtype of): «IDEAS:superSubtype»
CapabilityRole - ParticipationExtentType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
CapabilityRole - StrategicIndividualType
<u>*Attributes:*</u>
-
A ParticipationExtentType which is the extent of a Capability's participation in a StandardActivity.

EnduringTask «IDEAS:IndividualType»
<u>*Connectors:*</u>
Generalization (element - is a subtype of): «IDEAS:superSubtype»
EnduringTask - Undertaking
Generalization (element - is a subtype of): «IDEAS:superSubtype»
EnduringTask - EnduringTaskPhase
<u>*Attributes:*</u>
-
An Undertaking recognised by an enterprise as being essential to achieving its goals - i.e. a strategic specification of what the enterprise does.

EnduringTaskPhase «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
EnduringTaskPhase - UndertakingState
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
EnduringTaskPhase - EnduringTaskPart
Attributes:
-
A UndertakingState that is a temporal part of an EnduringTask.

EnterpriseRoleInEnduringTask «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
EnterpriseRoleInEnduringTask - ParticipationExtent
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
EnterpriseRoleInEnduringTask - EnterprisePart
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
EnterpriseRoleInEnduringTask - EnduringTaskPart
Attributes:
-
A ParticipationExtent whose extent is the participation of an EnterprisePhase (or WholeLifeEnterprise) in an EnduringTask.

HumanResourceRoleInEnduringTask «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
HumanResourceRoleInEnduringTask - ParticipationExtent
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
HumanResourceRoleInEnduringTask - OrganisationPart
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
HumanResourceRoleInEnduringTask - EnduringTaskPart
Attributes:
-
A ParticipationExtent where the participant is a ResponsibleHumanResource and the Process is an EnduringTask.

PackageDeployed «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):**«IDEAS:superSubtype»**
PackageDeployed - OrganisationPackageEvent
Attributes:
-
An OrganisationPackageEvent which marks the delivery of a particular ResourcePackage to an Organisation.

PackageNoLongerUsed «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):**«IDEAS:superSubtype»**
PackageNoLongerUsed - OrganisationPackageEvent

Attributes:
-
A OrganisationPackageEvent marking the point when a ResourcePacakge is no longer used by an Organisation.

This document is no longer extant and has been withdrawn.

RoleInStandardActivity «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **RoleInStandardActivity - ModemWholePartType**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **RoleInStandardActivity - ProcessWholeRoleExtentPartType**   *Association (source - target): «place1Type»*   **RoleInStandardActivity - StandardActivity**   *Association (source - target): «place2Type»*   **RoleInStandardActivity - CapabilityRole**   *Attributes:*   **-**   **A ProcessWholeRoleExtentPartType that relates a StandardActivity to a CapabilityRole.**
RoleOfCapability «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **RoleOfCapability - ModemWholePartType**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **RoleOfCapability - AgentParticipationType**   *Association (source - target): «place1Type»*   **RoleOfCapability - Capability**   *Association (source - target): «place2Type»*   **RoleOfCapability - CapabilityRole**   *Attributes:*   **-**   **An AgentParticipationType that relates a Capability to its role in a StandardOperationalActivity.**
StandardActivity «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **StandardActivity - ProcessType**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **StandardActivity - StrategicIndividualType**   *Attributes:*   **-**   **An ProcessType that is a standard procedure (e.g. doctrinal tasks). Note: This is equivalent to what some defence organisations call JETLs. Note: was called "StandardOperationalActivity" in M3.**
StandardActivityComposition «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **StandardActivityComposition - TypicalWholePart**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **StandardActivityComposition - ProcessWholeAndPartType**   *Association (source - target):«place2Type»*   **StandardActivityComposition - StandardActivity**   *Association (source - target):«place1Type»*   **StandardActivityComposition - StandardActivity**   *Attributes:*   **-**   **A TypicalWholePart that asserts one StandardActivity is part of another.**

StatementOfGoal «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
StatementOfGoal - StructuredRepresentation
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
StatementOfGoal - StringDescription
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
StatementOfGoal - ModemIndividualType
Attributes:
-
A StringDescription that is a specific, required objective for an EnterprisePhase.

StrategicIndividualType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
StrategicIndividualType - ModemIndividualType
Attributes:
-
A ModemIndividualType which is used in Strategic modelling - i.e. a type of individual that may have relevance across more than one architecture.

SubGoal «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
SubGoal - RepresentationInStructure
Association (source - target): **«place2Type»**
SubGoal - StatementOfGoal
Association (source - target): **«place1Type»**
SubGoal - StatementOfGoal
Attributes:
-
A RepresentationInStructure where one StatementOfGoal is part of another.

VisionStatement «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
VisionStatement - ModemIndividualType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
VisionStatement - StringDescription
Attributes:
-
A StringDescription that is a short paragraph outlining the vision for a given phase of an enterprise.

capabilityDependency «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
capabilityDependency - ModemThing
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
capabilityDependency - couple
Association (source - target): **«place2Type»**
capabilityDependency - Capability
Association (source - target): **«place1Type»**
capabilityDependency - Capability

Attributes: -   **A couple that relates a (dependent) Capability to a Capability it is dependent upon.**
capabilityForTask «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **capabilityForTask - propertyOfIndividual**   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **capabilityForTask - modemIndividualTypeInstance**   *Association (source - target):*«place1Type»   **capabilityForTask - Capability**   *Association (source - target):*«place2Type»   **capabilityForTask - EnduringTaskPhase**   *Attributes:*   -   **A propertyOfIndividual that asserts a Capability is required in order for an Enterprise to conduct a phase of an EnduringTask.**
capabilitySpecialisation «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **capabilitySpecialisation - modemIndividualTypeSpecialisation**   *Association (source - target):*«place1Type»   **capabilitySpecialisation - Capability**   *Association (source - target):*«place2Type»   **capabilitySpecialisation - Capability**   *Attributes:*   -   **A superSubtype that relates one Capability (supertype) to a more specialised Capability (subtype).**
deployed «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **deployed - modemTemporalWholePart**   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **deployed - individualResourceState**   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **deployed - startBorder**   *Association (source - target):*«place1Type»   **deployed - ResourcePackage**   *Association (source - target):*«place1Type»   **deployed - PackageDeployed**   *Attributes:*   -   **A startBorder that indicates that an PackageDeployed marks the introduction into an Organisation of a ResourcePackage.**

enduringTaskEnterpriseRole «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
enduringTaskEnterpriseRole - processWholeRoleExtentPart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
enduringTaskEnterpriseRole - enduringTaskWholePart
Association (source - target): «place2Type»
enduringTaskEnterpriseRole - EnterpriseRoleInEnduringTask
Association (source - target): «place1Type»
enduringTaskEnterpriseRole - EnduringTaskPhase
Attributes:
-
A processWholeRoleExtentPart which relates an EnduringTaskPhase to an EnterpriseRoleInEnduringTask.

enduringTaskHumanResourceRole «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
enduringTaskHumanResourceRole - enduringTaskWholePart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
enduringTaskHumanResourceRole - processWholeRoleExtentPart
Association (source - target): «place2Type»
enduringTaskHumanResourceRole -HumanResourceRoleInEnduringTask
Association (source - target): «place1Type»
enduringTaskHumanResourceRole - EnduringTask
Attributes:
-
A processWholeRoleExtentPart where the Process is an EnduringTask and the involved Individual is a ResponsibleHumanResource.

enterpriseGoal «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
enterpriseGoal - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
enterpriseGoal - describedBy
Association (source - target):«place1Type»
enterpriseGoal - EnterprisePhase
Association (source - target):«place2Type»
enterpriseGoal - StatementOfGoal
Attributes:
-
A describedBy that relates a StatementOfGoal to the EnterprisePhase it describes.

enterpriseMeasureOfEffectiveness «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
enterpriseMeasureOfEffectiveness - measureOfIndividual
Generalization (element - is a subtype of):«IDEAS:superSubtype»
enterpriseMeasureOfEffectiveness - modemIndividualTypeInstance
Association (source - target):«place2Type»
enterpriseMeasureOfEffectiveness - EnterprisePhase
Association (source - target):«place1Type»
enterpriseMeasureOfEffectiveness - Measure

Attributes: - **A measureOfIndividual where the Individual is an EnterprisePhase and the measure is a MeasureOfEffectiveness.**
enterpriseRole «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **enterpriseRole - agentParticipation** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **enterpriseRole - enterpriseWholePart** *Association (source - target):* **«place1Type»** **enterpriseRole - WholeLifeEnterprise** *Association (source - target):* **«place2Type»** **enterpriseRole - EnterpriseRoleInEnduringTask** *Attributes:* - **An agentParticipation where the agent is a WholeLifeEnterprise and the participation is an EnterpriseRoleInEnduringTask. An enterpriseRole relates a WholeLifeEnterprise to a role it performs in an EnduringTask.**
enterpriseVision «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **enterpriseVision - ModemThing** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **enterpriseVision - describedBy** *Association (source - target):* **«place1Type»** **enterpriseVision - EnterprisePhase** *Association (source - target):* **«place2Type»** **enterpriseVision - VisionStatement** *Attributes:* - **A describedBy that relates a VisionStatement to the EnteprisePhase it describes.**
exhibitsCapability «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **exhibitsCapability - propertyOfIndividual** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **exhibitsCapability - modemIndividualTypeInstance** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **exhibitsCapability - systemConcern** *Association (source - target):* **«place1Type»** **exhibitsCapability - Capability** *Association (source - target):* **«place2Type»** **exhibitsCapability - EnterprisePhase** *Attributes:* - **A propertyOfIndividual that relates an EnteprisePhase to a Capability that it exhibits.** **Note: replaces "exhibits" tagged value in M3.**

humanResourceEnduringTaskRole «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
humanResourceEnduringTaskRole - agentParticipation
Generalization (element - is a subtype of):«IDEAS:superSubtype»
humanResourceEnduringTaskRole - organisationWholePart
Association (source - target):«place1Type»
humanResourceEnduringTaskRole - ResponsibleHumanResource
Association (source - target):«place2Type»
humanResourceEnduringTaskRole - HumanResourceRoleInEnduringTask
Attributes:
-
An agentParticipation where the Agent is a ResponsibleHumanResource and the Process is an EnduringTask.

noLongerUsed «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
noLongerUsed - endBorder
Generalization (element - is a subtype of):«IDEAS:superSubtype»
noLongerUsed - individualResourceState
Generalization (element - is a subtype of):«IDEAS:superSubtype»
noLongerUsed - modemTemporalWholePart
Association (source - target):«place2Type»
noLongerUsed - PackageNoLongerUsed
Association (source - target):«place1Type»
noLongerUsed - ResourcePackage

Attributes:
-
An endBorder that indicates that an PackageNoLongerUsed marks the retirement from an Organisation of a ResourcePackage.

organisationInEnterprise «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
organisationInEnterprise - enterpriseWholePart
Association (source - target):«place1Type»
organisationInEnterprise - WholeLifeEnterprise
Association (source - target):«place2Type»
organisationInEnterprise - Organisation
Attributes:
-
An enterpriseWholePart that asserts an Organisation is part of a WholeLifeEnterprise. Note: this includes the limit case where the Organisation *is* the Enterprise, and cases where the Organisation is a Project.

packageEventInOrganisation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
packageEventInOrganisation - organisationWholePart
Association (source - target):«place2Type»
packageEventInOrganisation - OrganisationPackageEvent
Association (source - target):«place1Type»
packageEventInOrganisation - ResponsibleHumanResource

Attributes: - **An organisationWholePart where an OrganisationPackageEvent is part of an Organisation - e.g. the package is rolled-out into the organisation.**
phaseOfEnduringTask «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):* «IDEAS:superSubtype» **phaseOfEnduringTask - undertakingWholeState** *Generalization (element - is a subtype of):* «IDEAS:superSubtype» **phaseOfEnduringTask - enduringTaskWholePart** *Association (source - target):* «place2Type» **phaseOfEnduringTask - EnduringTaskPhase** *Association (source - target):* «place1Type» **phaseOfEnduringTask - EnduringTask** *Attributes:* - **An undertakingWholeState where the state (part) is an EnduringTaskPhase and the whole is an EnduringTask.**
resourcePackageMeasure «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **resourcePackageMeasure - modemIndividualTypeInstance** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **resourcePackageMeasure - measureOfIndividual** *Association (source - target):*«place1Type» **resourcePackageMeasure - Measure** *Association (source - target):*«place2Type» **resourcePackageMeasure - ResourcePackage** *Attributes:* - **A measureOfIndividual where the measure Individual is a ResourcePackage.**
taskMeasureOfEffectiveness «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **taskMeasureOfEffectiveness - measureOfIndividual** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **taskMeasureOfEffectiveness - modemIndividualTypeInstance** *Association (source - target):*«place1Type» **taskMeasureOfEffectiveness - Measure** *Association (source - target):*«place2Type» **taskMeasureOfEffectiveness - EnduringTaskPhase** *Attributes:* - **A measureOfIndividual that asserts a Measure is an MoE for an EnduringTaskPhase.**

2.3.8   Strategic Views additional diagrams.
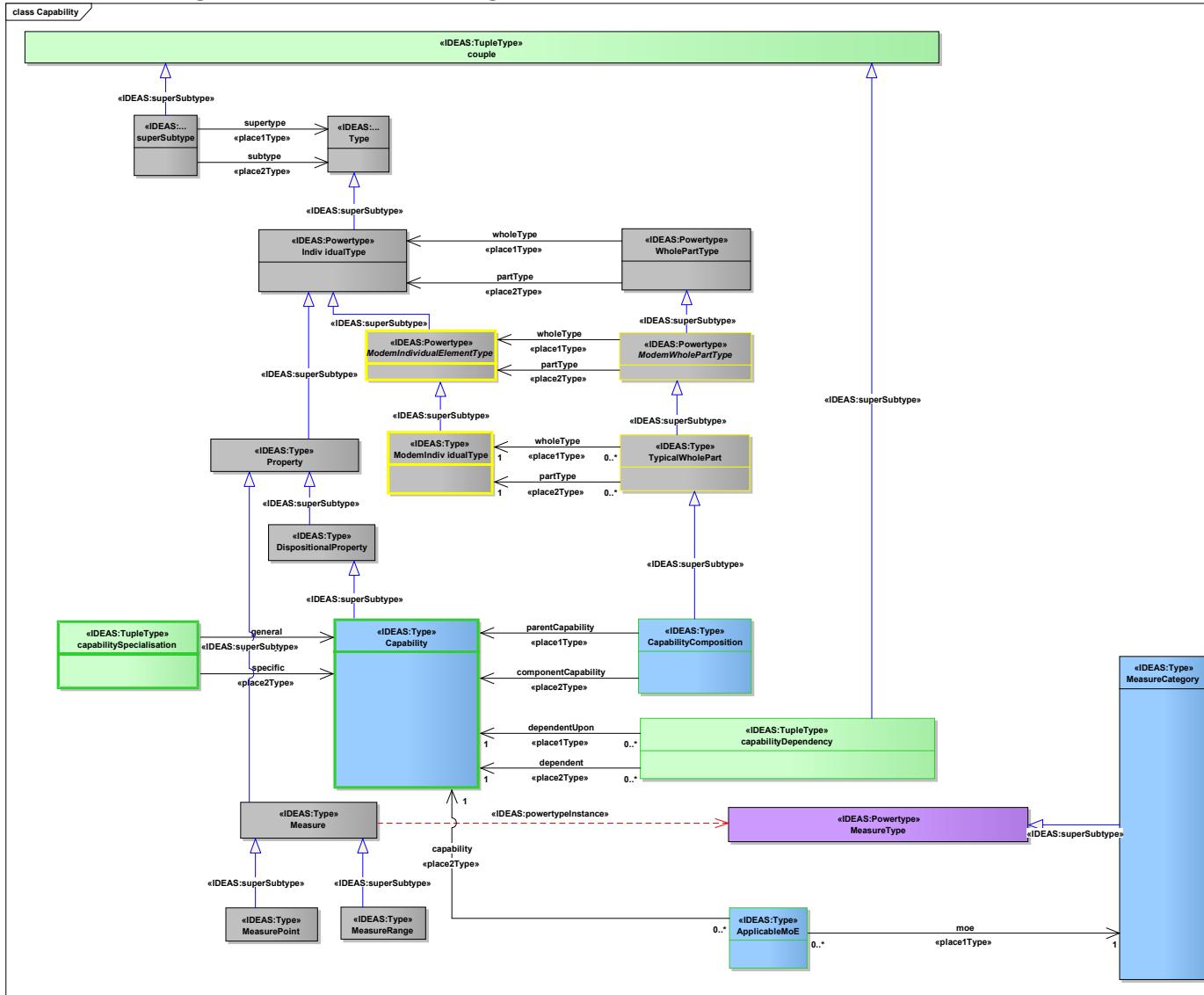
Figure 27 : Capability
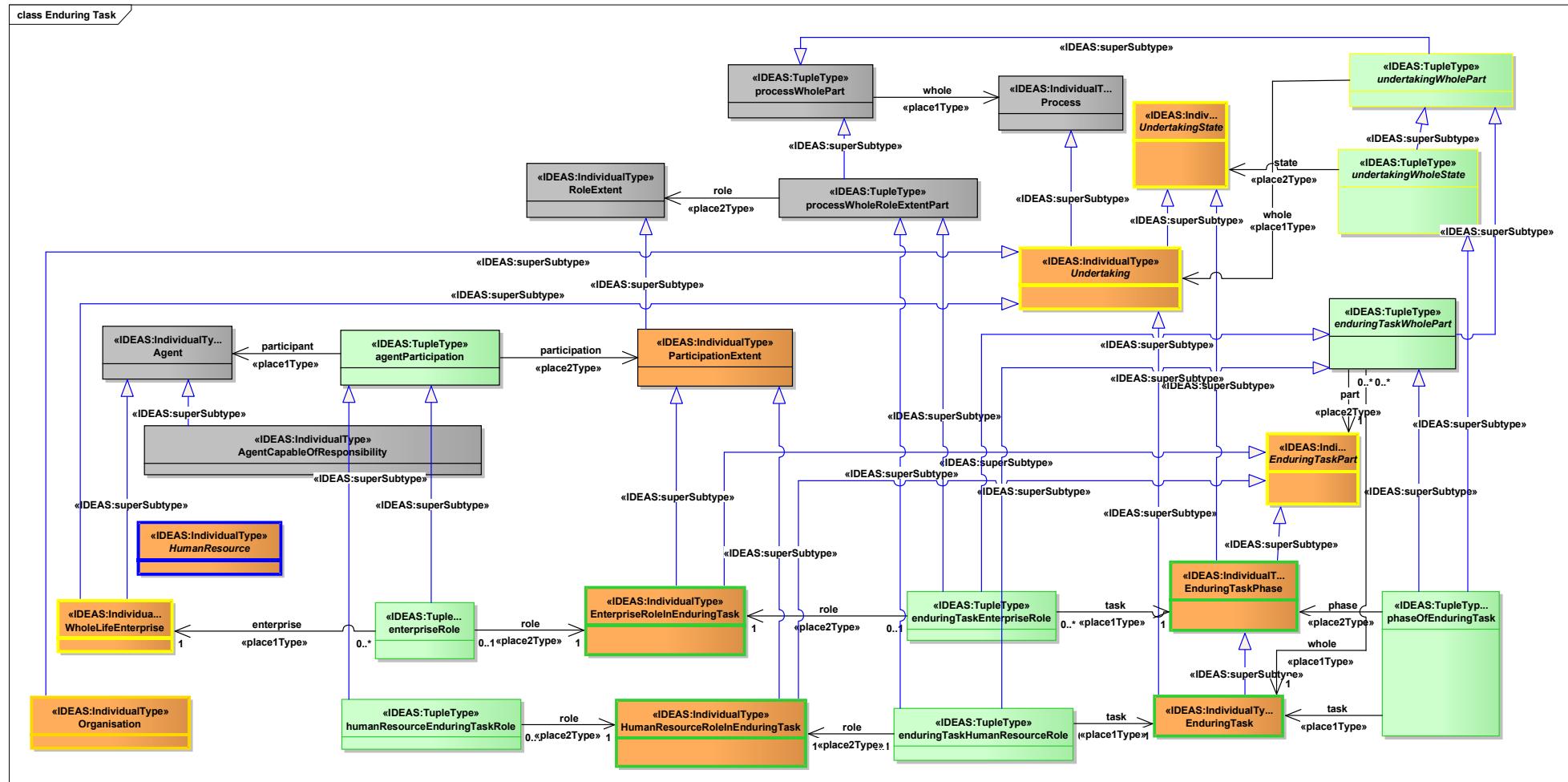
Figure 28 : Enduring Task

This document is no longer extant and has been withdrawn.
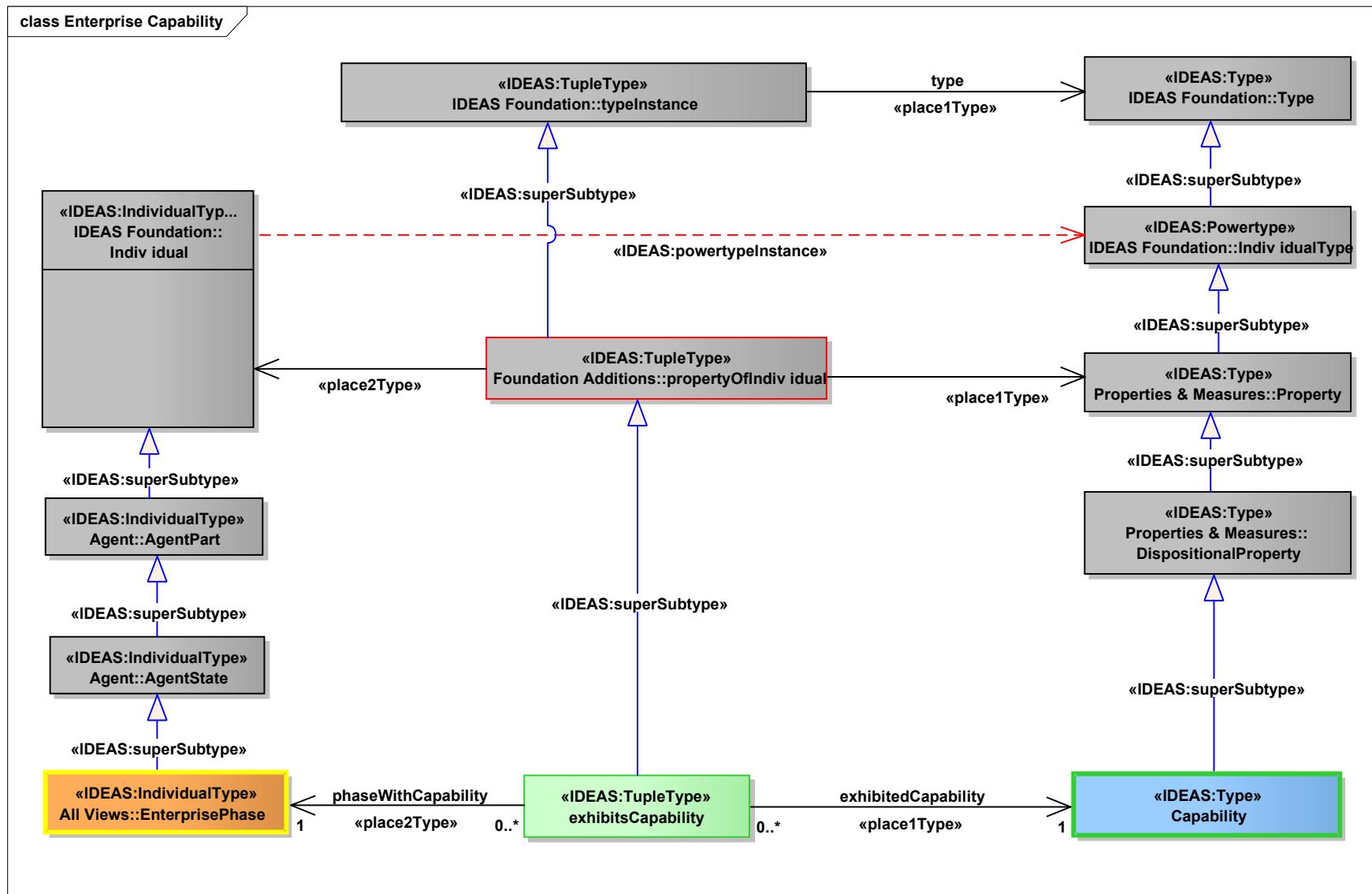
Figure 29 : Enterprise Capability
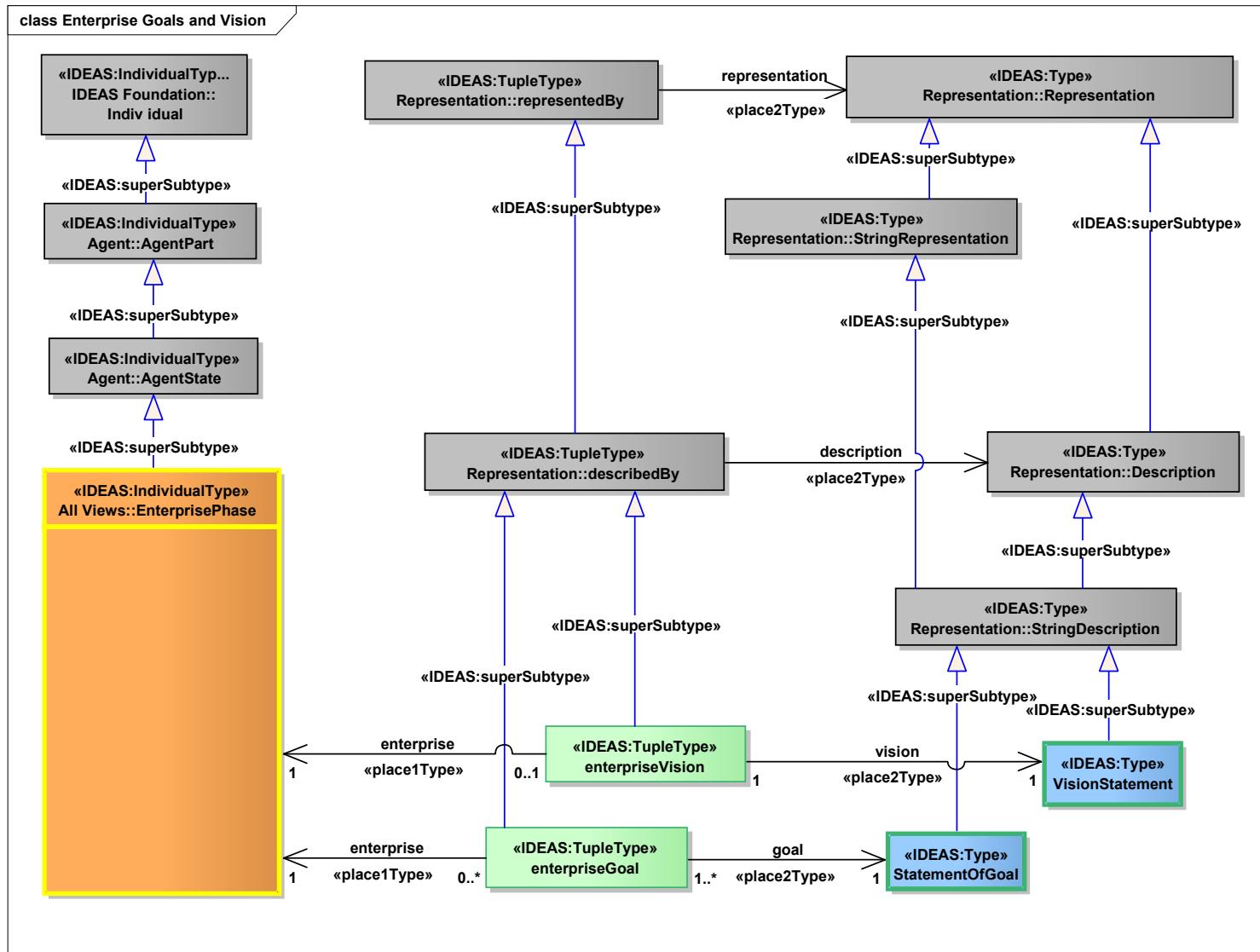
Figure 30 : Enterprise Goals and Vision
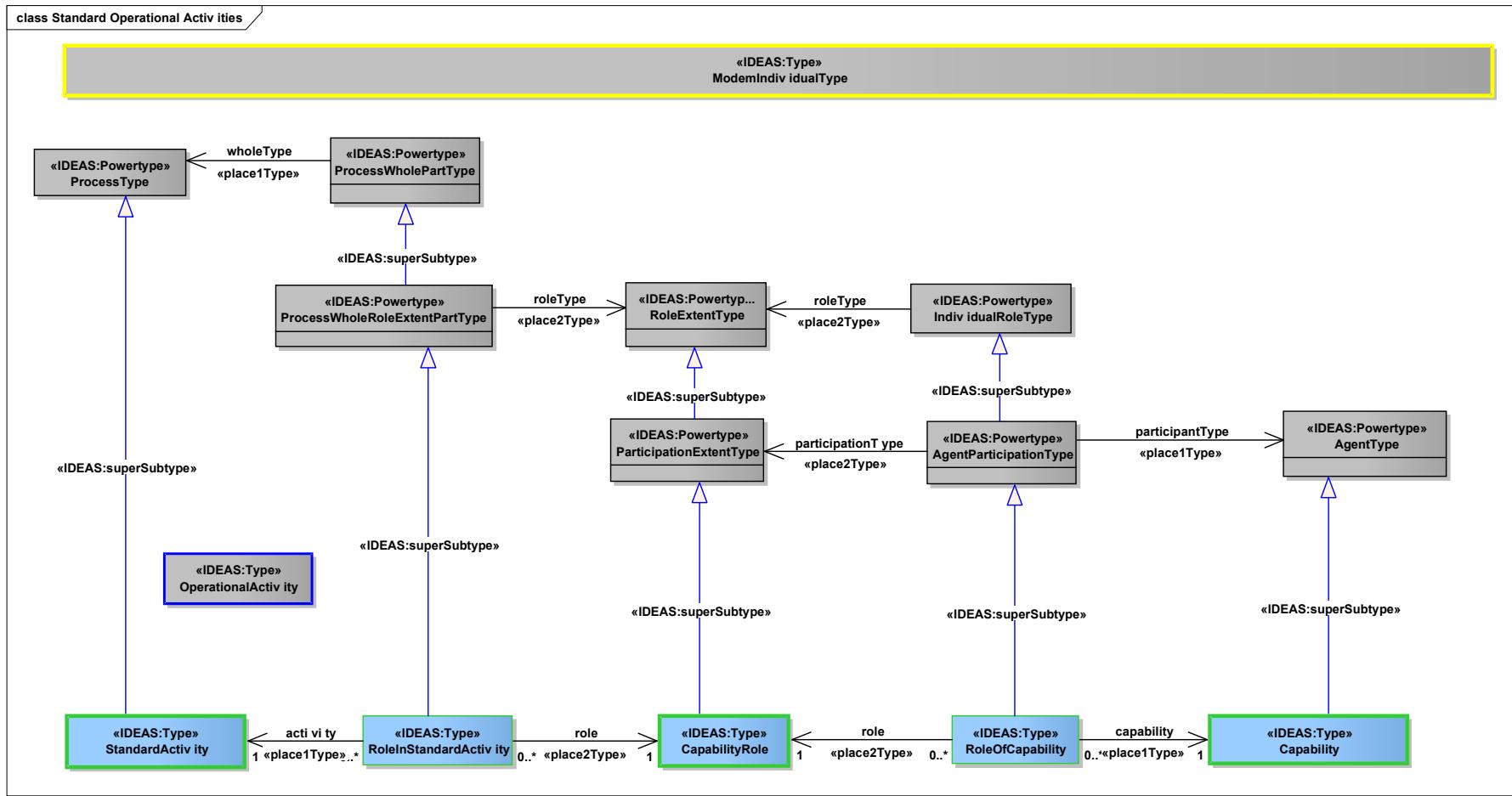
Figure 31 : Standard Operational Activities

2.4 Operational views

2.4.1 OV-1: High level operational concept graphic (a, b, c)
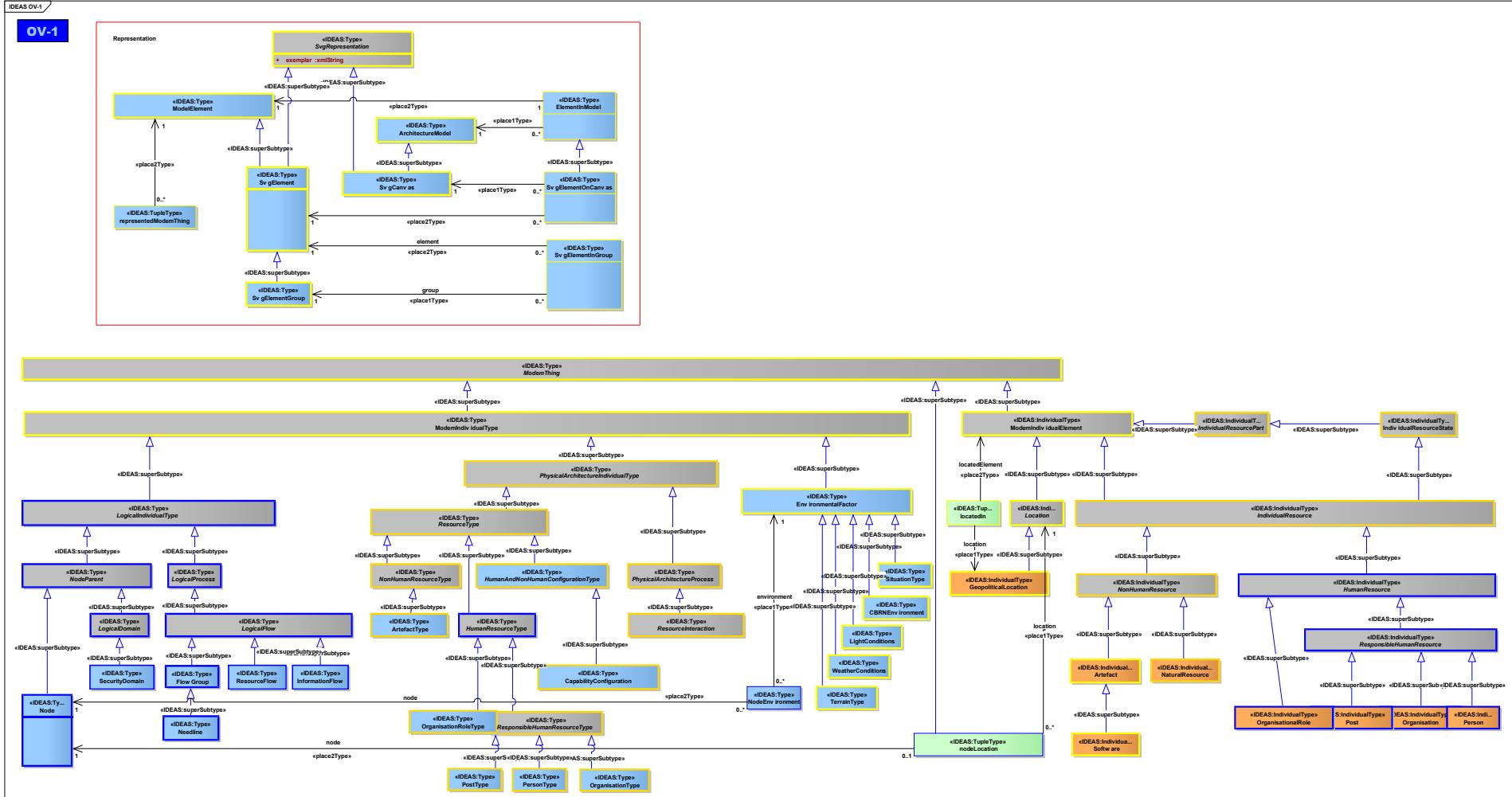
Figure 32 : OV-1

2.4.2 OV-2: Operational node relationship description
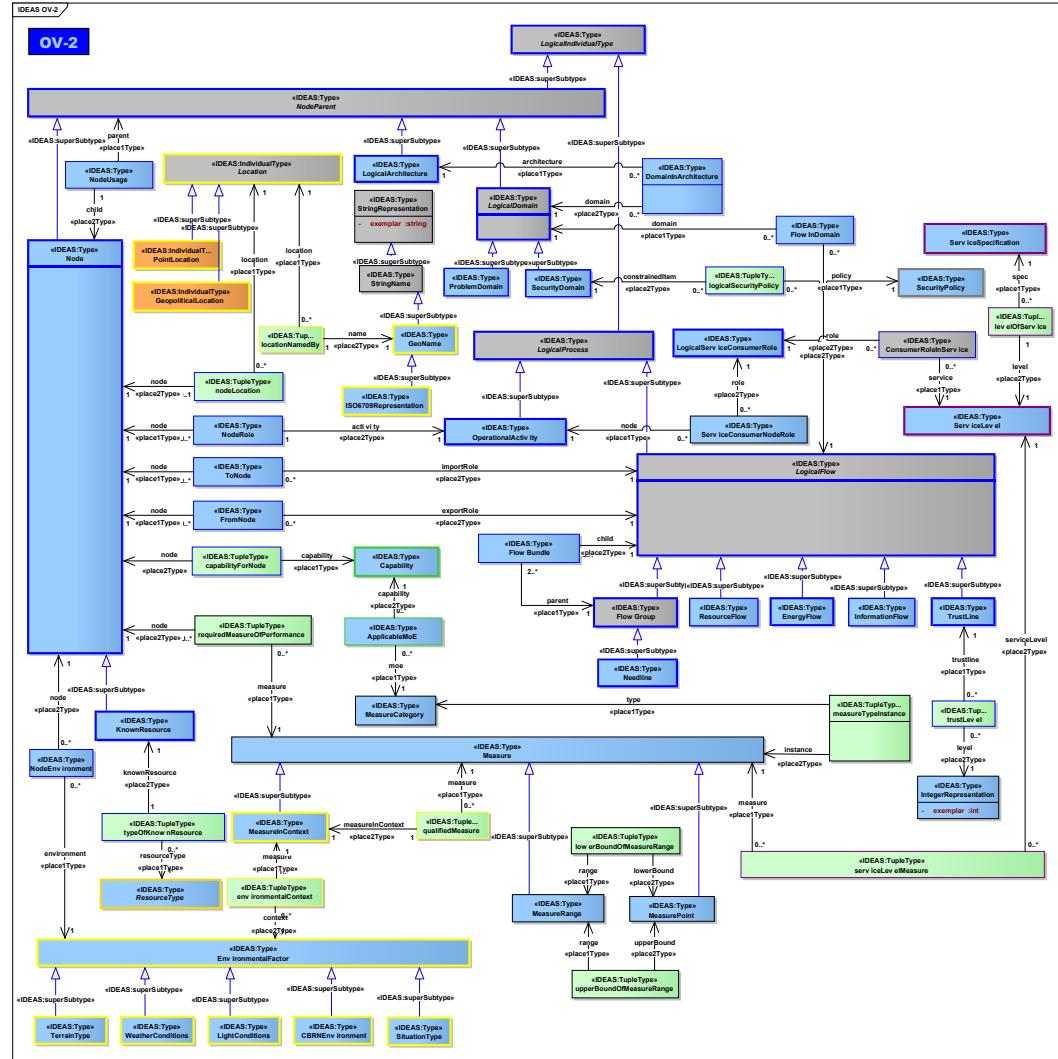
Figure 33 : OV-2

2.4.3 **OV-3: Operational information exchange matrix**
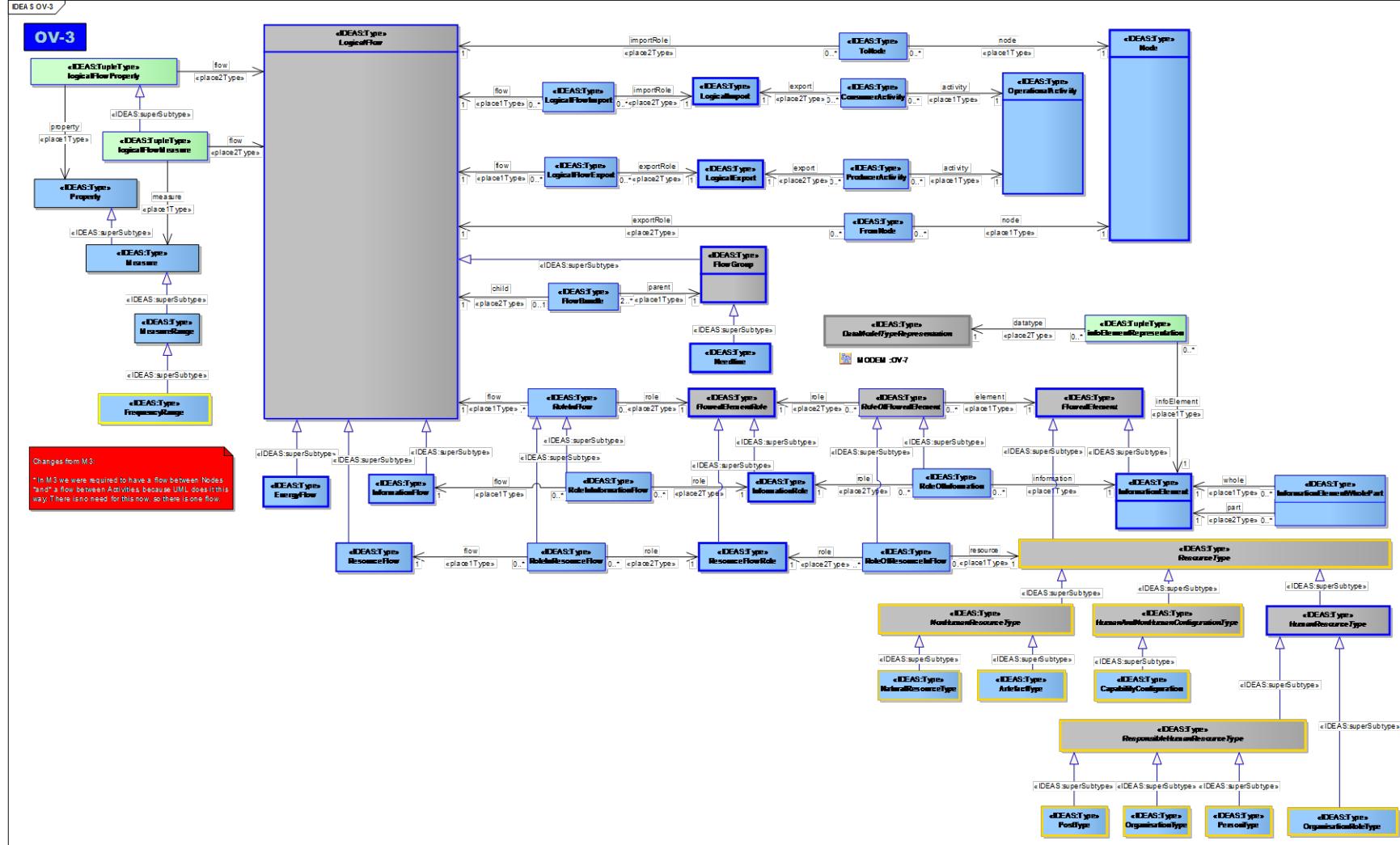
Figure 34 : OV-3

2.4.4   OV-4: Organisational relationships chart
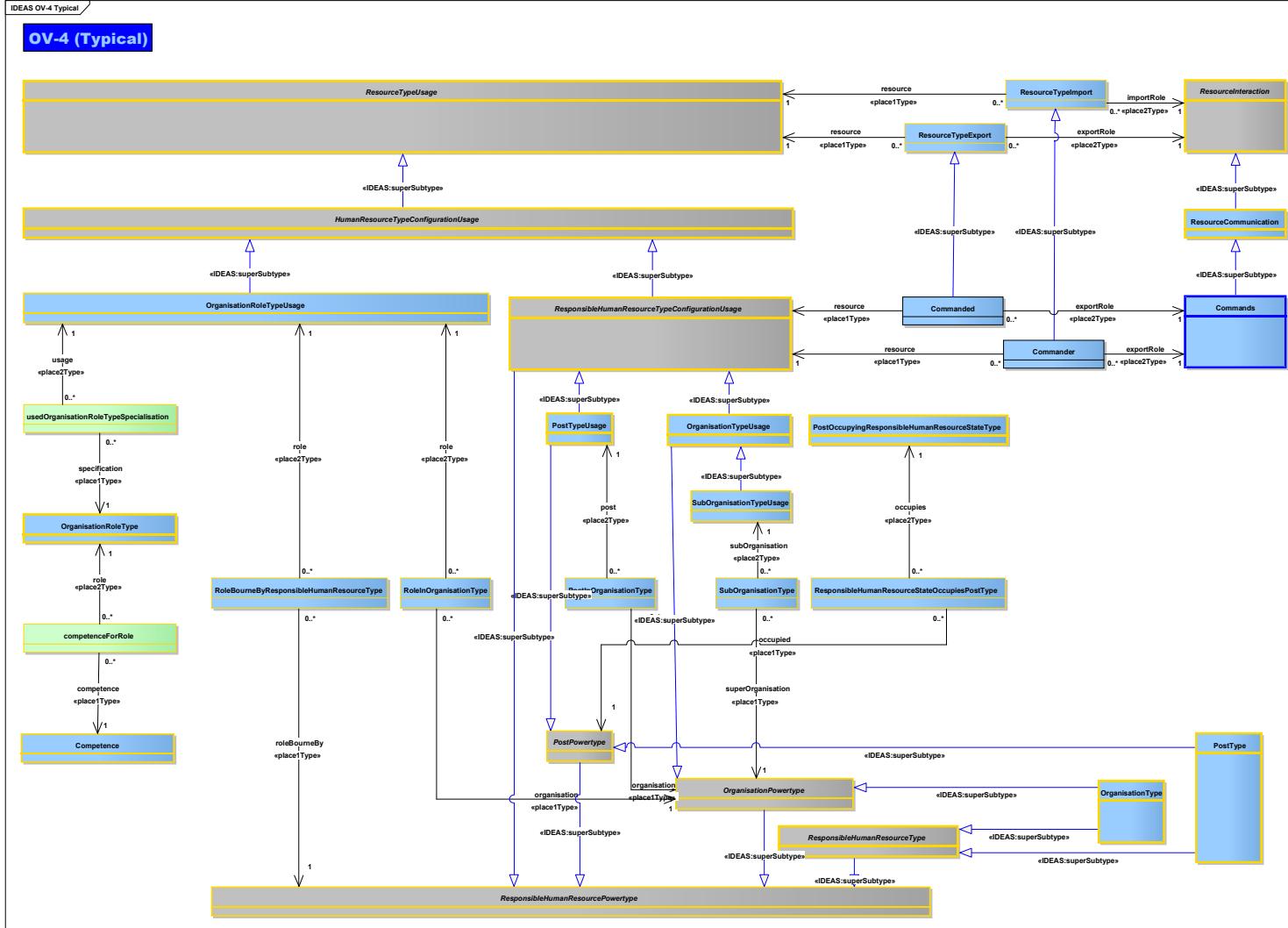
Figure 35 : OV-4 Typical

This document is no longer extant and has been withdrawn.
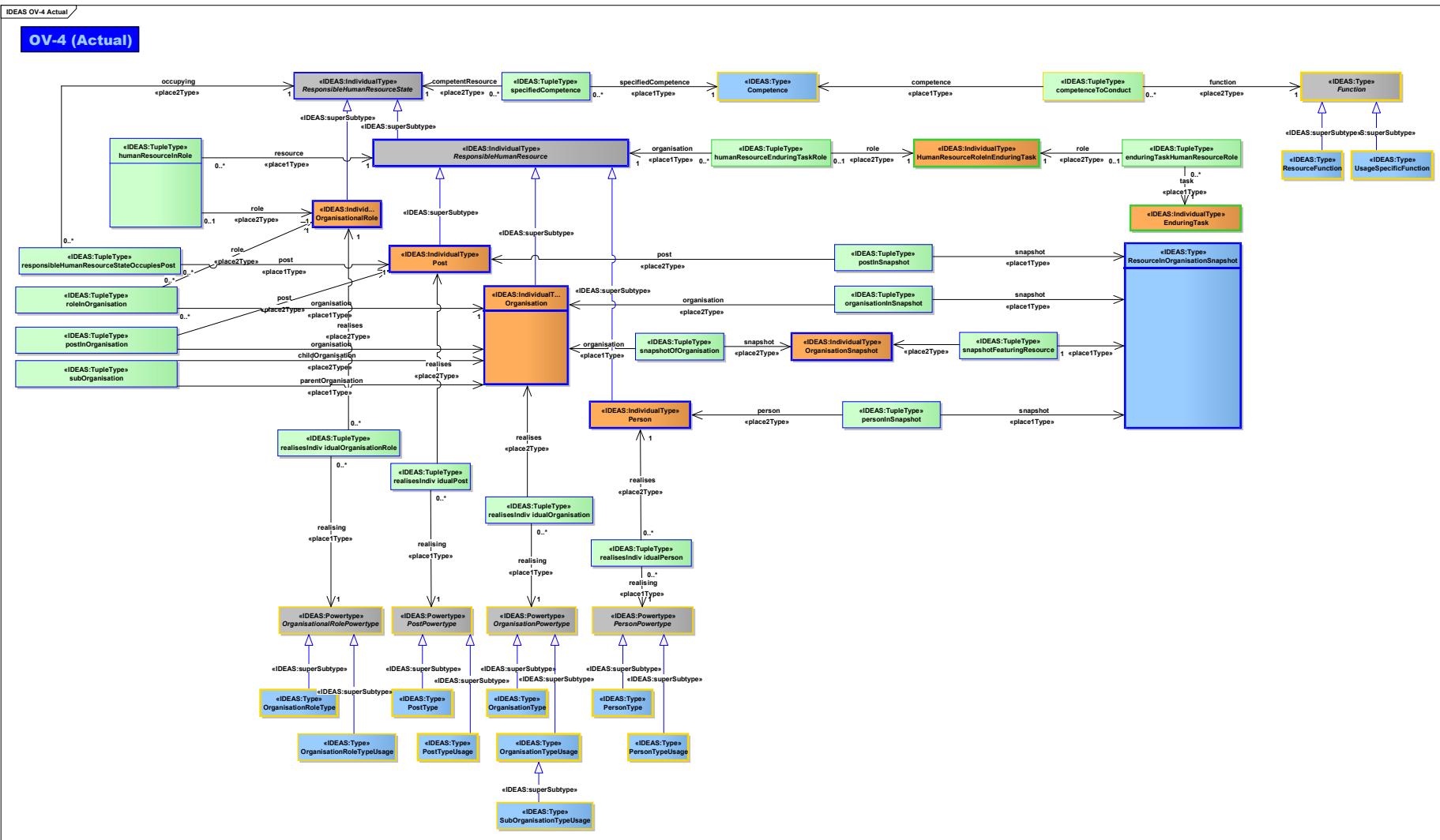
Figure 36 : OV-4 Actual

2.4.5   OV-5: Operational activity model
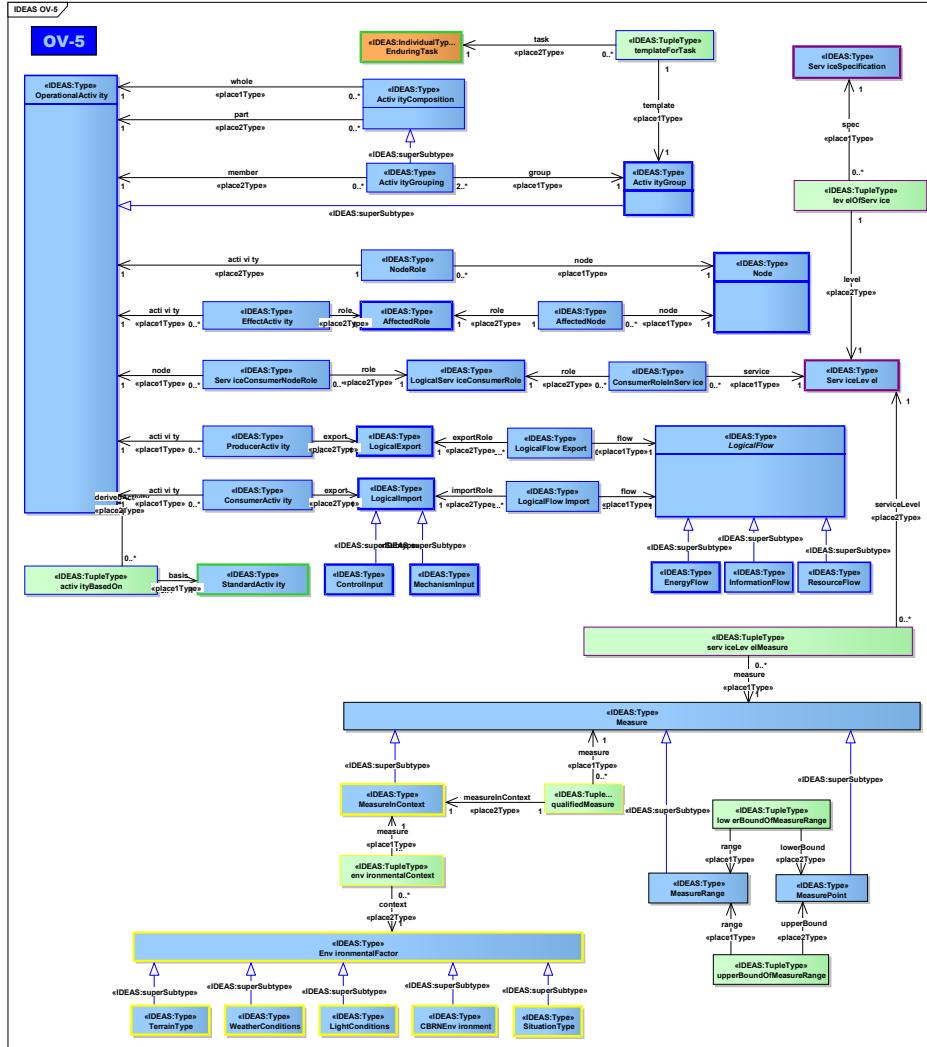
Figure 37 : OV-5

2.4.6   OV-6: Operational rules, state descriptions and event-trace description
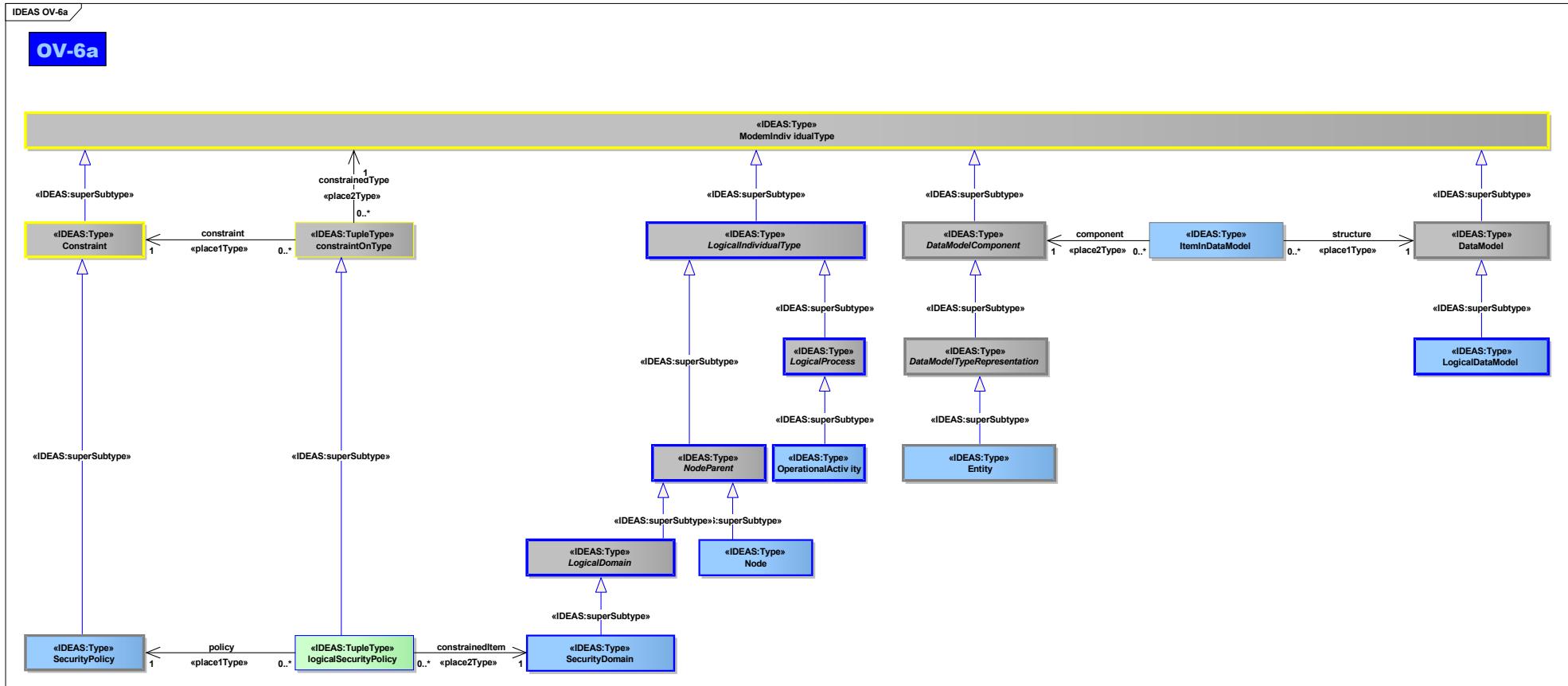
Figure 38 : OV-6a

# This document is no longer extant and has been withdrawn.
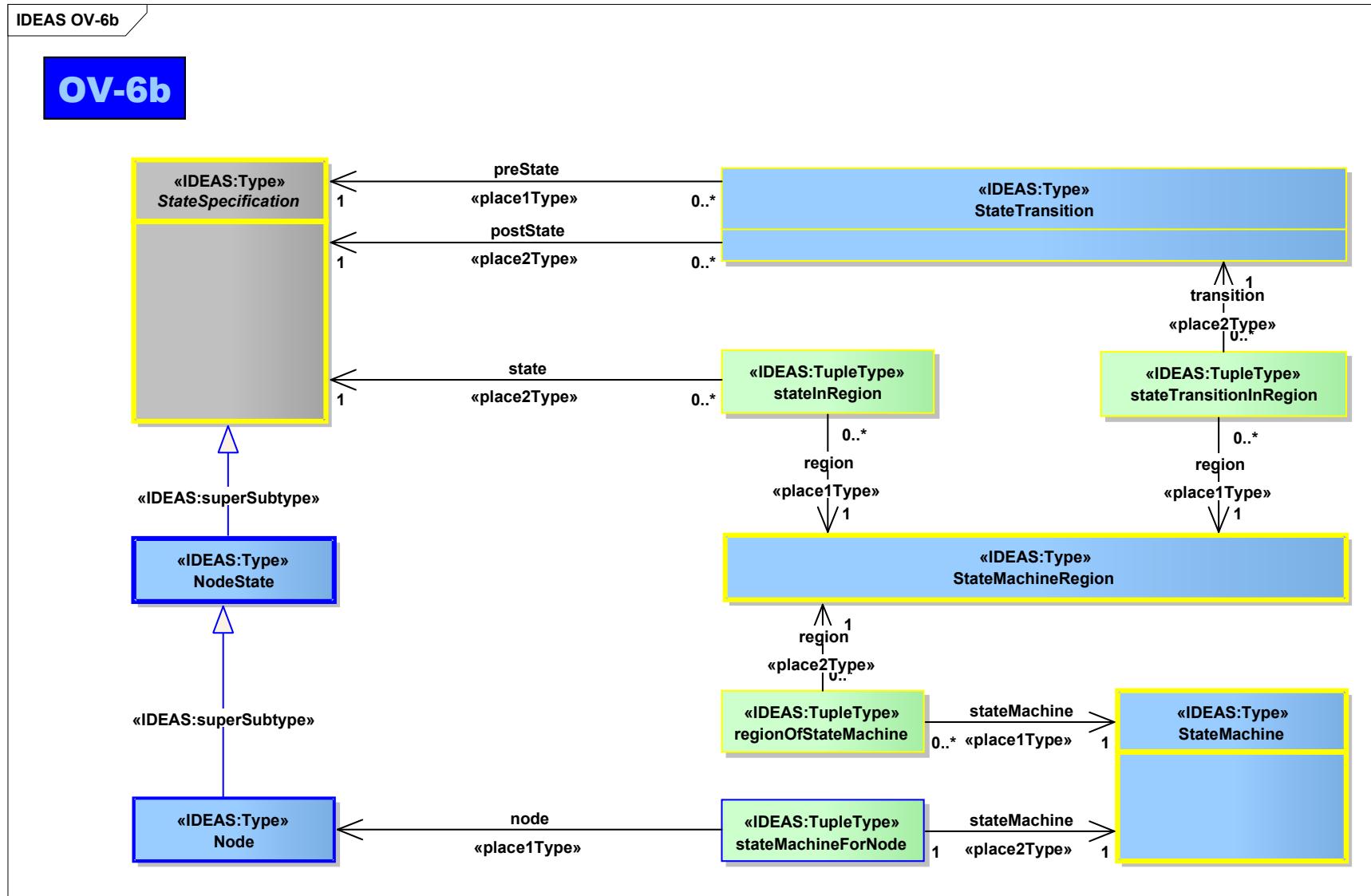
Figure 39 : OV-6b

**This document is no longer extant and has been withdrawn.**
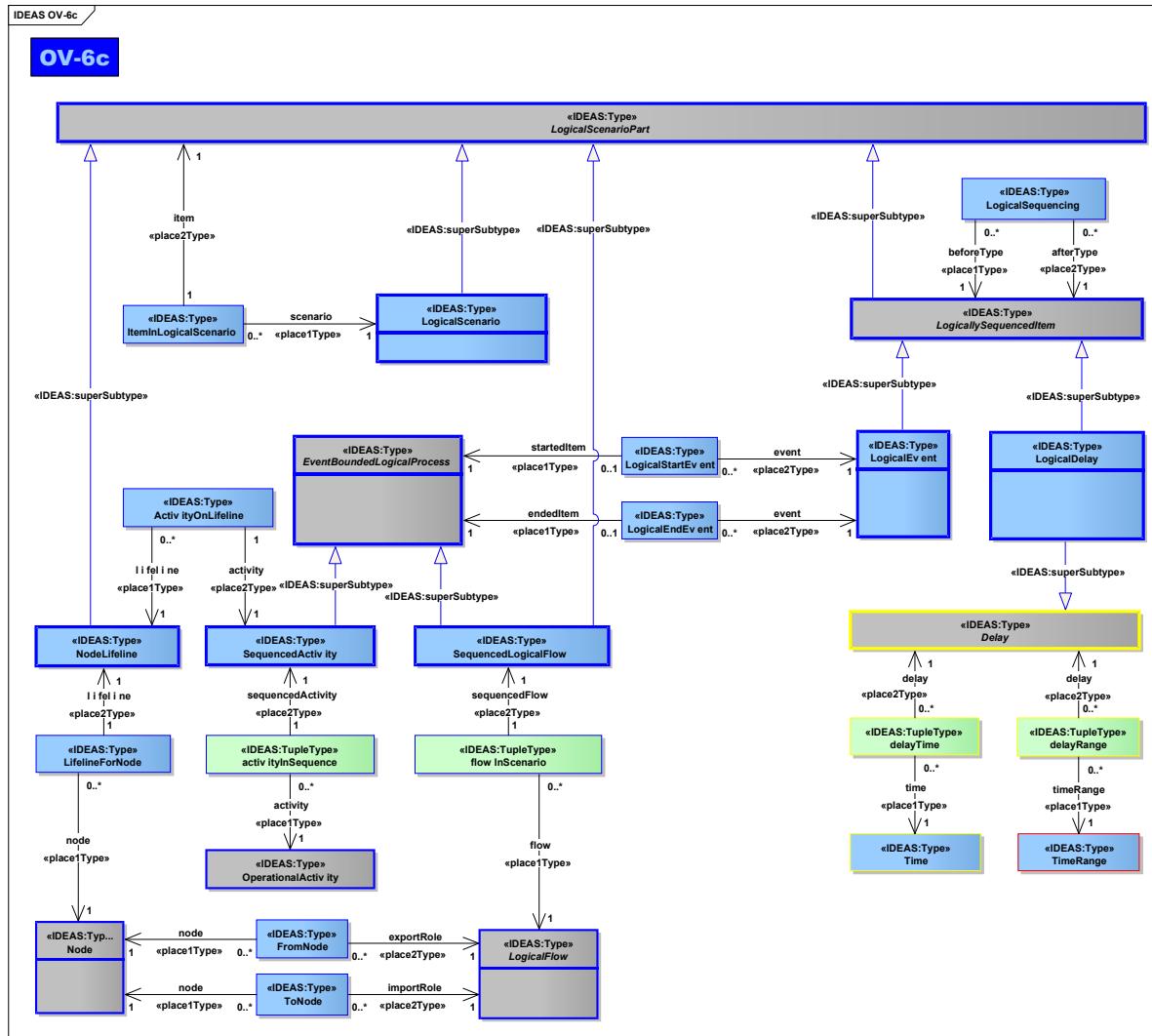
Figure 40 : OV-6c
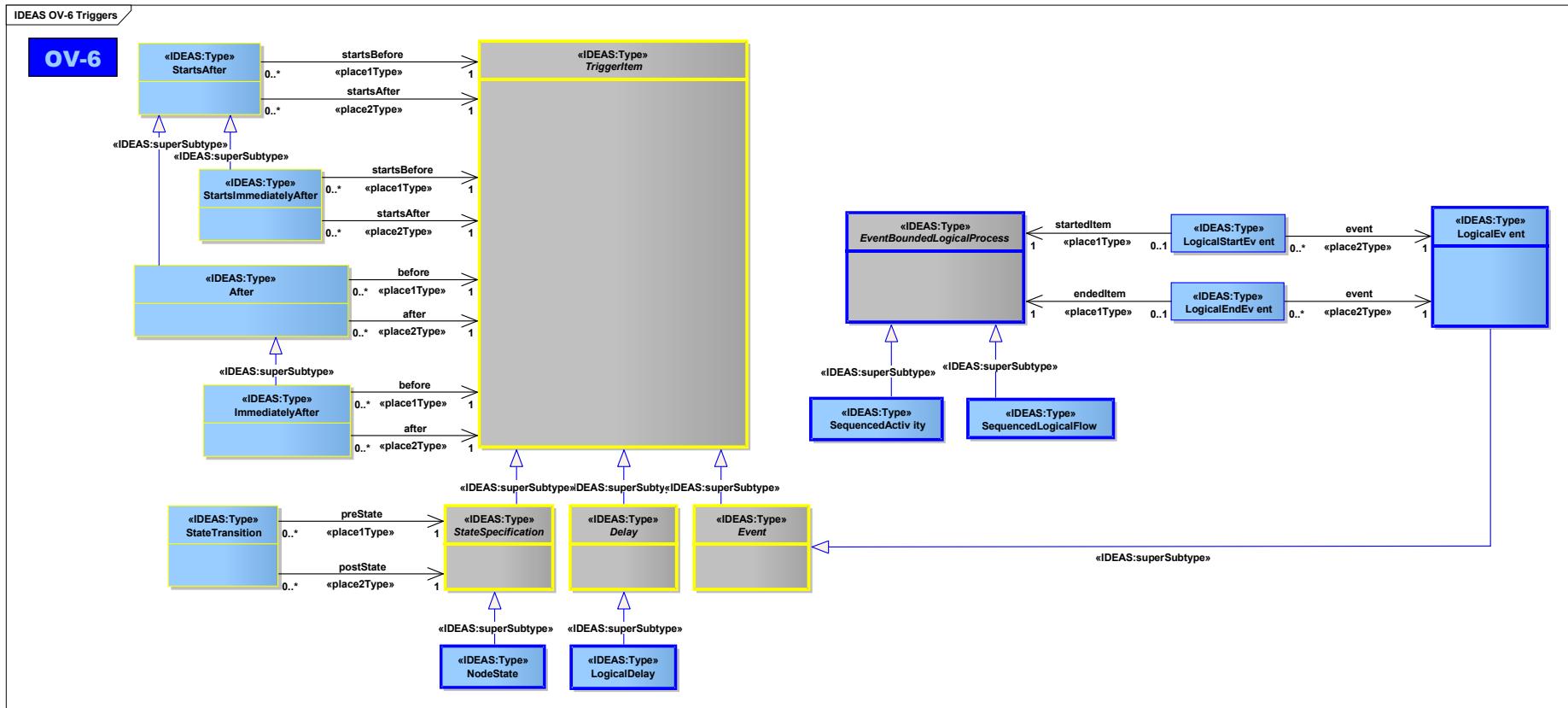
Figure 41 : OV-6 Triggers

2.4.7 OV-7: Information model
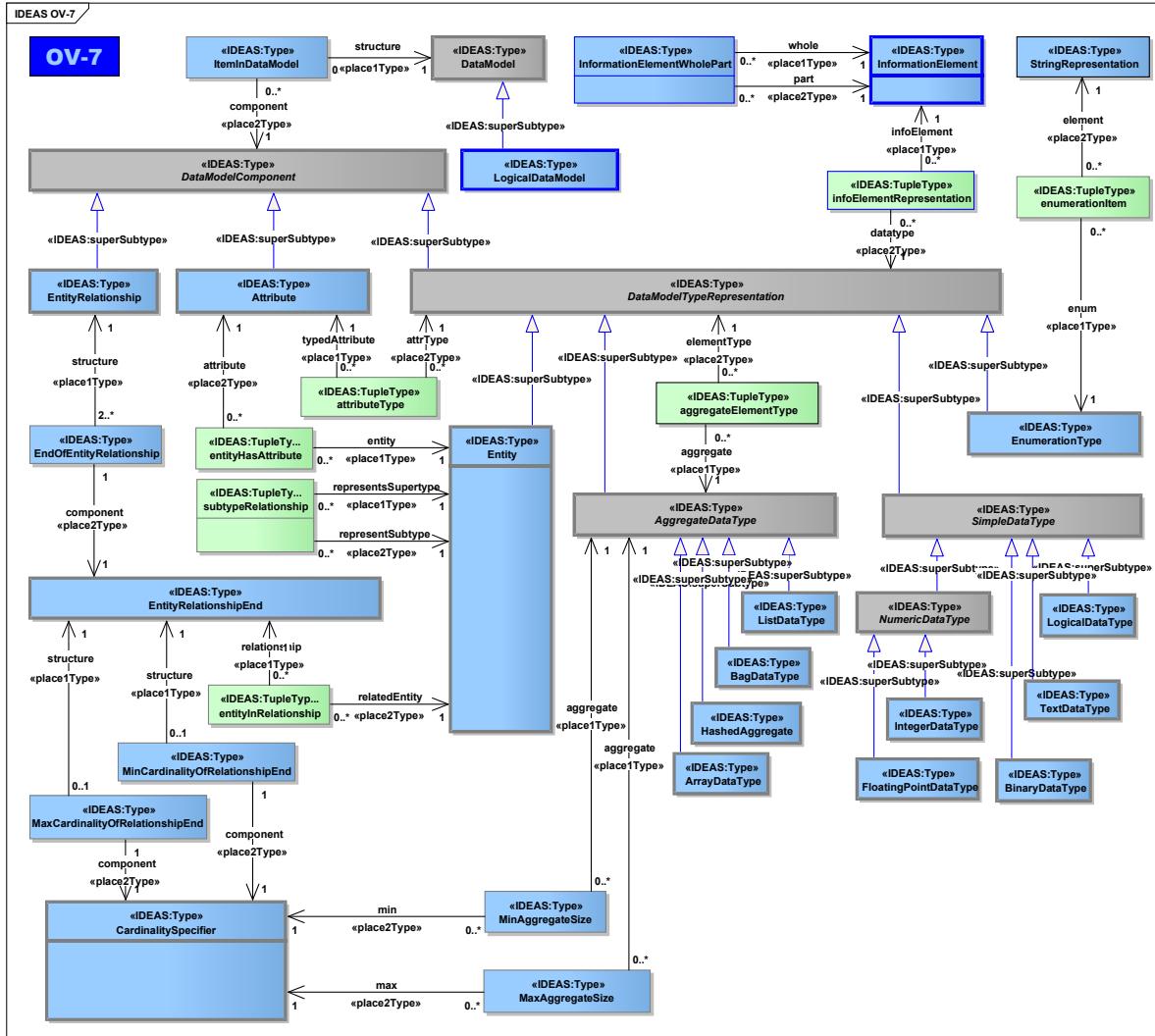
Figure 42 : OV-7

2.4.8   Operational Views elements list

Operational Views
Commands «IDEAS:Type» _Connectors:_ _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **Commands - ResourceCommunication** _Attributes:_ - **A ResourceCommunication where one ResponsibleHumanResourceTypeConfigurationUsage commands another.**
HumanResource «IDEAS:IndividualType» _Connectors:_ _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **HumanResource - HumanResourceState** _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **HumanResource - IndividualResource** _Dependency (element - is instance of):«IDEAS:powertypeInstance»_ **HumanResource - HumanResourcePowertype** _Attributes:_ - **An IndividualResource that is composed entirely of human resources. Note: was called "OrganisationalResource" in M3.**
Manager «IDEAS:IndividualType» _Connectors:_ _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **Manager - OrganisationalRole** _Attributes:_ - **An OrganisationalRole where the Person's role in the Organisation is as a Manager. Example: when the Organisation is a Project, the role would be as project manager.**
NodeRole «IDEAS:Type» _Connectors:_ _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **NodeRole - RoleInLogicalProcess** _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **NodeRole - ParticipationExtentType** _Dependency (element - is instance of):_ _Association (source - target):«place2Type»_ **NodeRole - OperationalActivity** _Association (source - target):«place1Type»_ **NodeRole - Node** _Attributes:_ - **A RoleInLogicalProcess which is the extent of a Node's participation in an OperationalActivity. Note: An OperationalActivity can only be conducted by one Node.**
OperationalActivity «IDEAS:Type» _Connectors:_ _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **OperationalActivity - LogicalProcess** _Attributes:_ - **A ProcessType that is a type of logical process, specified independently of how the process is carried out. Note: an OperationalActivity may only be carried out by a logical Node.**

OrganisationalRole «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
OrganisationalRole - HumanResource
Generalization (element - is a subtype of):«IDEAS:superSubtype»
OrganisationalRole - OrganisationPart
Dependency (element - is instance of):«IDEAS:powertypeInstance»
OrganisationalRole - OrganisationalRolePowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
OrganisationalRole - ConstructedHumanResource
Generalization (element - is a subtype of):«IDEAS:superSubtype»
OrganisationalRole - ResponsibleHumanResourceState
Attributes:
-
A ConstructedHumanResource that is the state of the ResponsibleHumanResource (that part of its life) where it has the role in an Organisation. Where a role carries the authority to undertake a function - though the human resource given the role has the responsibility.

Person «IDEAS:IndividualType»
Connectors:
Dependency (element - is instance of):«IDEAS:powertypeInstance»
Person - PersonPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
Person - ResponsibleHumanResource
Attributes:
-
An individual human being.

ResourceInOrganisationSnapshot «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceInOrganisationSnapshot - Doubleton
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceInOrganisationSnapshot - SetOfOverlappingIndividuals
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceInOrganisationSnapshot - ModemIndividualType
Attributes:
-
A SetOfOverlappingIndividuals whose members are an OrganisationSnapshot and

ResponsibleHumanResource «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResponsibleHumanResource - ResponsibleHumanResourceState
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResponsibleHumanResource - AgentCapableOfResponsibility
Dependency (element - is instance of):«IDEAS:powertypeInstance»
ResponsibleHumanResource - ResponsibleHumanResourcePowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResponsibleHumanResource - Stakeholder
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResponsibleHumanResource - HumanResource
Attributes:

This document is no longer extant and has been withdrawn.

- A Person, Post or Organisation. These can be held responsible for their actions, hence are responsible human resources.
ResponsibleHumanResourceState «IDEAS:IndividualType» *Connectors:* *Dependency (element - is instance of):«IDEAS:powertypeInstance»* **ResponsibleHumanResourceState - ResponsibleHumanResourceStatePowertype** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ResponsibleHumanResourceState - AgentCapableOfResponsibilityState** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ResponsibleHumanResourceState - ResponsibleHumanResourcePart** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ResponsibleHumanResourceState - IndividualResourceState** *Attributes:* - A temporal stage of a ResponsibleHumanResource.
ResponsibleOwner «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ResponsibleOwner - OrganisationalRole** *Attributes:* - An OrganisationProjectRole where the ResponsibleHumanResource is the responsible for the Organisation - e.g. a project owner.
ServiceConsumerNodeRole «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ServiceConsumerNodeRole - ProcessWholeRoleExtentPartType** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ServiceConsumerNodeRole - ModemWholePartType** *Association (source - target):«place1Type»* **ServiceConsumerNodeRole - OperationalActivity** *Association (source - target):«place2Type»* **ServiceConsumerNodeRole - LogicalServiceConsumerRole** *Attributes:* - A ProcessWholeRoleExtentType that relates an OperationalActivity to the role of a ServiceSpecification that supports it.
humanResourceInRole «IDEAS:TupleType» *Connectors:* *Dependency (element - is instance of):«IDEAS:powertypeInstance»* **humanResourceInRole - RoleBourneByResponsibleHumanResourcePowertype** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **humanResourceInRole - individualResourceUsage** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **humanResourceInRole - stateOfResponsibleHumanResourceState** *Association (source - target):«place1Type»* **humanResourceInRole - ResponsibleHumanResource** *Association (source - target):«place2Type»* **humanResourceInRole - OrganisationalRole** *Attributes:*

- A responsibleHumanResourceState relationship between the OrganisationRole and the ResponsibleHumanResource that bears the responsibility. Note: the OrganisationRole cannot be passed on. Instead, a new instance of the role is created.
personInSnapshot «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **personInSnapshot - resourceInSnapshot** *Association (source - target):«place2Type»* **personInSnapshot - Person** *Association (source - target):«place1Type»* **personInSnapshot - ResourceInOrganisationSnapshot** *Attributes:* - A resourceInSnapshot where the resource is a Person.
postInOrganisation «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **postInOrganisation - organisationWholePart** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **postInOrganisation - agentCapableOfResponsibilityWholeAndPart** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **postInOrganisation - individualResourceUsage** *Dependency (element - is instance of):«IDEAS:powertypeInstance»* **postInOrganisation - PostInOrganisationPowertype** *Association (source - target):«place1Type»* **postInOrganisation - Organisation** *Association (source - target):«place2Type»* **postInOrganisation - Post** *Attributes:* - An organisationWholePart that asserts a Post is part of an Organisation.
responsibleHumanResourceStateOccupiesPost «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **responsibleHumanResourceStateOccupiesPost - stateOfResponsibleHumanResourceState** *Dependency (element - is instance of):«IDEAS:powertypeInstance»* **responsibleHumanResourceStateOccupiesPost - ResponsibleHumanResourceStateOccupiesPostPowertype** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **responsibleHumanResourceStateOccupiesPost - individualResourceStateUsage** *Association (source - target):«place2Type»* **responsibleHumanResourceStateOccupiesPost - ResponsibleHumanResourceState** *Association (source - target):«place1Type»* **responsibleHumanResourceStateOccupiesPost - Post** *Attributes:* - A ResponsibleHumanResourceWholeState relationship between a Post and state of the ResponsibleHumanResource that is occupying the Post. Note: Any type of ResponsibleHumanResource's state can occupy a post.

roleInOrganisation «IDEAS:TupleType»
Connectors:
Dependency (element - is instance of):«IDEAS:powertypeInstance»
roleInOrganisation - RoleInOrganisationPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
roleInOrganisation - individualResourceUsage
Generalization (element - is a subtype of):«IDEAS:superSubtype»
roleInOrganisation - responsibleHumanResourceWholePart
Association (source - target):«place1Type»
roleInOrganisation - Organisation
Association (source - target):«place2Type»
roleInOrganisation - OrganisationalRole
Attributes:
-
A ResponsibleHumanResourceWholePart relationship between an Organisation and one of its OrganisationalRoles.

subOrganisation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
subOrganisation - individualResourceUsage
Generalization (element - is a subtype of):«IDEAS:superSubtype»
subOrganisation - organisationWholePart
Dependency (element - is instance of):«IDEAS:powertypeInstance»
subOrganisation - SubOrganisationPowertype
Association (source - target):«place2Type»
subOrganisation - Organisation
Association (source - target):«place1Type»
subOrganisation - Organisation
Attributes:
-
An organisationWholePart that asserts one Organisation is a component of another Organisation. Note: The childOrganisation is a component of the parentOrganisation, so this relation is not intended to model situations where a subsidiary Organisation moves from one parent to another.

ActivityComposition «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ActivityComposition - ProcessWholeAndPartType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ActivityComposition - TypicalWholePart
Association (source - target): «place2Type»
ActivityComposition - OperationalActivity
Association (source - target): «place1Type»
ActivityComposition - OperationalActivity
Attributes:
-
A TypicalWholePart that relates a parent (whole) OperationalActivity to its child (part).

ActivityGroup «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ActivityGroup - OperationalActivity
Attributes:

- An OperationalActivity that is entirely composed of other OperationalActivities.
ActivityGrouping «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ActivityGrouping - ActivityComposition** *Association (source - target):«place1Type»* **ActivityGrouping - ActivityGroup** *Association (source - target):«place2Type»* **ActivityGrouping - OperationalActivity** *Attributes:* - An ActivityComposition where the parent Activity is an ActivityGroup.
ActivityOnLifeline «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **ActivityOnLifeline - TypicalWholePart** *Association (source - target): «place2Type»* **ActivityOnLifeline - SequencedActivity** *Association (source - target): «place1Type»* **ActivityOnLifeline - NodeLifeline** *Attributes:* - A TypicalWholePart where a SequencedActivity is part of a NodeLifeline. Note: a given SequencedActivity may appear on one and only one NodeLifeline.
AffectedNode «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **AffectedNode - ModemWholePartType** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **AffectedNode - TypicalWholePart** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **AffectedNode - IndividualRoleType** *Association (source - target):«place1Type»* **AffectedNode - Node** *Association (source - target):«place2Type»* **AffectedNode - AffectedRole** *Attributes:* - An IndividualRoleType where the role extent is an AffectedRole and the whole is a Node.
AffectedRole «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **AffectedRole - ModemIndividualType** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **AffectedRole - RoleExtentType** *Attributes:* - A RoleExtentType that corresponds to the part of a Node affected by an Activity that acts upon it. Note: by "part", this includes temporal parts, so all of the Node may be affected for a period of time. This was

previously <<ActsUpon>> in M3.
Commanded «IDEAS:Type» _**Connectors:**_ _Generalization (element - is a subtype of):_**«IDEAS:superSubtype»** **Commanded - ResourceTypeExport** _Association (source - target):_**«place2Type»** **Commanded - Commands** _Association (source - target):_**«place1Type»** **Commanded - ResponsibleHumanResourceTypeConfigurationUsage** _**Attributes:**_ **-** **A ResourceTypeExport that asserts the ResponsibleHumanResourceTypeConfigurationUsage commanded participation in command.**
Commander «IDEAS:Type» _**Connectors:**_ _Generalization (element - is a subtype of):_**«IDEAS:superSubtype»** **Commander - ResourceTypeImport** _Association (source - target):_**«place2Type»** **Commander - Commands** _Association (source - target):_**«place1Type»** **Commander - ResponsibleHumanResourceTypeConfigurationUsage** _**Attributes:**_ **-** **A ResourceTypeExport that asserts the ResponsibleHumanResourceTypeConfigurationUsage participation as the commander in the command.**
ConstructedHumanResource «IDEAS:IndividualType» _**Connectors:**_ _Generalization (element - is a subtype of):_ **«IDEAS:superSubtype»** **ConstructedHumanResource - HumanResource** _**Attributes:**_ **-** **A HumanResource that is intentionally constructed. An OrganisationRole, Post, or Organisation.**
ConsumerActivity «IDEAS:Type» _**Connectors:**_ _Generalization (element - is a subtype of):_ **«IDEAS:superSubtype»** **ConsumerActivity - IndividualExchangeRoleType** _Generalization (element - is a subtype of):_ **«IDEAS:superSubtype»** **ConsumerActivity - ModemWholePartType** _Association (source - target):_ **«place1Type»** **ConsumerActivity - OperationalActivity** _Association (source - target):_ **«place2Type»** **ConsumerActivity - LogicalImport** _**Attributes:**_ **-** **An IndividualExchangeRoleType where an OperationalActivity is the consumer of a LogicalFlow.**

ConsumerRoleInService «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ConsumerRoleInService - AgentParticipationType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ConsumerRoleInService - ModemWholePartType
Association (source - target): «place2Type»
ConsumerRoleInService - LogicalServiceConsumerRole
Association (source - target): «place1Type»
ConsumerRoleInService - ServiceLevel
Attributes:
-
A AgentParticipationType that relates a ServiceSpecification to its role in supporting an OperationalActivity.

ControlInput «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ControlInput - LogicalImport
Attributes:
-
A LogicalImport where the imported LogicalFlow controls the OperationalActivity. Note: this exists to provide compatibility with IDEF0.

DomainInArchitecture «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
DomainInArchitecture - ModemWholePartType
Association (source - target):«place1Type»
DomainInArchitecture - LogicalArchitecture
Association (source - target):«place2Type»
DomainInArchitecture - LogicalDomain
Attributes:
-
A ModemWholePartType that asserts a LogicalDomain is part of a LogicalArchitecture.

EffectActivity «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
EffectActivity - TypicalWholePart
Generalization (element - is a subtype of):«IDEAS:superSubtype»
EffectActivity - ModemWholePartType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
EffectActivity - ProcessWholeRoleExtentPartType
Association (source - target):«place1Type»
EffectActivity - OperationalActivity
Association (source - target):«place2Type»
EffectActivity - AffectedRole
Attributes:
-
A ProcessWholeRoleExtentPartType where the ProcessType is an OperationalActivity.

EnergyFlow «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
EnergyFlow - LogicalFlow
Attributes:
-
A LogicalFlow where energy is transferred from one Node to another.

EventBoundedLogicalProcess «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
EventBoundedLogicalProcess - LogicalProcess
Attributes:
-
A LogicalProcess that can have LogicalEvents marking its start and end points.

FlowBundle «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
FlowBundle - TypicalWholePart
Generalization (element - is a subtype of):«IDEAS:superSubtype»
FlowBundle - ExchangeWholeAndPartType
Association (source - target):«place2Type»
FlowBundle - LogicalFlow
Association (source - target):«place1Type»
FlowBundle - FlowGroup
Attributes:
-
A TypicalWholePart where the whole is a FlowGroup and the part is a LogicalFlow.

FlowGroup «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
FlowGroup - LogicalFlow
Attributes:
-
A LogicalFlow that is composed of other LogicalFlows.

FlowInDomain «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
FlowInDomain - ModemWholePartType
Association (source - target):«place1Type»
FlowInDomain - LogicalDomain
Association (source - target):«place2Type»
FlowInDomain - LogicalFlow
Attributes:
-
A ModemWholePartType that asserts a LogicalFlow lies within an LogicalDomain.

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FlowedElement «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
FlowedElement - ModemIndividualType
Attributes:
-
A ModafIndividualType that can be flowed along a LogicalFlow.

FlowedElementRole «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
FlowedElementRole - ModemIndividualType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
FlowedElementRole - ExchangedItemRoleType
Attributes:
-
An ExchangedItemRoleType where a FlowedElement is exchanged along a LogicalFlow.

FromNode «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
FromNode - RoleInLogicalProcess
Association (source - target):«place2Type»
FromNode - LogicalFlow
Association (source - target):«place1Type»
FromNode - Node
Attributes:
-
An RoleInLogicalProcess where a LogicalFlow flows from a Node.

InformationElement «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
InformationElement - InformationInstanceType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
InformationElement - Information
Generalization (element - is a subtype of): «IDEAS:superSubtype»
InformationElement - FlowedElement
Attributes:
-
An InformationInstanceType that flows between OperationalActivities and Nodes. The structure of an InformationElement may be defined using a LogicalDataModel.

InformationElementWholePart «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
InformationElementWholePart - TypicalWholePart
Association (source - target): «place2Type»
InformationElementWholePart - InformationElement
Association (source - target): «place1Type»
InformationElementWholePart - InformationElement
Attributes:
-

A TypicalWholePart where one InformationElement is a part of another.
InformationFlow «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **InformationFlow - LogicalFlow** *Attributes:* **-** **A LogicalFlow where the FlowedElement is information.**
InformationRole «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **InformationRole - FlowedElementRole** *Attributes:* **-** **A FlowedElementRole where information is flowed.**
ItemInLogicalScenario «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ItemInLogicalScenario - ItemInScenario** *Association (source - target):* **«place2Type»** **ItemInLogicalScenario - LogicalScenarioPart** *Association (source - target):* **«place1Type»** **ItemInLogicalScenario - LogicalScenario** *Attributes:* **-** **An ItemInScenario where the item (part) is a LogicalScenarioItem and the scenario (whole) is a LogicalScenario.**
KnownResource «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **KnownResource - Node** *Attributes:* **-** **A ResourceType that plays a part in a LogicalArchitecture. Note: An OV-2 is meant to show logical interactions between nodes. However, sometimes it is known that a connection runs to/from a particular type of resource.**
LifelineForNode «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **LifelineForNode - StateOfNode** *Association (source - target):* **«place2Type»** **LifelineForNode - NodeLifeline** *Association (source - target):* **«place1Type»** **LifelineForNode - Node** *Attributes:* **-** **A StateOfNode that asserts that a NodeLifeLine is a typical temporal part of a Node.**

LogicalDataModel «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LogicalDataModel - DataModel
Attributes:
-
A DataModel that is a specification of business information requirements as a formal data structure, where relationships and classes (entities) are used to specify the logic which underpins the information.

LogicalDelay «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LogicalDelay - LogicallySequencedItem
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LogicalDelay - Delay
Attributes:
-
A LogicalSequencedItem that is part of a LogicalScenario that has a specified temporal extent, but an unspecified spatial extent.

LogicalDomain «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LogicalDomain - NodeParent
Attributes:
-
A NodeParent that is a collection of Nodes that share some common feature.

LogicalEndEvent «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
LogicalEndEvent - ModemTemporalWholePartType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LogicalEndEvent - EndBorderType
Association (source - target): **«place1Type»**
LogicalEndEvent - EventBoundedLogicalProcess
Association (source - target): **«place2Type»**
LogicalEndEvent - LogicalEvent
Attributes:
-
An EndtBorderType that relates a LogicallySequencedItem to the LogicalEvent that marks its end
Note: there may be no more than one LogicalEndEvent for a given LogicallySequencedItem.

LogicalEvent «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LogicalEvent - Event
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LogicalEvent - LogicallySequencedItem
Attributes:
-
An Event that marks the beginning or end of a LogicalActivity.

This document is no longer extant and has been withdrawn.

LogicalExport «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LogicalExport - SendType
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
LogicalExport - LogicalProcess
Attributes:
-
A SendType where a LogicalFlow exports from a Node or OperationalActivity. Note: this is the equivalent of OpActivityOutputPin in M3.

LogicalFlow «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LogicalFlow - LogicalProcess
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LogicalFlow - ExchangeType
Attributes:
-
An ExchangeType that flows between OperationalActivities and/or Nodes.

LogicalFlowExport «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
LogicalFlowExport - ModemWholePartType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LogicalFlowExport - SendInExchangeType
Association (source - target): **«place2Type»**
LogicalFlowExport - LogicalExport
Association (source - target): **«place1Type»**
LogicalFlowExport - LogicalFlow
Attributes:
-
A SendInExchangeType where a LogicalFlow exports from a Node or OperationalActivity.

LogicalFlowImport «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
LogicalFlowImport - ModemWholePartType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LogicalFlowImport - ReceiveInExchangeType
Association (source - target): **«place1Type»**
LogicalFlowImport - LogicalFlow
Association (source - target): **«place2Type»**
LogicalFlowImport - LogicalImport
Attributes:
-
A ReceiveInExchangeType where a LogicalFlow imports to a Node or OperationalActivity.

LogicalImport «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
LogicalImport - ReceiveType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
LogicalImport - LogicalProcess
Attributes:
-
A ReceiveType where a LogicalFlow imports to a Node or OperationalActivity. Note: this is the equivalent of OpActivityInputPin in M3.

LogicalIndividualType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
LogicalIndividualType - ModemIndividualType
Attributes:
-
A ModemIndividualType that is specified independently of any implemenation mechanism (i.e. without specifying the ResourceType).

LogicalProcess «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
LogicalProcess - ProcessType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
LogicalProcess - LogicalIndividualType
Attributes:
-
A ProcessType used to specify functionality without being specific about the type of Resource that provides the functionality.

LogicalScenario «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
LogicalScenario - LogicalScenarioPart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
LogicalScenario - Scenario
Attributes:
-
A Scenario that does not specify particular ResourceTypes - i.e. one that consists of Nodes and LogicalProcesses.

LogicalScenarioPart «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
LogicalScenarioPart - LogicalIndividualType
Attributes:
-
A LogicalIndividualType that is part of a LogicalScenario - note this can include other LogicalScenarios.

LogicalSequencing «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
LogicalSequencing - ImmediateBeforeAfterType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
LogicalSequencing - ModemThing
Association (source - target): «place2Type»

LogicalSequencing - LogicallySequencedItem *Association (source - target): «place1Type»* **LogicalSequencing - LogicallySequencedItem** *Attributes:* - **An ImmediateBeforeAfterType that asserts one LogicallySequencedItem occurs immediately after the other.**
LogicalServiceConsumerRole «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **LogicalServiceConsumerRole - ModemIndividualType** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **LogicalServiceConsumerRole - ParticipationExtentType** *Attributes:* - **A ParticipationExtentType which is the extent of an OperationalActivity's participation in as the consumer of a ServiceSpecification.**
LogicalStartEvent «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **LogicalStartEvent - ModemTemporalWholePartType** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **LogicalStartEvent - StartBorderType** *Association (source - target): «place2Type»* **LogicalStartEvent - LogicalEvent** *Association (source - target): «place1Type»* **LogicalStartEvent - EventBoundedLogicalProcess** *Attributes:* - **A StartBorderType that relates an EventBoundedLogicalProcess to the LogicalEvent that marks its start. Note: there may be no more than one LogicalStartEvent for a given EventBoundedLogicalProcess.**
LogicallySequencedItem «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **LogicallySequencedItem - LogicalScenarioPart** *Attributes:* - **A LogicalScenarioPart which may be temporally ordered using LogicalSequencing.**
MechanismInput «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **MechanismInput - LogicalImport** *Attributes:* - **A LogicalImport where the imported LogicalFlow provides a mechanism for conducting the OperationalActivity. Note: this exists to provide compatibility with IDEF0.**
Needline «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **Needline - FlowGroup** *Attributes:* -

A FlowGroup that is a bundle of LogicalFlows between Nodes.
Node «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Node - NodeState
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Node - BodyType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Node - NodeParent
Attributes:
-
A NodeState that is used in context of a NodeParent.
NodeEnvironment «IDEAS:Type»
Connectors:
Association (source - target):«place1Type»
NodeEnvironment - EnvironmentalFactor
Association (source - target):«place2Type»
NodeEnvironment - Node
Generalization (element - is a subtype of):«IDEAS:superSubtype»
NodeEnvironment - TypicalWholePart
Attributes:
-
A TypicalWholePart that indicates an of EnvironmentalFactor of the environment in which the Node will operate.
NodeLifeline «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
NodeLifeline - NodeState
Generalization (element - is a subtype of): «IDEAS:superSubtype»
NodeLifeline - LogicalScenarioPart
Attributes:
-
A NodeState whose extent is defined by a LogicalScenario.
NodeParent «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
NodeParent - AgentType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
NodeParent - LogicalIndividualType
Attributes:
-
A LogicalIndividualType that is any type of thing that has parts that are Nodes.
NodeState «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
NodeState - LogicalIndividualType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
NodeState - StateSpecification
Attributes:

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- A LogicalIndividualType that is a type of state that a Node can be in. This includes the limit case of the whole-life state type - i.e. the Node itself.
NodeUsage «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* NodeUsage - ModemWholePartType *Generalization (element - is a subtype of): «IDEAS:superSubtype»* NodeUsage - AgentWholeAndPartType *Association (source - target): «place2Type»* NodeUsage - Node *Association (source - target): «place1Type»* NodeUsage - NodeParent *Attributes:* - An AgentWholeAndPartType where a NodeParent has a Node as a part.
Organisation «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* Organisation - OrganisationState *Dependency (element - is instance of): «IDEAS:powertypeInstance»* Organisation - OrganisationPowertype *Generalization (element - is a subtype of): «IDEAS:superSubtype»* Organisation - ConstructedHumanResource *Generalization (element - is a subtype of): «IDEAS:superSubtype»* Organisation - Undertaking *Generalization (element - is a subtype of):«IDEAS:superSubtype»* Organisation - ResponsibleHumanResource *Attributes:* - A ConstructedHumanResource which is an Organisation.
OrganisationPart «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* OrganisationPart - ResponsibleHumanResourcePart *Generalization (element - is a subtype of): «IDEAS:superSubtype»* OrganisationPart - UndertakingPart *Attributes:* - A ResponsibleHumanResourcePart that is part of an Organisation.
OrganisationSnapshot «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* OrganisationSnapshot - OrganisationPart *Attributes:* - An OrganisationPart that is a timeslice of an Organisation or part of an Organisation (i.e. and incomplete snapshot) at a particular point in time. Note: most org charts represent a OrganisationSnapshot.

OrganisationState «IDEAS:IndividualType»
Connectors:
Dependency (element - is instance of):«IDEAS:powertypeInstance»
OrganisationState - OrganisationStatePowertype
Generalization (element - is a subtype of): «IDEAS:superSubtype»
OrganisationState - OrganisationPart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
OrganisationState - ResponsibleHumanResourceState
Generalization (element - is a subtype of): «IDEAS:superSubtype»
OrganisationState - UndertakingState
Attributes:
-
A ResponsibleHumanResourceState which is a temporal part of an Organisation.

Post «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
Post - ResponsibleHumanResource
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Post - OrganisationPart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Post - ConstructedHumanResource
Dependency (element - is instance of): «IDEAS:powertypeInstance»
Post - PostPowertype
Attributes:
-
A ConstructedHumanResource that is a position in an Organisation that may be filled wholly or partly by a ResponsibleHumanResource; in other words, by an Organisation, Person or Post. As the position is in the Organisation, it is a part of the Organisation.

ProblemDomain «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProblemDomain - LogicalDomain
Attributes:
-
A LogicalDomain that contains (has parts that are) those Nodes which may be realised by physical resources specified in SV-1. There may be more than one alternative solution for a given ProblemDomain specified as a set of SV suites. There may be only one ProblemDomain in a LogicalArchitecture.

ProducerActivity «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProducerActivity - IndividualExchangeRoleType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProducerActivity - ModemWholePartType
Association (source - target): «place1Type»
ProducerActivity - OperationalActivity
Association (source - target): «place2Type»
ProducerActivity - LogicalExport
Attributes:
-
An IndividualExchangeRoleType where the involved ProcessType is an OperationalActivity that is the producer of a LogicalFlow.

ResourceFlow «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **ResourceFlow - LogicalFlow**   *Attributes:*   **-**   **A LogicalFlow where the flowed element is a ResourceType.**
ResourceFlowRole «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **ResourceFlowRole - FlowedElementRole**   *Attributes:*   **-**   **A FlowedElementRole where a ResourceType is flowed.**
ResponsibleHumanResourcePart «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ResponsibleHumanResourcePart - ModemIndividualElement**   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ResponsibleHumanResourcePart - AgentCapableOfResponsibilityPart**   *Attributes:*   **-**   **An AgentCapableOfResponsibilityPart that is a part of a ResponsibleHumanResource.**
RoleInFlow «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **RoleInFlow - TypicalWholePart**   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **RoleInFlow - ExchangedItemRoleInExchangeType**   *Association (source - target):* «place1Type»   **RoleInFlow - LogicalFlow**   *Association (source - target):* «place2Type»   **RoleInFlow - FlowedElementRole**   *Attributes:*   **-**   **An ExchangedItemRoleInExchangeType where the role in exchange is a LogicalFlow.**
RoleInInformationFlow «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **RoleInInformationFlow - RoleInFlow**   *Association (source - target):* «place1Type»   **RoleInInformationFlow - InformationFlow**   *Association (source - target):* «place2Type»   **RoleInInformationFlow - InformationRole**   *Attributes:*   **-**   **A RoleInFlow where Information is being flowed.**

This document is no longer extant and has been withdrawn.

RoleInLogicalProcess «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleInLogicalProcess - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleInLogicalProcess - CapableOfType
Association (source - target):«place1Type»
RoleInLogicalProcess - Node
Association (source - target):«place2Type»
RoleInLogicalProcess - LogicalProcess
Attributes:
-
A CapableOfType that asserts that a Node conducts a LogicalProcess.

RoleInResourceFlow «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
RoleInResourceFlow - RoleInFlow
Association (source - target): «place1Type»
RoleInResourceFlow - ResourceFlow
Association (source - target): «place2Type»
RoleInResourceFlow - ResourceFlowRole
Attributes:
-
A RoleInFlow where a ResourceType is being flowed.

RoleOfFlowedElement «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
RoleOfFlowedElement - IndividualRoleAsExchangedItemType
Association (source - target): «place1Type»
RoleOfFlowedElement - FlowedElement
Association (source - target): «place2Type»
RoleOfFlowedElement - FlowedElementRole
Attributes:
-
An IndividualRoleAsExchangedItemType where a FlowedElement is exchanged.

RoleOfInformation «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
RoleOfInformation - RoleOfFlowedElement
Association (source - target): «place1Type»
RoleOfInformation - InformationElement
Association (source - target): «place2Type»
RoleOfInformation - InformationRole
Attributes:
-
A RoleOfFlowedElement where the flowed element is Information.

RoleOfResourceInFlow «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
RoleOfResourceInFlow - RoleOfFlowedElement
Association (source - target): «place1Type»
RoleOfResourceInFlow - ResourceType
Association (source - target): «place2Type»
RoleOfResourceInFlow - ResourceFlowRole
Attributes:
-
A RoleOfFlowedElement where the flowed element is ResourceType.

SecurityDomain «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SecurityDomain - LogicalDomain
Attributes:
-
A LogicalDomain whose parts all share a common SecurityPolicy.

SequencedActivity «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SequencedActivity - EventBoundedLogicalProcess
Attributes:
-
A LogicalProcess that is the typical useage of an OperationalActivity in a NodeLifeLine.

SequencedLogicalFlow «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SequencedLogicalFlow - EventBoundedLogicalProcess
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SequencedLogicalFlow - LogicalScenarioPart
Attributes:
-
A LogicalProcess that is the typical useage of a LogicalFlow between two NodeLifeLines.

StateOfNode «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
StateOfNode - TypicalTemporalWholePart
Association (source - target): «place2Type»
StateOfNode - NodeState
Association (source - target): «place1Type»
StateOfNode - Node
Attributes:
-
A TypicalTemporalWholePart that relates a Node to a NodeState.

This document is no longer extant and has been withdrawn.

ToNode «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ToNode - RoleInLogicalProcess
Association (source - target):«place2Type»
ToNode - LogicalFlow
Association (source - target):«place1Type»
ToNode - Node
Attributes:
-
An RoleInLogicalProcess where a LogicalFlow flows to a Node.

TrustLine «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
TrustLine - LogicalFlow
Attributes:
-
A LogicalFlow that asserts that the trusting Party (either a Node or a KnownResource) trusts the trustedParty to a given level (indicated by the level attribute). Note: No unit of measure is associated with the level
- security architects must define their own scale of trust levels for a given architecture or set of architectures.

activityBasedOn «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
activityBasedOn - modemIndividualTypeSpecialisation
Association (source - target):«place1Type»
activityBasedOn - StandardActivity
Association (source - target):«place2Type»
activityBasedOn - OperationalActivity
Attributes:
-
A modemIndividualTypeSpecialisation that asserts and OperationalActivity is based on a StandardActivity - e.g. a specialist usage of doctrine.

activityInSequence «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
activityInSequence - modemIndividualTypeSpecialisation
Association (source - target): «place1Type»
activityInSequence - OperationalActivity
Association (source - target): «place2Type»
activityInSequence - SequencedActivity
Attributes:
-
A modemIndividualTypeSpecialisation that relates an OperationaActivity to its usage (as a SequencedActivity) on a NodeLifeLine. Note: A SequencedActivity is based on only one OperationaActivity.

capabilityForNode «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
capabilityForNode - BodyTypeSuperSubType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
capabilityForNode - modemIndividualTypeSpecialisation
Association (source - target): «place1Type»

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capabilityForNode - Capability
Association (source - target): «place2Type»
capabilityForNode - Node
Attributes:
-
A BodyTypeSuperSubType that asserts that a Node exhibits or is required to exhibit a Capability.

flowInScenario «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
flowInScenario - modemIndividualTypeSpecialisation
Association (source - target): «place1Type»
flowInScenario - LogicalFlow
Association (source - target): «place2Type»
flowInScenario - SequencedLogicalFlow
Attributes:
-
A modemIndividualTypeSpecialisation that relates a LogicalFlow to its usage (as a SequencedLogicalFlow) in a LogicalScenario. Note: A SequencedLogicalFlow is based on only one LogicalFlow.

infoElementRepresentation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
infoElementRepresentation - representedByDataType
Association (source - target): «place2Type»
infoElementRepresentation - DataModelTypeRepresentation
Association (source - target): «place1Type»
infoElementRepresentation - InformationElement
Attributes:
-
A representedByDataType that asserts an InformationElement is represented by a DataModelTypeRepresentation.

logicalFlowMeasure «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
logicalFlowMeasure - measureOfType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
logicalFlowMeasure - logicalFlowProperty
Association (source - target): «place2Type»
logicalFlowMeasure - LogicalFlow
Association (source - target): «place1Type»
logicalFlowMeasure - MeasureableProperty
Attributes:
-
A logicalFlowProperty and a measureOfType - i.e. an assignment of a MeasureableProperty to a LogicalFlow.

logicalFlowProperty «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
logicalFlowProperty - ModemThing
Generalization (element - is a subtype of): «IDEAS:superSubtype»
logicalFlowProperty - propertyOfType
Association (source - target): «place2Type»

logicalFlowProperty - LogicalFlow
Association (source - target): «place1Type»
logicalFlowProperty - Property
Attributes:
-
A propertyOfType where the Property applies to a LogicalFlow.

logicalSecurityPolicy «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
logicalSecurityPolicy - constraintOnType
Association (source - target):«place2Type»
logicalSecurityPolicy - SecurityDomain
Association (source - target):«place1Type»
logicalSecurityPolicy - SecurityPolicy
Attributes:
-
A constraintOnType that sets the security policy for LogicalIndividualType.

nodeLocation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
nodeLocation - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
nodeLocation - couple
Association (source - target):«place1Type»
nodeLocation - Location
Association (source - target):«place2Type»
nodeLocation - Node
Attributes:
-
A couple used to assert the Location at/ in which a Node resides. Note: given that OV-2 is a logical model, more often than not, the environment rather than the actual location should be specified - i.e. use NodeEnvironment.

organisationInSnapshot «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
organisationInSnapshot - resourceInSnapshot
Association (source - target): «place1Type»
organisationInSnapshot - ResourceInOrganisationSnapshot
Association (source - target): «place2Type»
organisationInSnapshot - Organisation
Attributes:
-
A resourceInSnapshot where the resource is an Organisation.

postInOrganisation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
postInOrganisation - organisationWholePart
Generalization (element - is a subtype of):«IDEAS:superSubtype»
postInOrganisation - agentCapableOfResponsibilityWholeAndPart

Generalization (element - is a subtype of):«IDEAS:superSubtype»
postInOrganisation - individualResourceUsage
Dependency (element - is instance of):«IDEAS:powertypeInstance»
postInOrganisation - PostInOrganisationPowertype
Association (source - target):«place1Type»
postInOrganisation - Organisation
Association (source - target):«place2Type»
postInOrganisation - Post

Attributes:
-
An organisationWholePart that asserts a Post is part of an Organisation.

postInSnapshot «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
postInSnapshot - resourceInSnapshot
Association (source - target): «place1Type»
postInSnapshot - ResourceInOrganisationSnapshot
Association (source - target): «place2Type»
postInSnapshot - Post
Attributes:
-
A resourceInSnapshot where the resource is a Post.

realisesIndividualOrganisation «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
realisesIndividualOrganisation - OrganisationPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
realisesIndividualOrganisation - realisesIndividualResource
Association (source - target):«place2Type»
realisesIndividualOrganisation - Organisation
Attributes:
-
A realisesIndividualResource that asserts a type of organisation is realised by an organisation.

realisesIndividualOrganisationRole «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
realisesIndividualOrganisationRole - OrganisationalRolePowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
realisesIndividualOrganisationRole - realisesIndividualResource
Association (source - target):«place2Type»
realisesIndividualOrganisationRole - OrganisationalRole
Attributes:
-
A realisesIndividualResource that asserts a type of organisation role is realised by an organisation role.

realisesIndividualPerson «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
realisesIndividualPerson - PersonPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
realisesIndividualPerson - realisesIndividualResource
Association (source - target):«place2Type»
realisesIndividualPerson - Person
Attributes:
-
A realisesIndividualResource that asserts a type of person is realised by a person.

realisesIndividualPost «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
realisesIndividualPost - PostPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
realisesIndividualPost - realisesIndividualResource
Association (source - target):«place2Type»
realisesIndividualPost - Post
Attributes:
-
A realisesIndividualResource that asserts a type of post is realised by a post.

realisesIndividualResource «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
realisesIndividualResource - modemIndividualTypeInstance
Association (source - target):«place1Type»
realisesIndividualResource - IndividualResourcePowertype
Association (source - target):«place2Type»
realisesIndividualResource - IndividualResource
Attributes:
-
A modemIndividualTypeInstance that asserts a type of Resource is realised by a resource.

requiredMeasureOfPerformance «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
requiredMeasureOfPerformance - measureOfType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
requiredMeasureOfPerformance - ModemThing
Association (source - target):«place1Type»
requiredMeasureOfPerformance - Measure
Association (source - target):«place2Type»
requiredMeasureOfPerformance - Node
Attributes:
-
A measureOfType that asserts a Node is required to achieve a level of performance specified by a Measure.

resourceInSnapshot «IDEAS:TupleType»
Connectors:
Association (source - target): «place1Type»
resourceInSnapshot - ResourceInOrganisationSnapshot
Association (source - target): «place2Type»
resourceInSnapshot - HumanResource
Generalization (element - is a subtype of): «IDEAS:superSubtype»
resourceInSnapshot - doubletonTypeInstance
Generalization (element - is a subtype of): «IDEAS:superSubtype»
resourceInSnapshot - overlapTypeIndividualInstance
Generalization (element - is a subtype of): «IDEAS:superSubtype»
resourceInSnapshot - modemIndividualTypeInstance
Attributes:
-
An overlapTypeIndividualInstance where the instance is an OrganisationalResource.

responsibleHumanResourceWholePart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
responsibleHumanResourceWholePart - individualResourceWholePart
Generalization (element - is a subtype of):«IDEAS:superSubtype»
responsibleHumanResourceWholePart - agentCapableOfResponsibilityWholePart
Association (source - target):«place2Type»
responsibleHumanResourceWholePart - ResponsibleHumanResourcePart
Association (source - target):«place1Type»
responsibleHumanResourceWholePart - ResponsibleHumanResource
Attributes:
-
An agentCapableOfResponsibilityWholePart relationship between an OrganisationRole and the Organisation within which it has the role.

snapshotFeaturingResource «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
snapshotFeaturingResource - overlapTypeIndividualInstance
Generalization (element - is a subtype of): «IDEAS:superSubtype»
snapshotFeaturingResource - doubletonTypeInstance
Association (source - target): «place1Type»
snapshotFeaturingResource - ResourceInOrganisationSnapshot
Association (source - target): «place2Type»
snapshotFeaturingResource - OrganisationSnapshot
Generalization (element - is a subtype of): «IDEAS:superSubtype»
snapshotFeaturingResource - modemIndividualTypeInstance
Attributes:
-
An overlapTypeIndividualInstance where the instance is an OrganisationSnapshot.

snapshotOfOrganisation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
snapshotOfOrganisation - organisationWholePart
Association (source - target): **«place1Type»**
snapshotOfOrganisation - Organisation
Association (source - target): **«place2Type»**
snapshotOfOrganisation - OrganisationSnapshot
Attributes:
-
An organisationWholePart where the whole is an Organisation and the part is an OrganisationSnapshot.

specifiedCompetence «IDEAS:TupleType»
Connectors:
Association (source - target):**«place2Type»**
specifiedCompetence - ResponsibleHumanResourceState
Generalization (element - is a subtype of):**«IDEAS:superSubtype»**
specifiedCompetence - ModemThing
Association (source - target):**«place1Type»**
specifiedCompetence - Competence
Generalization (element - is a subtype of):**«IDEAS:superSubtype»**
specifiedCompetence - couple
Attributes:
-
A modemIndividualTypeSpecialisation that asserts an ResponsibleHumanResourceState is specified to have a Competence. Note: Was called "actualCompetence" in M3.

stateMachineForNode «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
stateMachineForNode - appliedStateMachine
Generalization (element - is a subtype of):**«IDEAS:superSubtype»**
stateMachineForNode - ModemThing
Association (source - target): **«place1Type»**
stateMachineForNode - Node
Association (source - target): **«place2Type»**
stateMachineForNode - StateMachine
Attributes:
-
An appliedStateMachine that relates a Node to its state machine.

stateOfResponsibleHumanResourceState «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):**«IDEAS:superSubtype»**
stateOfResponsibleHumanResourceState - agentCapableOfResponsibilityWholeState
Association (source - target):**«place2Type»**
stateOfResponsibleHumanResourceState - ResponsibleHumanResourceState
Generalization (element - is a subtype of):**«IDEAS:superSubtype»**
stateOfResponsibleHumanResourceState - individualResourceState
Generalization (element - is a subtype of):**«IDEAS:superSubtype»**
stateOfResponsibleHumanResourceState - responsibleHumanResourceWholePart
Association (source - target):**«place1Type»**
stateOfResponsibleHumanResourceState - ResponsibleHumanResource

Attributes: - **An agentCapableOfResponsibilityWholeState relationship between a ResponsibleHumanResource and its ResponsibleHumanResourceState.**
templateForTask «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **templateForTask - modemIndividualTypeInstance** *Association (source - target):*«place2Type» **templateForTask - EnduringTask** *Association (source - target):*«place1Type» **templateForTask - ActivityGroup** *Attributes:* - **A modemIndividualTypeInstance that relates an EnduringTask to an EnduringTaskTemplate that specifies it.**
trustLevel «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **trustLevel - ModemThing** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **trustLevel - representedBy** *Association (source - target):*«place2Type» **trustLevel - IntegerRepresentation** *Association (source - target):*«place1Type» **trustLevel - TrustLine** *Attributes:* - **A representedBy that uses an IntegerRepresentation to specify an arbitrary level of trust between the Nodes connected by a Trustline.**
typeOfKnownResource «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **typeOfKnownResource - modemIndividualTypeSpecialisation** *Association (source - target):*«place2Type» **typeOfKnownResource - KnownResource** *Association (source - target):*«place1Type» **typeOfKnownResource - ResourceType** *Attributes:* - **A modemIndividualTypeSpecialisation where a KnownResource is a subtype of a ResourceType.**

2.4.9   Operational Views additional diagrams.
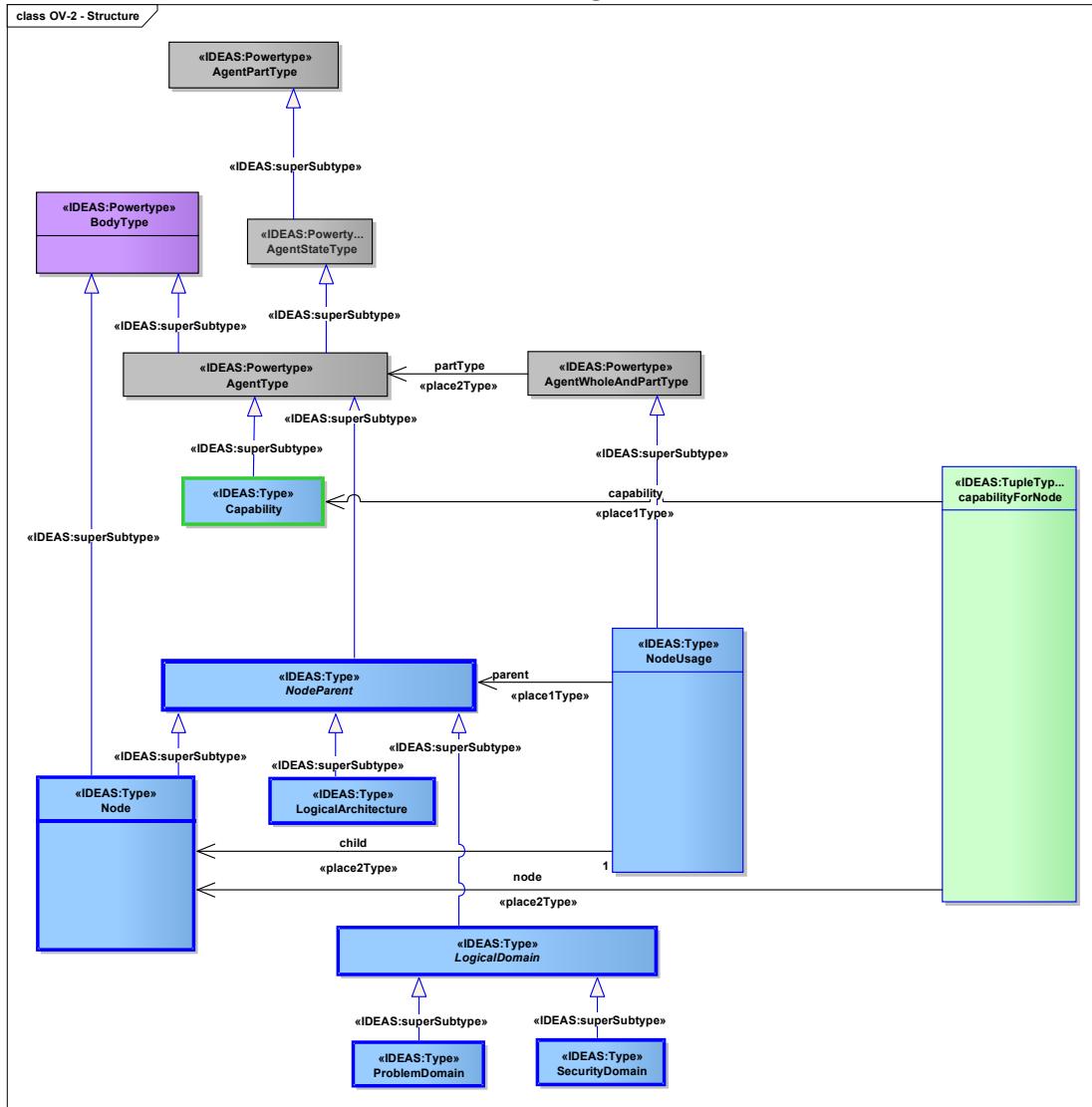
Figure 43 : OV-2 Structure

This document is no longer extant and has been withdrawn.
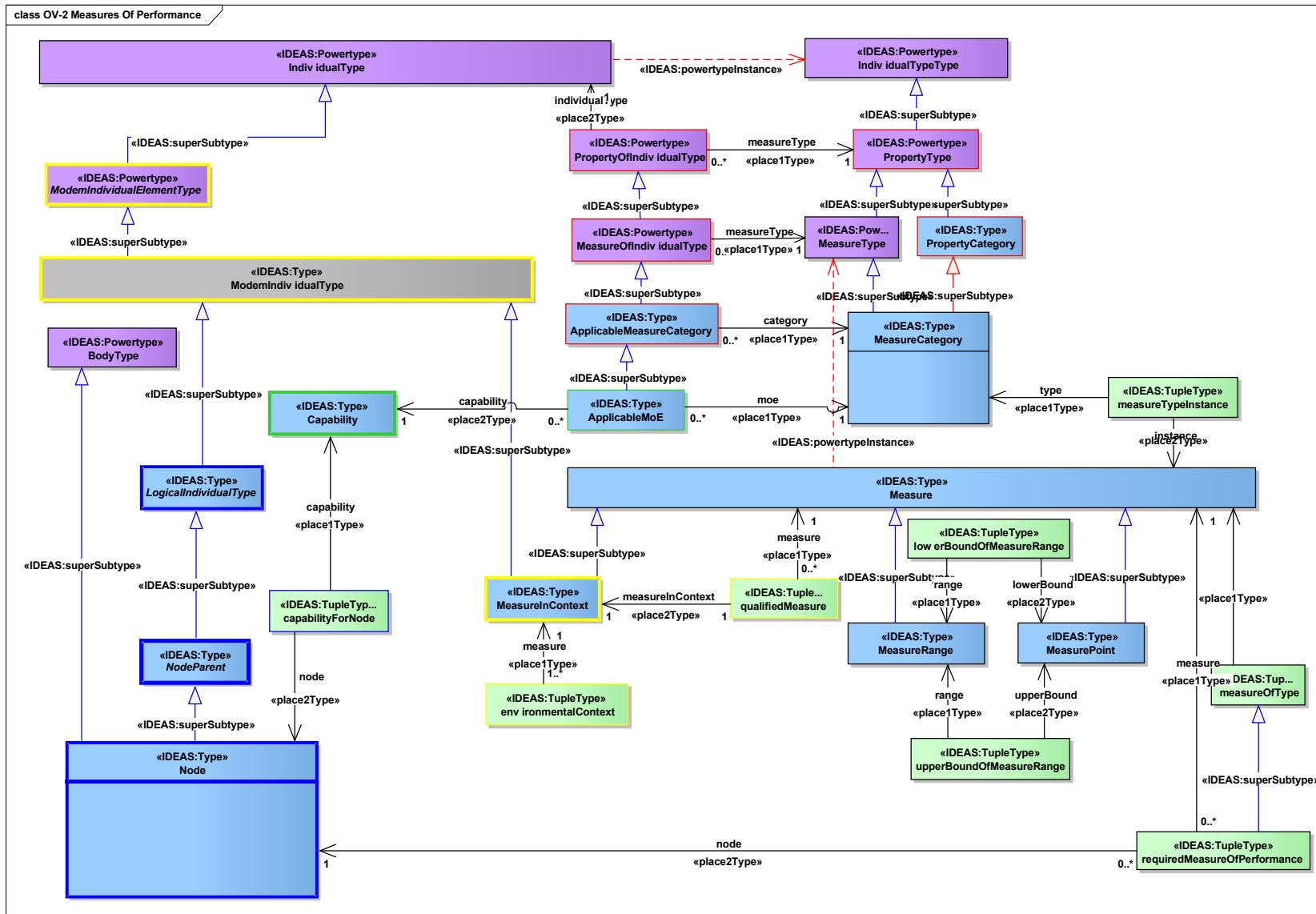

Figure 44 : Measures of performance
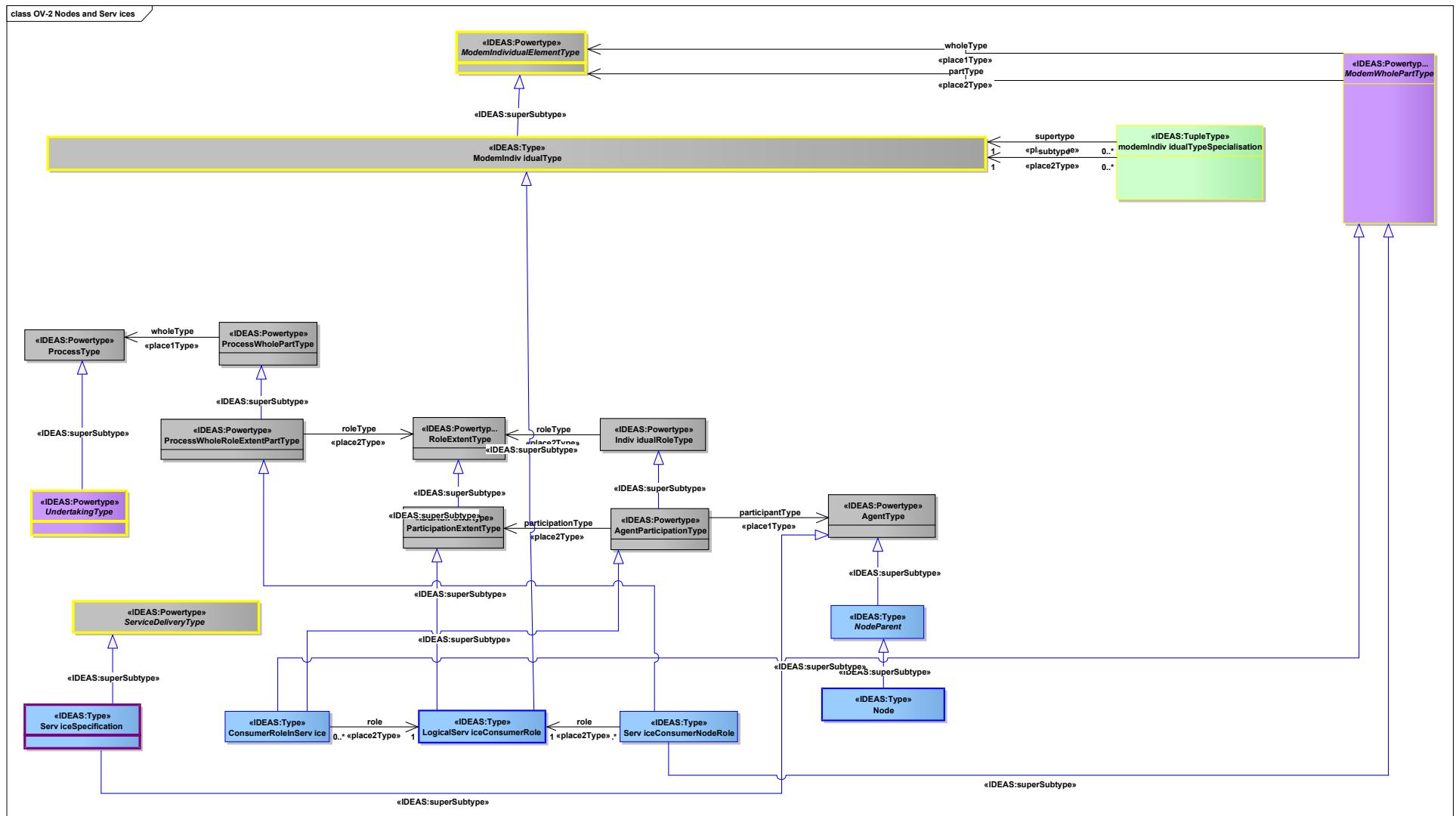
Figure 45 : Nodes and Services

This document is no longer extant and has been withdrawn.
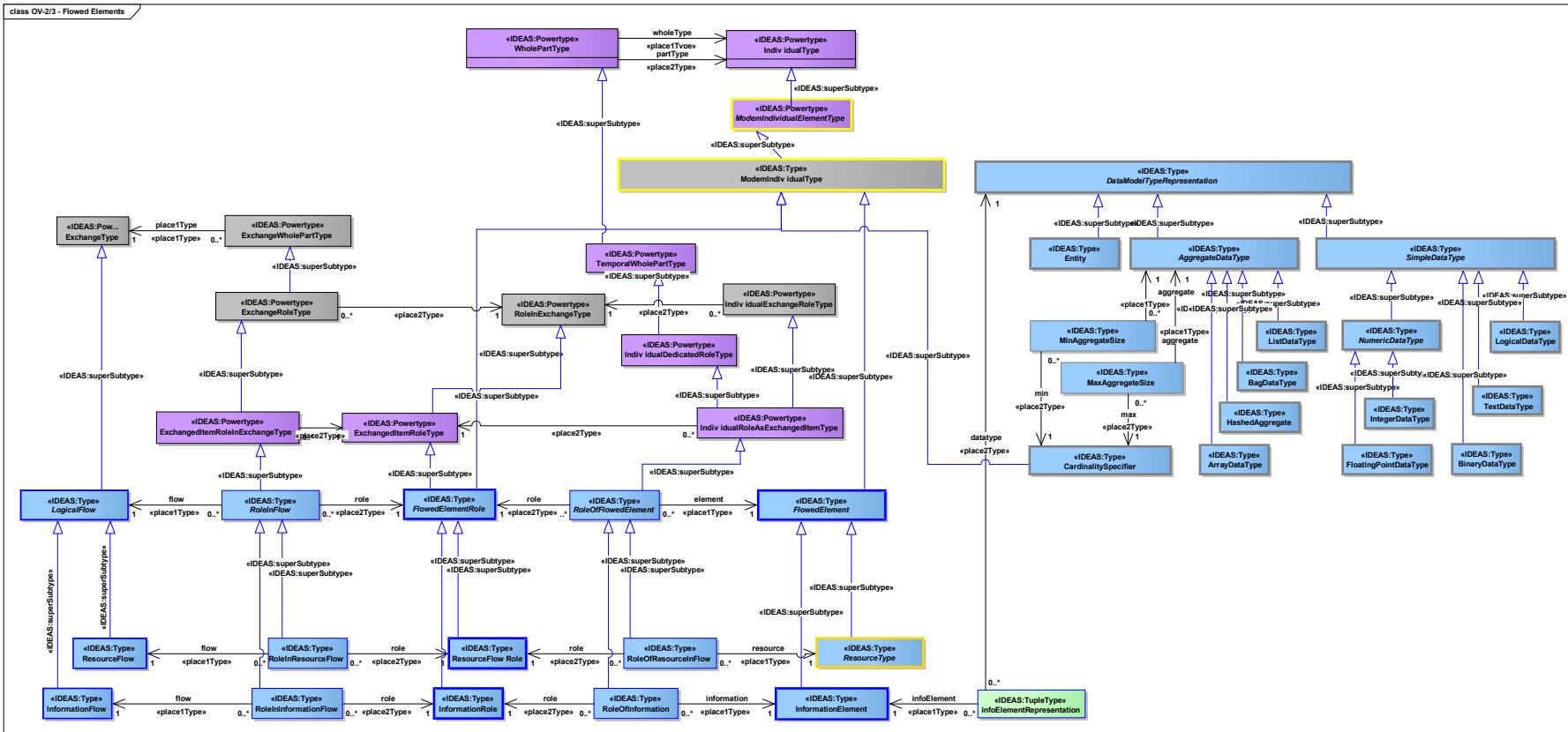
Figure 46 : OV-2/3 – Flowed Elements
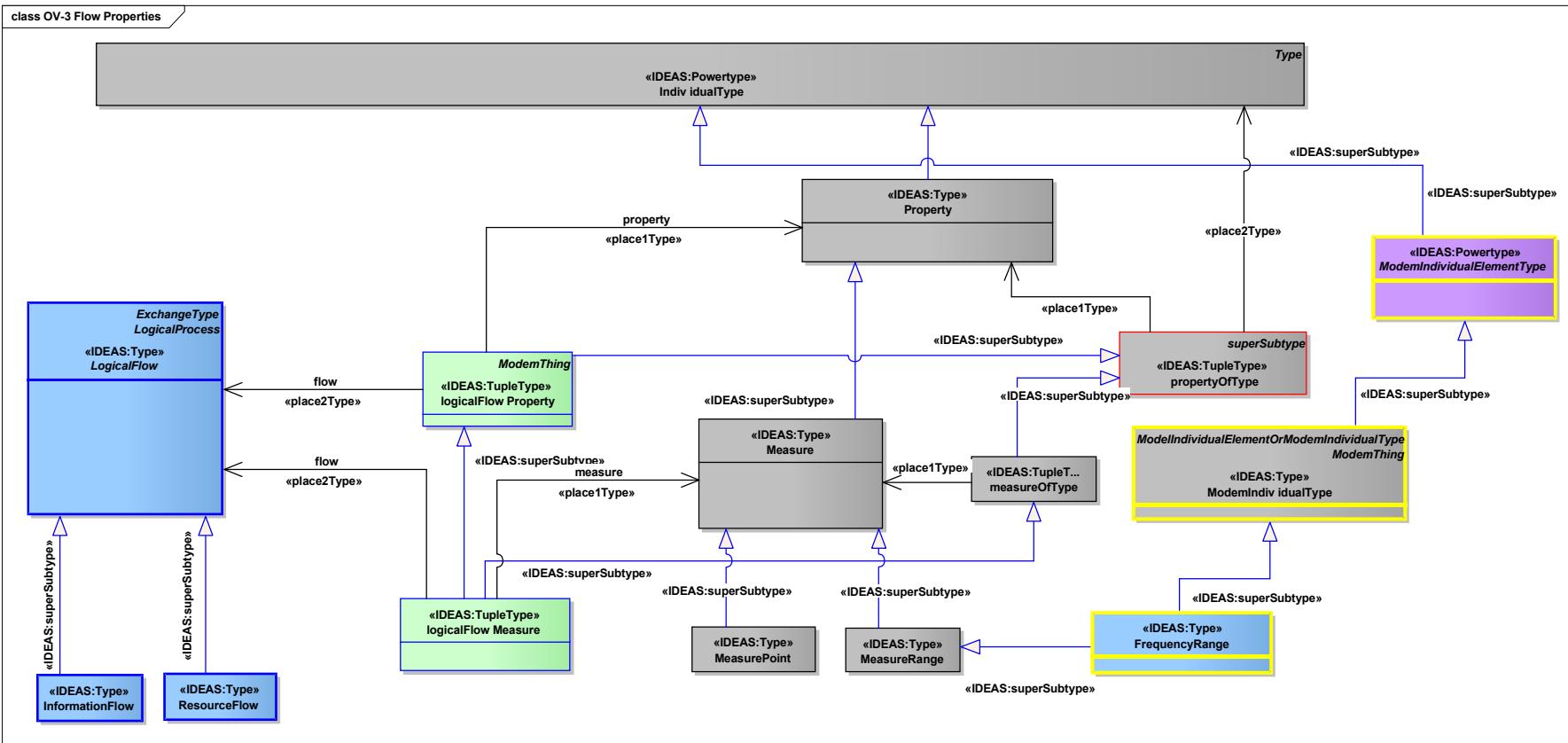
Figure 47 : Flow Properties

This document is no longer extant and has been withdrawn.

class OV-3/7 Information

«IDEAS:IndividualType»
Indiv idual

— — «IDEAS:powertypeInstance» — — →

«IDEAS:Powertype»
Indiv idualType

↑ «IDEAS:superSubtype»

«IDEAS:IndividualType»
SymbolOrSymbolString

— — «IDEAS:powertypeInstance» — — →

«IDEAS:Powertype»
SymbolOrSymbolStringType

↑ «IDEAS:superSubtype»

↑ «IDEAS:superSubtype»

«IDEAS:IndividualType»
Sign

— «IDEAS:powertypeInstance» →

«IDEAS:Powertype»
SignType

«IDEAS:Type»
DataElement

↑ «IDEAS:superSubtype»

↑ «IDEAS:superSubtype»

↑ «IDEAS:superSubtype»

«IDEAS:superSubtype»

«IDEAS:Type»
Representation

↑ «IDEAS:superSubtype»

«IDEAS:Type»
Information

«IDEAS:IndividualType»
InformationInstance

— — «IDEAS:powertypeInstance» — — →

«IDEAS:Powertype»
InformationInstanceType

«IDEAS:Type»
DataModelComponent

↑ «IDEAS:superSubtype»

↑ «IDEAS:superSubtype»

«IDEAS:Type»
InformationElement

Figure 48 : OV-3/7 Information
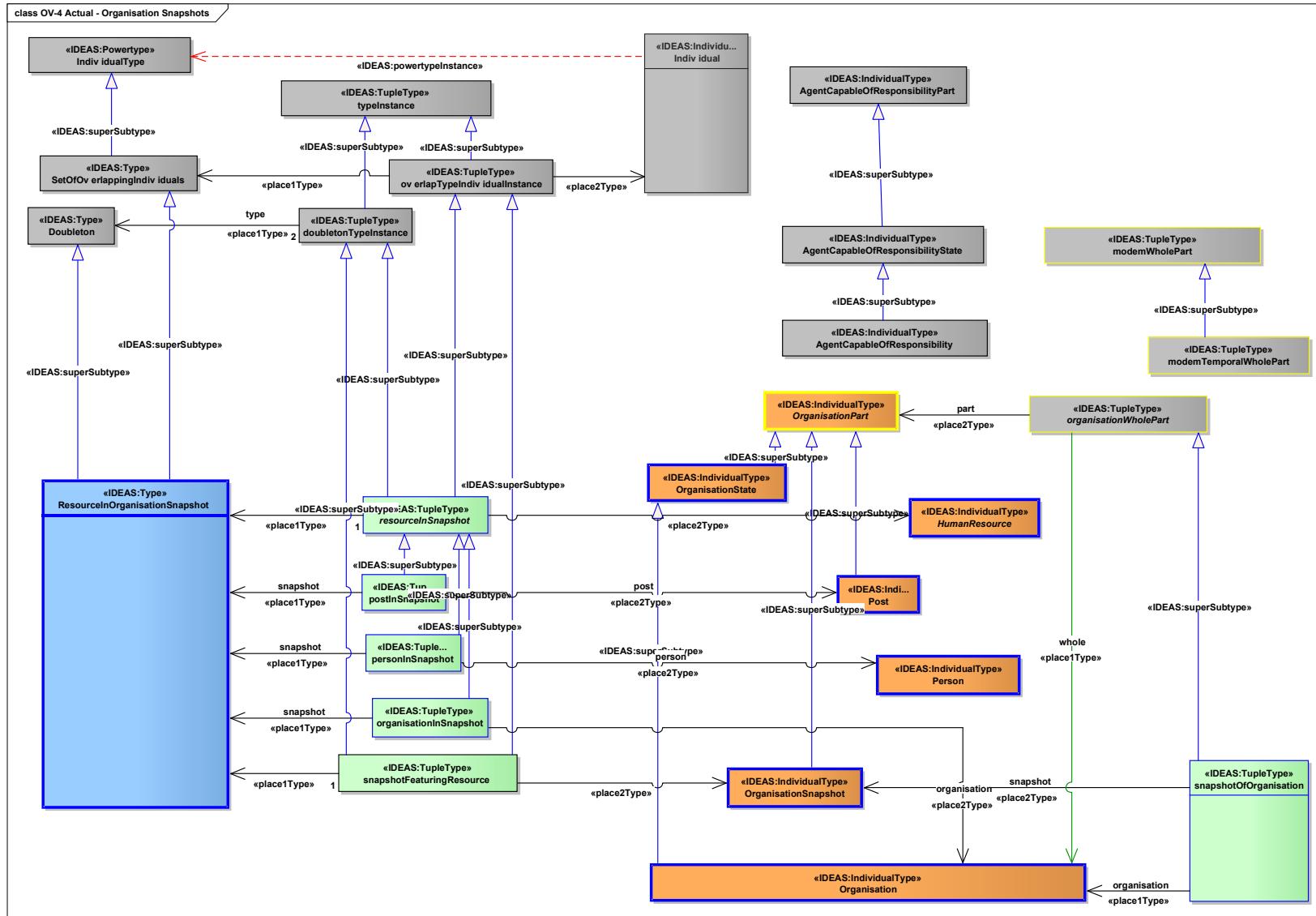
Figure 49 : OV-4 Actual Organisation Snapshots
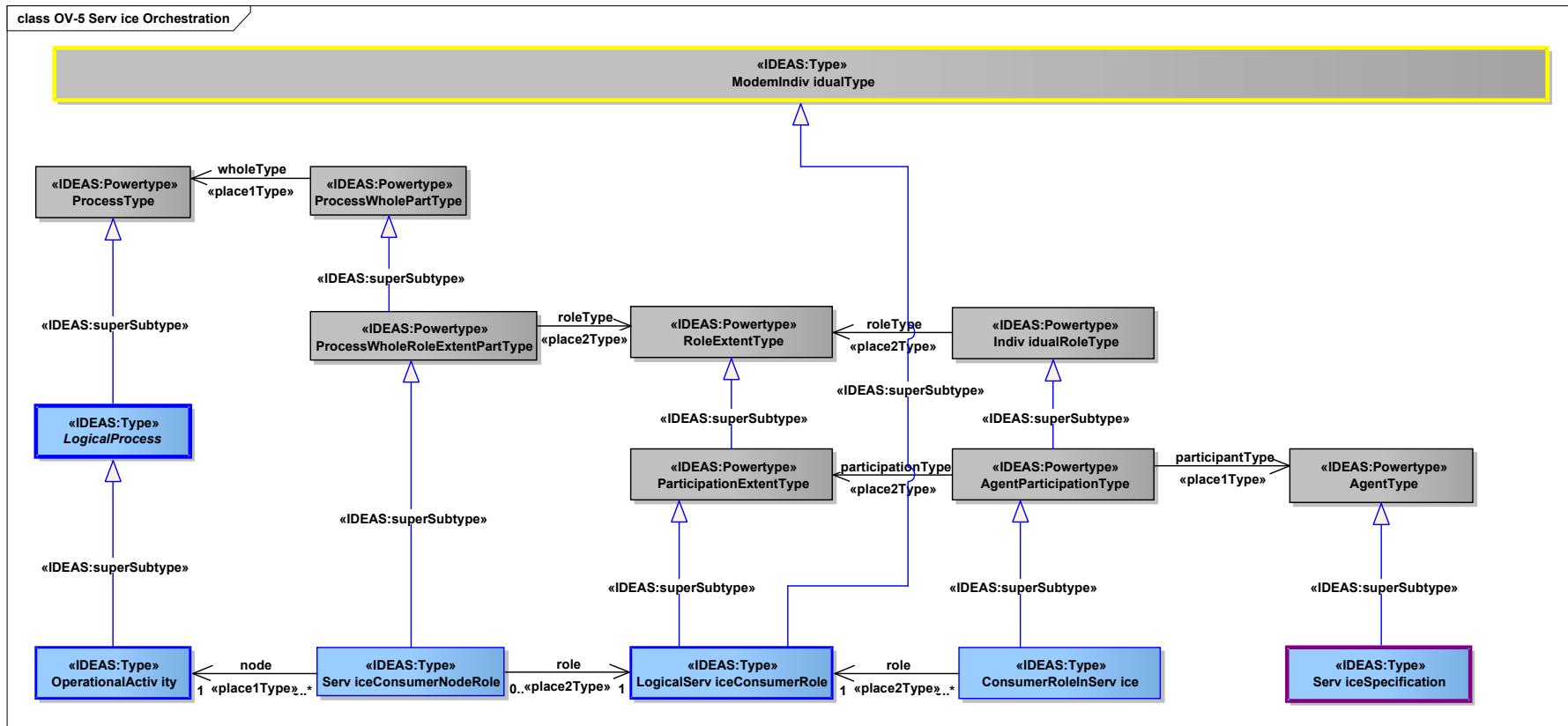
Figure 50 : OV-5 Service Orchestration
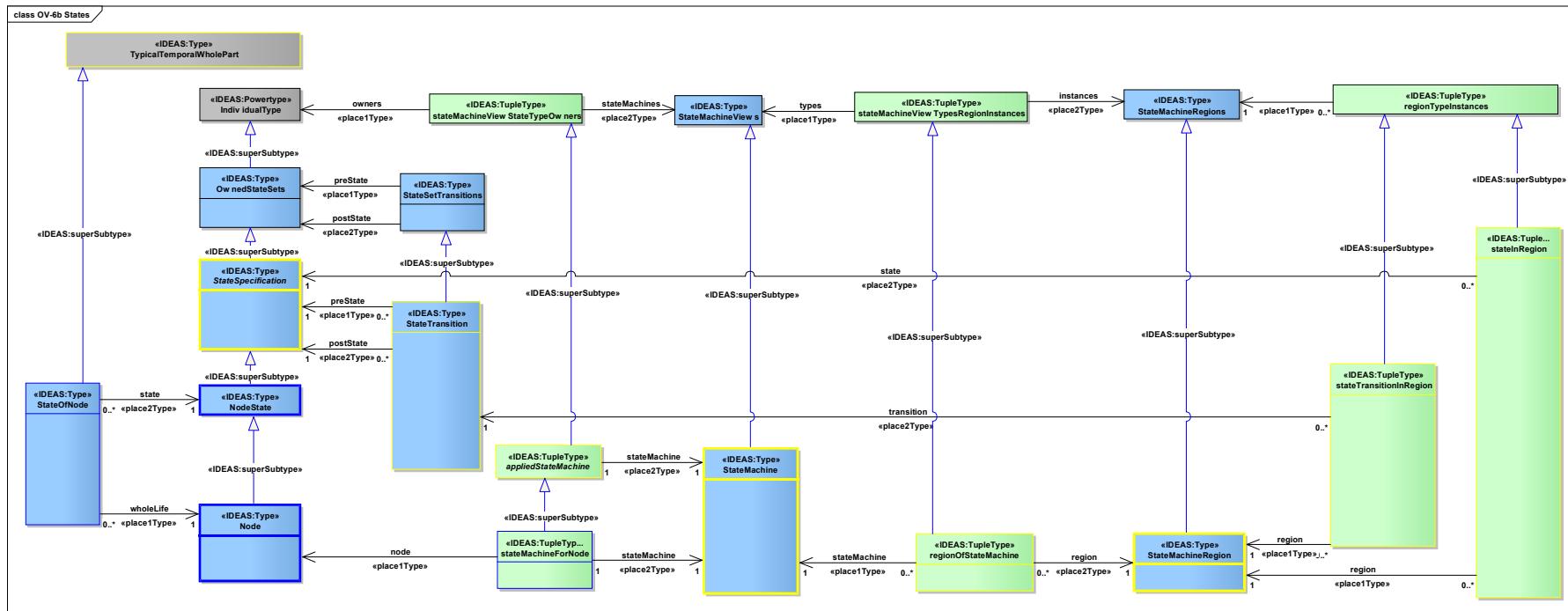
Figure 51 : OV-6b States

This document is no longer extant and has been withdrawn.
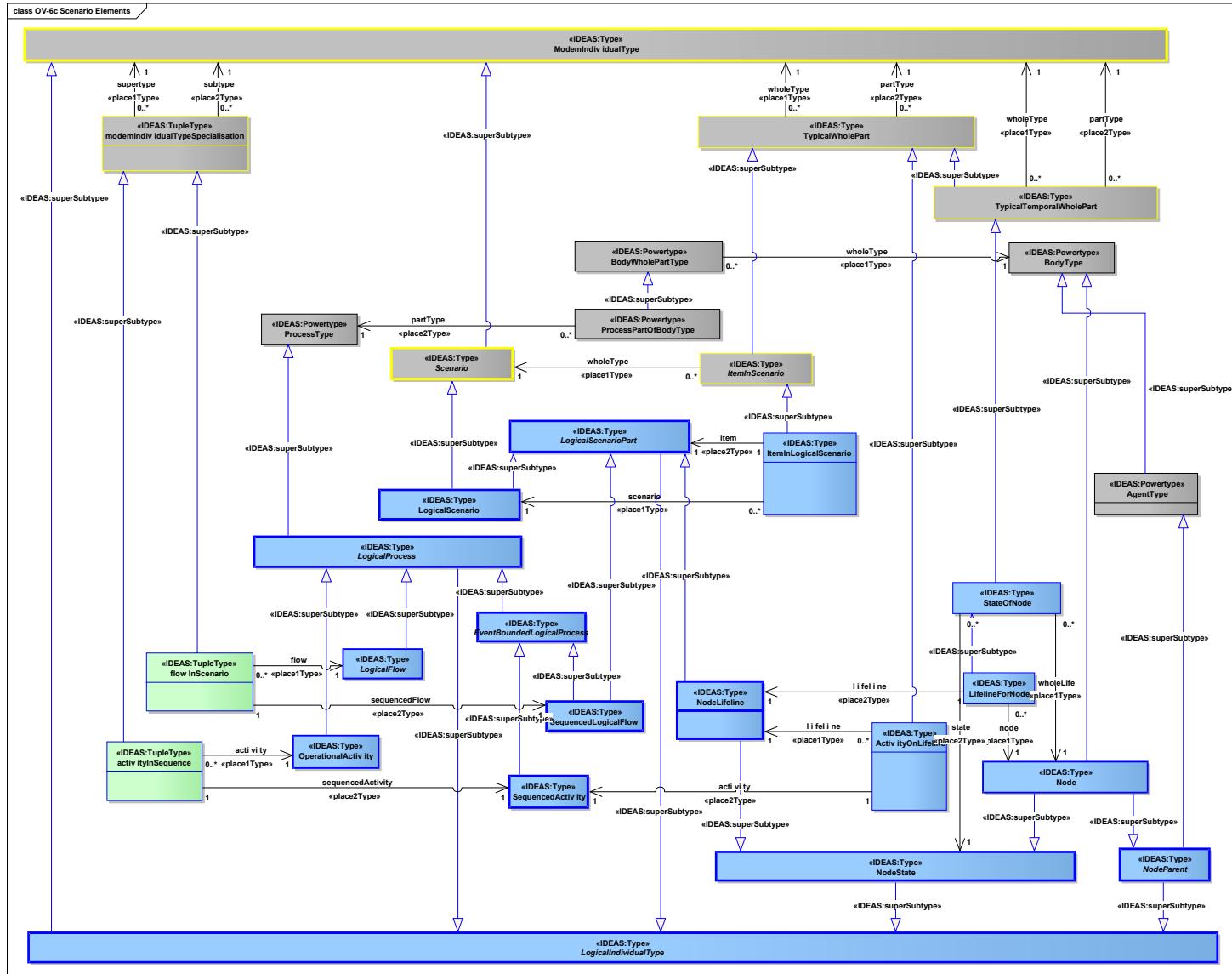
Figure 52 : OV-6c Scenario Elements

2.5 Service views

2.5.1 SOV-1: Service taxonomy
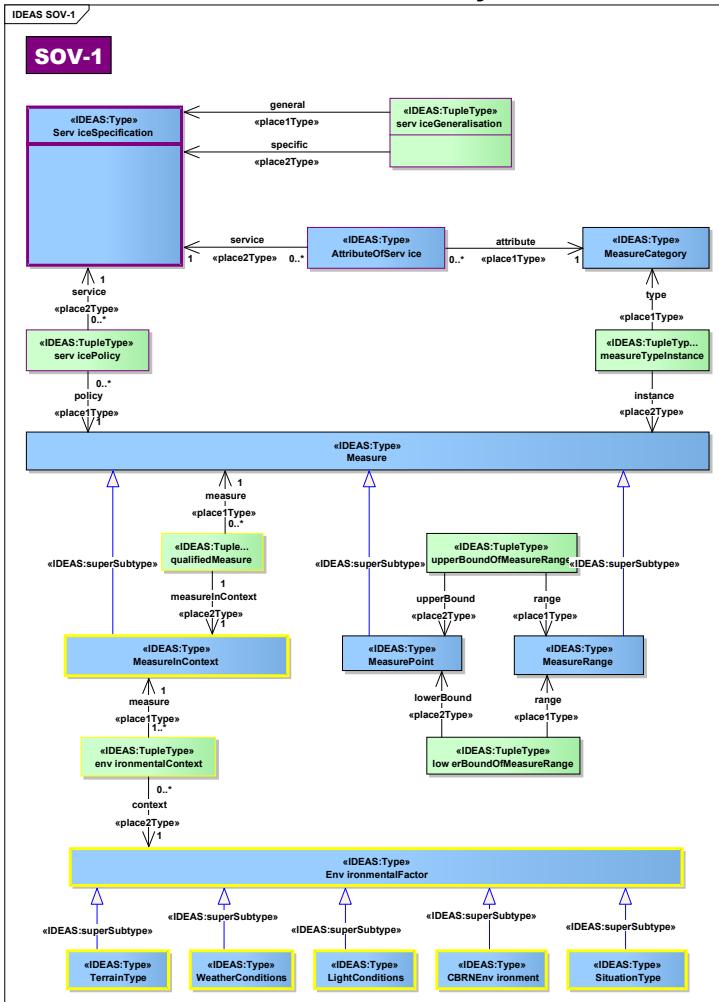
Figure 53 : SOV-1

2.5.2 SOV-2: Service interface specification
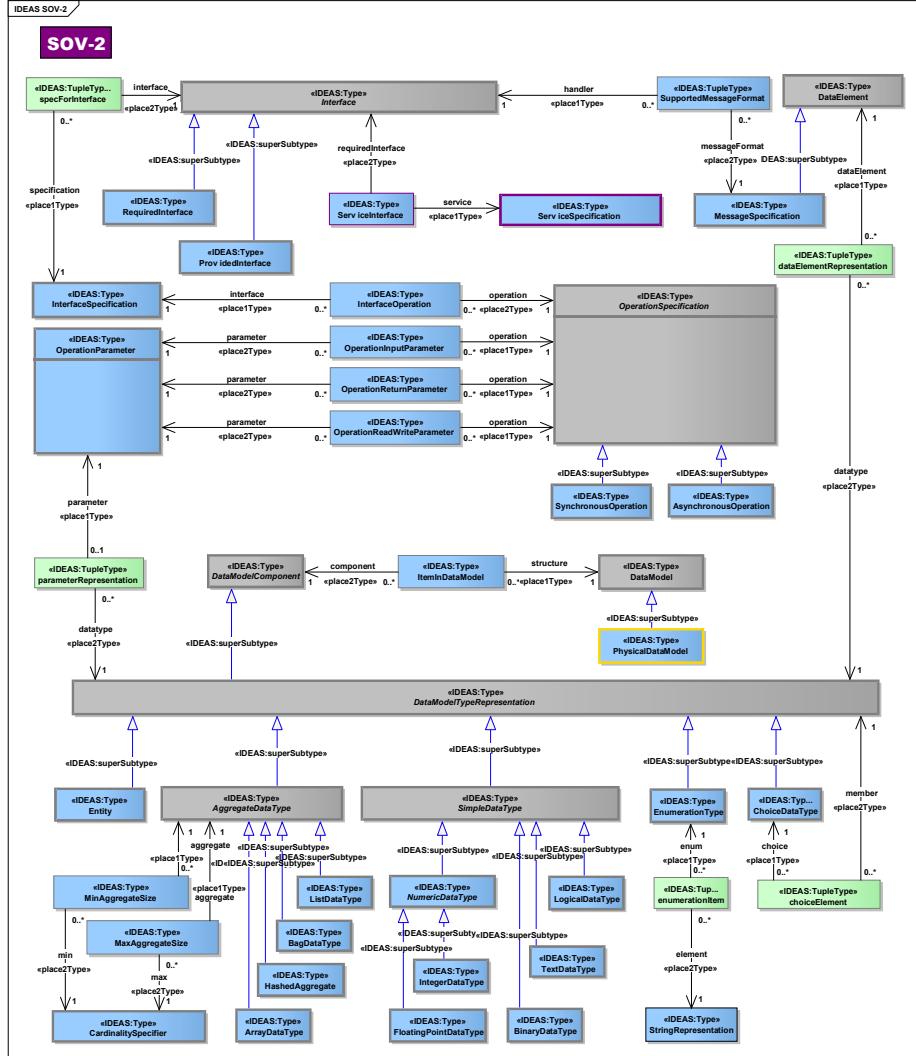
Figure 54 : SOV-2

2.5.3   SOV-3: Capability to service mapping
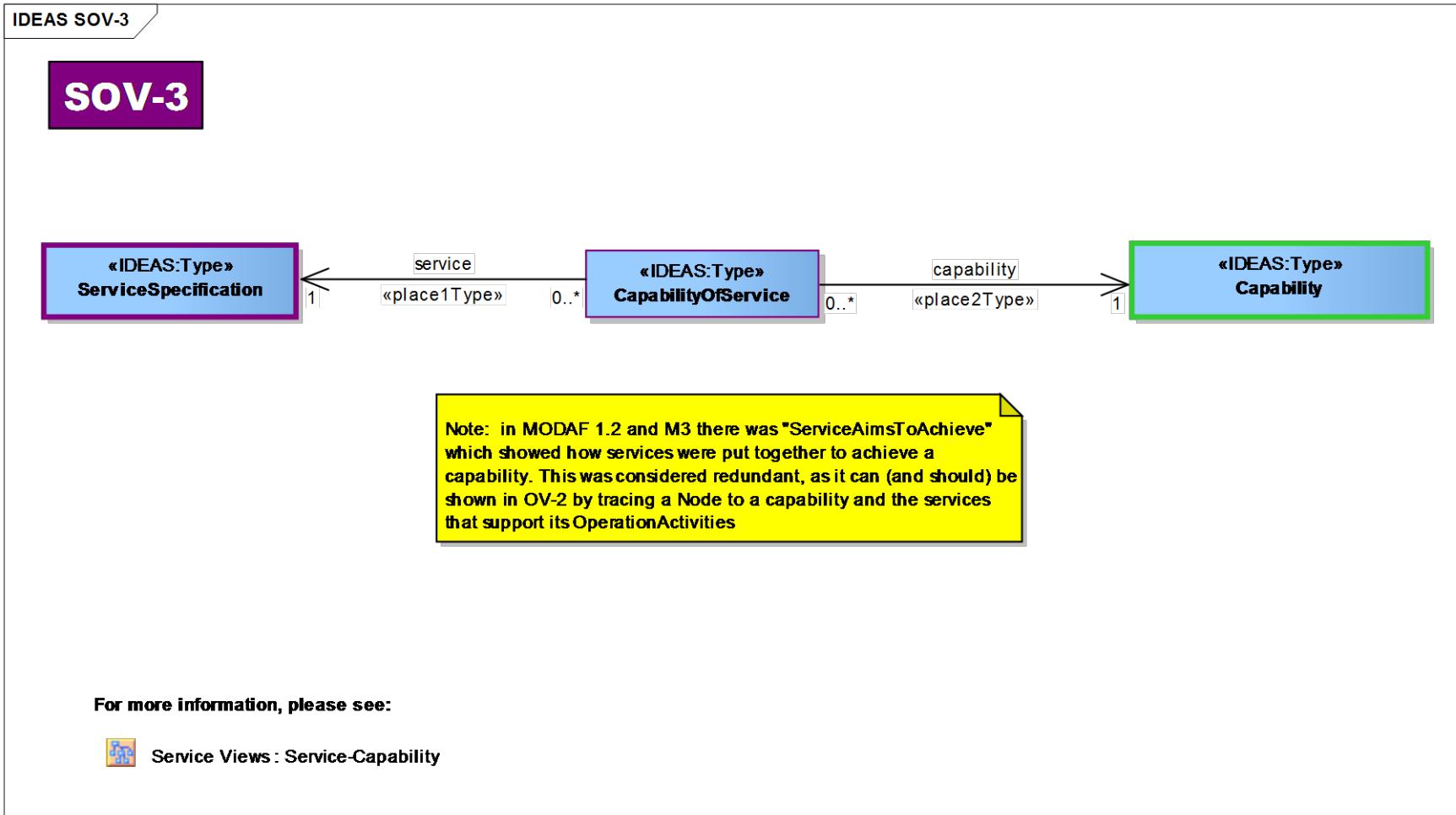
Figure 55 : SOV-3

2.5.4 SOV-4: Service constraints, state model and interaction specification
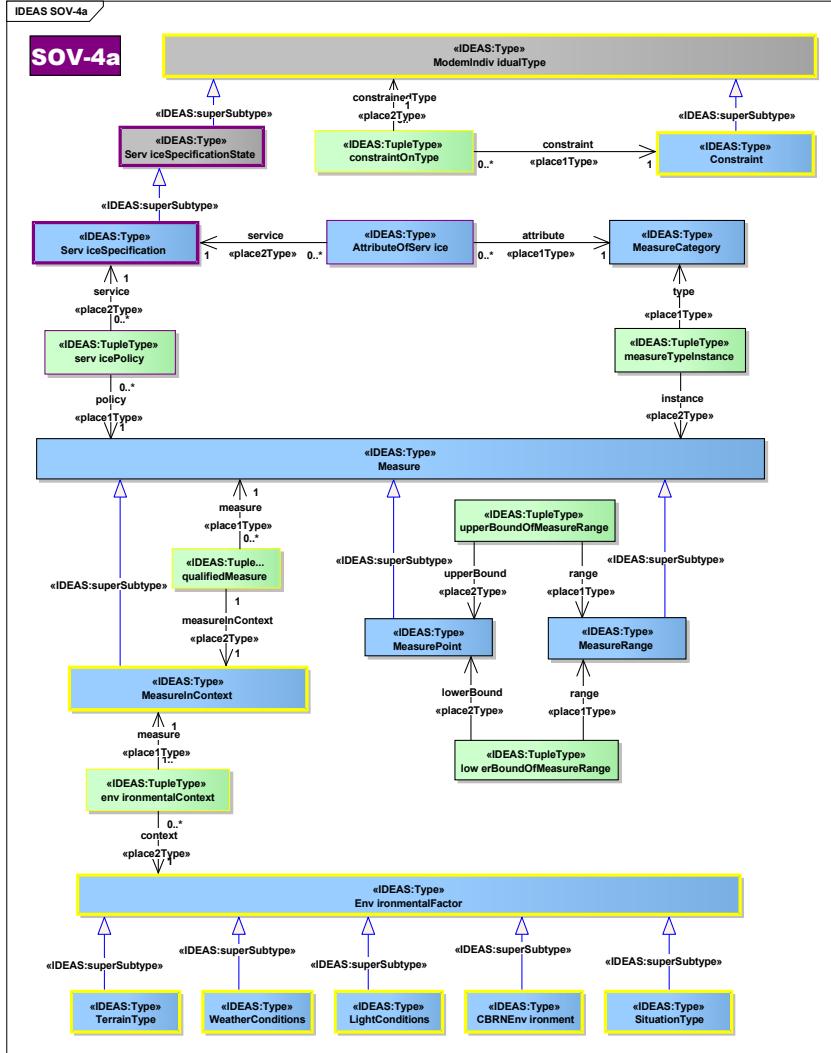

Figure 56 : SOV-4a
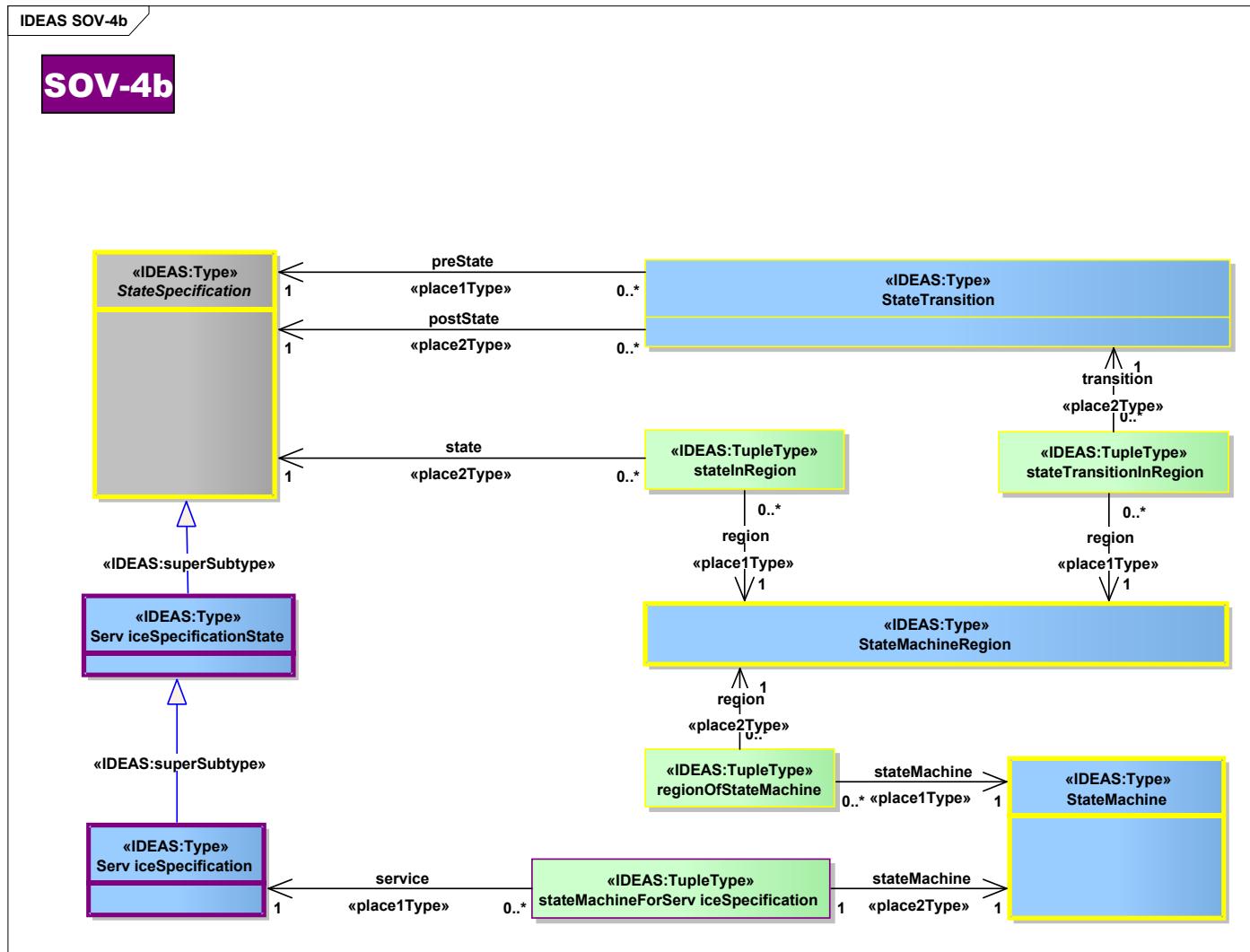
Figure 57 : SOV-4b

This document is no longer extant and has been withdrawn.
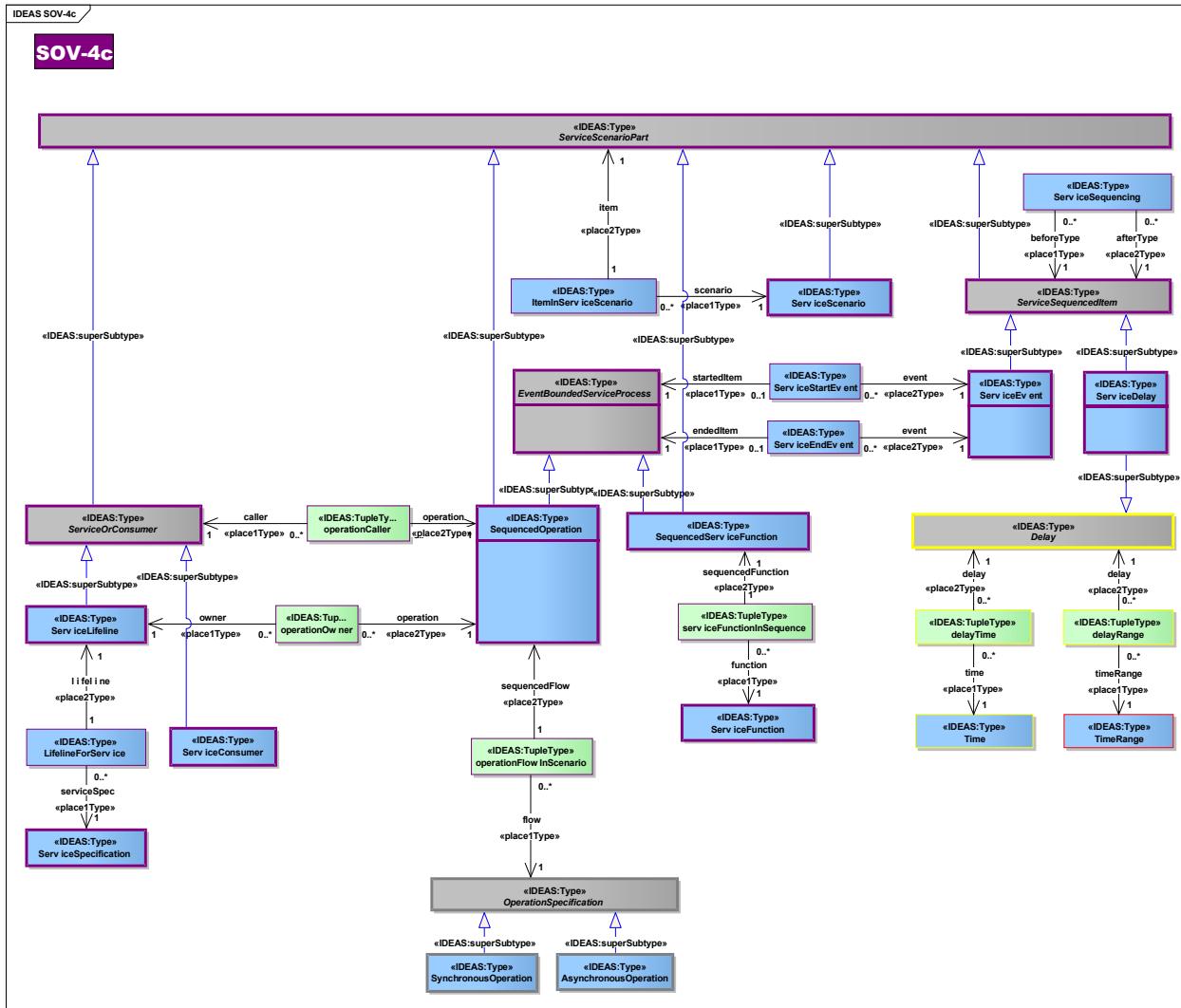
Figure 58 : SOV-4c

# This document is no longer extant and has been withdrawn.
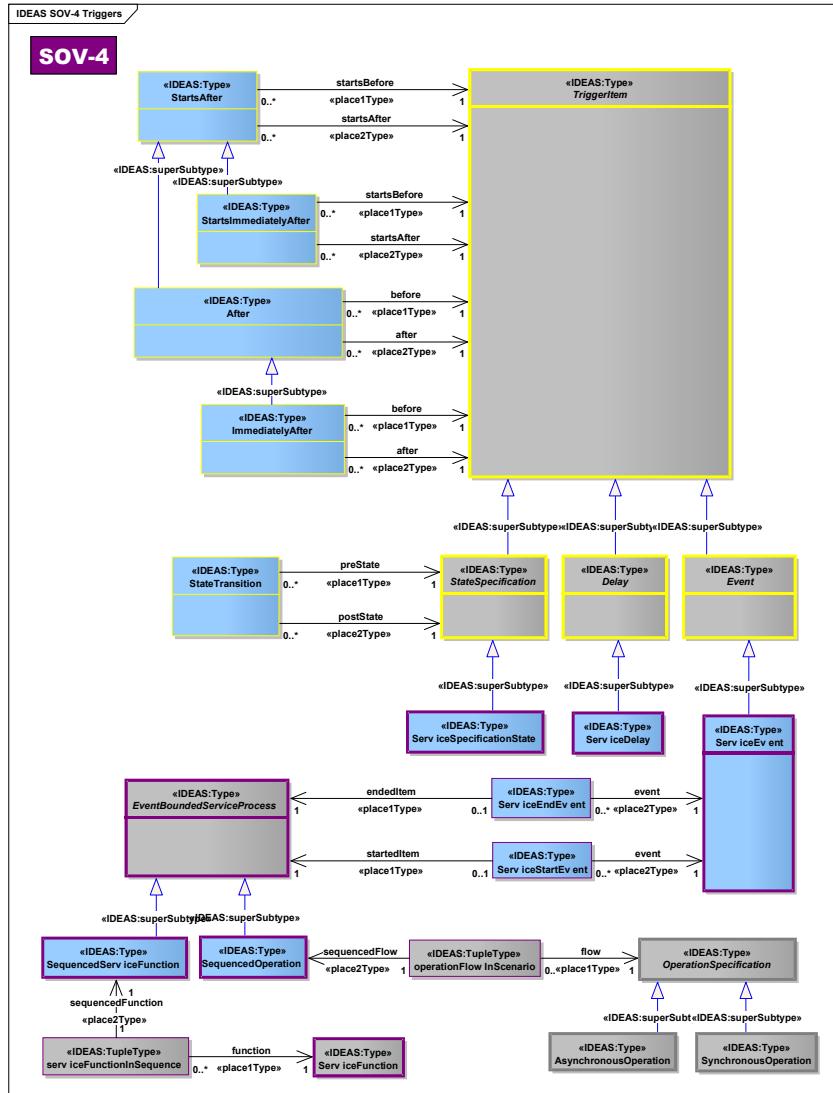
Figure 59 : SOV-4 Triggers

**2.5.5   SOV-5: Service functionality**
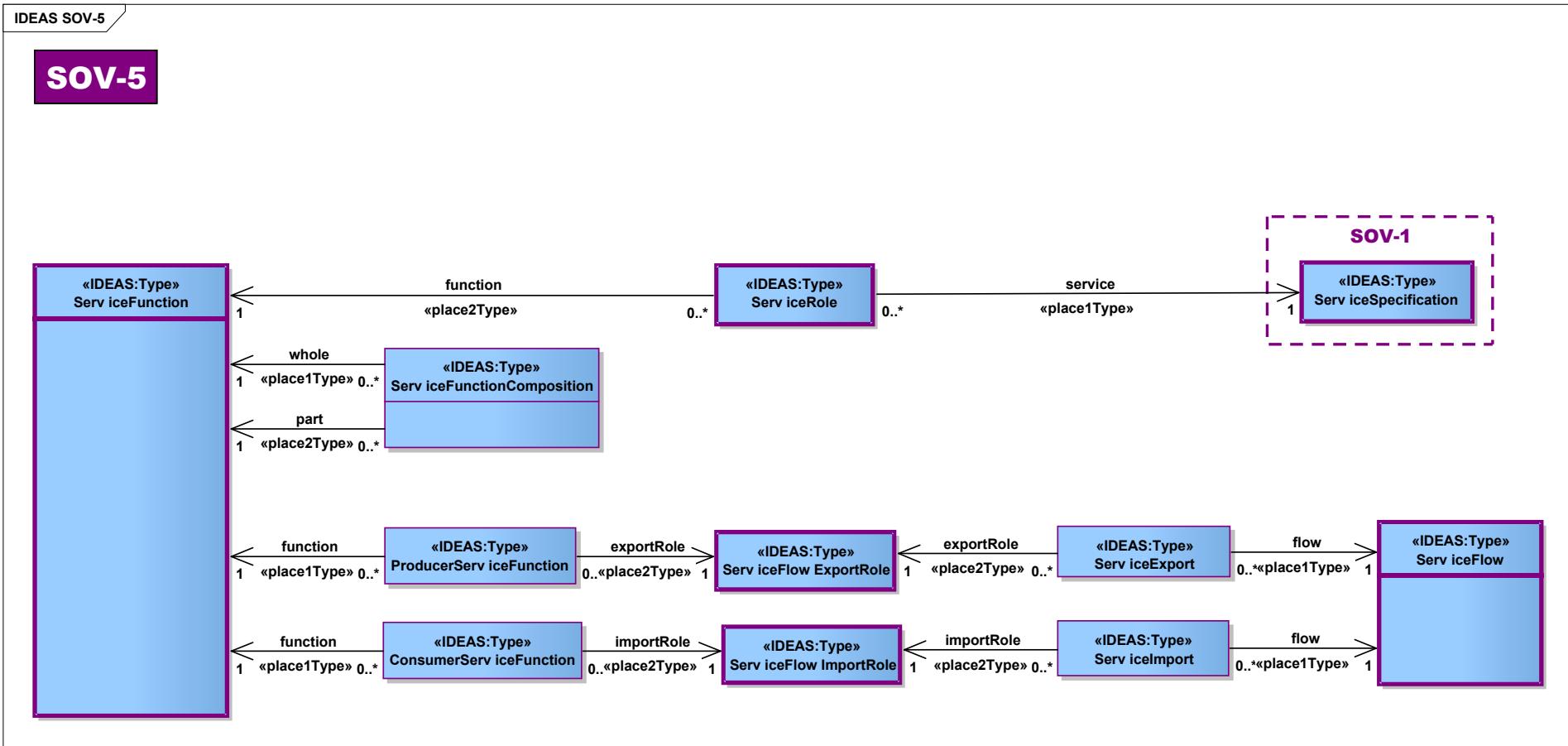
Figure 60 : SOV-5
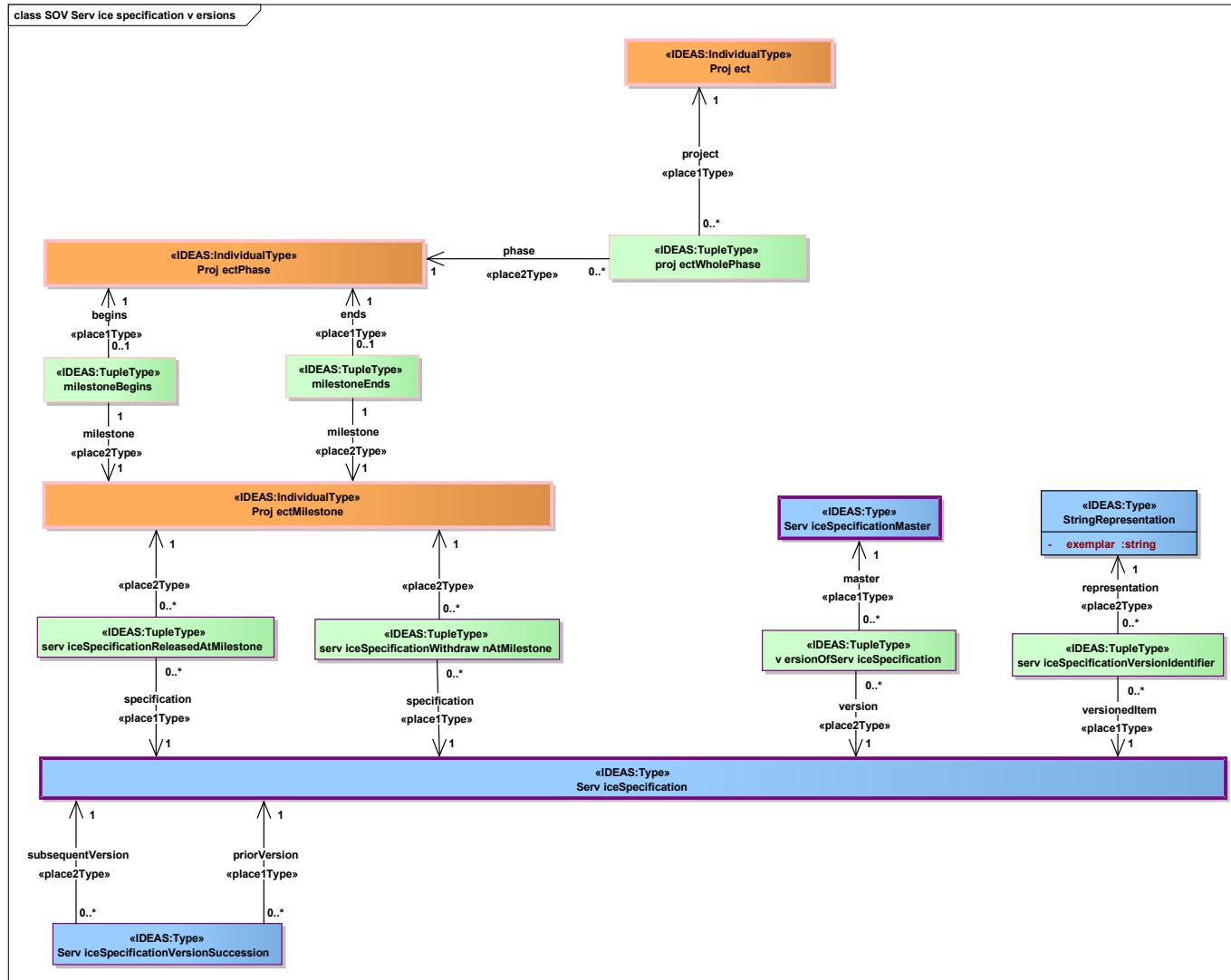
Figure 61 : SOV Service specification versions

2.5.6 Service Views elements list

Service Views

This document is no longer extant and has been withdrawn.

AttributeOfService «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
AttributeOfService - ApplicableMeasureCategory
Generalization (element - is a subtype of):«IDEAS:superSubtype»
AttributeOfService - ModemThing
Association (source - target):«place1Type»
AttributeOfService - MeasureCategory
Association (source - target):«place2Type»
AttributeOfService - ServiceSpecification
Attributes:
-
An ApplicableMeasureCategory that relates a ServiceSpecification to a MeasureCategory as a means of indicating a waythat service performance can be measured.

CapabilityOfService «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
CapabilityPartOfService - TypicalWholePart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
CapabilityPartOfService - ServiceDeliveryWholePartType
Association (source - target): «place2Type»
CapabilityPartOfService - Capability
Association (source - target): «place1Type»
CapabilityPartOfService - ServiceSpecification
Attributes:
-
A TypicalWholePart that relates a Service to the specification of its underlying capability
Note: in MODAF 1.2 and M3 there was "ServiceAimsToAchieve" which showed how services were put together to achieve a capability. This was considered redundant, as it can (and should) be shown in OV-2 by tracing a Node to a capability and the services that support its OperationActivities.

ConsumerServiceFunction «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ConsumerServiceFunction - IndividualExchangeRoleType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ConsumerServiceFunction - ModemWholePartType
Association (source - target): «place1Type»
ConsumerServiceFunction - ServiceFunction
Association (source - target): «place2Type»
ConsumerServiceFunction - ServiceFlowImportRole
Attributes:
-
An IndividualExchangeRoleType where the role is a ServiceFlowImportRole and the consumer is a Serviceunction

This document is no longer extant and has been withdrawn.

EventBoundedServiceProcess «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
EventBoundedServiceProcess - ServiceProcess
Attributes:
-
A ServiceProcess that has ServiceEvents marking its beginning and end.

ItemInServiceScenario «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ItemInServiceScenario - ItemInScenario
Association (source - target):«place2Type»
ItemInServiceScenario - ServiceScenarioPart
Association (source - target):«place1Type»
ItemInServiceScenario - ServiceScenario
Attributes:
-
An ItemInScenario where the Scenario is a ServiceScenario.

LifelineForService «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
LifelineForService - TypicalTemporalWholePart
Association (source - target):«place2Type»
LifelineForService - ServiceLifeline
Association (source - target):«place1Type»
LifelineForService - ServiceSpecification
Attributes:
-
A TypicalTemporalWholePart that asserts a ServiceLifeLine is a typical temporal part of a ServiceSpecification.

ProducerServiceFunction «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ProducerServiceFunction - IndividualExchangeRoleType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ProducerServiceFunction - ModemWholePartType
Association (source - target):«place2Type»
ProducerServiceFunction - ServiceFlowExportRole
Association (source - target):«place1Type»
ProducerServiceFunction - ServiceFunction
Attributes:
-
An IndividualExchangeRoleType where the role is a ServiceFlowExportRole and the producer is a ServiceFunction.

SequencedOperation «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
SequencedOperation - ServiceScenarioPart
Generalization (element - is a subtype of):«IDEAS:superSubtype»
SequencedOperation - EventBoundedServiceProcess

Attributes: -   **A ServiceScenarioPart that is the typical occurance of an OperationSpecification.**
SequencedServiceFunction «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **SequencedServiceFunction - ServiceScenarioPart**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **SequencedServiceFunction - ServiceProcess**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **SequencedServiceFunction - EventBoundedServiceProcess**   *Attributes:*   -   **An EventBoundedServiceProcess whose instances are special cases of ServiceFunctions that take part in ServiceScenarios.**
ServiceConsumer «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ServiceConsumer - ServiceOrConsumer**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ServiceConsumer - Node**   *Attributes:*   -   **A Node that interacts with one or more services.**
ServiceDelay «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ServiceDelay - ServiceSequencedItem**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ServiceDelay - Delay**   *Attributes:*   -   **A ServiceSequencedItem that has a specified temporal extent, but an unspecified spatial extent.**
ServiceEndEvent «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ServiceEndEvent - EndBorderType**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ServiceEndEvent - ModemTemporalWholePartType**   *Association (source - target):«place1Type»*   **ServiceEndEvent - EventBoundedServiceProcess**   *Association (source - target):«place2Type»*   **ServiceEndEvent - ServiceEvent**   *Attributes:*   -   **An EndBorderType that relates a EventBoundedServiceProcess to the ServiceEvent that marks its end. Note: there may be no more than one ServiceEndEvent for a given EventBoundedServiceProcess.**

ServiceEvent «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceEvent - ServiceSequencedItem
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceEvent - Event
Attributes:
-
An Event that marks the beginning or end of a EventBoundedServiceProcess.
ServiceExport «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceImport - SendInExchangeType
Association (source - target):«place1Type»
ServiceImport - ServiceFlow
Association (source - target):«place2Type»
ServiceImport - ServiceFlowExportRole
Attributes:
-
A ReceiveInExchangeType where the receiver is a ServiceSpecification or ServiceFunction.
ServiceFlow «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceFlow - ServiceProcess
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceFlow - ExchangeType
Attributes:
-
An ExchangeType where two ServiceSpecifications interact.
ServiceFlowExportRole «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceFlowExportRole - ModemIndividualType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ServiceFlowExportRole - SendType
Attributes:
-
A SendType where the sender is a ServiceSpecification or ServiceFunction.
ServiceFlowImportRole «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ServiceFlowImportRole - ReceiveType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceFlowImportRole - ModemIndividualType
Attributes:
-
A RecieveType where the receiver is a ServiceSpecification or ServiceFunction.

This document is no longer extant and has been withdrawn.

ServiceFunction «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ServiceFunction - ModemIndividualType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ServiceFunction - ServiceProcess
Attributes:
-
A ServiceProcess carried out by a ServiceSpecification

ServiceFunctionComposition «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ServiceFunctionComposition - TypicalWholePart
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ServiceFunctionComposition - ProcessWholeAndPartType
Association (source - target): **«place2Type»**
ServiceFunctionComposition - ServiceFunction
Association (source - target): **«place1Type»**
ServiceFunctionComposition - ServiceFunction
Attributes:
-
A TypicalWholePart that relates a parent (whole) ServiceFunction to its child (part) ServiceFunction. Note: was called "ActivityComposition" in M3.

ServiceImport «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ServiceImport - ReceiveInExchangeType
*Association (source - target):***«place1Type»**
ServiceImport - ServiceFlow
*Association (source - target):***«place2Type»**
ServiceImport - ServiceFlowImportRole
Attributes:
-
A ReceiveInExchangeType where the receiver is a ServiceSpecification or ServiceFunction.

ServiceInterface «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ServiceInterface - TypicalWholePart
*Association (source - target):***«place2Type»**
ServiceInterface - Interface
*Association (source - target):***«place1Type»**
ServiceInterface - ServiceSpecification
Attributes:
-
A TypicalWholePart that relates a ServiceSpecification to an Interface that it requires or provides.

ServiceLevel «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceLevel - ModemIndividualType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceLevel - BodyType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceLevel - AgentType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceLevel - DispositionalProperty
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceLevel - ServiceDeliveryType
Attributes:
-
A ServiceDeliveryType based on a ServiceSpecification that sets a level of service using of Measures that correspond to ServiceAttributes.

ServiceLifeline «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceLifeline - ServiceOrConsumer
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceLifeline - ServiceSpecificationState
Attributes:
-
A ServiceSpecificationState whose extent is defined by a ServiceScenario.

ServiceOrConsumer «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceOrConsumer - ServiceScenarioPart
Attributes:
-
A ServiceScenarioPart that is either a ServiceLifeline or a ServiceConsumer.
[ABSTRACT]

ServiceProcess «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceProcess - ProcessType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceProcess - ModemWholePartType
Attributes:
-
A ProcessType conducted by a ServiceSpecification.

ServiceRole «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceRole - ProcessPartOfBodyType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceRole - TypicalWholePart
Association (source - target):«place2Type»

ServiceRole - ServiceFunction   *Association (source - target):*«place1Type»   **ServiceRole - ServiceSpecification**   <u>*Attributes:*</u>   **-**   **A ProcessPartOfBodyType that asserts that a ServiceFunction is part of a ServiceSpecification.**
ServiceScenario «IDEAS:Type»   <u>*Connectors:*</u>   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ServiceScenario - ServiceScenarioPart**   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ServiceScenario - Scenario**   <u>*Attributes:*</u>   **-**   **A Scenario that describes the order of interactions with a ServiceSpecification.**
ServiceScenarioPart «IDEAS:Type»   <u>*Connectors:*</u>   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ServiceScenarioPart - ModemIndividualType**   <u>*Attributes:*</u>   **-**   **A ModemIndividualType that features in (i.e. is part of) a ServiceScenario.**
ServiceSequencedItem «IDEAS:Type»   <u>*Connectors:*</u>   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ServiceSequencedItem - ServiceScenarioPart**   <u>*Attributes:*</u>   **-**   **A ServiceScenarioPart that can be sequenced by ServiceSequencing.**
ServiceSequencing «IDEAS:Type»   <u>*Connectors:*</u>   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ServiceSequencing - ImmediateBeforeAfterType**   *Association (source - target):*«place2Type»   **ServiceSequencing - ServiceSequencedItem**   *Association (source - target):*«place1Type»   **ServiceSequencing - ServiceSequencedItem**   <u>*Attributes:*</u>   **-**   **An ImmediateBeforeAfterType that asserts one ServiceSequencedItem happens immediately before another.**
ServiceSpecification «IDEAS:Type»   <u>*Connectors:*</u>   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ServiceSpecification - ServiceDeliveryType**   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ServiceSpecification - BodyType**   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ServiceSpecification - AgentType**

Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceSpecification - DispositionalProperty
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceSpecification - ServiceSpecificationState
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceSpecification - SubjectOfForecast
<u>*Attributes:*</u>
-
A ServiceDeliveryType that is the specification of a ServiceDelivery. Note: was called "Service" in M3.

ServiceSpecificationComposition «IDEAS:Type»
<u>*Connectors:*</u>
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceSpecificationComposition - TypicalWholePart
Association (source - target):«place1Type»
ServiceSpecificationComposition - ServiceSpecification
Association (source - target):«place2Type»
ServiceSpecificationComposition - ServiceSpecification
<u>*Attributes:*</u>
-
A TypicalWholePart that states that a ServiceSpecification reuses other ServiceSpecifications, i.e. is specified on top of the ones reused.

ServiceSpecificationMaster «IDEAS:Type»
<u>*Connectors:*</u>
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceSpecificationMaster - ModemIndividualType
<u>*Attributes:*</u>
-
A ModemIndividualType that is the master specification from which ServiceSpecifications are versioned.

ServiceSpecificationState «IDEAS:Type»
<u>*Connectors:*</u>
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceSpecificationState - ServiceDeliveryStateType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceSpecificationState - ModemIndividualType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceSpecificationState - StateSpecification
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceSpecificationState - AgentStateType
<u>*Attributes:*</u>
-
A ServiceDeliveryStateType that is a type of temporal state typical of a ServiceSpecification.

ServiceSpecificationVersionSuccession «IDEAS:Type»
<u>*Connectors:*</u>
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceSpecificationVersionSuccession - BeforeAfterType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ServiceSpecificationVersionSuccession - ModemThing
Association (source - target):«place1Type»
ServiceSpecificationVersionSuccession - ServiceSpecification

Association (source - target):«place2Type» **ServiceSpecificationVersionSuccession - ServiceSpecification** *Attributes:* - **A BeforeAfterType that asserts that one ServiceSpecification succeeds another. Note: both ServiceSpecifications must be versions of the same ServiceSpecificationMaster.**
ServiceStartEvent «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ServiceStartEvent - ModemTemporalWholePartType** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ServiceStartEvent - StartBorderType** *Association (source - target):«place2Type»* **ServiceStartEvent - ServiceEvent** *Association (source - target):«place1Type»* **ServiceStartEvent - EventBoundedServiceProcess** *Attributes:* - **A StartBorderType that relates an EventBoundedServicelProcess to the ServiceEvent that marks its start. Note: there may be no more than one ServiceStartEvent for a given ServiceSequencedProcess.**
StateOfServiceSpecification «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **StateOfServiceSpecification - AgentWholeStateType** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **StateOfServiceSpecification - ServiceDeliveryWholeStateType** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **StateOfServiceSpecification - TypicalTemporalWholePart** *Association (source - target):«place1Type»* **StateOfServiceSpecification - ServiceSpecification** *Association (source - target):«place2Type»* **StateOfServiceSpecification - ServiceSpecificationState** *Attributes:* - **A ServiceDeliveryWholeStateType that relates a ServiceSpecification to one of its temporal states.**
levelOfService «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **levelOfService - modemIndividualTypeSpecialisation** *Association (source - target):«place2Type»* **levelOfService - ServiceLevel** *Association (source - target):«place1Type»* **levelOfService - ServiceSpecification** *Attributes:* - **A modemIndividualTypeSpecialisation where a ServiceLevel is sets levels of service based on a ServiceSpecification.**

operationCaller «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **operationCaller - ModemThing**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **operationCaller - couple**   *Association (source - target):«place1Type»*   **operationCaller - ServiceOrConsumer**   *Association (source - target):«place2Type»*   **operationCaller - SequencedOperation**   *Attributes:*   -   **A couple that asserts a ServiceOrConsumer invokes a SequencedOperation on a ServiceLifeline.**
operationFlowInScenario «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **operationFlowInScenario - modemIndividualTypeSpecialisation**   *Association (source - target):«place1Type»*   **operationFlowInScenario - OperationSpecification**   *Association (source - target):«place2Type»*   **operationFlowInScenario - SequencedOperation**   *Attributes:*   -   **A modemIndividualTypeSpecialisation that relates an OperationSpecification to its usage (as a SequencedOperation) in a ServiceScenario. Note: A SequencedOperation is based on only one OperationSpecification.**
operationOwner «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **operationOwner - ModemThing**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **operationOwner - couple**   *Association (source - target):«place2Type»*   **operationOwner - SequencedOperation**   *Association (source - target):«place1Type»*   **operationOwner - ServiceLifeline**   *Attributes:*   -   **A couple where a SequencedOperation is run by a ServiceLifeline.**
serviceFunctionInSequence «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **serviceFunctionInSequence - modemIndividualTypeSpecialisation**   *Association (source - target):«place1Type»*   **serviceFunctionInSequence - ServiceFunction**   *Association (source - target):«place2Type»*   **serviceFunctionInSequence - SequencedServiceFunction**   *Attributes:*   -   **A modemIndividualTypeSpecialisation that relates a ServiceFunction to a SequencedServiceFunction that is a case of it being used in a ServiceScenario.**

serviceGeneralisation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
serviceGeneralisation - modemIndividualTypeSpecialisation
Association (source - target):«place1Type»
serviceGeneralisation - ServiceSpecification
Association (source - target):«place2Type»
serviceGeneralisation - ServiceSpecification
Attributes:
-
A modemIndividualTypeSpecialisation where one ServiceSpecification is a specialisation of another.

serviceLevelMeasure «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
serviceLevelMeasure - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
serviceLevelMeasure - measureOfType
Association (source - target):«place1Type»
serviceLevelMeasure - Measure
Association (source - target):«place2Type»
serviceLevelMeasure - ServiceLevel
Attributes:
-
A measureOfType that specifies a ServiceLevel.

servicePolicy «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
servicePolicy - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
servicePolicy - measureOfType
Association (source - target):«place1Type»
servicePolicy - Measure
Association (source - target):«place2Type»
servicePolicy - ServiceSpecification
Attributes:
-
A measureOfType where the Measure specifies a policy for a ServiceSpecification. Note: The Measure must correspond to a given MeasureCategory that is an attributeOfService for the ServiceSpecification.

serviceSpecificationReleasedAtMilestone «IDEAS:TupleType»
Connectors:
Association (source - target):«place2Type»
serviceSpecificationReleasedAtMilestone - ProjectMilestone
Generalization (element - is a subtype of):«IDEAS:superSubtype»
serviceSpecificationReleasedAtMilestone - couple
Generalization (element - is a subtype of):«IDEAS:superSubtype»
serviceSpecificationReleasedAtMilestone - ModemThing
Association (source - target):«place1Type»
serviceSpecificationReleasedAtMilestone - ServiceSpecification
Attributes:
-

This document is no longer extant and has been withdrawn.

A couple that indicates that a ServiceSpecification is released at a ProjectMilestone.
serviceSpecificationVersionIdentifier «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **serviceSpecificationVersionIdentifier - ModemThing** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **serviceSpecificationVersionIdentifier - representedBy** *Association (source - target):*«place2Type» **serviceSpecificationVersionIdentifier - StringRepresentation** *Association (source - target):*«place1Type» **serviceSpecificationVersionIdentifier - ServiceSpecification** *Attributes:* **-** **A representedBy that asserts that a StringRepresentation represents the version identifier of a ServiceSpecification.**
serviceSpecificationWithdrawnAtMilestone «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **serviceSpecificationWithdrawnAtMilestone - ModemThing** *Association (source - target):*«place2Type» **serviceSpecificationWithdrawnAtMilestone - ProjectMilestone** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **serviceSpecificationWithdrawnAtMilestone - couple** *Association (source - target):*«place1Type» **serviceSpecificationWithdrawnAtMilestone - ServiceSpecification** *Attributes:* **-** **A couple that indicates that a ServiceSpecification is withdrawn at a ProjectMilestone.**
stateMachineForServiceSpecification «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **stateMachineForServiceSpecification - appliedStateMachine** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **stateMachineForServiceSpecification - ModemThing** *Association (source - target):*«place1Type» **stateMachineForServiceSpecification - ServiceSpecification** *Association (source - target):*«place2Type» **stateMachineForServiceSpecification - StateMachine** *Attributes:* **-** **An appliedStateMachine that relates a ServiceSpecification to its state machine.**

versionOfServiceSpecification «IDEAS:TupleType»

Connectors:

Generalization (element - is a subtype of):«IDEAS:superSubtype»
versionOfServiceSpecification - modemIndividualTypeSpecialisation
Association (source - target):«place1Type»
versionOfServiceSpecification - ServiceSpecificationMaster
Association (source - target):«place2Type»
versionOfServiceSpecification - ServiceSpecification
Attributes:
-

A modemIndividualTypeSpecialisation that asserts that a ServiceSpecification is a version of a ServiceSpecificationMaster.

2.5.7   Service Views additional diagrams.
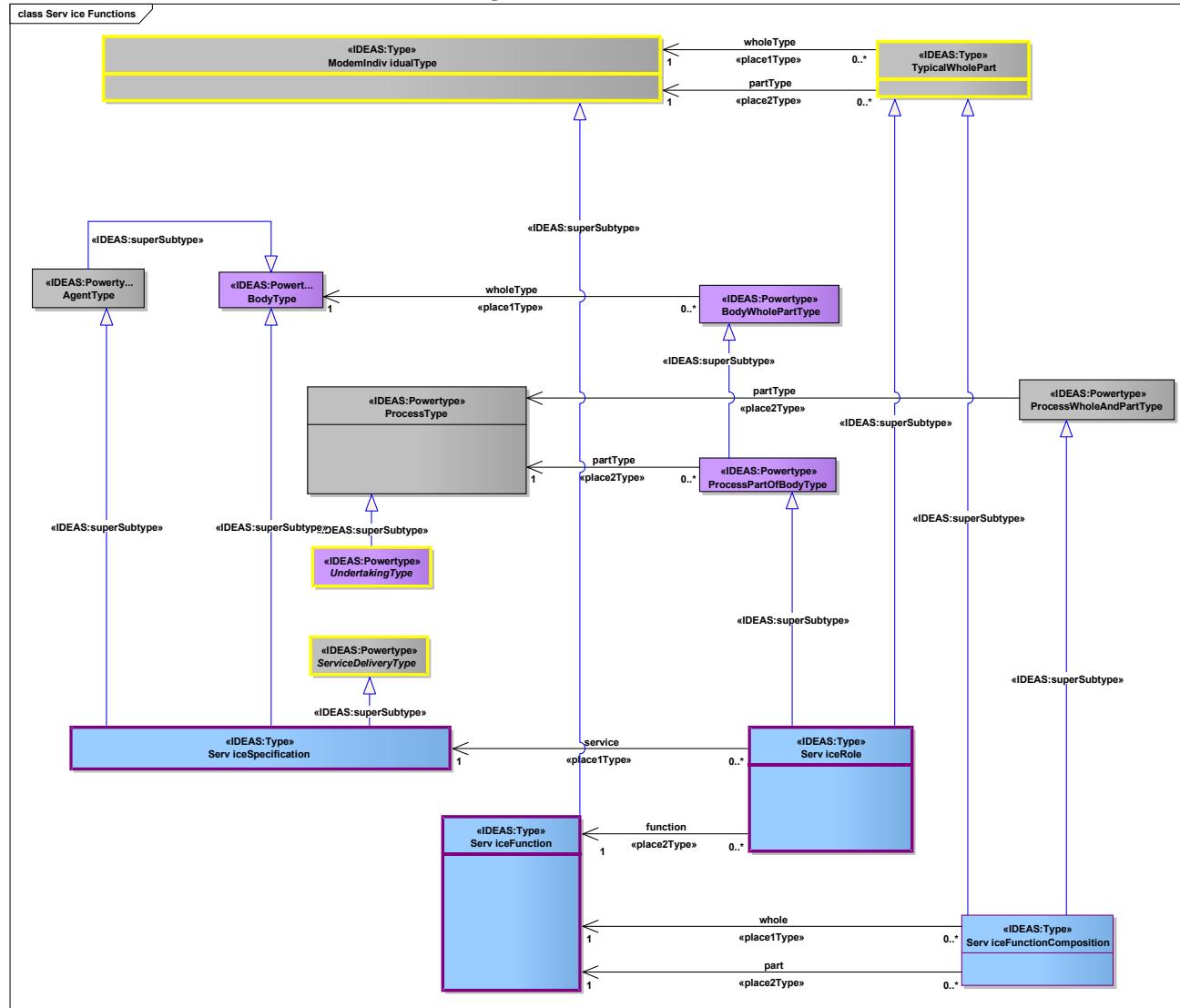
Figure 62 : Service Functions
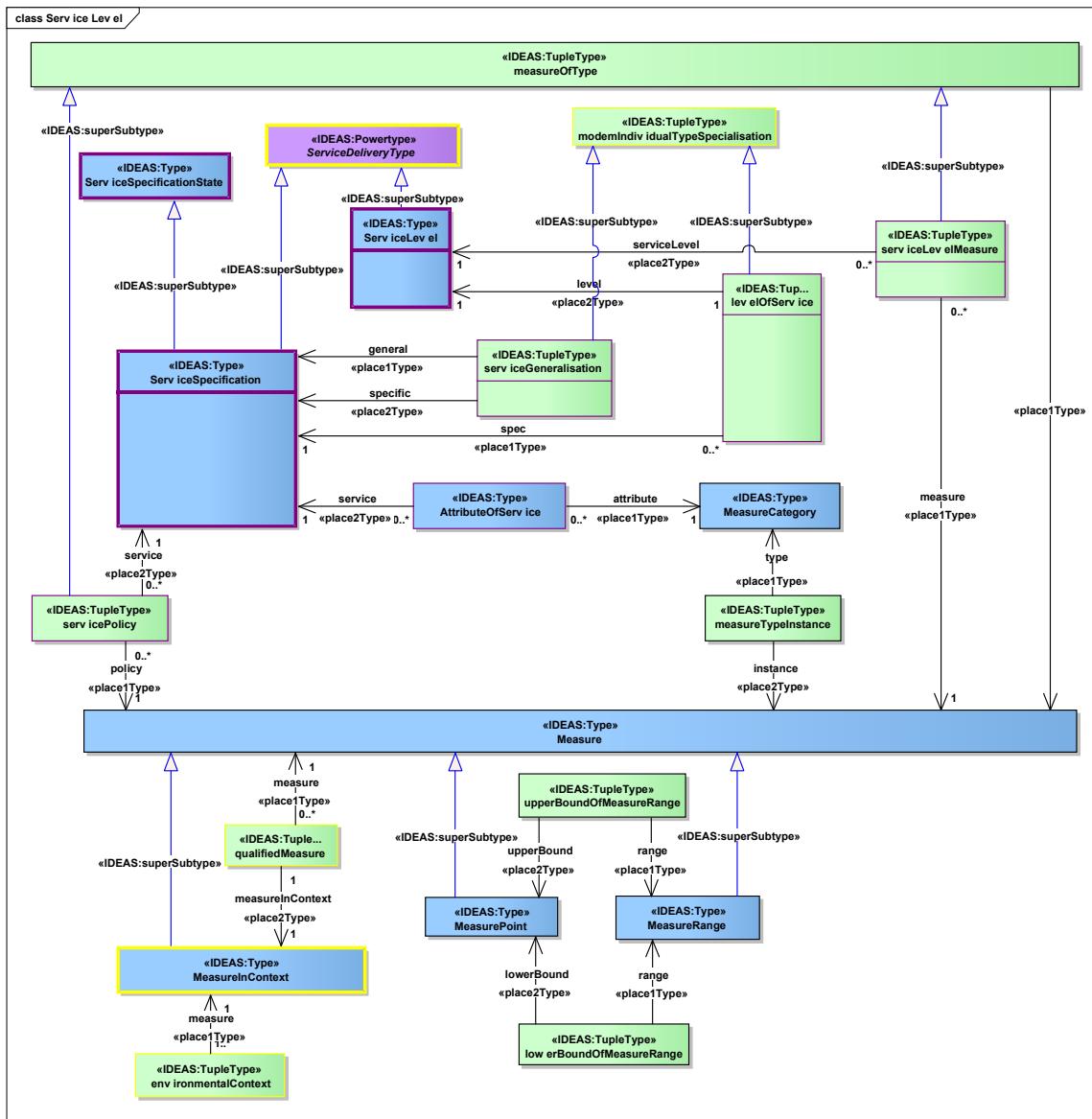
Figure 63 : Service Level
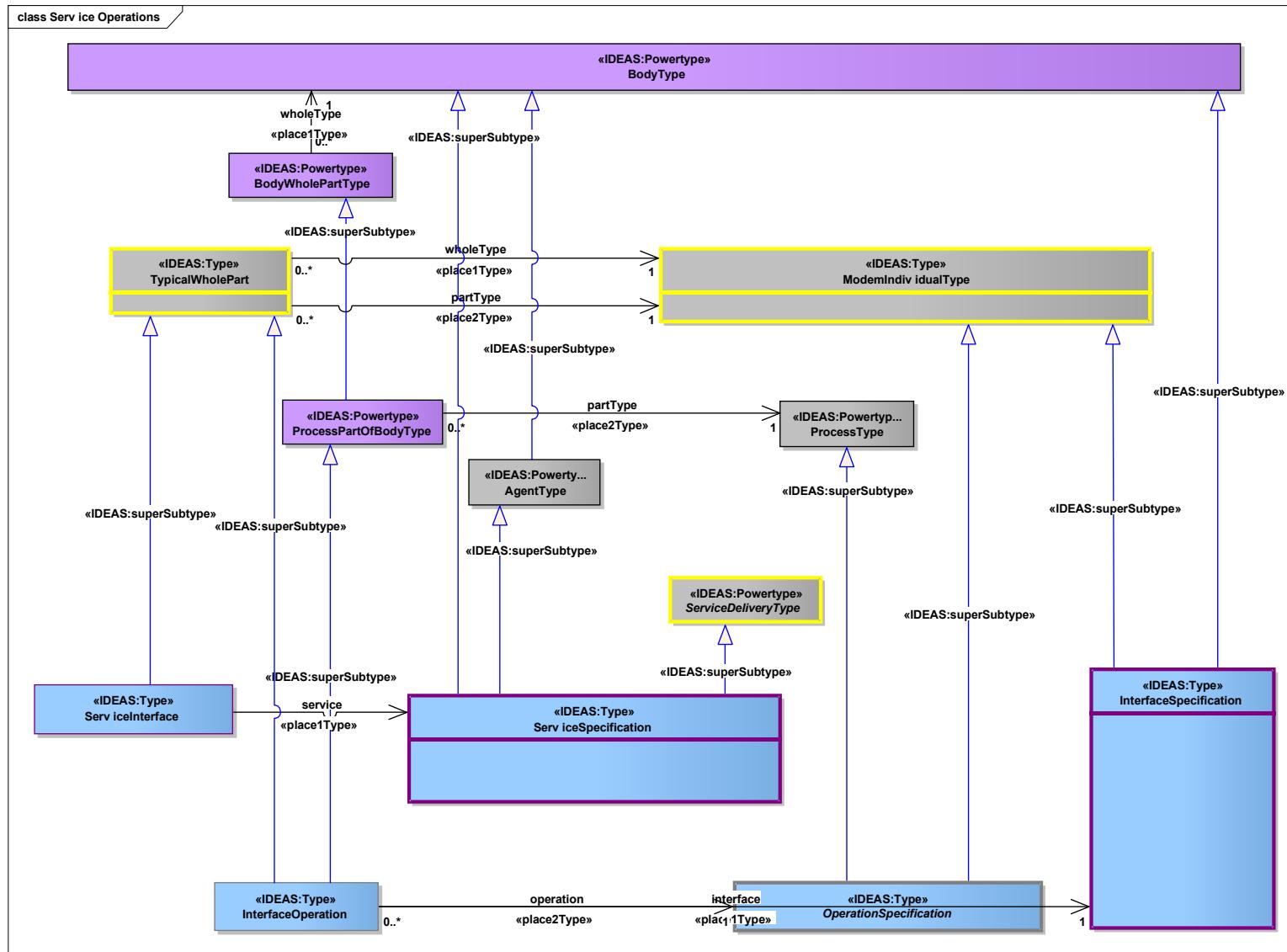
Figure 64 : Service Operations
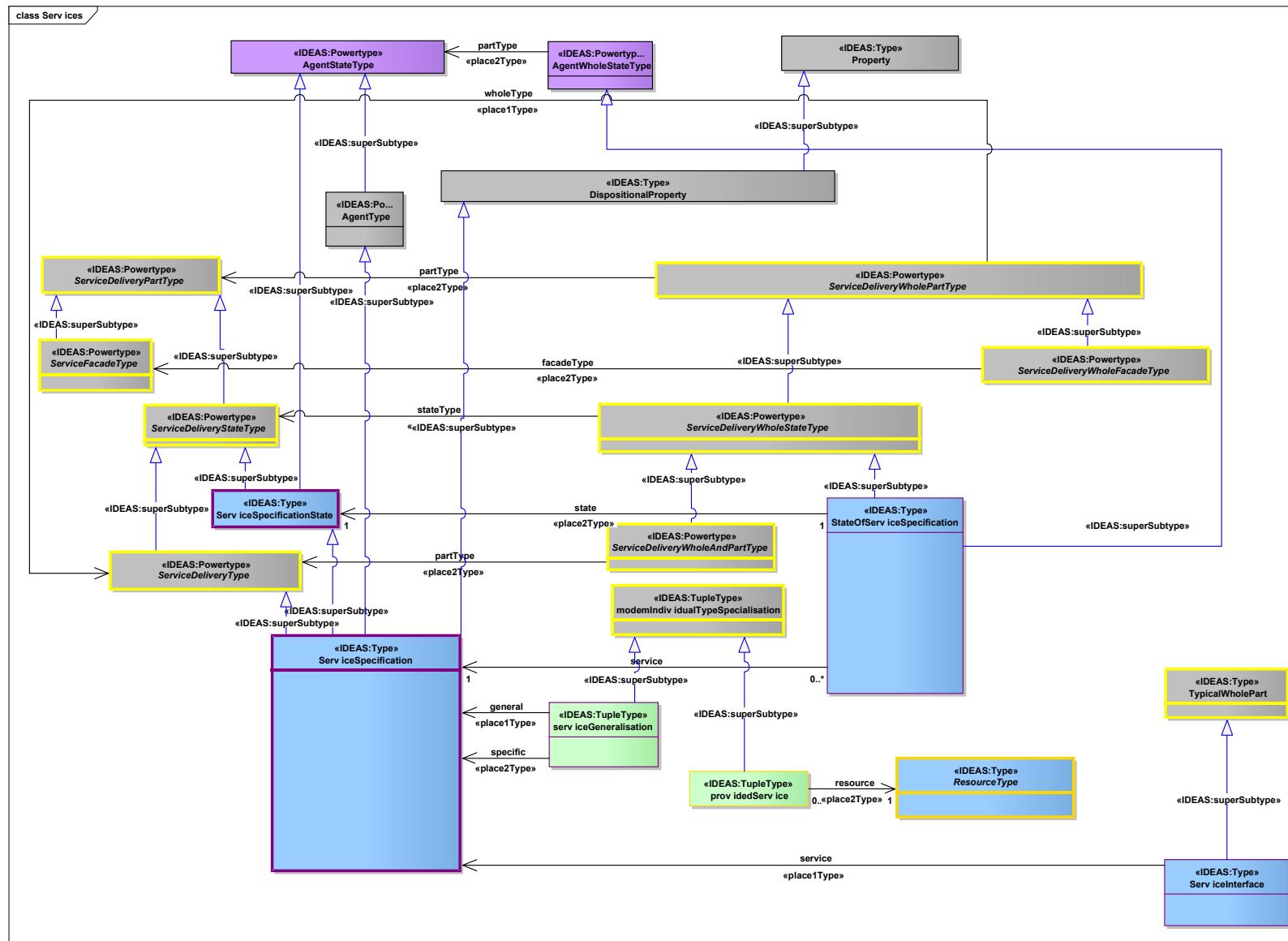
Figure 65 : Services

2.6　System views

2.6.1　SV-1: Resource interaction specification
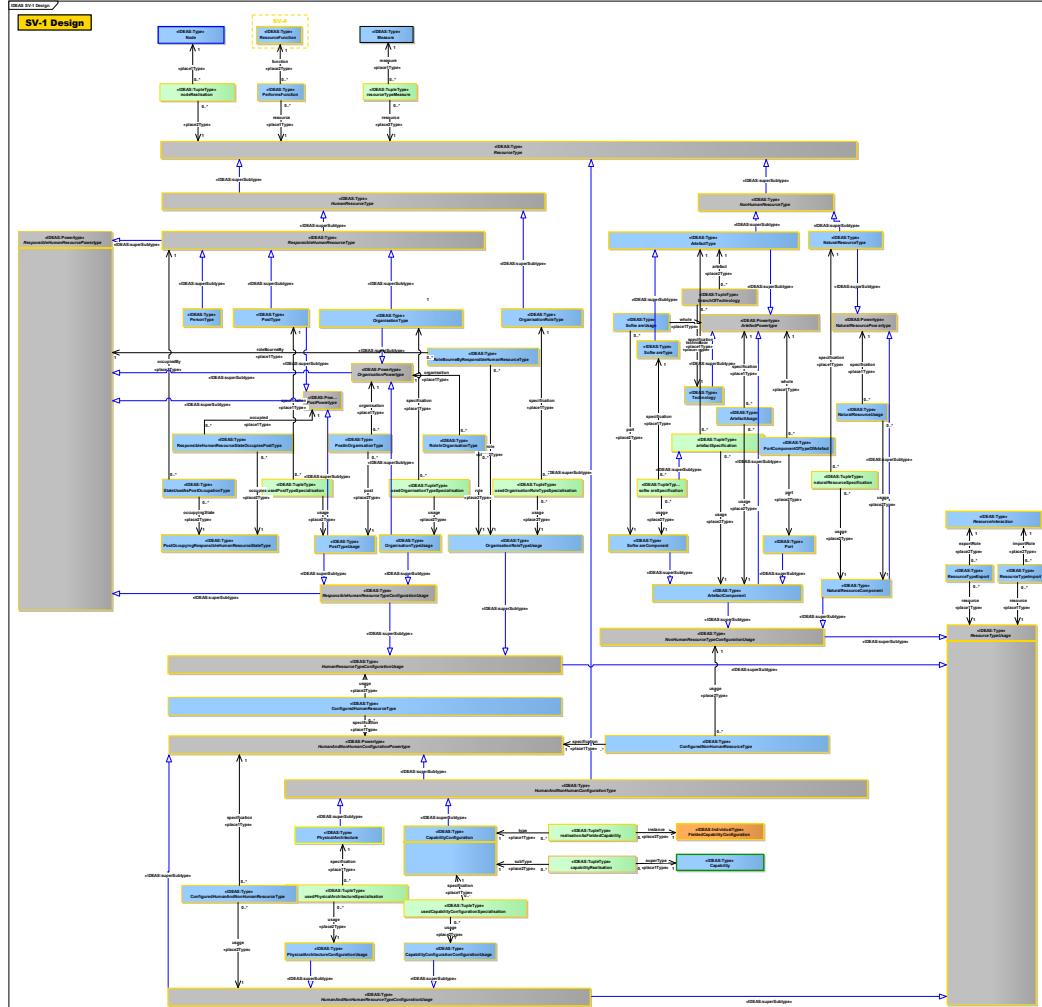
Figure 66 : SV-1 Design

**This document is no longer extant and has been withdrawn.**
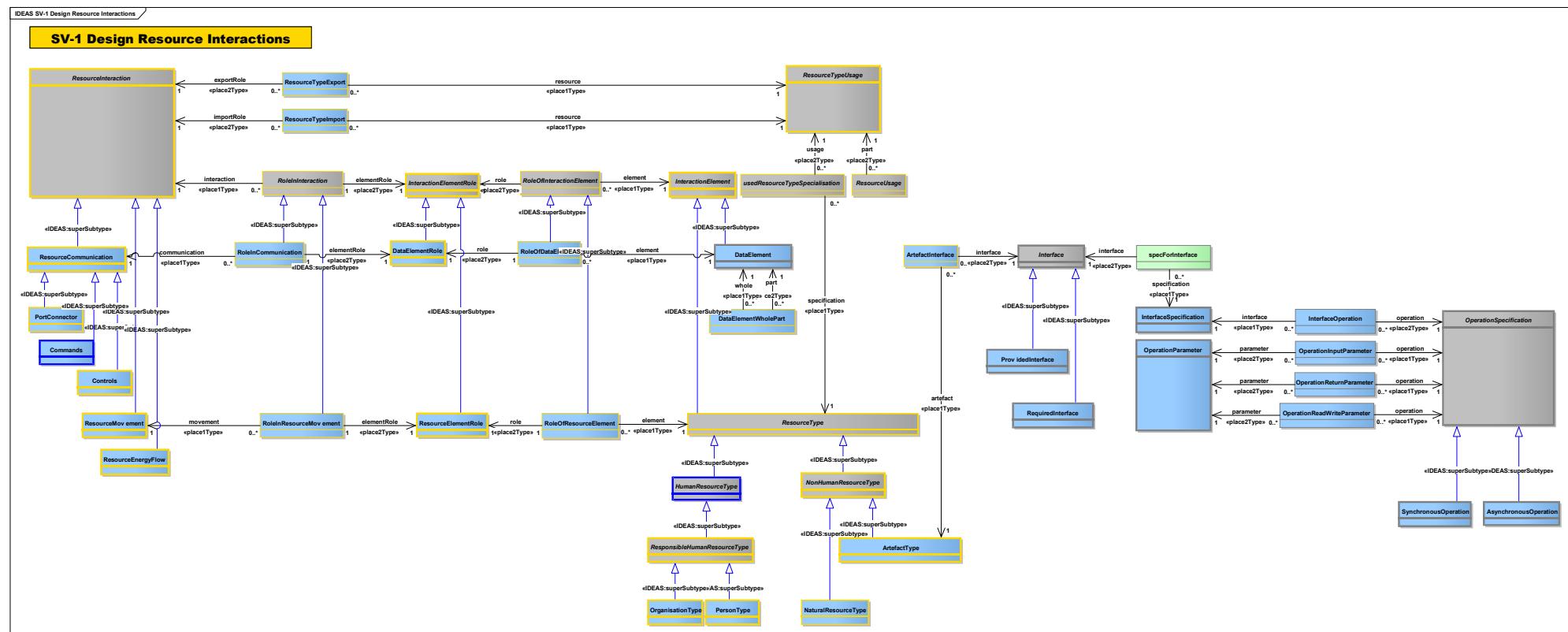
Figure 67 : SV-1 Design Resource Interactions
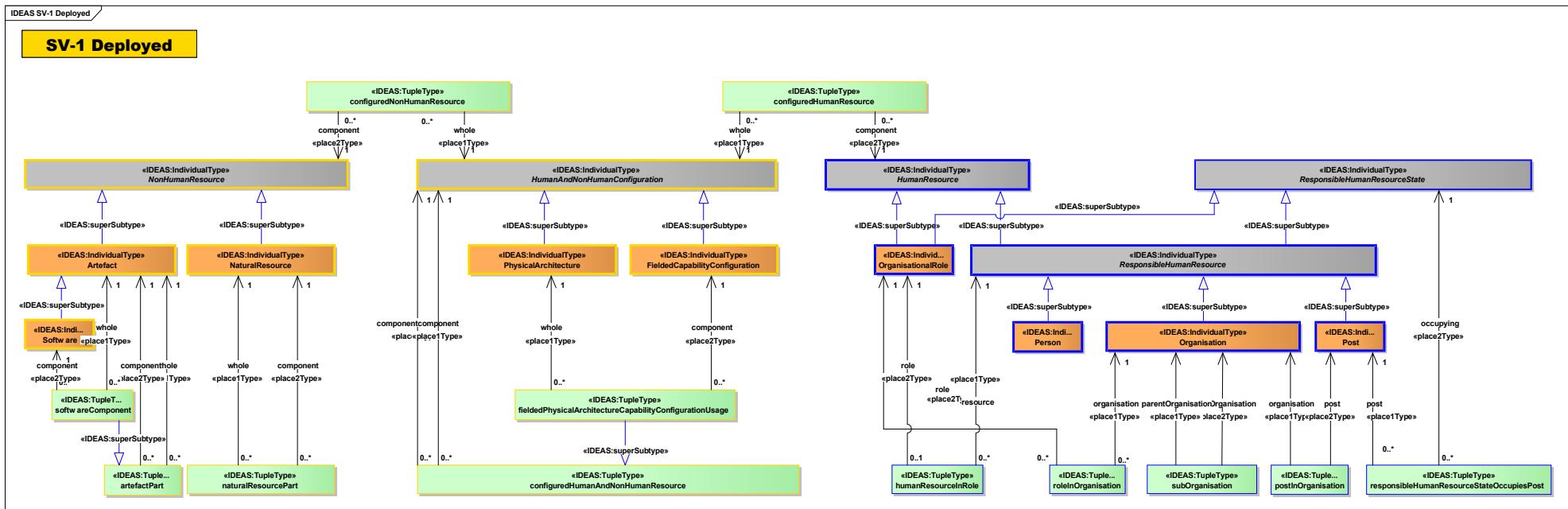
Figure 68 : SV-1 Deployed

This document is no longer extant and has been withdrawn.
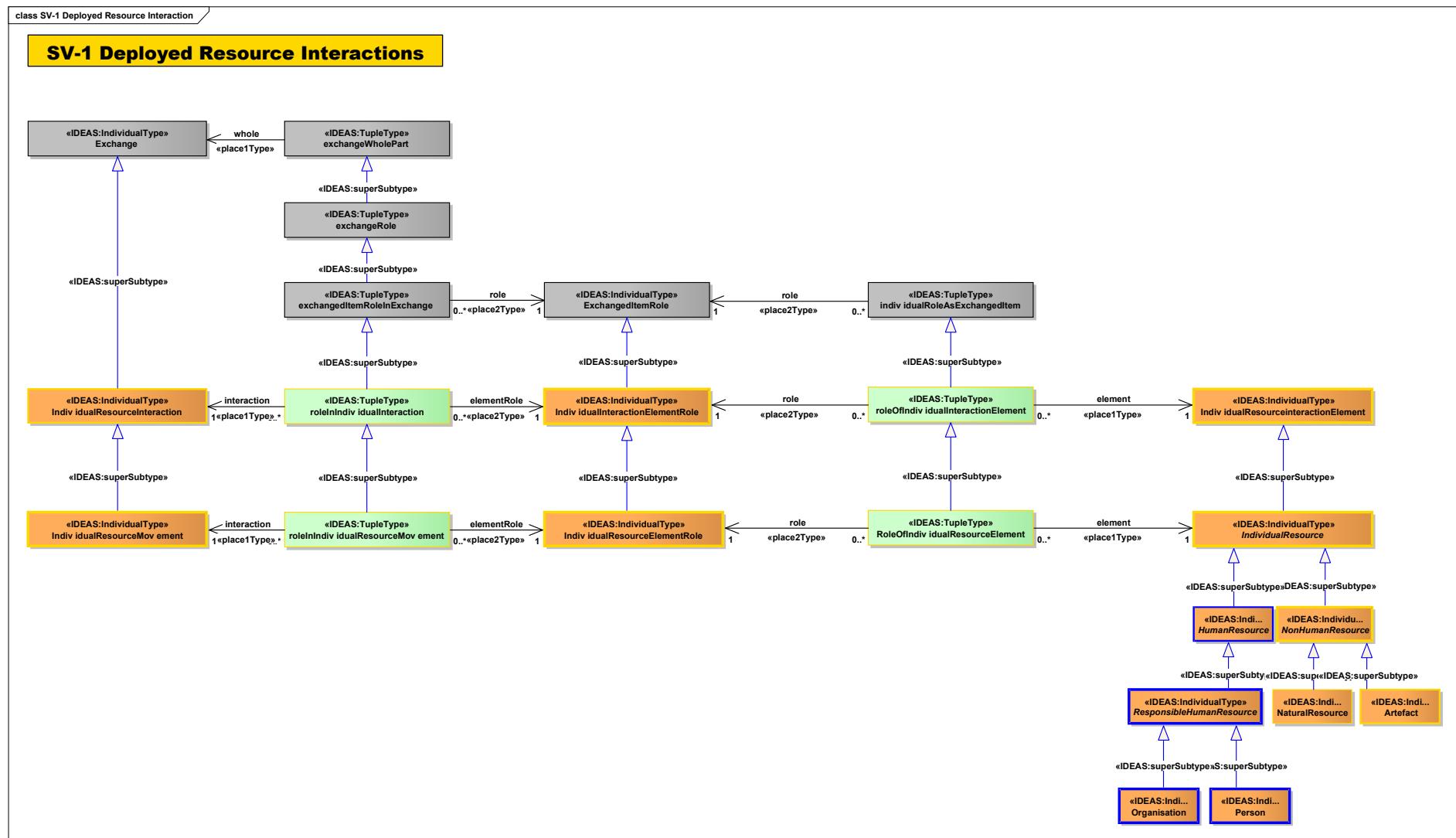
Figure 69 : SV-1 Deployed Resource Interaction

2.6.2 SV-2: System port specification, connectivity description and clusters
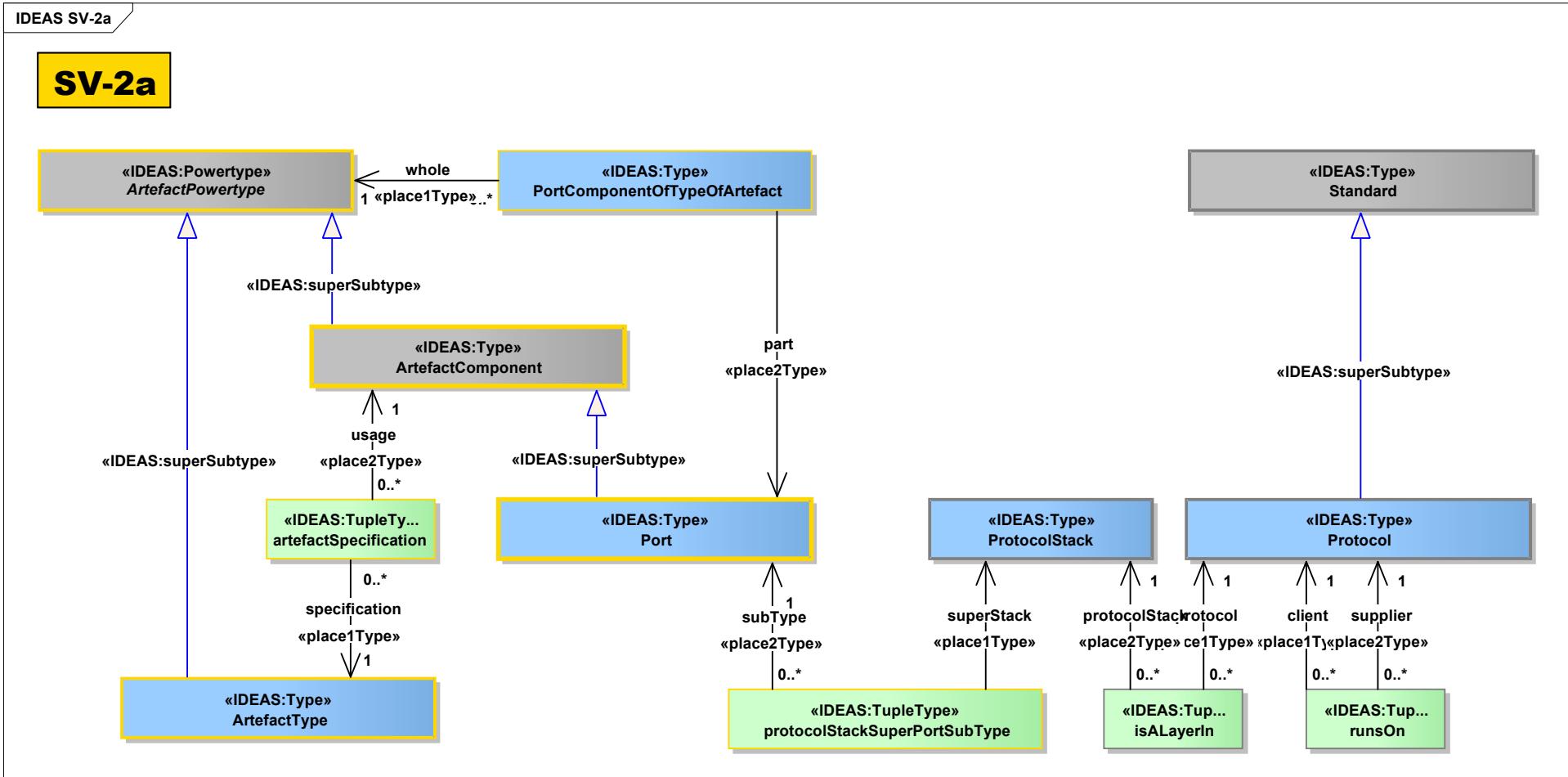
Figure 70 : SV-2a

This document is no longer extant and has been withdrawn.
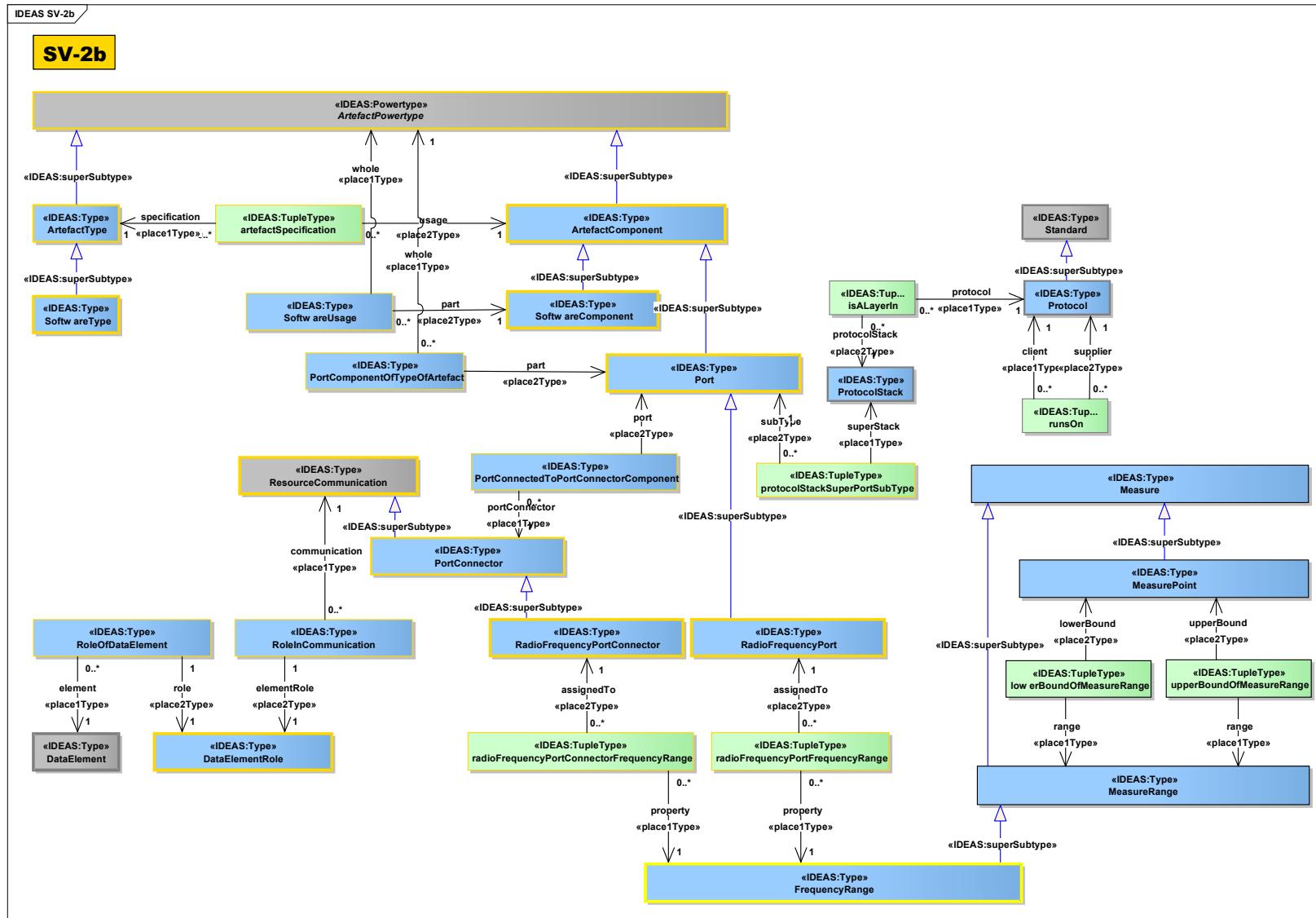
Figure 71 : SV-2b
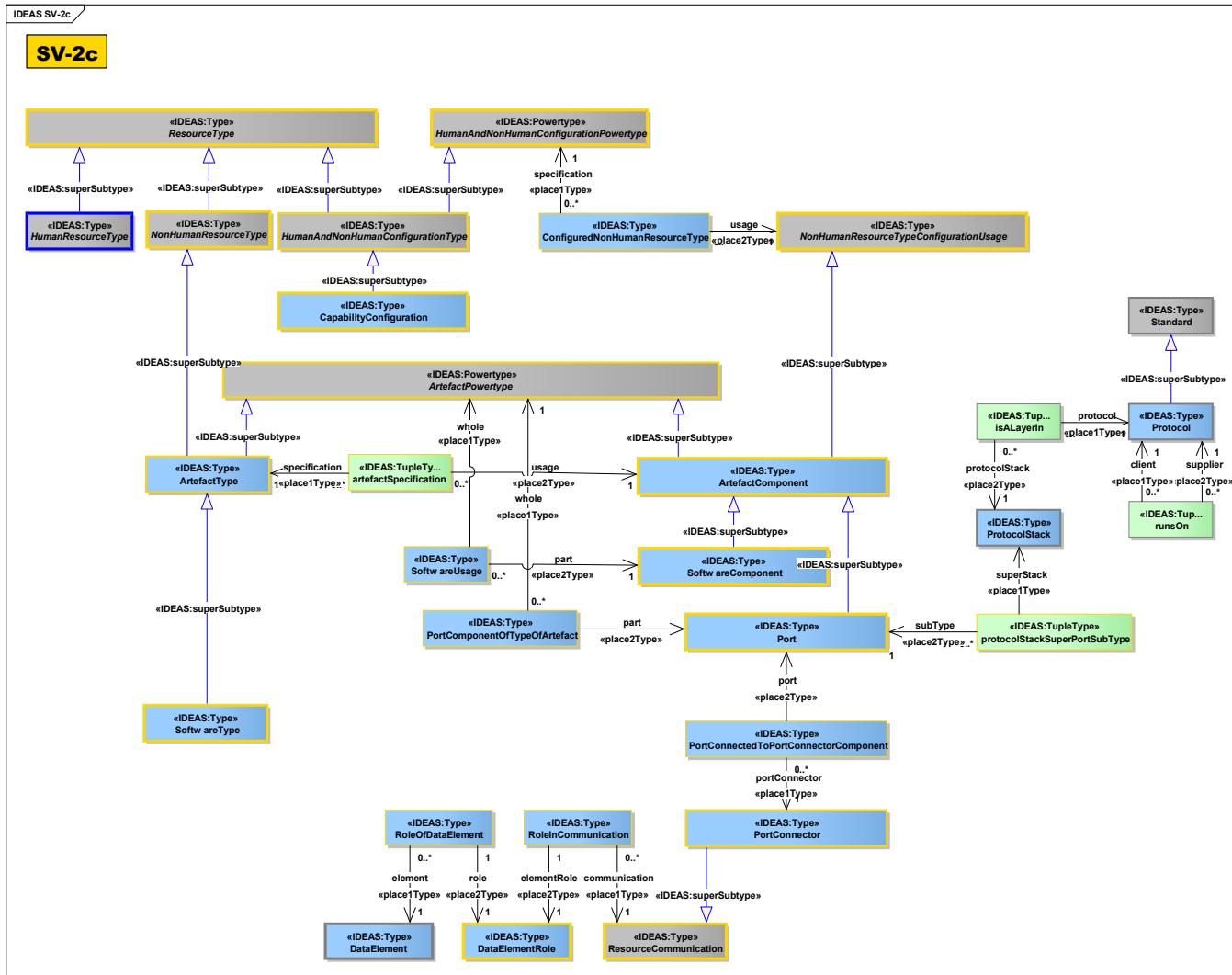
Figure 72 : SV-2c

2.6.3 SV-3: Resource interaction matrix
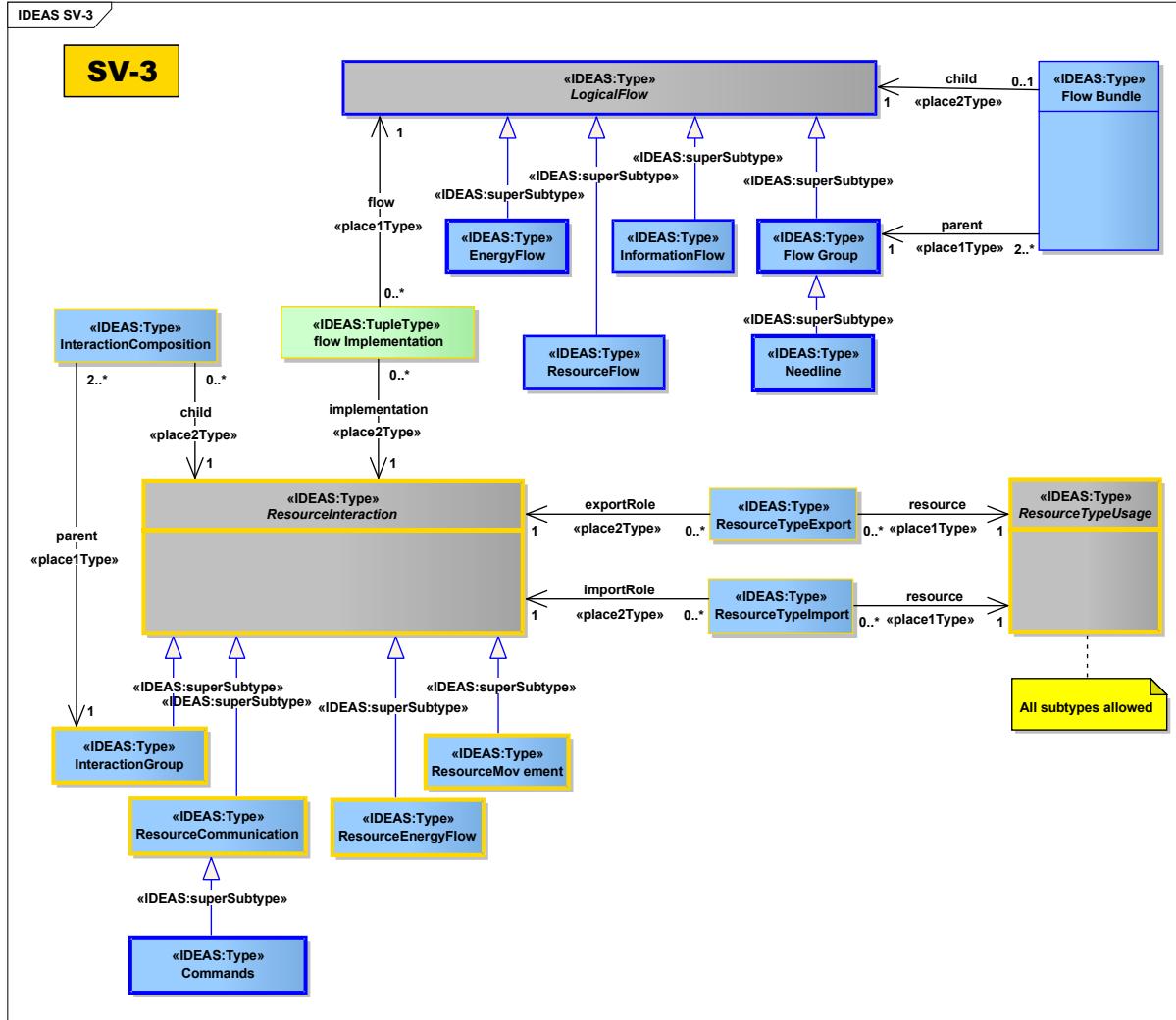
Figure 73 : SV-3

2.6.4   SV-4: Functionality description
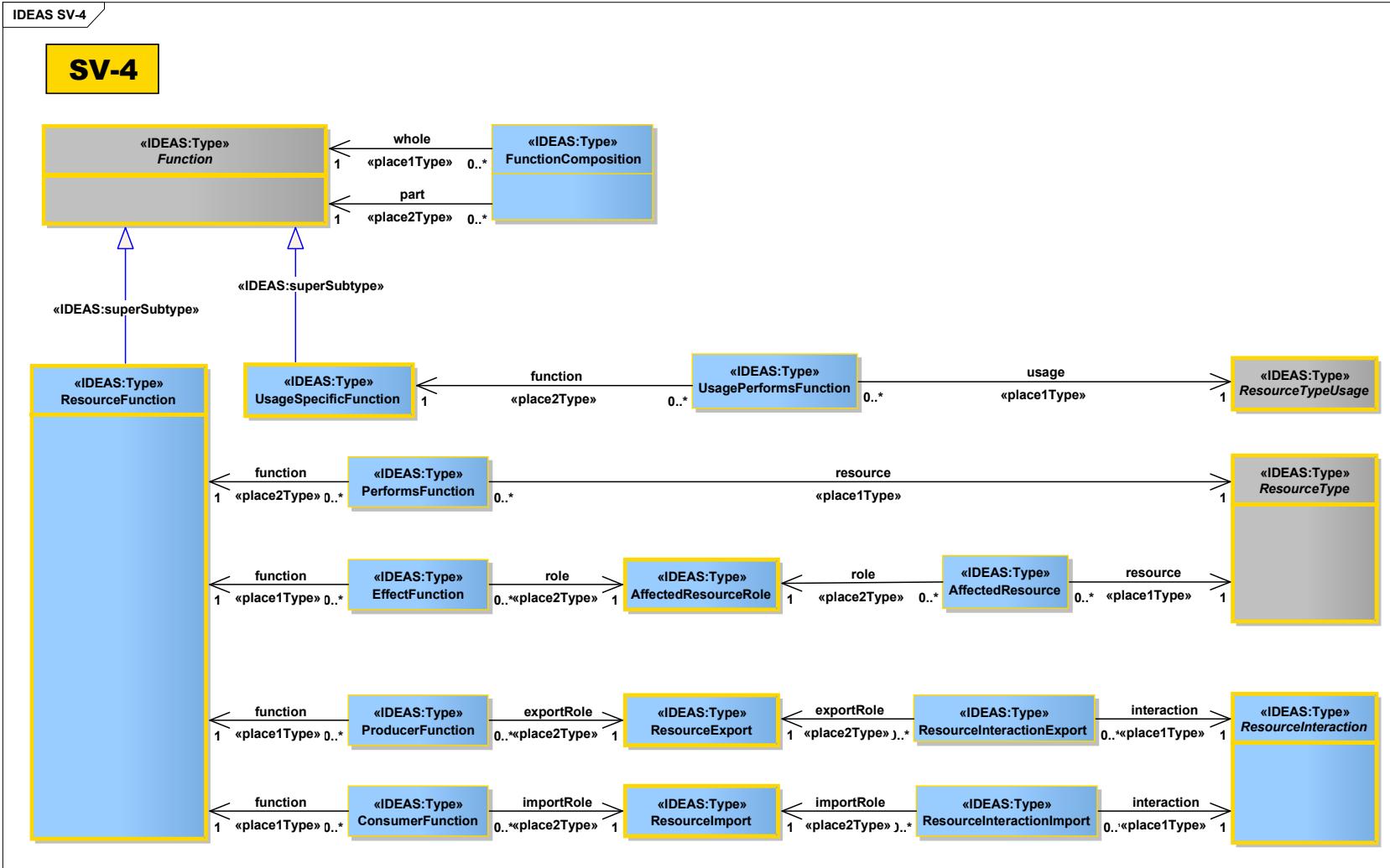
Figure 74 : SV-4

2.6.5 SV-5: Function operational activity/ service function traceability matrix
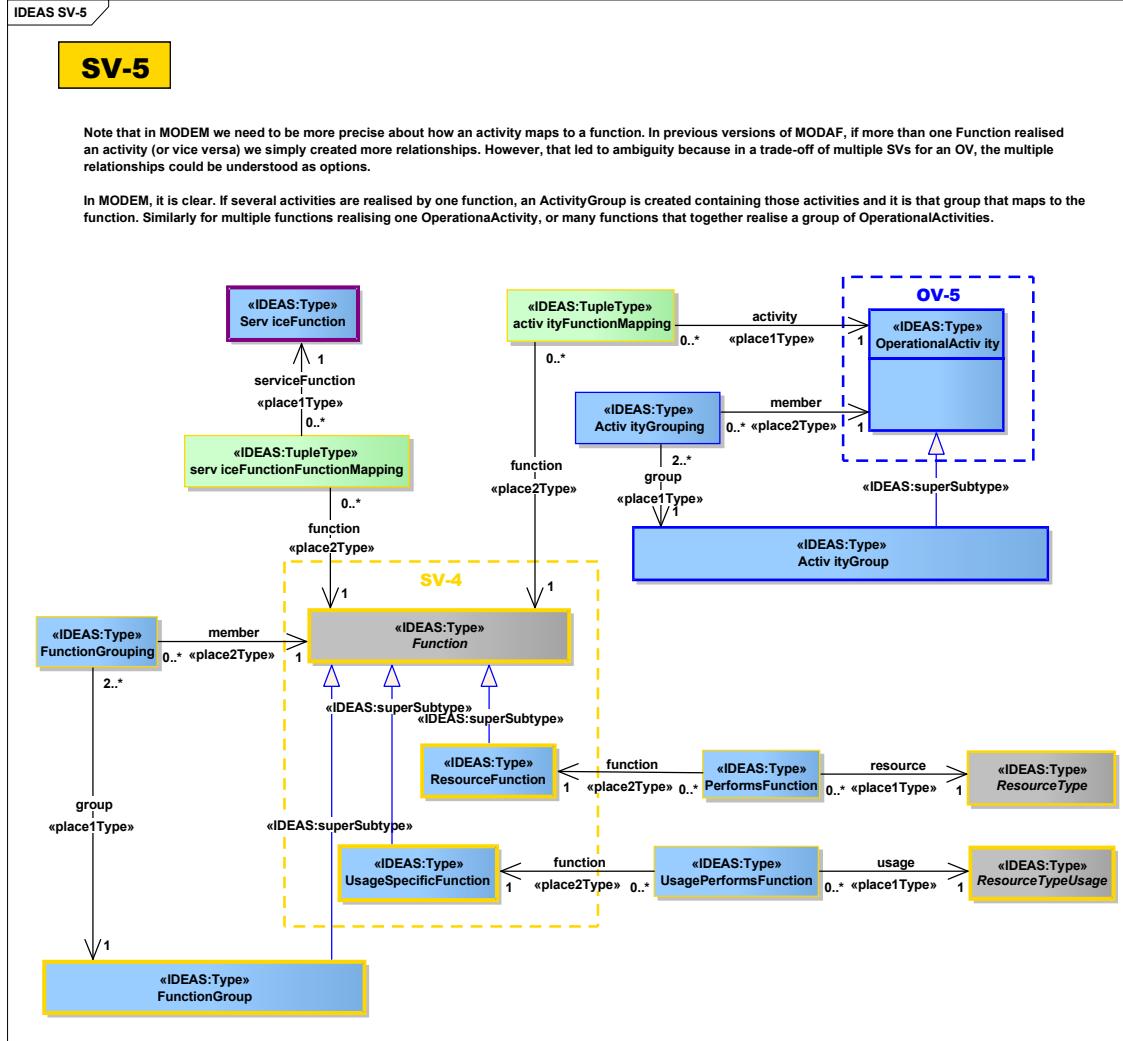
Figure 75 : SV-5

2.6.6 **SV-6: Systems data exchange matrix**
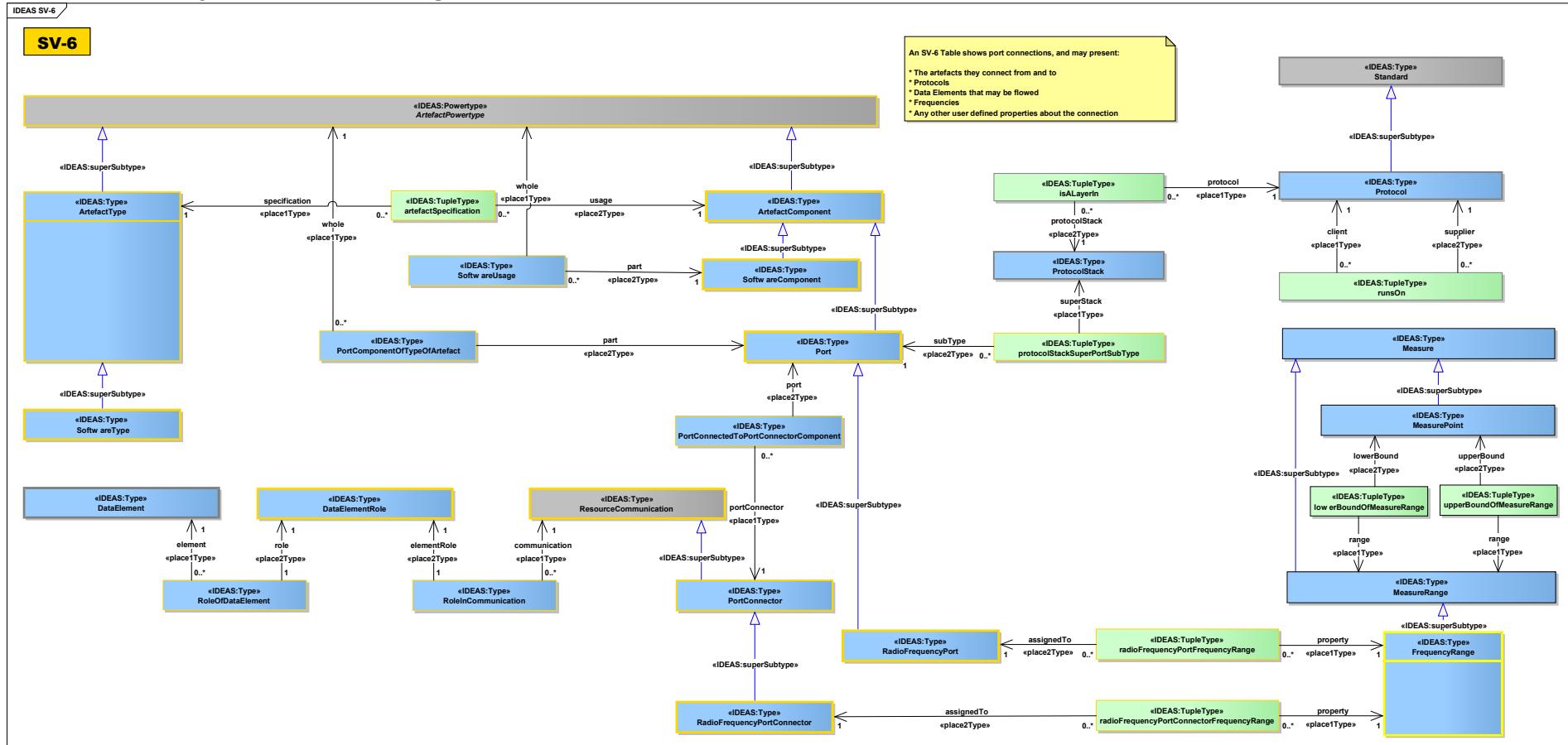
Figure 76 : SV-6

2.6.7   SV-7: Resource performance parameters matrix
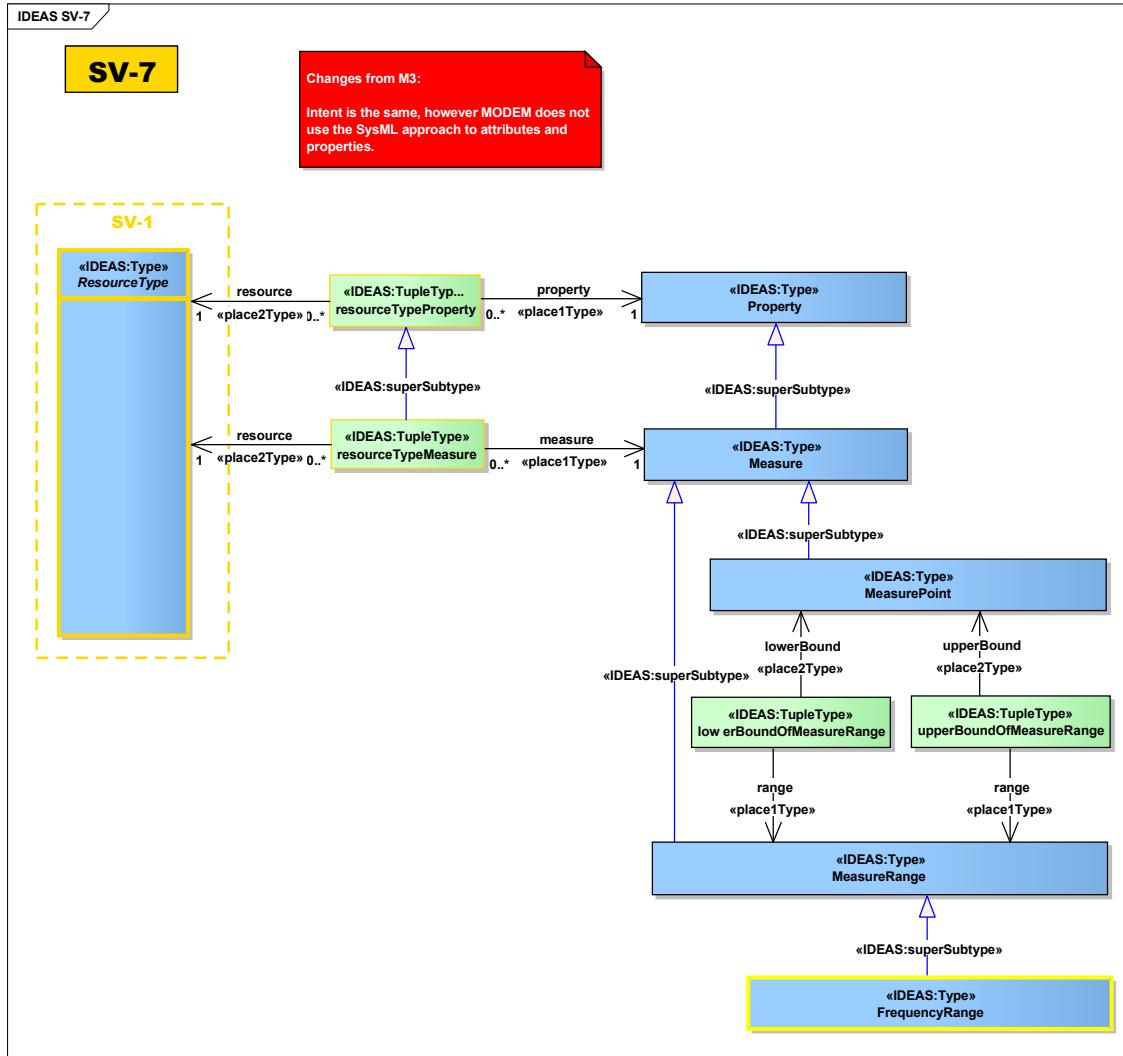
Figure 77 : SV-7

2.6.8   SV-8: Capability configuration management
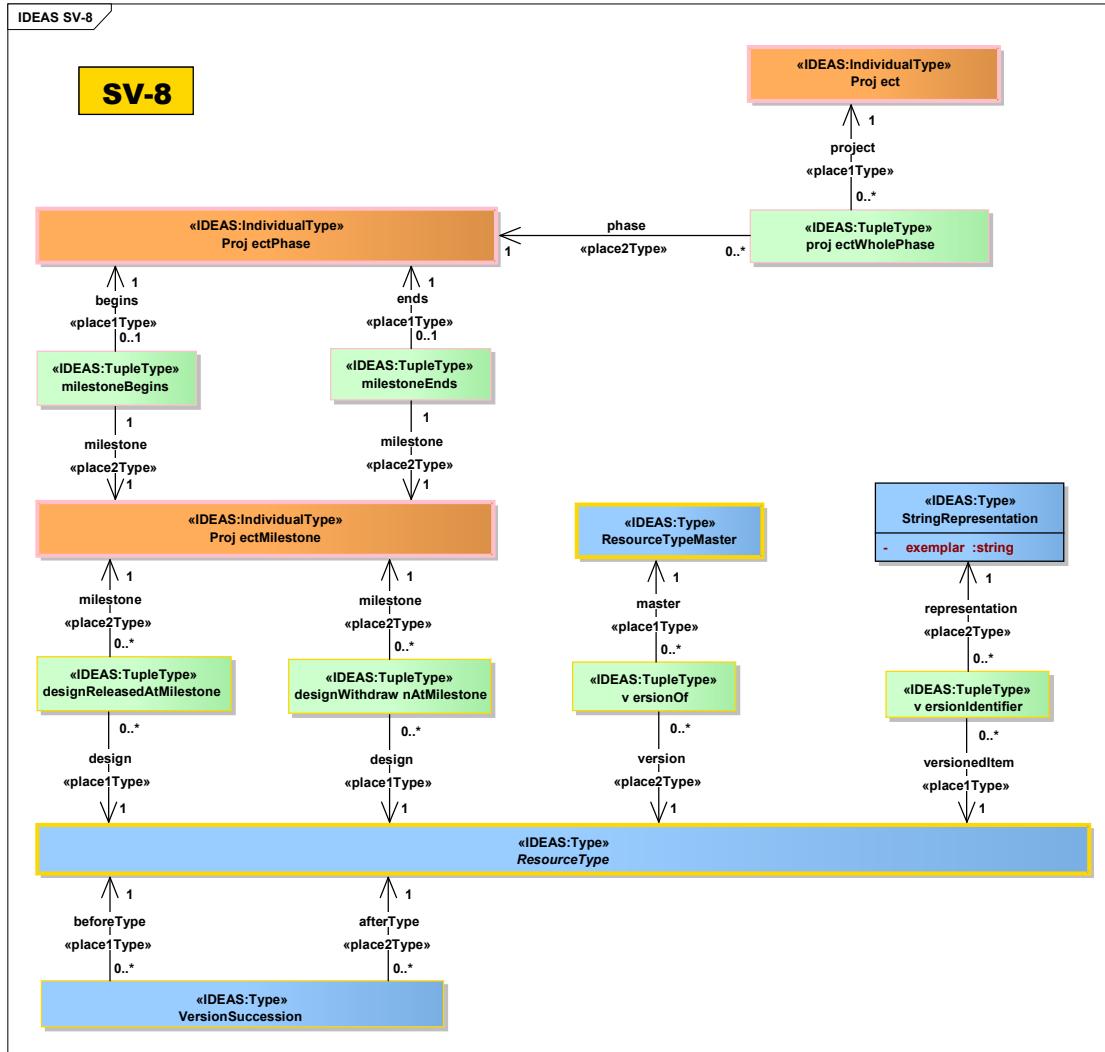
Figure 78 : SV-8

2.6.9   SV-9: Technology and skills forecast
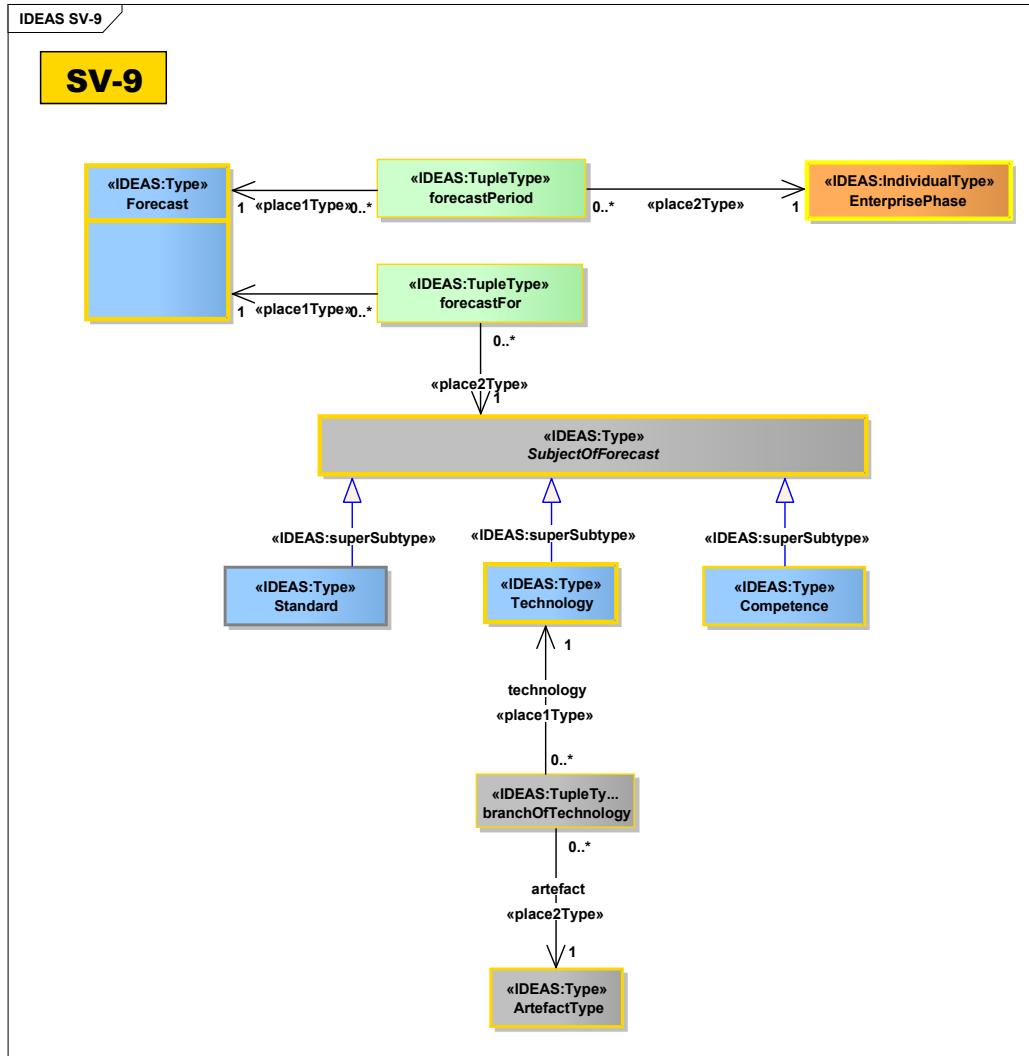
Figure 79 : SV-9

2.6.10   SV-10: Resource constraints, state transition and event-trace description
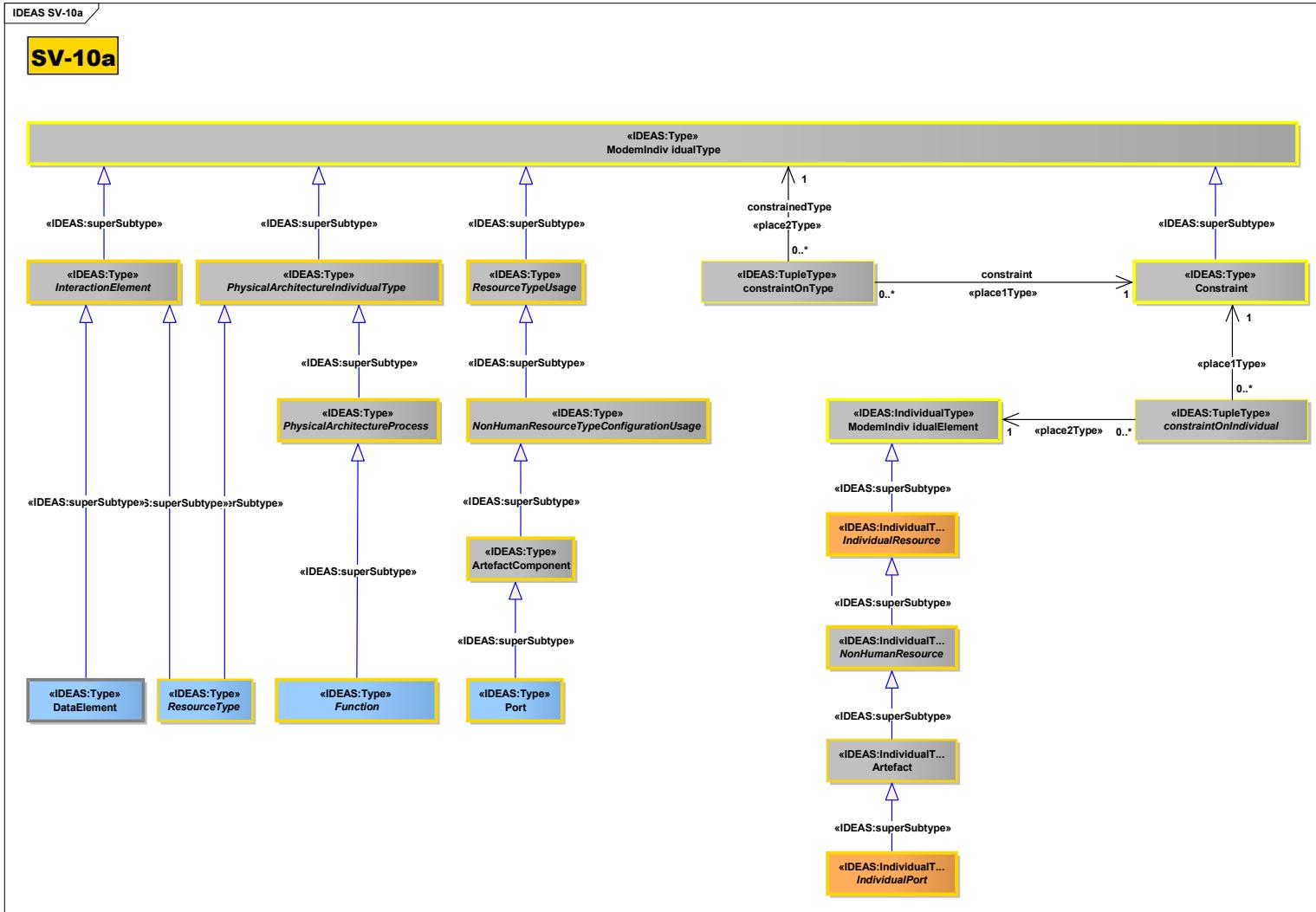
Figure 80 : SV-10a
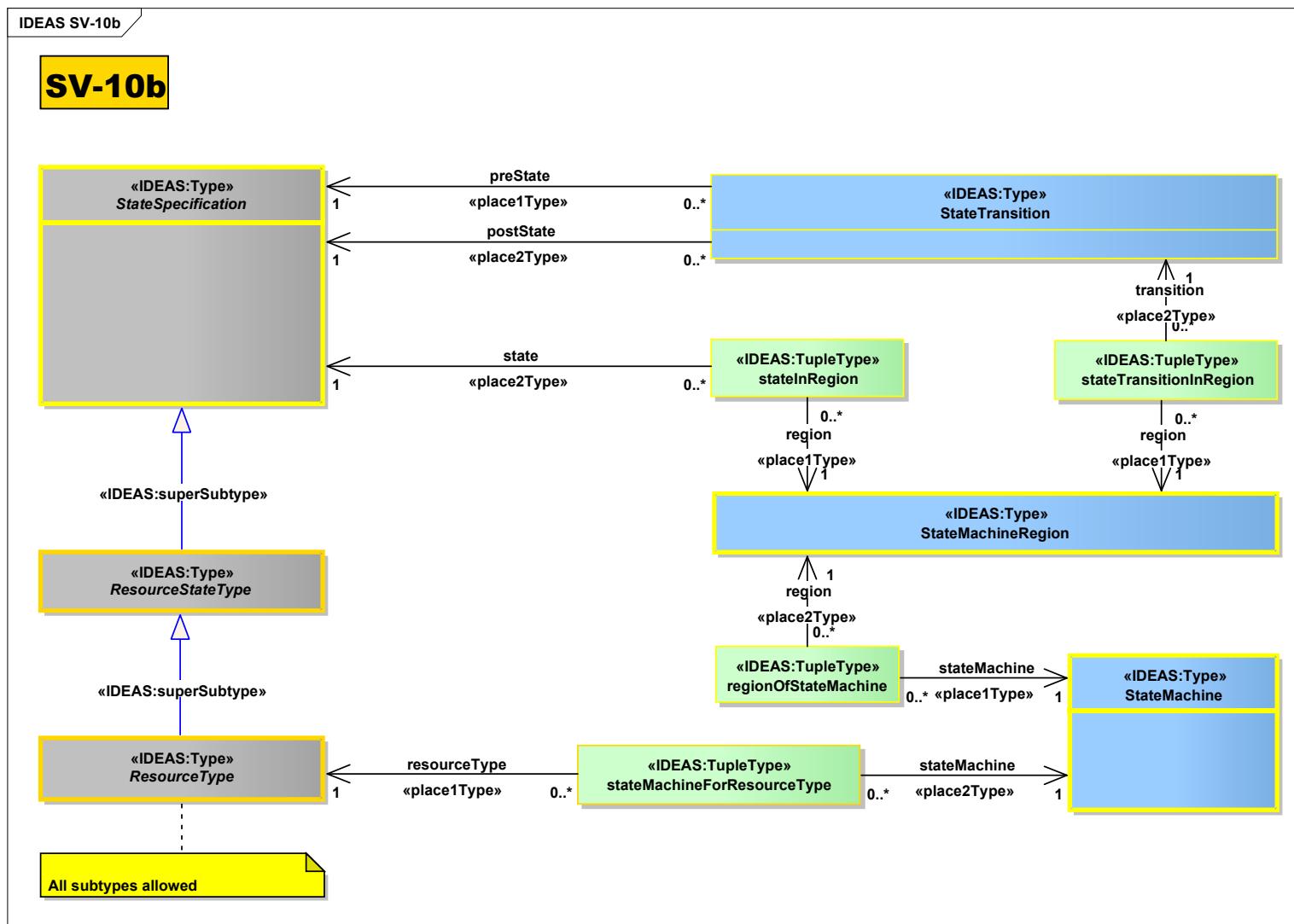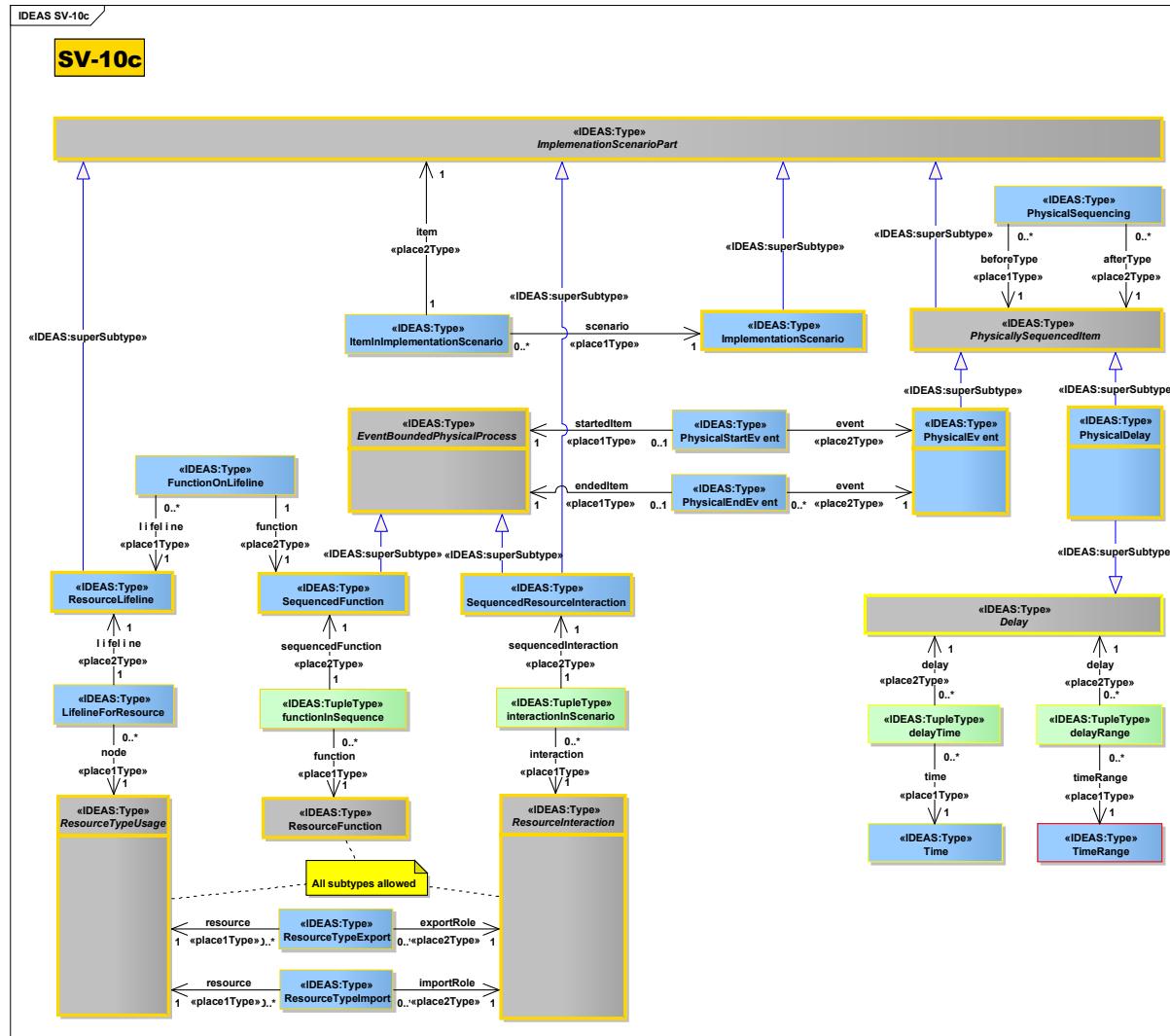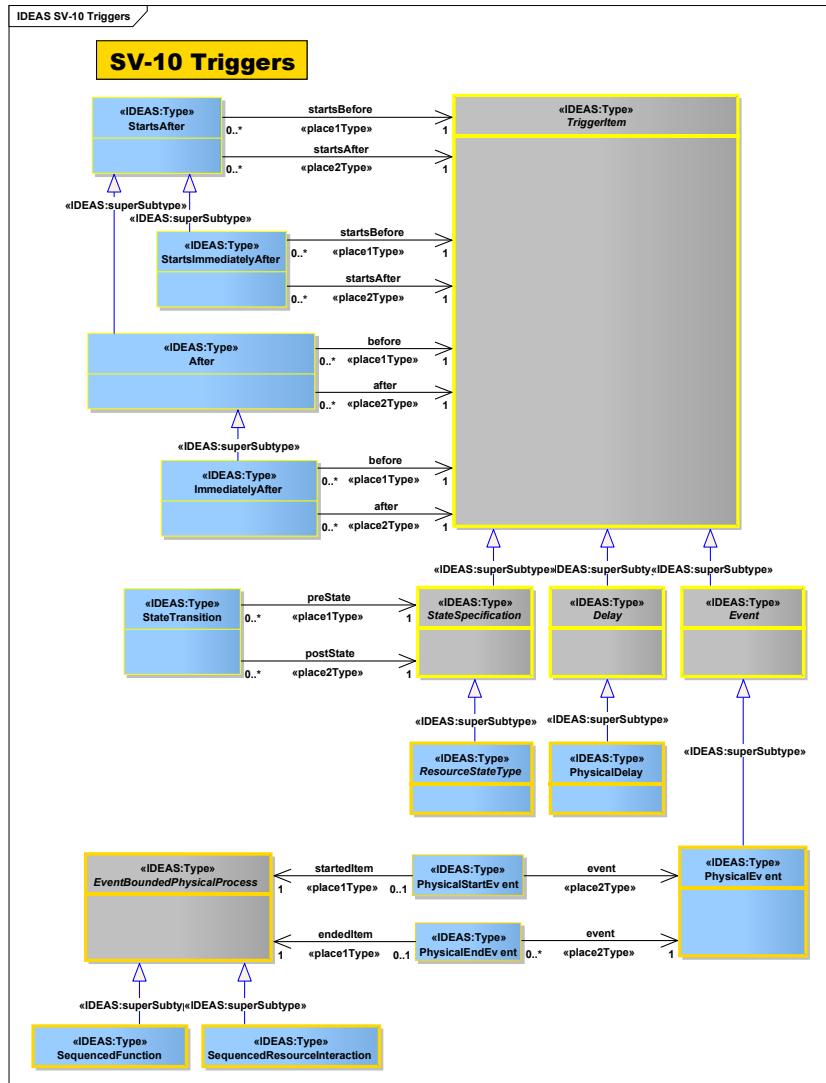
Figure 81 : SV-10b

Figure 82 : SV-10c

Figure 83 : SV-10 Triggers

2.6.11   SV-11: Physical schema
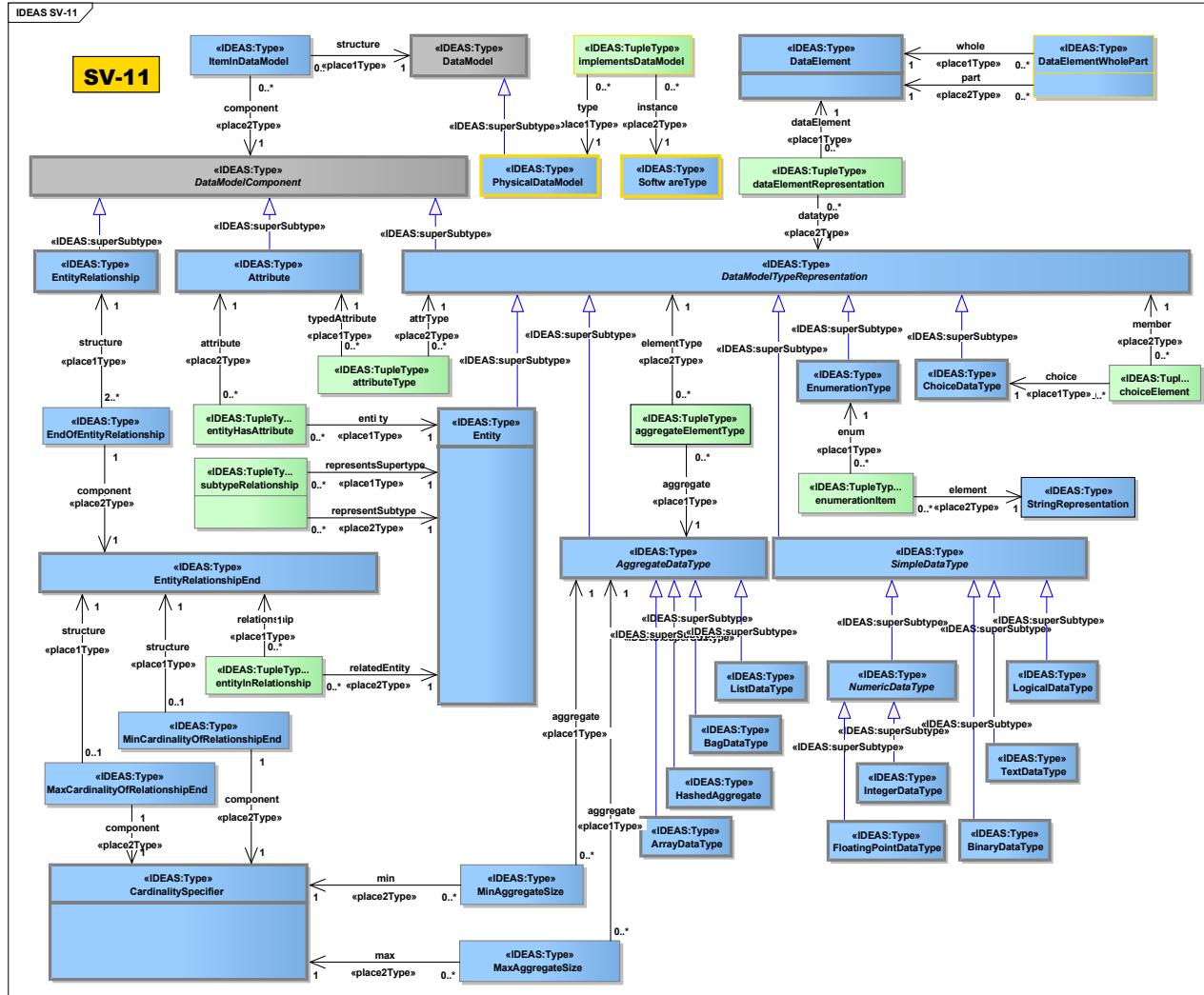
Figure 84 : SV-11

2.6.12   SV-12: Service provision and service composition
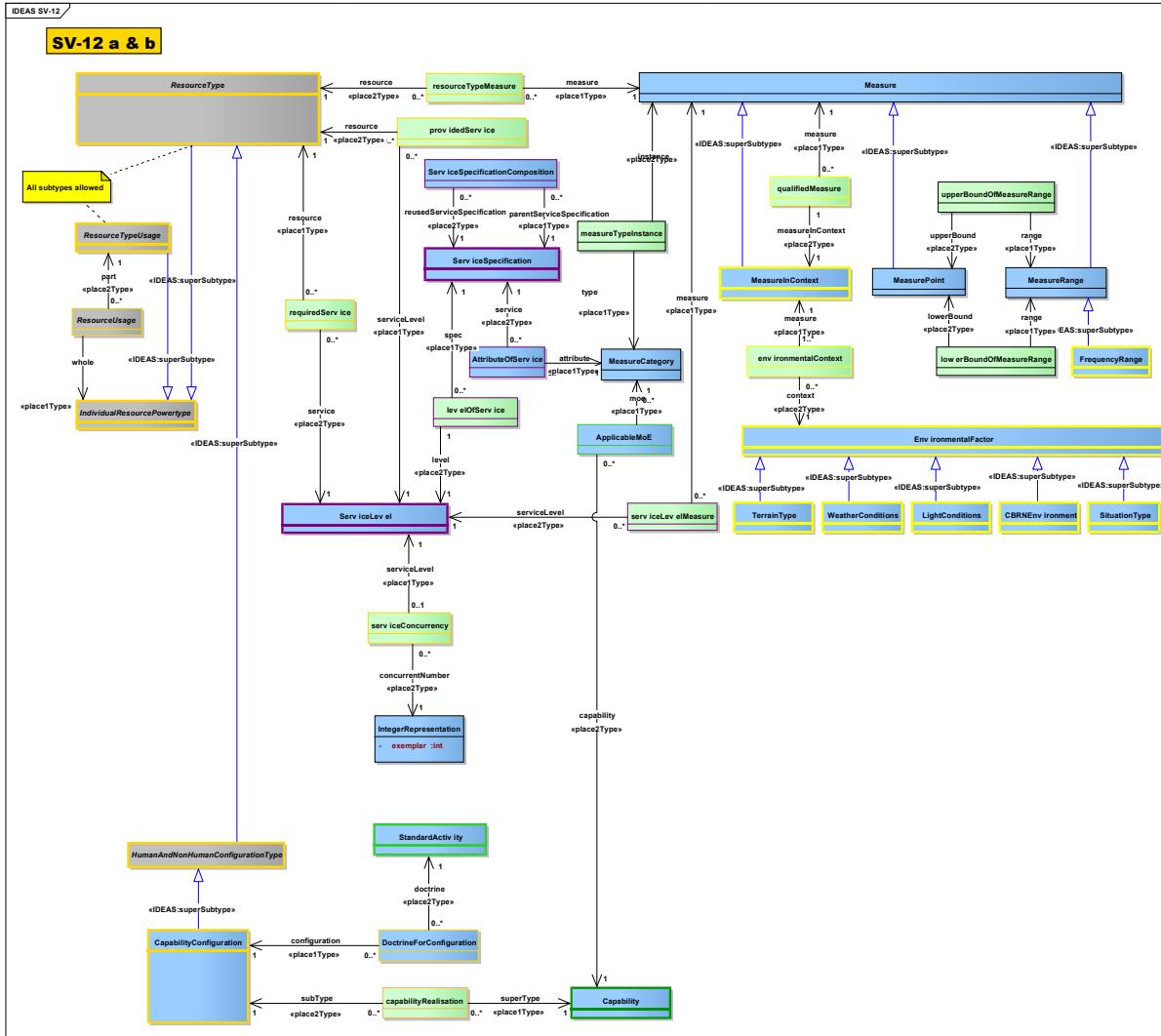
Figure 85 : SV-12

2.6.13 System Views elements list

System Views
AffectedResource «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **AffectedResource - IndividualRoleType** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **AffectedResource - TypicalWholePart** *Association (source - target):«place1Type»* **AffectedResource - ResourceType** *Association (source - target):«place2Type»* **AffectedResource - AffectedResourceRole** *Attributes:* - **An IndividualRoleType where the role extent is an AffectedResourceRole and the whole is a ResourceType.**
AffectedResourceRole «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **AffectedResourceRole - RoleExtentType** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **AffectedResourceRole - ModemIndividualType** *Attributes:* - **A ModemIndividualType that is the role played by a ResourceType when it is acted upon by a Function.**
Artefact «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **Artefact - NonHumanResource** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **Artefact - ArtefactPowertype** *Attributes:* - **An IndividualResource that is non-human and man-made. Examples are "car", "radio", "diesel", etc.**
ArtefactComponent «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ArtefactComponent - ArtefactPowertype** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ArtefactComponent - NonHumanResourceTypeConfigurationUsage** *Attributes:* - **A NonHumanResourceTypeConfigurationUsage that is a type of Artefact that is used as a component of an ArtefactType.**
ArtefactInterface «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ArtefactInterface - TypicalWholePart** *Association (source - target):«place1Type»* **ArtefactInterface - ArtefactType**

Association (source - target):«place2Type» **ArtefactInterface - Interface** *Attributes:* **-** **A TypicalWholePart that relates an ArtefactType to the Interface it provides or requires.**
ArtefactType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* «IDEAS:superSubtype» **ArtefactType - ArtefactPowertype** *Generalization (element - is a subtype of):* «IDEAS:superSubtype» **ArtefactType - NonHumanResourceType** *Attributes:* **-** **A type of man-made object. Examples are "car", "radio", "diesel", etc.** **Note: It has no human components.**
ArtefactUsage «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ArtefactUsage - NonHumanResourceUsage** *Association (source - target):*«place1Type» **ArtefactUsage - ArtefactPowertype** *Association (source - target):*«place2Type» **ArtefactUsage - ArtefactComponent** *Attributes:* **-** **A NonHumanResourceUsage that asserts a ArtefactComponent is used by an ArtefactType.**
CapabilityConfiguration «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* «IDEAS:superSubtype» **CapabilityConfiguration - HumanAndNon-HumanConfigurationType** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **CapabilityConfiguration - FieldedCapabilityConfigurationPowertype** *Attributes:* **-** **A composite structure representing the physical and human resources (and their interactions) that when brought together provide one or more Capabilities. A CapabilityConfiguration is a set of Resources configured to provide a capability, and should be guided by [doctrine] which may take the form of Standard or OperationalConstraint stereotypes.**
CapabilityConfigurationConfigurationUsage «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **CapabilityConfigurationConfigurationUsage - HumanAndNonHumanResourceTypeConfigurationUsage** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **CapabilityConfigurationConfigurationUsage - FieldedCapabilityConfigurationPowertype** *Attributes:* **-** **A HumanAndNonHumanResourceTypeConfigurationUsage that is a type of CapabilityConfiguration.**

This document is no longer extant and has been withdrawn.

Competence «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **Competence - ResponsibleHumanResourceStateType** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **Competence - SubjectOfForecast** *Attributes:* - A ResponsibleHumanResourceStateType where each instance is a state of a ResponsibleHumanResource that possesses a specific set of abilities defined by knowledge, skills and attitude.
ConfiguredHumanAndNonHumanResourceType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ConfiguredHumanAndNonHumanResourceType - HumanAndNonHumanConfigurationTypeResourceUsage** *Association (source - target):«place1Type»* **ConfiguredHumanAndNonHumanResourceType - HumanAndNonHumanConfigurationPowertype** *Association (source - target):«place2Type»* **ConfiguredHumanAndNonHumanResourceType - HumanAndNonHumanResourceTypeConfigurationUsage** *Attributes:* - A resourceUsage that asserts that a state of a type of HumanAndNonHumanResouce is typically a component of a HumanAndNonHumanConfigurationType.
ConfiguredHumanResourceType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ConfiguredHumanResourceType - HumanAndNonHumanConfigurationTypeResourceUsage** *Association (source - target):«place1Type»* **ConfiguredHumanResourceType - HumanAndNonHumanConfigurationPowertype** *Association (source - target):«place2Type»* **ConfiguredHumanResourceType - HumanResourceTypeConfigurationUsage** *Attributes:* - A resourceUsage that asserts that a state of a type of HumanResouce is typically a component of a HumanAndNonHumanConfigurationType.
ConfiguredNonHumanResourceType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ConfiguredNonHumanResourceType - HumanAndNonHumanConfigurationTypeResourceUsage** *Association (source - target):«place1Type»* **ConfiguredNonHumanResourceType - HumanAndNonHumanConfigurationPowertype** *Association (source - target):«place2Type»* **ConfiguredNonHumanResourceType - NonHumanResourceTypeConfigurationUsage** *Attributes:* - A resourceUsage that asserts that a state of a type of NonHumanResouce is typically a component of a HumanAndNonHumanConfigurationType.
ConsumerFunction «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **ConsumerFunction - ModemWholePartType** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **ConsumerFunction - IndividualExchangeRoleType**

Association (source - target): «place1Type»
ConsumerFunction - Function
Association (source - target): «place2Type»
ConsumerFunction - ResourceImport
Attributes:
-
An IndividualExchangeRoleType where the role is a ResourceImport and the consumer is a Function.

Controls «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
Controls - ResourceCommunication
Attributes:
-
A ResourceCommunication where one InteractionElement controls another.

DataElementRole «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
DataElementRole - InteractionElementRole
Attributes:
-
An InteractionElementRole where the element is a DataElement.

DataElementWholePart «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
DataElementWholePart - TypicalWholePart
Association (source - target):«place2Type»
DataElementWholePart -DataElement
Association (source - target):«place1Type»
DataElementWholePart - DataElement
Attributes:
-
A TypicalWholePart where one DataElement is a part of another.

DoctrineForConfiguration «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
DoctrineForConfiguration - ModemWholePartType
Association (source - target):«place1Type»
DoctrineForConfiguration - CapabilityConfiguration
Association (source - target):«place2Type»
DoctrineForConfiguration - StandardActivity
Attributes:
-
A ModemWholePartType that asserts a StandardActivity is part of a CapabilityConfiguration - i.e. in order to deliver the Capability, the configuration must follow doctrinal processes.

EffectFunction «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
EffectFunction - ProcessWholeRoleExtentPartType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
EffectFunction - TypicalWholePart
Association (source - target):«place1Type»
EffectFunction - ResourceFunction
Association (source - target):«place2Type»
EffectFunction - AffectedResourceRole
Attributes:
-
A TypicalWholePart that relates a ResourceFunction to the AffectedResourceRole played by a ResourceType when acted upon by the ResourceFunction.

EventBoundedPhysicalProcess «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
EventBoundedPhysicalProcess - PhysicalArchitectureProcess
Attributes:
-
A PhysicalArchitectureProcess that can have PhysicalEvents marking its start and end points.

FieldedCapabilityConfiguration «IDEAS:IndividualType»
Connectors:
Dependency (element - is instance of):«IDEAS:powertypeInstance»
FieldedCapabilityConfiguration - FieldedCapabilityConfigurationPowertype
Generalization (element - is a subtype of): «IDEAS:superSubtype»
FieldedCapabilityConfiguration - HumanAndNon-HumanConfiguration
Attributes:
-
An actual, fully-realised capability. A FieldedCapability must indicate its configuration (HumanAndNon-HumanConfiguration). Example: "HMS Iron Duke, configured and crewed, operating under the appropriate doctrine". Note - the CapabilityConfiguration that this realises would specify a UK Type 23 Frigate, the crew, the weapons systems, etc. Note: was called FieldedCapability in M3

FieldedCapabilityConfigurationPowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
FieldedCapabilityConfigurationPowertype - HumanAndNonHumanConfigurationPowertype
Attributes:
-
The powertype of FieldedCapabilityConfiguration.

Forecast «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
Forecast - ModemIndividualType
Attributes:
-
A ModemIndividualType that is the forecasted future states of one or more SubjectOfForecasts for the forecast period.

Function «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Function - PhysicalArchitectureProcess
Attributes:
-
A PhysicalArchitectureProcess that is either carried out by a ResourceType or a ResourceTypeUsage.

FunctionComposition «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
FunctionComposition - TypicalWholePart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
FunctionComposition - ProcessWholeAndPartType
Association (source - target): «place2Type»
FunctionComposition - Function
Association (source - target): «place1Type»
FunctionComposition - Function
Attributes:
-
A TypicalWholePart that relates a parent (whole) Function to its child (part) Function.

FunctionGroup «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
FunctionGroup - Function
Attributes:
-
A Function that is entirely composed of other Functions

FunctionGrouping «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
FunctionGrouping - FunctionComposition
Association (source - target): «place1Type»
FunctionGrouping - FunctionGroup
Association (source - target): «place2Type»
FunctionGrouping - Function
Attributes:
-
A FunctionComposition where the parent is a FunctionGroup.

FunctionOnLifeline «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
FunctionOnLifeline - TypicalWholePart
Association (source - target): «place2Type»
FunctionOnLifeline - SequencedFunction
Association (source - target): «place1Type»
FunctionOnLifeline - ResourceLifeline
Attributes:
-

A TypicalWholePart where a SequencedFunction is part of a ResourceLifeline. Note: a given SequencedFunction may appear on one and only one ResourceLifeline.
HumanAndNonHumanConfiguration «IDEAS:IndividualType» _**Connectors:**_ _**Generalization (element - is a subtype of): «IDEAS:superSubtype»**_ **HumanAndNonHumanConfiguration - IndividualResource** _**Dependency (element - is instance of): «IDEAS:powertypeInstance»**_ **HumanAndNonHumanConfiguration - HumanAndNonHumanConfigurationPowertype** _**Attributes:**_ **-** **An IndividualResource that is composed of both human and non-human resources.**
HumanAndNonHumanConfigurationPowertype «IDEAS:Powertype» _**Connectors:**_ _**Generalization (element - is a subtype of):«IDEAS:superSubtype»**_ **HumanAndNonHumanConfigurationPowertype - IndividualResourcePowertype** _**Attributes:**_ **-** **The powertype of HumanAndNonHumanConfiguration.**
HumanAndNonHumanConfigurationType «IDEAS:Type» _**Connectors:**_ _**Generalization (element - is a subtype of): «IDEAS:superSubtype»**_ **HumanAndNonHumanConfigurationType - ResourceType** _**Generalization (element - is a subtype of): «IDEAS:superSubtype»**_ **HumanAndNonHumanConfigurationType - HumanAndNonHumanConfigurationPowertype** _**Attributes:**_ **-** **A ResourceType that has both Human and Non-Human components.**
HumanAndNonHumanConfigurationTypeResourceUsage «IDEAS:Type» _**Connectors:**_ _**Association (source - target):«place1Type»**_ **HumanAndNonHumanConfigurationTypeResourceUsage - HumanAndNonHumanConfigurationPowertype** _**Generalization (element - is a subtype of):«IDEAS:superSubtype»**_ **HumanAndNonHumanConfigurationTypeResourceUsage - ResourceUsage** _**Attributes:**_ **-** **A resourceUsage that asserts that a state of a type of HumanResouce is typically a component of a HumanAndNonHumanConfigurationType.**
HumanAndNonHumanResourceTypeConfigurationUsage «IDEAS:Type» _**Connectors:**_ _**Generalization (element - is a subtype of):«IDEAS:superSubtype»**_ **HumanAndNonHumanResourceTypeConfigurationUsage - ResourceTypeUsage** _**Generalization (element - is a subtype of):«IDEAS:superSubtype»**_ **HumanAndNonHumanResourceTypeConfigurationUsage - HumanAndNonHumanConfigurationPowertype** _**Attributes:**_ **-** **ResourceTypeUsage that is a type of state or part of a HumanAndNonHumanResource that is used by (a part of, a component of) another HumanAndNonHumanResourceType .**
HumanResourcePowertype «IDEAS:Powertype» _**Connectors:**_ _**Generalization (element - is a subtype of): «IDEAS:superSubtype»**_ **HumanResourcePowertype - IndividualResourcePowertype**

Attributes: - **The powertype of HumanResource.**
HumanResourceState «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **HumanResourceState - IndividualResourceState** *Attributes:* - **An IndividualResourceState that is a temporal state of a HumanResource.**
HumanResourceType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **HumanResourceType - ResourceType** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **HumanResourceType - HumanResourcePowertype** *Attributes:* - **A ResourceType that is a type of HumanResource. A PersonType, PostType, OrganisationType or OrganisationRoleType. [ABSTRACT]** **Note: was called "OrganisationalResource" in M3 v1.2. Note: was called "OrganisationalResourceType" in M3.**
HumanResourceTypeConfigurationUsage «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **HumanResourceTypeConfigurationUsage - HumanResourcePowertype** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **HumanResourceTypeConfigurationUsage - ResourceTypeUsage** *Attributes:* - **A state or part of a HumanResourceType that is used by (a part of, a component of) another HumanResourceType.**
HumanResourceTypeUsage «IDEAS:Type» *Connectors:* *Association (source - target):«place1Type»* **HumanResourceTypeUsage - HumanResourceType** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **HumanResourceTypeUsage - ResourceUsage** *Attributes:* - **A resourceUsage that ia a type of humanResource which asserts a given HumanResourceType belongs to an ResourceTypeUsage.**
ImplemenationScenarioPart «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **ImplemenationScenarioPart - PhysicalArchitectureIndividualType** *Attributes:* - **A ModemIndividualType that features in (i.e. is part of) an ImplemenationScenario.**

This document is no longer extant and has been withdrawn.

ImplementationScenario «IDEAS:Type» _Connectors:_ _Generalization (element - is a subtype of): «IDEAS:superSubtype»_ **ImplementationScenario - Scenario** _Generalization (element - is a subtype of): «IDEAS:superSubtype»_ **ImplementationScenario – ImplementationScenarioPart** _Attributes:_ **-** **A Scenario that features ResourceTypes, their Functions and Interactions.**
IndividualInteractionElementRole «IDEAS:IndividualType» _Connectors:_ _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **IndividualInteractionElementRole - ExchangedItemRole** _Dependency (element - is instance of):«IDEAS:powertypeInstance»_ **IndividualInteractionElementRole - IndividualInteractionElementRolePowertype** _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **IndividualInteractionElementRole - ModemIndividualElement** _Attributes:_ **-** **An ExchangedItemRole that is a role in an IndividualResourceInteraction.**
IndividualInteractionElementRolePowertype «IDEAS:Powertype» _Connectors:_ _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **IndividualInteractionElementRolePowertype - ExchangedItemRoleType** _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **IndividualInteractionElementRolePowertype - ModemIndividualElementType** _Attributes:_ **-** **The powertype of IndividualInteractionElementRole.**
IndividualPort «IDEAS:IndividualType» _Connectors:_ _Dependency (element - is instance of):«IDEAS:powertypeInstance»_ **IndividualPort - IndividualPortPowertype** _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **IndividualPort - Artefact** _Attributes:_ **-** **An Artefact that is a port or interface provided by (and part of) an Artefact. Note: subsumes "SystemPort" and "SoftwarePort" in M3.**
IndividualPortConnectedToPortConnectorPowertype «IDEAS:Powertype» _Connectors:_ _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **IndividualPortConnectedToPortConnectorPowertype - ModemThing** _Generalization (element - is a subtype of):«IDEAS:superSubtype»_ **IndividualPortConnectedToPortConnectorPowertype - CoupleType** _Attributes:_ **-** **The powertype of IndividualPortConnectedToPortConnector.**

IndividualPortConnector «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **IndividualPortConnector - IndividualResourceInteraction** *Dependency (element - is instance of):*«IDEAS:powertypeInstance» **IndividualPortConnector - IndividualPortConnectorPowertype** *Attributes:* **-** **An IndividualResourceInteraction that has a protocolStackTypeIndividualPortConnector to a ProtocolStack.**
IndividualPortConnectorPowertype «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **IndividualPortConnectorPowertype - ExchangeType** *Attributes:* **-** **The powertype of IndividualPortConnector.**
IndividualPortPowertype «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **IndividualPortPowertype - IndividualResourcePartPowertype** *Attributes:* **-** **The powertype of IndividualPort.**
IndividualRadioFrequencyPort «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **IndividualRadioFrequencyPort - IndividualPort** *Attributes:* **-** **An IndividualPort that use radio frequency.**
IndividualRadioFrequencyPortConnector «IDEAS:IndividualType» *Connectors:* *Dependency (element - is instance of):*«IDEAS:powertypeInstance» **IndividualRadioFrequencyPortConnector - IndividualRadioFrequencyPortConnectorPowertype** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **IndividualRadioFrequencyPortConnector - IndividualPortConnector** *Attributes:* **-** **An IndividualPortConnector that connects two ports using a radio frequency.**
IndividualRadioFrequencyPortConnectorPowertype «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **IndividualRadioFrequencyPortConnectorPowertype - IndividualPortConnectorPowertype** *Attributes:* **-** **The powertype of IndividualRadioFrequencyPortConnector.**

IndividualResource «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResource - IndividualResourceInteractionElement
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResource - Body
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResource - ModemIndividualElement
Dependency (element - is instance of):«IDEAS:powertypeInstance»
IndividualResource - IndividualResourcePowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResource - IndividualResourceState
Attributes:
-
A ModemIndividualElement that is an IndividualOrganisationalResource, an ItemOfMateriel or a ResourceConfiguration.

IndividualResourceElementRole «IDEAS:IndividualType»
Connectors:
Dependency (element - is instance of):«IDEAS:powertypeInstance»
IndividualResourceElementRole - IndividualResourceElementRolePowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResourceElementRole - IndividualInteractionElementRole
Attributes:
-
An IndividualInteractionElementRole that is a role in an IndividualResourceMovement.

IndividualResourceElementRolePowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResourceElementRolePowertype - IndividualInteractionElementRolePowertype
Attributes:
-
The powertype of IndividualResourceElementRole.

IndividualResourceInteraction «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResourceInteraction - Exchange
Dependency (element - is instance of):«IDEAS:powertypeInstance»
IndividualResourceInteraction - IndividualResourceInteractionPowertype
Attributes:
-
An Exchange between IndividualResourceInteractionElements.

IndividualResourceInteractionElementPowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResourceInteractionElementPowertype - ModemIndividualElementType
Attributes:
-
The powertype of IndividualResourceInteractionElement.

IndividualResourceInteractionPowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResourceInteractionPowertype - ModemIndividualElementType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResourceInteractionPowertype - ExchangeType
Attributes:
-
The powertype of IndividualResourceInteraction.

IndividualResourceMovement «IDEAS:IndividualType»
Connectors:
Dependency (element - is instance of):«IDEAS:powertypeInstance»
IndividualResourceMovement - IndividualResourceMovementPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResourceMovement - IndividualResourceInteraction
Attributes:
-
An IndividualResourceInteraction between IndividualResources.

IndividualResourceMovementPowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResourceMovementPowertype - IndividualResourceInteractionPowertype
Attributes:
-
The powertype of IndividualResourceMovement.

IndividualResourcePart «IDEAS:IndividualType»
Connectors:
Dependency (element - is instance of):«IDEAS:powertypeInstance»
IndividualResourcePart - IndividualResourcePartPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResourcePart - ModemIndividualElement

Attributes:
-
A ModemIndividualElement that is a part of an IndividualResource. Note: an IndividualResource is an improper part of itself.

IndividualResourcePartPowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResourcePartPowertype - ModemIndividualElementType
Attributes:
-
The powertype of IndividualResourcePart.

IndividualResourcePowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
IndividualResourcePowertype - IndividualResourceStatePowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResourcePowertype - BodyType

Attributes: - The powertype of IndividualResourceState
IndividualResourceState «IDEAS:IndividualType» *Connectors:* Generalization (element - is a subtype of): «IDEAS:superSubtype» IndividualResourceState – IndividualResourcePart Dependency (element - is instance of): «IDEAS:powertypeInstance» IndividualResourceState - IndividualResourceStatePowertype *Attributes:* - A ModemIndividualElement that is either a IndividualResource or a proper state of one.
IndividualResourceStatePowertype «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* IndividualResourceStatePowertype - IndividualResourcePartPowertype *Attributes:* - The powertype of IndividualResourceState.
IndividualResourceStateUsagePowertype «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* IndividualResourceStateUsagePowertype - ModemTemporalWholePartType *Association (source - target):«place2Type»* IndividualResourceStateUsagePowertype - IndividualResourceStatePowertype *Association (source - target):«place1Type»* IndividualResourceStateUsagePowertype - IndividualResourcePowertype *Attributes:* - The powertype of IndividualResourceStateUsage.
IndividualResourceStateWholeAndPartType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* IndividualResourceStateWholeAndPartType - ModemWholePartType *Attributes:* - The powertype of IndividualResourceStateWholeAndPart.
IndividualResourceUsagePowertype «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* IndividualResourceUsagePowertype - ModemWholePartType *Association (source - target):«place1Type»* IndividualResourceUsagePowertype - IndividualResourcePowertype *Association (source - target):«place2Type»* IndividualResourceUsagePowertype - IndividualResourcePartPowertype *Attributes:* - The powertype of individualResourceUsage.

This document is no longer extant and has been withdrawn.

IndividualResourceInteractionElement «IDEAS:IndividualType»
Connectors:
Dependency (element - is instance of):«IDEAS:powertypeInstance»
IndividualResourceInteractionElement - IndividualResourceInteractionElementPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IndividualResourceInteractionElement - ModemIndividualElement
Attributes:
-
A ModemIndividualElement that is a exchanged in an IndividualResourceInteraction.

InteractionComposition «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
InteractionComposition - TypicalWholePart
Association (source - target):«place2Type»
InteractionComposition - ResourceInteraction
Association (source - target):«place1Type»
InteractionComposition - InteractionGroup
Attributes:
-
A TypicalWholePart where one ResourceInteraction is part of an InteractionGroup.

InteractionElement «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
InteractionElement - IndividualResourceInteractionElementPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
InteractionElement - ModemIndividualType
Attributes:
-
A ModemIndividualType that can be flowed between Resources in a ResourceInteraction.
[ABSTRACT]

InteractionElementRole «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
InteractionElementRole - IndividualInteractionElementRolePowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
InteractionElementRole - ModemIndividualType
Attributes:
-
A ModemIndividualType that is the Role played by an InteractionElement in a ResourceInteraction.
[ABSTRACT]

This document is no longer extant and has been withdrawn.

InteractionGroup «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **InteractionGroup - ResourceInteraction**   *Attributes:*   **-**   **A ResourceInteraction that is composed of other ResourceInteractions.**
ItemInImplementationScenario «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **ItemInImplementationScenario - ItemInScenario**   *Association (source - target):* **«place2Type»**   **ItemInImplementationScenario - ImplemenationScenarioPart**   *Association (source - target):* **«place1Type»**   **ItemInImplementationScenario - ImplementationScenario**   *Attributes:*   **-**   **An ItemInScenario where the Scenario is an ImplementationScenario.**
LifelineForResource «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **LifelineForResource - TypicalTemporalWholePart**   *Association (source - target):* **«place2Type»**   **LifelineForResource - ResourceLifeline**   *Association (source - target):* **«place1Type»**   **LifelineForResource - ResourceType**   *Attributes:*   **-**   **A TypicalTemporalWholePart that asserts a ResourceLifeLine is a typical temporal part of a Resource.**
NaturalResource «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **NaturalResource - NonHumanResource**   *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»**   **NaturalResource - NaturalResourcePowertype**   *Attributes:*   **-**   **An IndividualResource that is non-human and natural. Examples are "rock", "tree", "animal", etc.**
NaturalResourceComponent «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **NaturalResourceComponent - NaturalResourcePowertype**   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **NaturalResourceComponent - NonHumanResourceTypeConfigurationUsage**   *Attributes:*   **-**   **A NonHumanResourceTypeConfigurationUsage that is a type of NaturalResource, a specialisation of NaturalResourceType, that is used as a component of a NaturalResourceType.**

NaturalResourcePowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
NaturalResourcePowertype - NonHumanResourcePowertype
Attributes:
-
The powertype of NaturalResource.

NaturalResourceType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
NaturalResourceType - NaturalResourcePowertype
Generalization (element - is a subtype of): «IDEAS:superSubtype»
NaturalResourceType - NonHumanResourceType
Attributes:
-
A NonHumanResourceType that is a type of NaturalResource.

NaturalResourceUsage «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
NaturalResourceUsage - NonHumanResourceUsage
Association (source - target):«place1Type»
NaturalResourceUsage - NaturalResourcePowertype
Association (source - target):«place2Type»
NaturalResourceUsage - NaturalResourceComponent
Attributes:
-
A NonHumanResourceUsage that asserts that a NaturalResourceComponent is used by a NaturalResourceType.

NonHumanResource «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
NonHumanResource - NonHumanResourceState
Generalization (element - is a subtype of): «IDEAS:superSubtype»
NonHumanResource - IndividualResource
Dependency (element - is instance of): «IDEAS:powertypeInstance»
NonHumanResource - NonHumanResourcePowertype
Attributes:
-
An IndividualResource that is non-human.

NonHumanResourcePowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
NonHumanResourcePowertype - IndividualResourcePowertype
Attributes:
-
The powertype of NonHumanResource.

NonHumanResourceState «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
NonHumanResourceState - IndividualResourceState
Attributes:
-
A state of a NonHumanResource.

NonHumanResourceType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
NonHumanResourceType - ResourceType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
NonHumanResourceType - NonHumanResourcePowertype
Attributes:
-
A ResourceType that is a type of NonHumanResource (i.e. an Artefact or NaturalResource). [ABSTRACT]

NonHumanResourceTypeConfigurationUsage «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
NonHumanResourceTypeConfigurationUsage - NonHumanResourcePowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
NonHumanResourceTypeConfigurationUsage - ResourceTypeUsage
Attributes:
-
A NonHumanResourceTypeConfigurationUsage that is a type of state or part of a NonHumanResource that is used by (a part of, a component of) another NonHumanResourceType.

NonHumanResourceUsage «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
NonHumanResourceUsage - ResourceUsage
Association (source - target):«place1Type»
NonHumanResourceUsage - NonHumanResourcePowertype
Attributes:
-
A ResourceUsage that asserts a type of NonHumanResource is used by a ResourceType.

OrganisationPowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
OrganisationPowertype - ResponsibleHumanResourcePowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
OrganisationPowertype - OrganisationStatePowertype
Attributes:
-
The powertype of Organisation.

OrganisationRoleType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
OrganisationRoleType - OrganisationalRolePowertype
Generalization (element - is a subtype of): «IDEAS:superSubtype»

OrganisationRoleType - HumanResourceType   *Attributes:*   -   A type of role a human resource may carry out in an organisation. This is not used as a component of a ResourceType. Note: was called "RoleType" in M3.
OrganisationRoleTypeUsage «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   OrganisationRoleTypeUsage - HumanResourceTypeConfigurationUsage   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   OrganisationRoleTypeUsage - OrganisationalRolePowertype   *Attributes:*   -   A HumanResourceTypeConfigurationUsage that is a type of OrganisationRole , a specialisation of OrganisationRoleType, that is used as a component of a ResourceType.
OrganisationType «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   OrganisationType - OrganisationPowertype   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   OrganisationType - ResponsibleHumanResourceType   *Attributes:*   -   A ResponsibleHumanResourceType and a ConstructedHumanResourceType that is a type of Organisation. This is not used as a component of a ResourceType. Examples: Government Department, Commercial Company, Accounting Department.
OrganisationTypeUsage «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   OrganisationTypeUsage - ResponsibleHumanResourceTypeConfigurationUsage   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   OrganisationTypeUsage - OrganisationPowertype   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   OrganisationTypeUsage - OrganisationStatePowertype   *Attributes:*   -   A ResponsibleHumanResourceTypeConfigurationUsage that is a type of Organisation, a specialisation of OrganisationType, that is used as a component of a ResourceType.
OrganisationalRolePowertype «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   OrganisationalRolePowertype - HumanResourcePowertype   *Attributes:*   -   The powertype of OrganisationalRole.
PerformsFunction «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   PerformsFunction - ModemThing   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   PerformsFunction - CapableOfType   *Association (source - target):«place2Type»*

PerformsFunction - ResourceFunction   *Association (source - target):«place1Type»*   **PerformsFunction - ResourceType**   <u>*Attributes:*</u>   -   **A CapableOf that asserts a Function is conducted by a ResourceType.**
PersonPowertype «IDEAS:Powertype»   <u>*Connectors:*</u>   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **PersonPowertype - ResponsibleHumanResourcePowertype**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **PersonPowertype - AgentCapableOfResponsibilityStateType**   <u>*Attributes:*</u>   -   **The powertype of Person.**
PersonType «IDEAS:Type»   <u>*Connectors:*</u>   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **PersonType - PersonPowertype**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **PersonType - ResponsibleHumanResourceType**   <u>*Attributes:*</u>   -   **A ResponsibleHumanResourceType that is a type of person.**
PhysicalArchitecture «IDEAS:IndividualType»   <u>*Connectors:*</u>   *Dependency (element - is instance of):«IDEAS:powertypeInstance»*   **PhysicalArchitecture - PhysicalArchitecturePowertype**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **PhysicalArchitecture - HumanAndNonHumanConfiguration**   <u>*Attributes:*</u>   -   **An actual, fully-realised physical architecture.**
PhysicalArchitectureConfigurationUsage «IDEAS:Type»   <u>*Connectors:*</u>   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **PhysicalArchitectureConfigurationUsage - PhysicalArchitecturePowertype**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **PhysicalArchitectureConfigurationUsage - HumanAndNonHumanResourceTypeConfigurationUsage**   <u>*Attributes:*</u>   -   **A HumanAndNonHumanResourceTypeConfigurationUsage that is a type of PhysicalArchitecture.**
PhysicalArchitectureIndividualType «IDEAS:Type»   <u>*Connectors:*</u>   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **PhysicalArchitectureIndividualType - ModemIndividualType**   <u>*Attributes:*</u>   -

A ModemIndividualType that is involved in a PhysicalArchitecture.

PhysicalArchitecturePowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PhysicalArchitecturePowertype - HumanAndNonHumanConfigurationPowertype
Attributes:
-
The powertype of PhysicalArchitecture.

PhysicalArchitectureProcess «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
PhysicalArchitectureProcess - PhysicalArchitectureIndividualType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
PhysicalArchitectureProcess - ProcessType
Attributes:
-
A ProcessType typically conducted by ResourcesTypes.

PhysicalDataModel «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
PhysicalDataModel - DataModel
Attributes:
-
A DataModel that is an implementable specification of a data structure. A PhysicalDataModel realises a LogicalDataModel, taking into account implementation restrictions and performance issues whilst still enforcing the constraints, relationships and typing of the logical model.

PhysicalDelay «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PhysicalDelay - PhysicallySequencedItem
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PhysicalDelay - Delay
Attributes:
-
A PhysicallySequencedItem that has a specified temporal extent, but an unspecified spatial extent.

PhysicalEndEvent «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PhysicalEndEvent - EndBorderType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PhysicalEndEvent - ModemWholePartType
Association (source - target):«place1Type»
PhysicalEndEvent - EventBoundedPhysicalProcess
Association (source - target):«place2Type»
PhysicalEndEvent - PhysicalEvent
Attributes:
-
An EndBorderType that relates a EventBoundedPhysicalProcess to the PhysicalEvent that marks its end. Note: there may be no more than one LogicalEndEvent for a given EventBoundedPhysicalProcess

PhysicalEvent «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PhysicalEvent - Event
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PhysicalEvent - PhysicallySequencedItem
Attributes:
-
An Event that marks the beginning or end of a EventBoundedPhysicalProcess.

PhysicalSequencing «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PhysicalSequencing - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PhysicalSequencing - ImmediateBeforeAfterType
Association (source - target):«place1Type»
PhysicalSequencing - PhysicallySequencedItem
Association (source - target):«place2Type»
PhysicalSequencing - PhysicallySequencedItem
Attributes:
-
An ImmediateBeforeAfterType that asserts one PhysicallySequencedItem occurs immediately after the other.

PhysicalStartEvent «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PhysicalStartEvent - StartBorderType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PhysicalStartEvent - ModemWholePartType
Association (source - target):«place2Type»
PhysicalStartEvent - PhysicalEvent
Association (source - target):«place1Type»
PhysicalStartEvent - EventBoundedPhysicalProcess
Attributes:
-
A StartBorderType that relates an EventBoundedPhysicalProcess to the LogicalEvent that marks its start.
Note: there may be no more than one LogicalStartEvent for a given LogicallySequencedProcess.

PhysicallySequencedItem «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PhysicallySequencedItem - ImplemenationScenarioPart
Attributes:
-
An ImplemenationScenarioPart that is physically sequenced; i.e it has a PhysicalSequencing relation.

This document is no longer extant and has been withdrawn.

Port «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
Port - ArtefactComponent
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
Port - IndividualPortPowertype
Attributes:
-
An ArtefactComponent that is a type of IndividualPort. Note: was called "ResourcePort" in M3.

PortComponentOfArtefactPowertype «IDEAS:Powertype»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
PortComponentOfArtefactPowertype - ModemWholePartType
Attributes:
-
The powertype of portComponentOfArtefact.

PortComponentOfTypeOfArtefact «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
PortComponentOfTypeOfArtefact - PortComponentOfArtefactPowertype
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
PortComponentOfTypeOfArtefact - NonHumanResourceUsage
*Association (source - target):***«place2Type»**
PortComponentOfTypeOfArtefact - Port
*Association (source - target):***«place1Type»**
PortComponentOfTypeOfArtefact - ArtefactPowertype
Attributes:
-
A NonHumanResourceUsage that asserts a Port is a component of a type of Artefact.

PortConnectedToPortConnectorComponent «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
PortConnectedToPortConnectorComponent - IndividualPortConnectedToPortConnectorPowertype
*Association (source - target):***«place2Type»**
PortConnectedToPortConnectorComponent - Port
*Association (source - target):***«place1Type»**
PortConnectedToPortConnectorComponent - PortConnector
Attributes:
-
An PortConnectedToPortConnectorComponent that is a type of IndividualPortConnectedToPortConnector that asserts a Port is a part of a PortConnector.

PortConnector «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
PortConnector - ResourceCommunication
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
PortConnector - IndividualPortConnectorPowertype
Attributes:
-

This document is no longer extant and has been withdrawn.

A ResourceCommunication that has a protocolStackSuperResourcePortConnectorTypeSubType to a ProtocolStack. Note: was called "ResourcePortConnector" in M3.

PostInOrganisationPowertype «IDEAS:Powertype»
Connectors:
Association (source - target):«place2Type»
PostInOrganisationPowertype - PostPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PostInOrganisationPowertype - IndividualResourceUsagePowertype
Association (source - target):«place1Type»
PostInOrganisationPowertype - OrganisationPowertype
Attributes:
-
The powertype of PostInOrganisation.

PostInOrganisationType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PostInOrganisationType - PostInOrganisationPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PostInOrganisationType - HumanResourceTypeUsage
Association (source - target):«place1Type»
PostInOrganisationType - OrganisationPowertype
Association (source - target):«place2Type»
PostInOrganisationType - PostTypeUsage
Attributes:
-
A resourceUsage that asserts that a post exists in an OrganisationType of the type specified by the related PostType. Note: posts in organisations may or may not be filled. Note: was called "Post" in M3.

PostOccupyingResponsibleHumanResourceStateType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PostOccupyingResponsibleHumanResourceStateType - ResponsibleHumanResourceStateType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PostOccupyingResponsibleHumanResourceStateType - ResourceStateTypeUsage
Attributes:
-
A ResourceStateTypeUsage that has a type of state of a Post that is occupied by a type of ResponsibleHumanResource.

PostPowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PostPowertype - ResponsibleHumanResourcePowertype
Attributes:
-
The powertype of Post.

PostType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PostType - ResponsibleHumanResourceType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PostType - PostPowertype
Attributes:

-
An ConstructedHumanResourceType and ResponsibleHumanResourceType specifying a type of Post. This is not used as a component of a ResourceType. A type of point of contact or responsible person. Note that this is the type of post - e.g. Desk Officer, Commander, etc.

PostTypeUsage «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PostTypeUsage - ResponsibleHumanResourceTypeConfigurationUsage
Generalization (element - is a subtype of):«IDEAS:superSubtype»
PostTypeUsage - PostPowertype
Attributes:
-
A ResponsibleHumanResourceTypeConfigurationUsage that is a type of Post, a specialisation of PostType, which is used as a component of a ResourceType. E.g. The specialisation of the PostType, Commander, may be a component of the Land Component - the Commander Land Component.

ProducerFunction «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProducerFunction - IndividualExchangeRoleType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProducerFunction - ModemWholePartType
Association (source - target): «place2Type»
ProducerFunction - ResourceExport
Association (source - target): «place1Type»
ProducerFunction - ResourceFunction
Attributes:
-
An IndividualExchangeRoleType where the role is a ResourceExport and the producer is a ResourceFunction.

RadioFrequencyPort «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RadioFrequencyPort - Port
Attributes:
-
A Port that is a type of RadioFrequencyPort.

RadioFrequencyPortConnectedToPortConnectorComponent «IDEAS:Type»
Connectors:
Association (source - target):«place1Type»
RadioFrequencyPortConnectedToPortConnectorComponent - RadioFrequencyPortConnector
Association (source - target):«place2Type»
RadioFrequencyPortConnectedToPortConnectorComponent - RadioFrequencyPort
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RadioFrequencyPortConnectedToPortConnectorComponent - PortConnectedToPortConnectorComponent
Attributes:
-
An IndividualPortConnectedToPortConnectorPowertype that is a type of IndividualRadioFrequencyPortConnectedToPortConnector that asserts a RadioFrequencyPort is a part of a RadioFrequencyPortConnector.

RadioFrequencyPortConnector «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RadioFrequencyPortConnector - IndividualRadioFrequencyPortConnectorPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RadioFrequencyPortConnector - PortConnector
Attributes:
-
A ResourcePortConnector that is a type of IndividualRadioFrequencyPortConnector.

ResourceCommunication «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceCommunication - ResourceInteraction
Attributes:
-
A ResourceInteraction where DataElements are exchanged.

ResourceElementRole «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceElementRole - IndividualResourceElementRolePowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceElementRole - InteractionElementRole
Attributes:
-
An InteractionElementRole where the flowed element is a ResourceType.

ResourceEnergyFlow «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceEnergyFlow - ResourceInteraction
Attributes:
-
A ResourceInteraction where energy is transferred between ResourceUsages.

ResourceExport «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ResourceExport - SendType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceExport -ModemIndividualType
Attributes:
-
A SendType where the sender is a ResourceType or Function

ResourceFunction «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceFunction - Function
Attributes:
-
A Function carried out by a ResourceType.

ResourceImport «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **ResourceImport - ReceiveType**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ResourceImport - ModemIndividualType**   *Attributes:*   **-**   **A ReceiveType where the receiver is a ResourceType or Function.**
ResourceInteraction «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ResourceInteraction - IndividualResourceInteractionPowertype**   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ResourceInteraction - PhysicalArchitectureProcess**   *Attributes:*   **-**   **An ExchangeType where two ResourceTypes interact.**   **Examples: data exchange between systems, conversations between people, people using systems, flows of materiel from one resource to another, etc.**
ResourceInteractionExport «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ResourceInteractionExport - ModemThing**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **ResourceInteractionExport - SendInExchangeType**   *Association (source - target): «place2Type»*   **ResourceInteractionExport - ResourceExport**   *Association (source - target): «place1Type»*   **ResourceInteractionExport - ResourceInteraction**   *Attributes:*   **-**   **A SendInExchangeType where the sender is a ResourceType or Function.**
ResourceInteractionImport «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):«IDEAS:superSubtype»*   **ResourceInteractionImport - ModemThing**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **ResourceInteractionImport - ReceiveInExchangeType**   *Association (source - target): «place2Type»*   **ResourceInteractionImport - ResourceImport**   *Association (source - target): «place1Type»*   **ResourceInteractionImport - ResourceInteraction**   *Attributes:*   **-**   **A RecieveInExchangeType where the receiver is a ResourceType or Function.**

ResourceLifeline «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ResourceLifeline - ImplemenationScenarioPart
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ResourceLifeline - ResourceStateType
Attributes:
-
A ResourceStateType whose extent is defined by an ImplemenationScenario.

ResourceMovement «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ResourceMovement - ResourceInteraction
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ResourceMovement - IndividualResourceMovementPowertype
Attributes:
-
A ResourceInteraction where the element that flows is a ResourceType.

ResourceStateType «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ResourceStateType - StateSpecification
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ResourceStateType - IndividualResourceStatePowertype
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ResourceStateType - ModemIndividualType
Attributes:
-
A type of state that a ResourceType may have.

ResourceStateTypeUsage «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ResourceStateTypeUsage - IndividualResourceStatePowertype
Attributes:
-
An IndividualResourceStatePowertype that has a type of state of a Resource that is used by another type of Resource.

ResourceStateUsage «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ResourceStateUsage - IndividualResourceStateUsagePowertype
*Association (source - target):***«place2Type»**
ResourceStateUsage - ResourceStateTypeUsage
Association (source - target): **«place1Type»**
ResourceStateUsage - IndividualResourceStatePowertype
Attributes:
-
A IndividualResourceStateUsagePowertype that is a type of resource state relation that asserts a type of resource state is used by a type of resource.

This document is no longer extant and has been withdrawn.

ResourceType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceType - IndividualResourcePowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceType - FlowedElement
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceType - ResourceStateType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceType - InteractionElement
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceType - PhysicalArchitectureIndividualType
Attributes:
-
A PhysicalArchitectureIndividualType that is a type of IndividualResource. This is not used as a component of a ResourceType, but may use components. [ABSTRACT]

ResourceTypeExport «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceTypeExport - CapableOfType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceTypeExport - ModemThing
Association (source - target):«place2Type»
ResourceTypeExport - ResourceInteraction
Association (source - target):«place1Type»
ResourceTypeExport - ResourceTypeUsage
Attributes:
-
A CapableOfType where a ResourceInteraction exports from a ResourceTypeUsage.

ResourceTypeImport «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceTypeImport - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceTypeImport - CapableOfType
Association (source - target):«place2Type»
ResourceTypeImport - ResourceInteraction
Association (source - target):«place1Type»
ResourceTypeImport - ResourceTypeUsage
Attributes:
-
A CapableOfType where a ResourceInteraction imports from a ResourceTypeUsage.

ResourceTypeMaster «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceTypeMaster - ModemIndividualType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceTypeMaster - IndividualResourcePowertype
Attributes:
-

This document is no longer extant and has been withdrawn.

A ModemIndividualType that is the master specification from which ResourceTypes are versioned.
ResourceTypeUsage «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ResourceTypeUsage - IndividualResourcePowertype** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ResourceTypeUsage - ModemIndividualType** *Attributes:* - **A ModemIndividualType, that is a component of a ResourceType that is used by (a component of) another ResourceType.**
ResourceUsage «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ResourceUsage - IndividualResourceUsagePowertype** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ResourceUsage - ModemThing** *Association (source - target):*«place1Type» **ResourceUsage - IndividualResourcePowertype** *Association (source - target):*«place2Type» **ResourceUsage - ResourceTypeUsage** *Attributes:* - **A ModemWholePartType that is a relationship between types of IndividualResources which asserts the ResourceTypeUsage is part of the ResourceType. The relationship is abstract, and one of its subtypes should be used to describe *how* a ResourceTypeUsage is part of a ResourceType. Note: was called "ResourceUsage" in M3.**
ResponsibleHumanResourcePowertype «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ResponsibleHumanResourcePowertype - ResponsibleHumanResourceStatePowertype** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ResponsibleHumanResourcePowertype - AgentCapableOfResponsibilityType** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ResponsibleHumanResourcePowertype - HumanResourcePowertype** *Attributes:* - **The powertype of ResponsibleHumanResource.**
ResponsibleHumanResourceStateOccupiesPostPowertype «IDEAS:Powertype» *Connectors:* *Association (source - target):*«place1Type» **ResponsibleHumanResourceStateOccupiesPostPowertype - PostPowertype** *Association (source - target):*«place2Type» **ResponsibleHumanResourceStateOccupiesPostPowertype - ResponsibleHumanResourceStatePowertype** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ResponsibleHumanResourceStateOccupiesPostPowertype - IndividualResourceStateUsagePowertype** *Attributes:* - **The powertype of responsibleHumanResourceStateOccupiesPost.**

ResponsibleHumanResourceStateOccupiesPostType «IDEAS:Type»

Connectors:

Generalization (element - is a subtype of):«IDEAS:superSubtype»

ResponsibleHumanResourceStateOccupiesPostType - ResourceStateUsage

Generalization (element - is a subtype of):«IDEAS:superSubtype»

ResponsibleHumanResourceStateOccupiesPostType - ResponsibleHumanResourceStateOccupiesPostPowertype

Association (source - target):«place1Type»

ResponsibleHumanResourceStateOccupiesPostType - PostPowertype

Association (source - target):«place2Type»

ResponsibleHumanResourceStateOccupiesPostType - PostOccupyingResponsibleHumanResourceStateType

Attributes:

-

A ResourceStateUsage that asserts a ResponsibleHumanResourceTypeConfigurationUsage (i.e. a OrganisationRoleType, a PostTypeUsage or a OrganisationTypeUsage) occupies a PostType. Note it is a state of the ResponsibleHumanResourceTypeConfigurationUsage that occupies the PostType, as it can only occupy it for a period of time. Futhermore, many states of ResponsibleHumanResourceTypeConfigurationUsages can occupy the post across time. Typically, only one state occupies the post at a point in time.

ResponsibleHumanResourceStatePowertype «IDEAS:Powertype»

Connectors:

Generalization (element - is a subtype of):«IDEAS:superSubtype»

ResponsibleHumanResourceStatePowertype - IndividualResourceStatePowertype

Attributes:

-

The powertype of ResponsibleHumanResourceState.

ResponsibleHumanResourceStateType «IDEAS:Type»

Connectors:

Generalization (element - is a subtype of):«IDEAS:superSubtype»

ResponsibleHumanResourceStateType - ResponsibleHumanResourceStatePowertype

Generalization (element - is a subtype of):«IDEAS:superSubtype»

ResponsibleHumanResourceStateType - ResourceStateType

Attributes:

-

A type of state that a ResponsibleHumanResourceType may have.

ResponsibleHumanResourceType «IDEAS:Type»

Connectors:

Generalization (element - is a subtype of):«IDEAS:superSubtype»

ResponsibleHumanResourceType - HumanResourceType

Generalization (element - is a subtype of):«IDEAS:superSubtype»

ResponsibleHumanResourceType - ResponsibleHumanResourcePowertype

Generalization (element - is a subtype of):«IDEAS:superSubtype»

ResponsibleHumanResourceType - ResponsibleHumanResourceStateType

Generalization (element - is a subtype of):«IDEAS:superSubtype»

ResponsibleHumanResourceType - Stakeholder

Attributes:

-

A HumanResourceType that is a type of ResponsibleHumanResource. A PostType, OrganisationType or a PersonType.

ResponsibleHumanResourceTypeConfigurationUsage «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **ResponsibleHumanResourceTypeConfigurationUsage - ResponsibleHumanResourcePowertype** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **ResponsibleHumanResourceTypeConfigurationUsage - HumanResourceTypeConfigurationUsage** *Attributes:* - **A state or part of a ResponsibleHumanResourceType that is used by (a part of, a component of) another ResponsibleHumanResourceType.**
RoleBourneByResponsibleHumanResourcePowertype «IDEAS:Powertype» *Connectors:* *Association (source - target):«place1Type»* **RoleBourneByResponsibleHumanResourcePowertype - ResponsibleHumanResourcePowertype** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **RoleBourneByResponsibleHumanResourcePowertype - IndividualResourceUsagePowertype** *Association (source - target):«place2Type»* **RoleBourneByResponsibleHumanResourcePowertype - OrganisationalRolePowertype** *Attributes:* - **The powertype of roleBourneByResponsibleHumanResource.**
RoleBourneByResponsibleHumanResourceType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **RoleBourneByResponsibleHumanResourceType - HumanResourceTypeUsage** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **RoleBourneByResponsibleHumanResourceType - RoleBourneByResponsibleHumanResourcePowertype** *Association (source - target):«place2Type»* **RoleBourneByResponsibleHumanResourceType - OrganisationRoleTypeUsage** *Association (source - target):«place1Type»* **RoleBourneByResponsibleHumanResourceType - ResponsibleHumanResourcePowertype** *Attributes:* - **A HumanResourceTypeUsage that asserts that a ResponsibleHumanResourcePowertype has an OrganisationRoleTypeUsage.**
RoleInCommunication «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **RoleInCommunication - RoleInInteraction** *Association (source - target):«place1Type»* **RoleInCommunication - ResourceCommunication** *Association (source - target):«place2Type»* **RoleInCommunication - DataElementRole** *Attributes:* - **A RoleInInteraction where the exchanged element is a DataElement exchanged over a ResourceCommunication.**

RoleInIndividualInteractionPowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleInIndividualInteractionPowertype - ExchangedItemRoleInExchangeType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleInIndividualInteractionPowertype - ModemIndividualElementType
Attributes:
-
The powertype of RoleInIndividualInteraction.

RoleInIndividualResourceMovementPowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleInIndividualResourceMovementPowertype - RoleInIndividualInteractionPowertype
Attributes:
-
The powertype of RoleInIndividualResourceMovement.

RoleInInteraction «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleInInteraction - TypicalWholePart
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleInInteraction - RoleInIndividualInteractionPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleInInteraction - ModemWholePartType
Association (source - target):«place2Type»
RoleInInteraction - InteractionElementRole
Association (source - target):«place1Type»
RoleInInteraction - ResourceInteraction
Attributes:
-
An TypicalWholePart where the involving exchange is a ResourceInteraction. [ABSTRACT]

RoleInOrganisationPowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleInOrganisationPowertype - IndividualResourceUsagePowertype
Association (source - target):«place2Type»
RoleInOrganisationPowertype - OrganisationalRolePowertype
Association (source - target):«place1Type»
RoleInOrganisationPowertype - OrganisationPowertype
Attributes:
-
The powertype of roleInOrganisation.

RoleInOrganisationType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleInOrganisationType - HumanResourceTypeUsage
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleInOrganisationType - RoleInOrganisationPowertype
Association (source - target):«place1Type»
RoleInOrganisationType - OrganisationPowertype
Association (source - target):«place2Type»
RoleInOrganisationType - OrganisationRoleTypeUsage
Attributes:
-
A HumanResourceTypeUsage that is a type of roleInOrganisation which asserts that a given OrganisationRoleTypeUsage belongs to an OrganisationPowertype.

RoleInResourceMovement «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleInResourceMovement - RoleInInteraction
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleInResourceMovement - RoleInIndividualResourceMovementPowertype
Association (source - target):«place2Type»
RoleInResourceMovement - ResourceElementRole
Association (source - target):«place1Type»
RoleInResourceMovement - ResourceMovement
Attributes:
-
A RoleInInteraction where the interaction is a ResourceMovement.

RoleOfDataElement «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleOfDataElement - RoleOfInteractionElement
Association (source - target):«place1Type»
RoleOfDataElement - DataElement
Association (source - target):«place2Type»
RoleOfDataElement - DataElementRole
Attributes:
-
A RoleOfInteractionElement where the element is a DataElement.

RoleOfIndividualInteractionElementPowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleOfIndividualInteractionElementPowertype - IndividualRoleAsExchangedItemType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleOfIndividualInteractionElementPowertype - ModemIndividualElementType
Attributes:
-
The powertype of RoleOfIndividualInteractionElement.

RoleOfIndividualResourceElementPowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleOfIndividualResourceElementPowertype - RoleOfIndividualInteractionElementPowertype
Attributes:
-
The powertype of RoleOfIndividualResourceElement.

RoleOfInteractionElement «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleOfInteractionElement - TypicalWholePart
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleOfInteractionElement - ModemWholePartType
Association (source - target):«place1Type»
RoleOfInteractionElement - InteractionElement
Association (source - target):«place2Type»
RoleOfInteractionElement - InteractionElementRole
Attributes:
-
A TypicalWholePart relating an InteractionElement to its role in a ResourceInteraction. [ABSTRACT]

RoleOfResourceElement «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleOfResourceElement - RoleOfIndividualResourceElementPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleOfResourceElement - RoleOfInteractionElement
Association (source - target):«place1Type»
RoleOfResourceElement - ResourceType
Association (source - target):«place2Type»
RoleOfResourceElement - ResourceElementRole
Attributes:
-
A RoleOfInteractionElement where the element is a ResourceType.

SequencedFunction «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SequencedFunction - EventBoundedPhysicalProcess
Attributes:
-
An EventBoundedPhysicalProcess that is the typical useage of a Function in a ResourceLifeLine.

SequencedResourceInteraction «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SequencedResourceInteraction - ImplemenationScenarioPart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SequencedResourceInteraction - EventBoundedPhysicalProcess
Attributes:
-
An ImplementationScenarioPart that is the typical occurance of a ResourceInteraction between two ResourceLifelines

Software «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Software - Artefact
Dependency (element - is instance of):«IDEAS:powertypeInstance»
Software - SoftwarePowertype
Attributes:
-
An executable computer programme, or fragment of an executable programme (e.g. a subroutine, class, etc.)

SoftwareComponent «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
SoftwareComponent - ArtefactComponent
Generalization (element - is a subtype of):«IDEAS:superSubtype»
SoftwareComponent - SoftwarePowertype
Attributes:
-
A type of Software that is a hostingArtefactWholesoftwareTypePart of an ArtefactType. In other words, a type of Software that is hosted by an ArtefactType.

SoftwarePowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
SoftwarePowertype - ArtefactPowertype
Attributes:
-
The powertype of Software.

SoftwareType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
SoftwareType - ArtefactType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
SoftwareType - SoftwarePowertype
Attributes:
-
An Artefact that is a type of Software.

SoftwareUsage «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
SoftwareUsage - NonHumanResourceUsage
Association (source - target):«place2Type»
SoftwareUsage - SoftwareComponent
Association (source - target):«place1Type»
SoftwareUsage - ArtefactPowertype
Attributes:
-
A NonHumanResourceUsage that asserts a SoftwareComponent is used by an ArtefactType.

StateUsedAsPostOccupationType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
StateUsedAsPostOccupationType - UsedResourceState
Association (source - target):«place1Type»
StateUsedAsPostOccupationType - ResponsibleHumanResourceType
Association (source - target):«place2Type»
StateUsedAsPostOccupationType - PostOccupyingResponsibleHumanResourceStateType
Attributes:
-
A UsedResourceState that asserts a ResponsibleHumanResourceType occupies a PostOccupyingResponsibleHumanResourceStateType.

SubOrganisationPowertype «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
SubOrganisationPowertype - IndividualResourceUsagePowertype
Association (source - target):«place2Type»
SubOrganisationPowertype - OrganisationStatePowertype
Association (source - target):«place1Type»
SubOrganisationPowertype - OrganisationPowertype
Attributes:
-
The powertype of subOrganisation.

SubOrganisationType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
SubOrganisationType - HumanResourceTypeUsage
Generalization (element - is a subtype of):«IDEAS:superSubtype»
SubOrganisationType - SubOrganisationPowertype
Association (source - target):«place2Type»
SubOrganisationType - SubOrganisationTypeUsage
Association (source - target):«place1Type»
SubOrganisationType - OrganisationPowertype
Attributes:
-
A HumanResourceTypeUsage that is a type of subOrganisation which asserts that a state of one type of Organisation, the OrganisationType, is typically the parent of another, the OrganisationTypeUsage. In other words, one type of Organisation is typically the parent of another for a period of time. E.g. a squadron may be part of a battalion. Note: was called "SubOrganisation" in M3.

SubOrganisationTypeUsage «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **SubOrganisationTypeUsage - OrganisationTypeUsage** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **SubOrganisationTypeUsage - OrganisationStatePowertype** *Attributes:* *-* **An OrganisatioTypeUsage that is type of Organisation that is a sub-organisation of another type of organisation.**
SubjectOfForecast «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **SubjectOfForecast - ModemIndividualType** *Attributes:* *-* **A ModemIndividualType that is the subject of a Forecast.**
Technology «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **Technology - ArtefactPowertype** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **Technology - SubjectOfForecast** *Attributes:* *-* **An ArtefactPowertype that is a class of Artefact that defines a branch of engineering or computer science.**
UsagePerformsFunction «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **UsagePerformsFunction - ModemThing** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **UsagePerformsFunction - CapableOfType** *Association (source - target):«place2Type»* **UsagePerformsFunction - UsageSpecificFunction** *Association (source - target):«place1Type»* **UsagePerformsFunction - ResourceTypeUsage** *Attributes:* *-* **A CapableOfType where a ResoureceTypeUsage is capable of conducting a UsageSpecificFunction.**
UsageSpecificFunction «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **UsageSpecificFunction - Function** *Association (source - target):«place2Type»* **UsagePerformsFunction - UsageSpecificFunction** *Attributes:* *-* **A PhysicalArchitectureProcess that is a particular usage of a Function. Note: this is used where there is a requirement to distinguish between two uses of a ResourceType which both have the same functionality, but put to different purposes. This is particularly important for tracing back to OV-5 Activities.**

UsedResourceState «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» UsedResourceState - ResourceStateUsage *Association (source - target):*«place2Type» UsedResourceState - ResourceStateTypeUsage *Association (source - target):*«place1Type» UsedResourceState - ResourceType *Attributes:* - A IndividualResourceStateUsagePowertype that is a type of IndividualResourceState Usage that asserts a type of resource state is used by a type of resource.
VersionSuccession «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» VersionSuccession - ModemThing *Generalization (element - is a subtype of):*«IDEAS:superSubtype» VersionSuccession - BeforeAfterType *Association (source - target):*«place2Type» VersionSuccession - ResourceType *Association (source - target):*«place1Type» VersionSuccession - ResourceType *Attributes:* - A BeforeAfterType that asserts one ResourceType succeeds another. Note: both ResourceTypes must be versions of the same ResourceTypeMaster.
activityFunctionMapping «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):* «IDEAS:superSubtype» activityFunctionMapping - modemIndividualTypeSpecialisation *Association (source - target):* «place1Type» activityFunctionMapping - OperationalActivity *Association (source - target):* «place2Type» activityFunctionMapping - Function *Attributes:* - A modemIndividualTypeSpecialisation that relates an OperationalActivity or ActivityGroup to the Function or FunctionGroup that realises it.
artefactPart «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» artefactPart - individualResourceUsage *Association (source - target):*«place2Type» artefactPart - Artefact *Association (source - target):*«place1Type» artefactPart - Artefact *Attributes:* - An individualResourceUsage that asserts one artefact is part of another.

artefactSpecification «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
artefactSpecification - usedNonHumanResourceTypeSpecialisation
Association (source - target):«place1Type»
artefactSpecification - ArtefactType
Association (source - target):«place2Type»
artefactSpecification - ArtefactComponent
Attributes:
-
An usedNonHumanResourceTypeSpecialisation that asserts that an ArtefactTypeUsage. is a specialisation of an ArtefactType.

branchOfTechnology «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
branchOfTechnology - modemIndividualTypeSpecialisation
Association (source - target):«place2Type»
branchOfTechnology - ArtefactType
Association (source - target):«place1Type»
branchOfTechnology - Technology
Attributes:
-
A modemIndividualTypeSpecialisation that asserts an ArtefactType belongs to a branch of Technology.

capabilityInstance «IDEAS:TupleType»
Connectors:
Association (source - target): «place2Type»
capabilityInstance - HumanAndNonHumanConfiguration
Association (source - target): «place1Type»
capabilityInstance - Capability
Generalization (element - is a subtype of): «IDEAS:superSubtype»
capabilityInstance - modemIndividualTypeInstance
Attributes:
-
A modemIndividualTypeInstance where the instance is a HumanAndNon-HumanConfiguration and the type is a Capability. This asserts that an individual configuration of people and equipment has a Capability.

capabilityRealisation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
capabilityRealisation - modemIndividualTypeSpecialisation
Association (source - target):«place2Type»
capabilityRealisation - CapabilityConfiguration
Association (source - target):«place1Type»
capabilityRealisation - Capability
Attributes:
-
A modemIndividualTypeSpecialisation that relates a CapabilityConfiguration to a Capability.

competenceForRole «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
competenceForRole - requiredCompetence
Association (source - target):«place1Type»
competenceForRole - Competence
Association (source - target):«place2Type»
competenceForRole - OrganisationRoleType
Attributes:
-
A requiredCompetence that asserts an OrganisationRoleType requires a Competence.

competenceToConduct «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
competenceToConduct - requiredCompetence
Association (source - target):«place1Type»
competenceToConduct - Competence
Association (source - target):«place2Type»
competenceToConduct - Function
Attributes:
-
A requiredCompetence that asserts a competence is required by the HumanResource to conduct the Function. Note: was called "toConduct" in M3.

configuredHumanAndNonHumanResource «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
configuredHumanAndNonHumanResource - individualResourceUsage
Association (source - target):«place1Type»
configuredHumanAndNonHumanResource - HumanAndNonHumanConfiguration
Association (source - target):«place2Type»
configuredHumanAndNonHumanResource - HumanAndNonHumanConfiguration
Attributes:
-
An individualResourceUsage that asserts a HumanAndNonHumanConfiguration uses another HumanAndNonHumanConfiguration.

configuredHumanResource «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
configuredHumanResource - individualResourceUsage
Association (source - target):«place2Type»
configuredHumanResource - HumanResource
Association (source - target):«place1Type»
configuredHumanResource - HumanAndNonHumanConfiguration
Attributes:
-
An individualResourceUsage that asserts that a HumanAndNonHumanConfiguration uses a HumanResource.

configuredNonHumanResource «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
configuredNonHumanResource - individualResourceUsage
Association (source - target):«place2Type»
configuredNonHumanResource - NonHumanResource
Association (source - target):«place1Type»
configuredNonHumanResource - HumanAndNonHumanConfiguration
Attributes:
-
n individualResourceUsage that asserts that a NonHumanResource uses a HumanAndNonHumanConfiguration.

connected «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
connected - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
connected - couple
Attributes:
-
A couple that asserts two things are connected.

fieldedConfiguration «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
fieldedConfiguration - resourceTypeInstance
Association (source - target): «place2Type»
fieldedConfiguration - FieldedCapabilityConfiguration
Association (source - target): «place1Type»
fieldedConfiguration - CapabilityConfiguration
Attributes:
-
A resourceTypeInstance where the type is a CapabilityConfiguration and the instance is a FieldedCapabilityConfiguration.

fieldedPhysicalArchitectureCapabilityConfigurationUsage «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
fieldedPhysicalArchitectureCapabilityConfigurationUsage - configuredHumanAndNonHumanResource
Association (source - target):«place2Type»
fieldedPhysicalArchitectureCapabilityConfigurationUsage - FieldedCapabilityConfiguration
Association (source - target):«place1Type»
fieldedPhysicalArchitectureCapabilityConfigurationUsage - PhysicalArchitecture
Attributes:
-
A configuredHumanAndNonHumanResource usage of a FieldedPhysicalArchitecture by a FieldedCapabilityConfiguration. Asserts that a FieldedCapabilityConfiguration is a component of a FieldedPhysicalArchitecture.

flowImplementation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
flowImplementation - modemIndividualTypeSpecialisation
Association (source - target):«place1Type»
flowImplementation - LogicalFlow
Association (source - target):«place2Type»
flowImplementation - ResourceInteraction
Attributes:
-
A modemIndividualTypeSpecialisation where a ResourceInteraction implements a LogicalFlow.

forecastFor «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
forecastFor - ModemThing
Association (source - target):«place2Type»
forecastFor - SubjectOfForecast
Generalization (element - is a subtype of):«IDEAS:superSubtype»
forecastFor - couple
Association (source - target):«place1Type»
forecastFor - Forecast
Attributes:
-
A couple that relates the Forecast to the SubjectOfForecast.

forecastPeriod «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
forecastPeriod - couple
Association (source - target):«place1Type»
forecastPeriod - Forecast
Association (source - target):«place2Type»
forecastPeriod - EnterprisePhase
Generalization (element - is a subtype of):«IDEAS:superSubtype»
forecastPeriod - ModemThing
Attributes:
-
A couple that relates the Forecast to the EnterprisePhase that it covers. Note: if a forecast does not correspond to an existing EnterprisePhase, new EnterprisePhases can be created to cover the period - i.e. you can have as many EnterprisePhases as are needed.

functionInSequence «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
functionInSequence - modemIndividualTypeSpecialisation
Association (source - target): «place1Type»
functionInSequence - ResourceFunction
Association (source - target): «place2Type»
functionInSequence - SequencedFunction
Attributes:
-
A modemIndividualTypeSpecialisation that relates a ResourceFunction to its usage (as a SequencedFunction) on a ResourceLifeLine. Note: A SequencedFunction is based on only one Function

implementsDataModel «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
implementsDataModel - couple
Association (source - target):«place2Type»
implementsDataModel - SoftwareType
Association (source - target):«place1Type»
implementsDataModel - PhysicalDataModel
Attributes:
-
A couple that asserts that a SoftwareType implements a PhysicalDataModel.
individualPortConnectedToPortConnector «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
individualPortConnectedToPortConnector - IndividualPortConnector
Association (source - target):«place2Type»
individualPortConnectedToPortConnector - IndividualPort
Dependency (element - is instance of):«IDEAS:powertypeInstance»
individualPortConnectedToPortConnector - IndividualPortConnectedToPortConnectorPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
individualPortConnectedToPortConnector - connected
Attributes:
-
A connected relationship that asserts that an IndividualResourcePort is a part of an IndividualResourcePortConnection.
individualRadioFrequencyPortConnectedToPortConnector «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
individualRadioFrequencyPortConnectedToPortConnector - individualPortConnectedToPortConnector
Association (source - target):«place1Type»
individualRadioFrequencyPortConnectedToPortConnector - IndividualRadioFrequencyPortConnector
Association (source - target):«place2Type»
individualRadioFrequencyPortConnectedToPortConnector - IndividualRadioFrequencyPort
Attributes:
-
A individualPortConnectedToPortConnector that asserts that an IndividualRadioFrequencyPort is a part of an IndividualRadioFrequencyPortConnection.
individualResourceState «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
individualResourceState - individualResourceWholePart
Generalization (element - is a subtype of):«IDEAS:superSubtype»
individualResourceState - modemTemporalWholePart
Association (source - target):«place2Type»
individualResourceState - IndividualResourceState
Attributes:
-
An individualResourceWholePart and a modemTemporalWholePart that links an IndividualResource to one of its states.

individualResourceStateUsage «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
individualResourceStateUsage - individualResourceState
Dependency (element - is instance of):«IDEAS:powertypeInstance»
individualResourceStateUsage - IndividualResourceStateUsagePowertype
Attributes:
-
An individualResourceState that is a usage relation between the used IndividualResourceState and individualResource.

individualResourceStateWholeAndPart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
individualResourceStateWholeAndPart - modemWholePart
Dependency (element - is instance of):«IDEAS:powertypeInstance»
individualResourceStateWholeAndPart - IndividualResourceStateWholeAndPartType
Association (source - target):«place2Type»
individualResourceStateWholeAndPart - IndividualResourceState
Association (source - target):«place1Type»
individualResourceStateWholeAndPart - IndividualResourceState
Attributes:
-
A modemWholePart where both the whole and part are IndividualResourceStates.

individualResourceUsage «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
individualResourceUsage - individualResourceWholePart
Dependency (element - is instance of):«IDEAS:powertypeInstance»
individualResourceUsage - IndividualResourceUsagePowertype
Association (source - target):«place1Type»
individualResourceUsage - IndividualResource
Association (source - target):«place2Type»
individualResourceUsage - IndividualResource
Attributes:
-
An individualResourceWholePart relationship where one IndividualResource uses a part (or all) of another.

individualResourceWholePart «IDEAS:TupleType»
*Connectors***:**
Generalization (element - is a subtype of): «IDEAS:superSubtype»
individualResourceWholePart - modemWholePart
Association (source - target): «place2Type»
individualResourceWholePart - IndividualResourcePart
Association (source - target): «place1Type»
individualResourceWholePart - IndividualResource
*Attributes***:**
-
A modemWholePart where the whole is an IndividualResource and the part is an IndividualResourcePart.

interactionInScenario «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
interactionInScenario - modemIndividualTypeSpecialisation
Association (source - target): **«place1Type»**
interactionInScenario - ResourceInteraction
Association (source - target): **«place2Type»**
interactionInScenario - SequencedResourceInteraction
Attributes:
-
A modemIndividualTypeSpecialisation that relates a ResourceInteraction to its usage (as a SequencedResourceInteraction) in an ImplementationScenario. Note: A SequencedResourceInteraction is based on only one ResourceInteraction

measureOfIndividualResourcePerformance «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
measureOfIndividualResourcePerformance - modemIndividualTypeInstance
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
measureOfIndividualResourcePerformance - measureOfIndividual
Association (source - target): **«place1Type»**
measureOfIndividualResourcePerformance - Measure
Association (source - target): **«place2Type»**
measureOfIndividualResourcePerformance - IndividualResource
Attributes:
-
A measureOfIndividual that specifies the level of performance of an IndividualResource.

naturalResourcePart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
naturalResourcePart - individualResourceUsage
Association (source - target): **«place2Type»**
naturalResourcePart - NaturalResource
Association (source - target): **«place1Type»**
naturalResourcePart - NaturalResource
Attributes:
-
An individualResourceUsage that asserts one NaturalResource is part of another.

naturalResourceSpecification «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
naturalResourceSpecification - usedNonHumanResourceTypeSpecialisation
Association (source - target): **«place1Type»**
naturalResourceSpecification - NaturalResourceType
Association (source - target): **«place2Type»**
naturalResourceSpecification - NaturalResourceComponent
Attributes:
-
A usedNonHumanResourceTypeSpecialisation that asserts that a NaturalResourceTypeUsageis a specialisation of a NaturalResourceType.

nodeRealisation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
nodeRealisation - bodyTypeSuperSubType
Association (source - target):«place1Type»
nodeRealisation - Node
Association (source - target):«place2Type»
nodeRealisation - ResourceType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
nodeRealisation - modemIndividualTypeSpecialisation
Attributes:
-
A superSubtype that asserts that a ResourceType provides the functionality specified by an operational node.

portComponentOfArtefact «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
portComponentOfArtefact - individualResourceWholePart
Dependency (element - is instance of):«IDEAS:powertypeInstance»
portComponentOfArtefact - PortComponentOfArtefactPowertype
Association (source - target):«place2Type»
portComponentOfArtefact - IndividualPort
Association (source - target):«place1Type»
portComponentOfArtefact - Artefact
Attributes:
-
An individualResourceWholePart where the whole is an IndividualResource and the part is an ResourcePort.

protocolStackSuperResourcePortConnectorTypeSubType «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
protocolStackSuperResourcePortConnectorTypeSubType - protocolStackSuperSubType
Association (source - target):«place2Type»
protocolStackSuperResourcePortConnectorTypeSubType - PortConnector
Attributes:
-
A superSubType relation with a superType ProtocolStack and a subType ResourcePortConnectorType.

protocolStackSuperPortSubType «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
protocolStackSuperPortSubType - protocolStackSuperSubType
Association (source - target):«place2Type»
protocolStackSuperPortSubType - Port
Association (source - target):«place1Type»
protocolStackSuperPortSubType - ProtocolStack
Attributes:
-
A superSubType relation with a superType ProtocolStack and a subType Port.

protocolStackSuperSubType «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
protocolStackSuperSubType - modemIndividualTypeSpecialisation
Association (source - target):«place1Type»
protocolStackSuperSubType - ProtocolStack
Attributes:
-
A modemIndividualTypeSpecialisation relation with a superType ProtocolStack.

protocolStackTypeIndividualPortConnector «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
protocolStackTypeIndividualPortConnector - protocolStackTypeInstance
Association (source - target):«place2Type»
protocolStackTypeIndividualPortConnector - IndividualPortConnector
Attributes:
-
A typeInstance relation between the type ProtocolStack and the instance IndividualResourcePortConnection.

protocolStackTypeInstance «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
protocolStackTypeInstance - modemIndividualTypeInstance
Association (source - target):«place1Type»
protocolStackTypeInstance - ProtocolStack
Attributes:
-
A modemIndividualTypeInstance that asserts that a ProtocolStack has a ResoucePort as an instance.

protocolStackTypePortInstance «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
protocolStackTypePortInstance - protocolStackTypeInstance
Association (source - target):«place2Type»
protocolStackTypePortInstance - IndividualPort
Attributes:
-
A ProtocolStackTypeInstance that asserts that a ProtocolStack has a ResourcePort as an instance.

providedService «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
providedService - modemIndividualTypeSpecialisation
Generalization (element - is a subtype of):«IDEAS:superSubtype»
providedService - bodyTypeSuperSubType
Association (source - target):«place2Type»
providedService - ResourceType
Association (source - target):«place1Type»
providedService - ServiceLevel
Attributes:
-

A superSubtype that asserts that a Resource delivers a Service to a specified ServiceLevel.

radioFrequencyPortConnectorFrequencyRange «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
radioFrequencyPortConnectorFrequencyRange - radioFrequencyRangeAssignment
Association (source - target):«place2Type»
radioFrequencyPortConnectorFrequencyRange - RadioFrequencyPortConnector
Association (source - target):«place1Type»
radioFrequencyPortConnectorFrequencyRange - FrequencyRange
Attributes:
-
A radioFrequencyRangeAssignment that asserts a radio frequency range has been assigned to a RadioFrequencyPortConnector.

radioFrequencyPortFrequencyRange «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
radioFrequencyPortFrequencyRange - radioFrequencyRangeAssignment
Association (source - target):«place2Type»
radioFrequencyPortFrequencyRange - RadioFrequencyPort
Association (source - target):«place1Type»
radioFrequencyPortFrequencyRange - FrequencyRange
Attributes:
-
A radioFrequencyRangeAssignment that asserts a radio frequency range has been assigned to a RadioFrequencyPort.

radioFrequencyRangeAssignment «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
radioFrequencyRangeAssignment - measureOfType
Association (source - target):«place1Type»
radioFrequencyRangeAssignment - FrequencyRange
Attributes:
-
A measureOfType that asserts a radio frequency range has been assigned.

realisationAsFieldedCapability «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
realisationAsFieldedCapability - modemIndividualTypeInstance
Association (source - target):«place2Type»
realisationAsFieldedCapability - FieldedCapabilityConfiguration
Association (source - target):«place1Type»
realisationAsFieldedCapability - CapabilityConfiguration
Attributes:
-
A modemIndividualTypeInstance that relates a CapabilityConfiguration to a FieldedCapabilityConfiguration.

requiredCompetence «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
requiredCompetence - Competence
Generalization (element - is a subtype of):«IDEAS:superSubtype»
requiredCompetence - couple
Generalization (element - is a subtype of):«IDEAS:superSubtype»
requiredCompetence -ModemThing
Attributes:
-
A couple that asserts a Competence is required.

requiredService «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
requiredService - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
requiredService - couple
Association (source - target):«place1Type»
requiredService - ResourceType
Association (source - target):«place2Type»
requiredService - ServiceLevel
Attributes:
-
A couple that asserts a ResourceType requires a Service (to a given ServiceLevel) in order to function.

resourceTypeInstance «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
resourceTypeInstance - modemIndividualTypeInstance
Association (source - target):«place2Type»
resourceTypeInstance - IndividualResource
Association (source - target):«place1Type»
resourceTypeInstance - ResourceType
Attributes:
-
A modelIndividualTypeInstance that relates an IndividualResource to its ResourceType.

resourceTypeMeasure «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
resourceTypeMeasure - measureOfType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
resourceTypeMeasure - resourceTypeProperty
Association (source - target):«place1Type»
resourceTypeMeasure - Measure
Association (source - target):«place2Type»
resourceTypeMeasure - ResourceType
Attributes:
-
A measureOfType where the type is a ResourceType.

resourceTypeProperty «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
resourceTypeProperty - propertyOfType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
resourceTypeProperty - modemIndividualTypeSpecialisation
Association (source - target):«place1Type»
resourceTypeProperty - Property
Association (source - target):«place2Type»
resourceTypeProperty - ResourceType
Attributes:
-
A propertyOfType where the type is a ResourceType.

roleInIndividualInteraction «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
roleInIndividualInteraction - exchangedItemRoleInExchange
Dependency (element - is instance of):«IDEAS:powertypeInstance»
roleInIndividualInteraction - RoleInIndividualInteractionPowertype
Association (source - target):«place2Type»
roleInIndividualInteraction - IndividualInteractionElementRole
Association (source - target):«place1Type»
roleInIndividualInteraction -IndividualResourceInteraction
Attributes:
-
n exchangedItemRoleInExchange that asserts the IndividualInteractionElementRole is a component of the exchange.

roleOfIndividualResourceElement «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
RoleOfIndividualResourceElement - roleOfIndividualInteractionElement
Dependency (element - is instance of):«IDEAS:powertypeInstance»
RoleOfIndividualResourceElement - RoleOfIndividualResourceElementPowertype
Association (source - target):«place1Type»
RoleOfIndividualResourceElement - IndividualResource
Association (source - target):«place2Type»
RoleOfIndividualResourceElement - IndividualResourceElementRole
Attributes:
-
An roleOfIndividualInteractionElement that asserts the IndividualResourceElementRole is the thing being exchanged by the IndividualResource.

roleInIndividualResourceMovement «IDEAS:TupleType»
Connectors:
Dependency (element - is instance of):«IDEAS:powertypeInstance»
roleInIndividualResourceMovement - RoleInIndividualResourceMovementPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
roleInIndividualResourceMovement - roleInIndividualInteraction
Association (source - target):«place2Type»
roleInIndividualResourceMovement - IndividualResourceElementRole
Association (source - target):«place1Type»
roleInIndividualResourceMovement - IndividualResourceMovement

Attributes:

-

A roleInIndividualInteraction that asserts the IndividualResourceElementRole is a component of the exchange.

roleOfIndividualInteractionElement «IDEAS:TupleType»

Connectors:
Dependency (element - is instance of):«IDEAS:powertypeInstance»
roleOfIndividualInteractionElement - RoleOfIndividualInteractionElementPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
roleOfIndividualInteractionElement - individualRoleAsExchangedItem
Generalization (element - is a subtype of):«IDEAS:superSubtype»
roleOfIndividualInteractionElement - modemWholePart
Association (source - target):«place1Type»
roleOfIndividualInteractionElement - IndividualResourceInteractionElement
Association (source - target):«place2Type»
roleOfIndividualInteractionElement - IndividualInteractionElementRole
Attributes:

-

An individualRoleAsExchangedItem that asserts the IndividualResourceInteractionElement is the thing being exchanged by the IndividualResourceInteractionElement.

serviceConcurrency «IDEAS:TupleType»

Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
serviceConcurrency - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
serviceConcurrency - representedBy
Association (source - target):«place2Type»
serviceConcurrency - IntegerRepresentation
Association (source - target):«place1Type»
serviceConcurrency - ServiceLevel
Attributes:

-

A representedBy that assigns an IntegerRepresentation for the number of concurrent ServiceSpecifications required for a ServiceLevel.

serviceFunctionFunctionMapping «IDEAS:TupleType»

Connectors:
Association (source - target): «place1Type»
serviceFunctionFunctionMapping - ServiceFunction
Association (source - target): «place2Type»
serviceFunctionFunctionMapping - Function
Generalization (element - is a subtype of): «IDEAS:superSubtype»
serviceFunctionFunctionMapping - modemIndividualTypeSpecialisation
Attributes:

-

A modemIndividualTypeSpecialisation that relates an OperationalActivity or ActivityGroup to the Function or FunctionGroup that realises it.

softwareComponent «IDEAS:TupleType»

Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
softwareComponent - artefactPart
Association (source - target):«place2Type»
softwareComponent - Software

Association (source - target):«place1Type»
softwareComponent - Software
Attributes:
-
An artefactPart that asserts that a Software is component of an Artefact.

softwareSpecification «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
softwareSpecification - artefactSpecification
Association (source - target):«place1Type»
softwareSpecification - SoftwareType
Association (source - target):«place2Type»
softwareSpecification - SoftwareComponent
Attributes:
-
An artefactSpecification that asserts that a SoftwareComponent is a specialisation of a SoftwareType.

stateMachineForResourceType «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
stateMachineForResourceType - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
stateMachineForResourceType - appliedStateMachine
Association (source - target):«place1Type»
stateMachineForResourceType - ResourceType
Association (source - target):«place2Type»
stateMachineForResourceType - StateMachine
Attributes:
-
A appliedStateMachine that relates a ResourceType to its state machine.

usedCapabilityConfigurationSpecialisation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
usedCapabilityConfigurationSpecialisation - usedHumanAndNonHumanConfigurationTypeSpecialisation
Association (source - target):«place1Type»
usedCapabilityConfigurationSpecialisation - CapabilityConfiguration
Association (source - target):«place2Type»
usedCapabilityConfigurationSpecialisation - CapabilityConfigurationConfigurationUsage
Attributes:
-
An usedHumanAndNonHumanConfigurationTypeSpecialisation between CapabilityConfiguration and CapabilityConfigurationConfigurationUsage.

usedHumanAndNonHumanConfigurationTypeSpecialisation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
usedHumanAndNonHumanConfigurationTypeSpecialisation - usedResourceTypeSpecialisation
Association (source - target):«place1Type»
usedHumanAndNonHumanConfigurationTypeSpecialisation - HumanAndNonHumanConfigurationType
Association (source - target):«place2Type»
usedHumanAndNonHumanConfigurationTypeSpecialisation - HumanAndNonHumanResourceTypeConfigurationUsage

Attributes: - **A usedResourceTypeSpecialisation that asserts that an HumanAndNonHumanConfigurationTypeis a superType of a UsedHumanAndNonHumanConfigurationType.**
usedNonHumanResourceTypeSpecialisation «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **usedNonHumanResourceTypeSpecialisation - usedResourceTypeSpecialisation** *Association (source - target):«place1Type»* **usedNonHumanResourceTypeSpecialisation - NonHumanResourceType** *Association (source - target):«place2Type»* **usedNonHumanResourceTypeSpecialisation - NonHumanResourceTypeConfigurationUsage** *Attributes:* - **An usedNonHumanResourceTypeSpecialisation between NonHumanResourceType and NonHumanResourceTypeConfigurationUsage.**
usedOrganisationRoleTypeSpecialisation «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **usedOrganisationRoleTypeSpecialisation - usedResourceTypeSpecialisation** *Association (source - target):«place1Type»* **usedOrganisationRoleTypeSpecialisation - OrganisationRoleType** *Association (source - target):«place2Type»* **usedOrganisationRoleTypeSpecialisation - OrganisationRoleTypeUsage** *Attributes:* - **An usedResourceTypeSpecialisation that asserts a OrganisationRoleTypeUsage is a specialisation of a OrganisationRoleType.**
usedOrganisationTypeSpecialisation «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **usedOrganisationTypeSpecialisation - usedResourceTypeSpecialisation** *Association (source - target):«place1Type»* **usedOrganisationTypeSpecialisation - OrganisationType** *Association (source - target):«place2Type»* **usedOrganisationTypeSpecialisation - OrganisationTypeUsage** *Attributes:* - **An usedResourceTypeSpecialisation that asserts a OrganisationTypeUsage is a specialisation of a OrganisationType.**
usedPhysicalArchitectureSpecialisation «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **usedPhysicalArchitectureSpecialisation - usedHumanAndNonHumanConfigurationTypeSpecialisation** *Association (source - target):«place1Type»* **usedPhysicalArchitectureSpecialisation - PhysicalArchitecture** *Association (source - target):«place2Type»* **usedPhysicalArchitectureSpecialisation - PhysicalArchitectureConfigurationUsage** *Attributes:* - **An usedHumanAndNonHumanConfigurationTypeSpecialisation between PhysicalArchitecture and PhysicalArchitectureConfigurationUsage.**

usedPostTypeSpecialisation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
usedPostTypeSpecialisation - usedResourceTypeSpecialisation
Association (source - target):«place1Type»
usedPostTypeSpecialisation - PostType
Association (source - target):«place2Type»
usedPostTypeSpecialisation - PostTypeUsage
Attributes:
-
An usedResourceTypeSpecialisation that asserts a PostTypeUsagei s a specialisation of a PostType.
usedResourceTypeSpecialisation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
usedResourceTypeSpecialisation - modemIndividualTypeSpecialisation
Association (source - target):«place1Type»
usedResourceTypeSpecialisation - ResourceType
Association (source - target):«place2Type»
usedResourceTypeSpecialisation - ResourceTypeUsage
Attributes:
-
A superSubtype that asserts that a ResourceType is a superType of ResourceTypeUsage.
versionIdentifier «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
versionIdentifier - representedBy
Generalization (element - is a subtype of):«IDEAS:superSubtype»
versionIdentifier - ModemThing
Association (source - target):«place2Type»
versionIdentifier - StringRepresentation
Association (source - target):«place1Type»
versionIdentifier - ResourceType
Attributes:
-
A representedBy that asserts a StringRepresentation represents the version identifier of a ResourceType.
versionOf «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
versionOf - modemIndividualTypeSpecialisation
Association (source - target):«place1Type»
versionOf - ResourceTypeMaster
Association (source - target):«place2Type»
versionOf - ResourceType
Attributes:
-
A modemIndividualTypeSpecialisation that asserts a ResourceType is a version of a ResourceTypeMaster.

**2.6.14   System Views additional diagrams.**
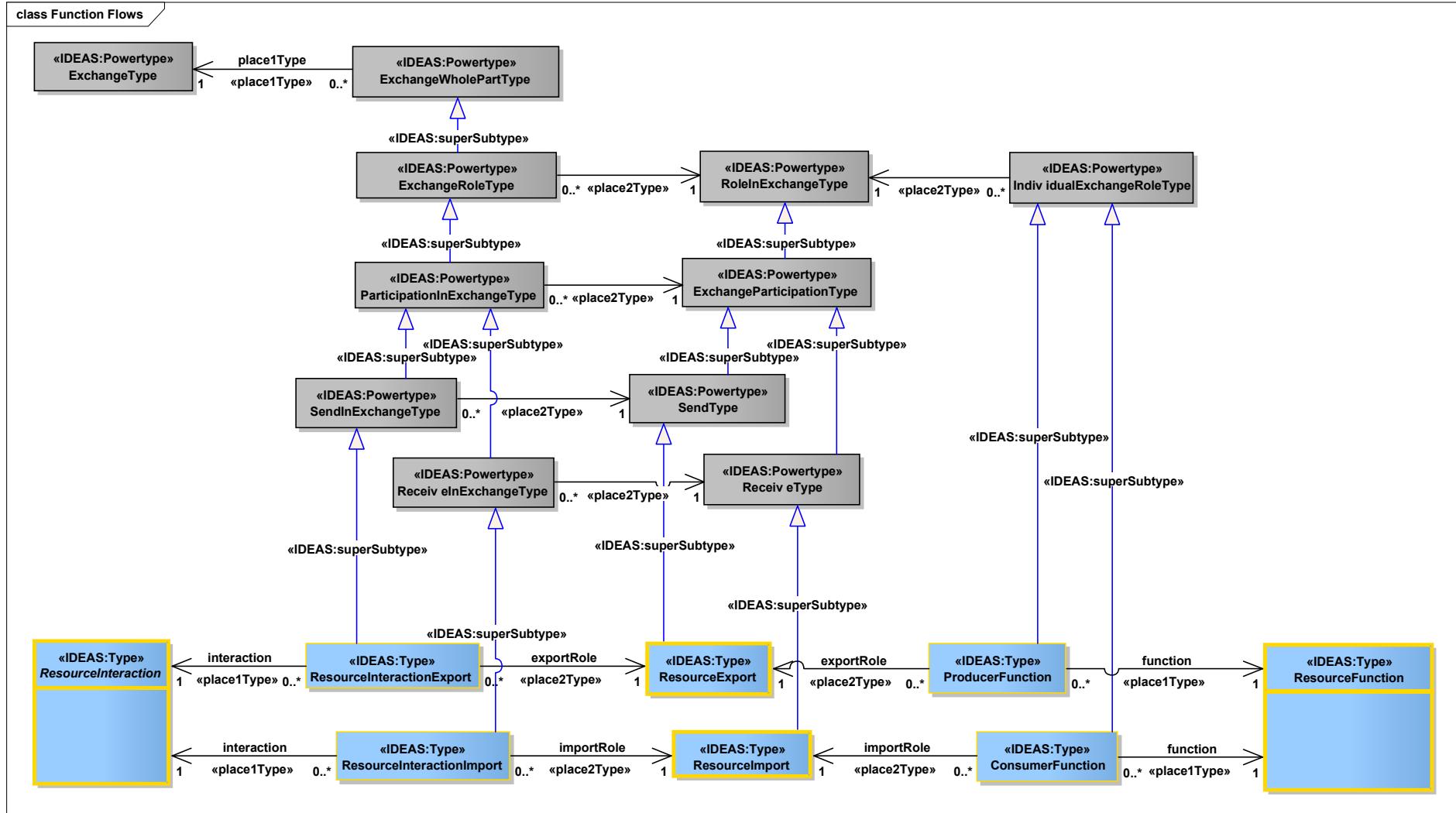
Figure 86 : Function Flows

# This document is no longer extant and has been withdrawn.
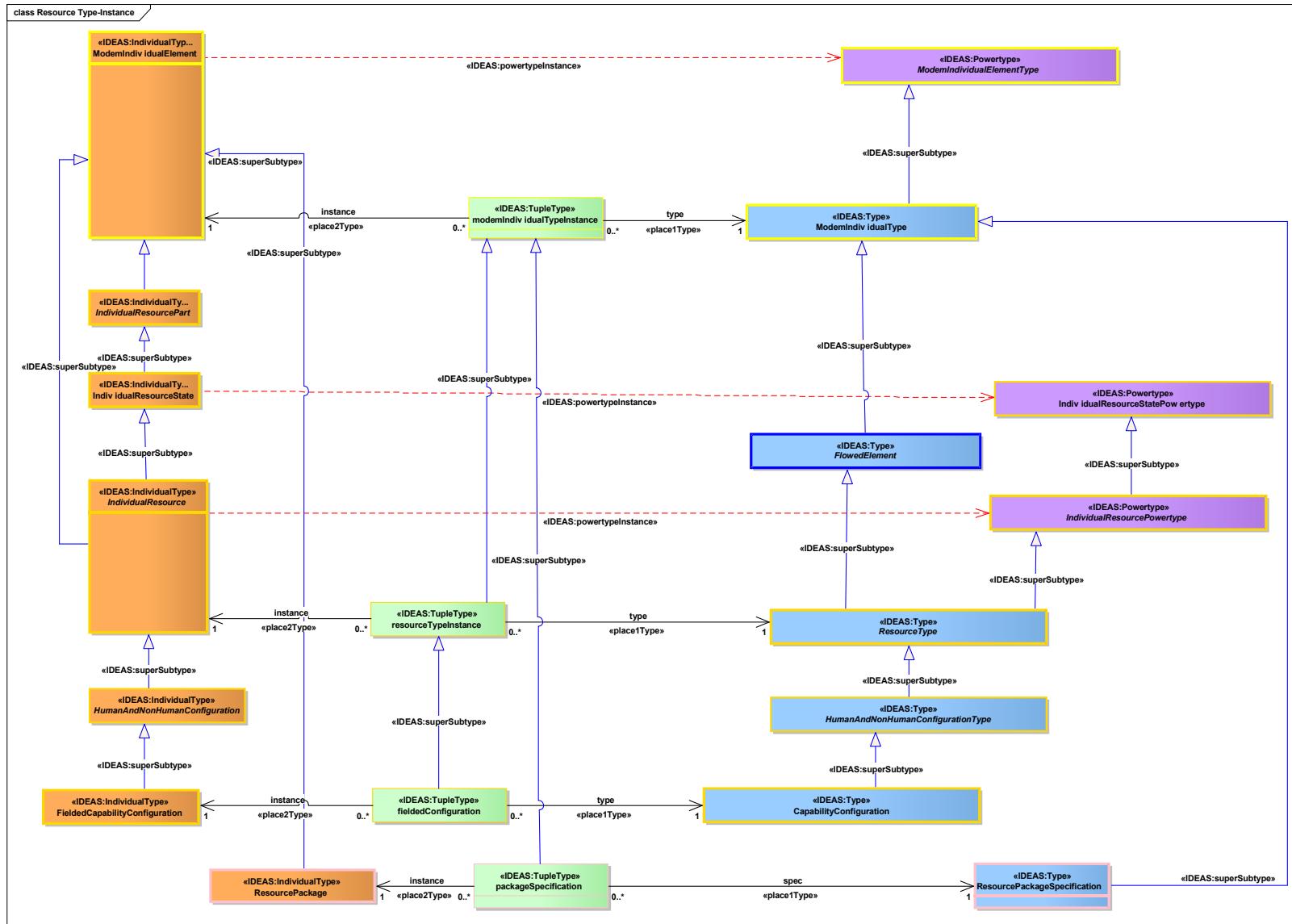
Figure 87 : Resource Type - Instance

# This document is no longer extant and has been withdrawn.
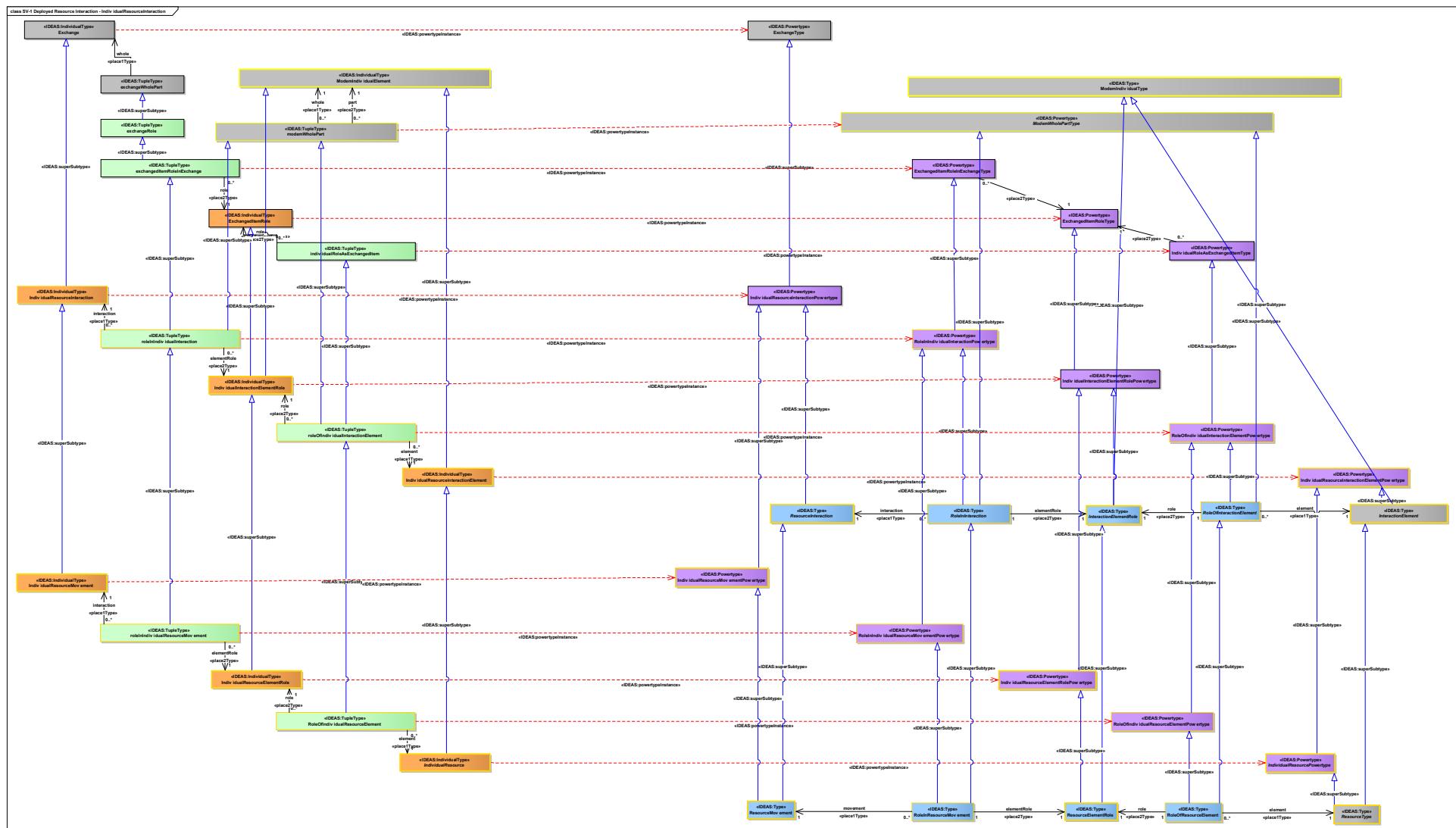
Figure 88 : SV-1 Deployed Resource Interaction - IndividualResourceInteraction
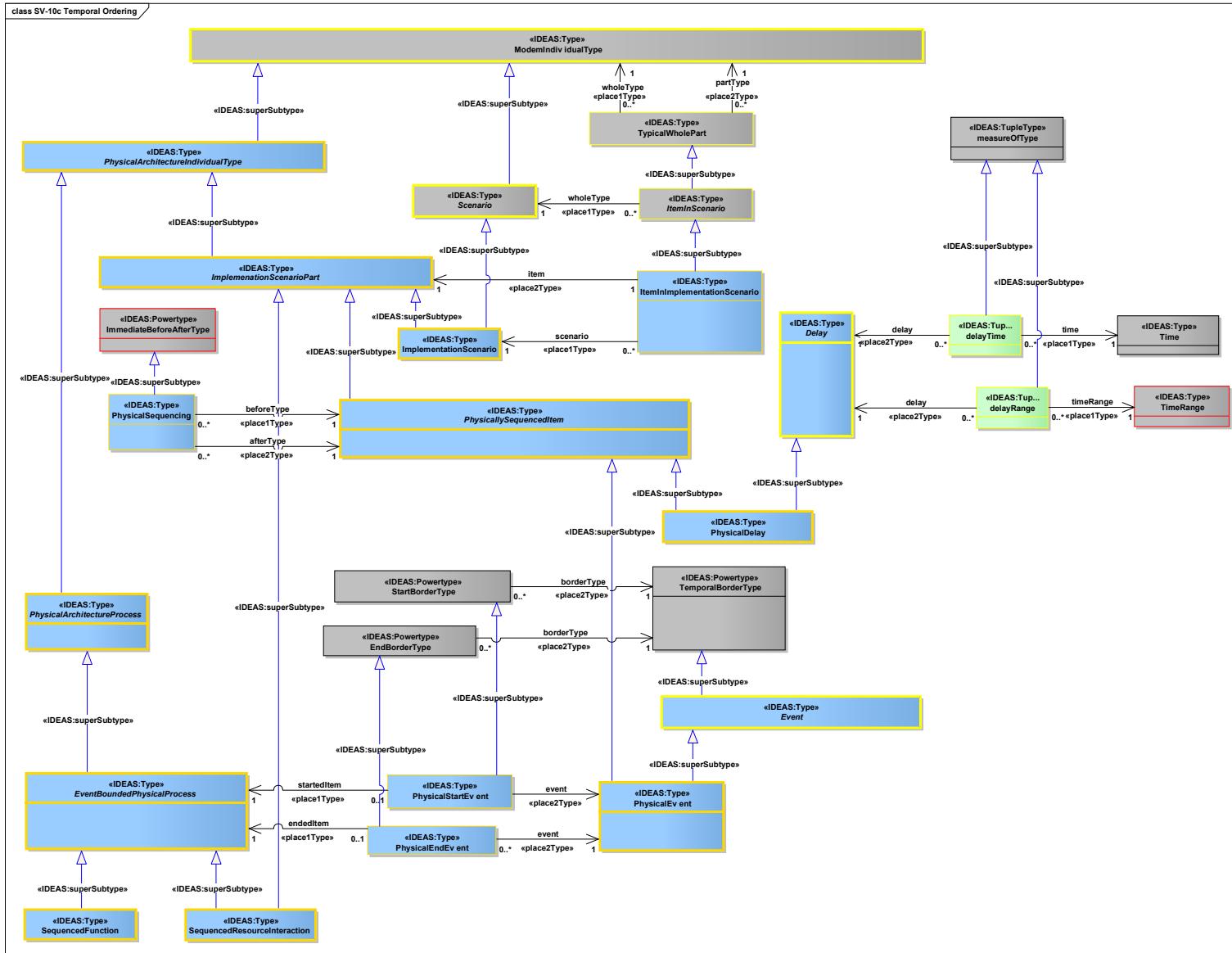
Figure 89 : SV-10c Temporal Ordering
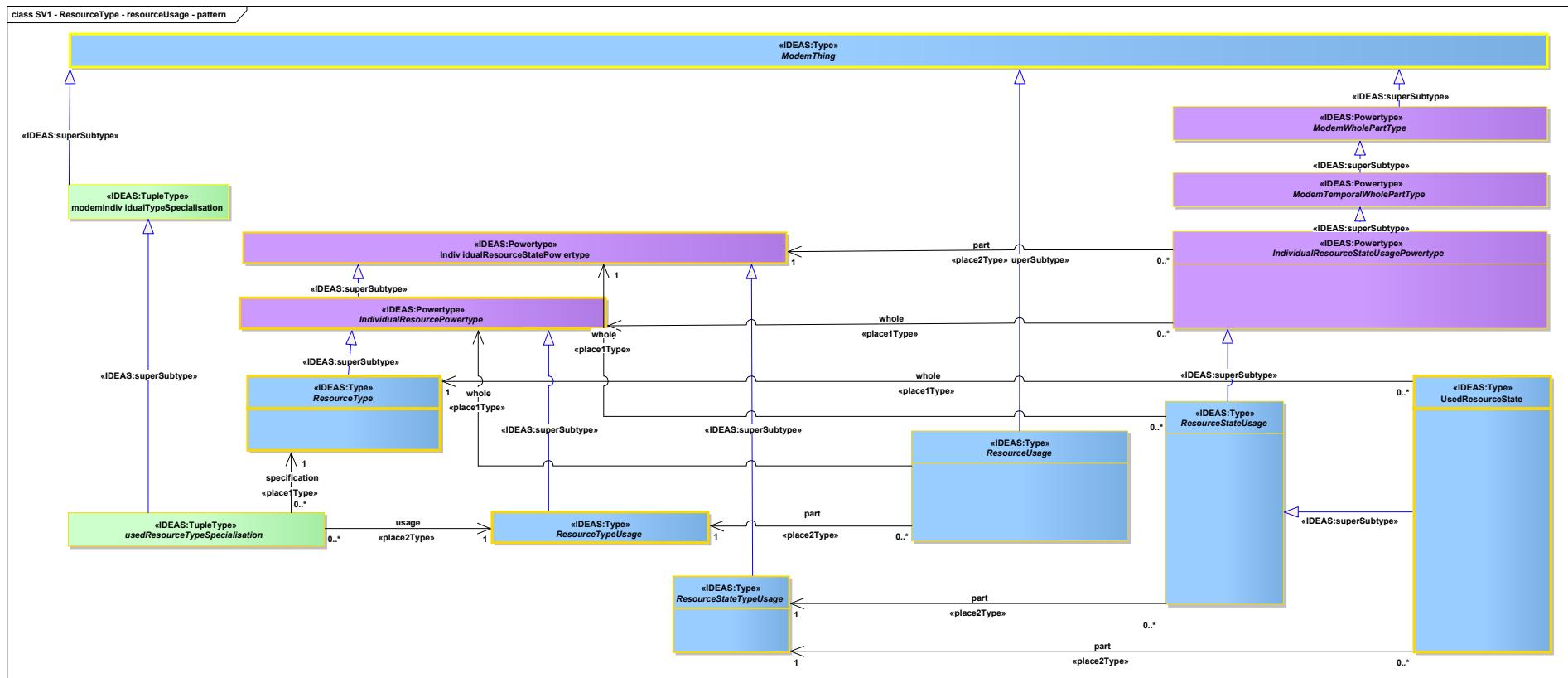
Figure 90 : SV1 - ResourceType - resourceUsage - pattern
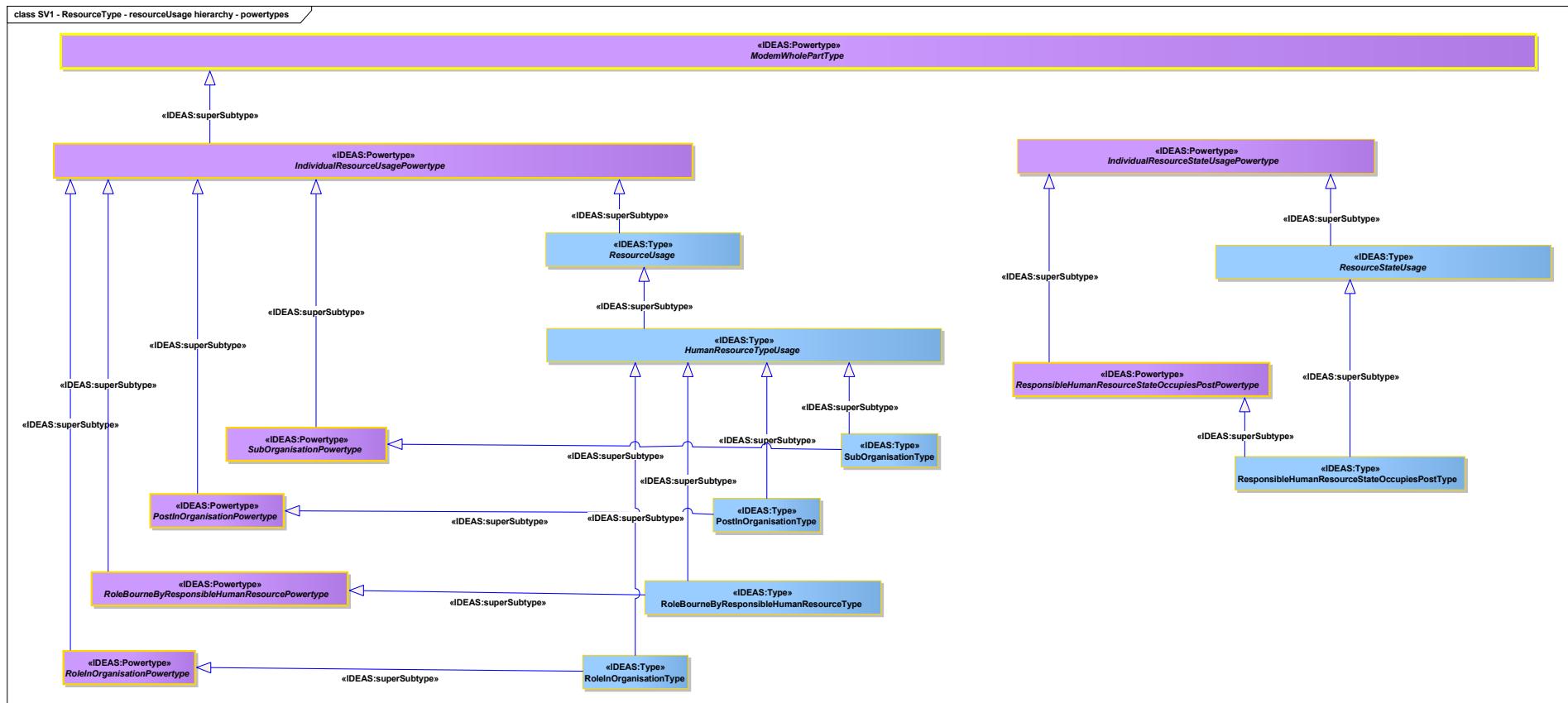
Figure 91 : SV1 - ResourceType - resourceUsage hierarchy - powertypes
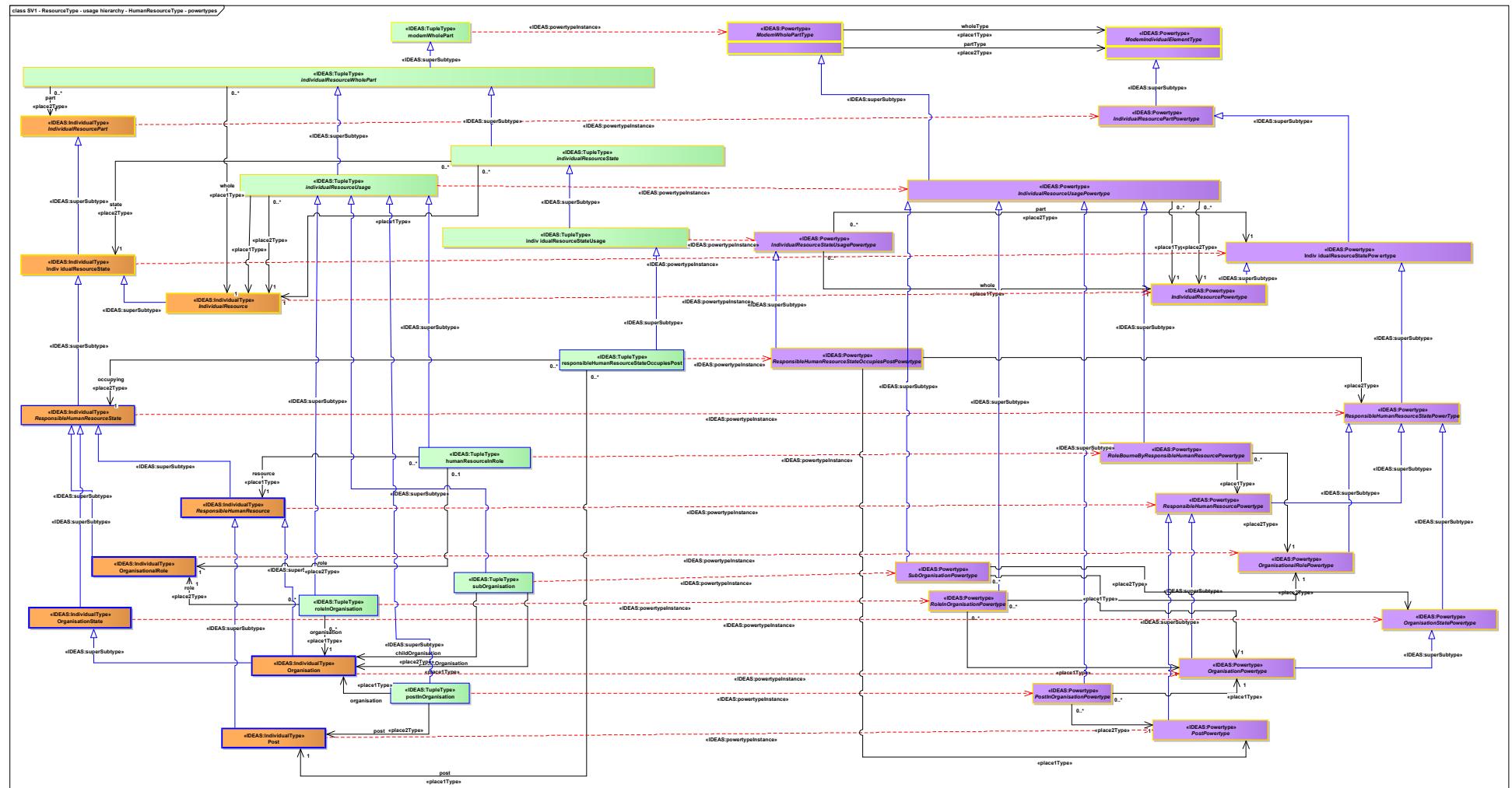
Figure 92 : SV1 - ResourceType - usage hierarchy - HumanResourceType - powertypes
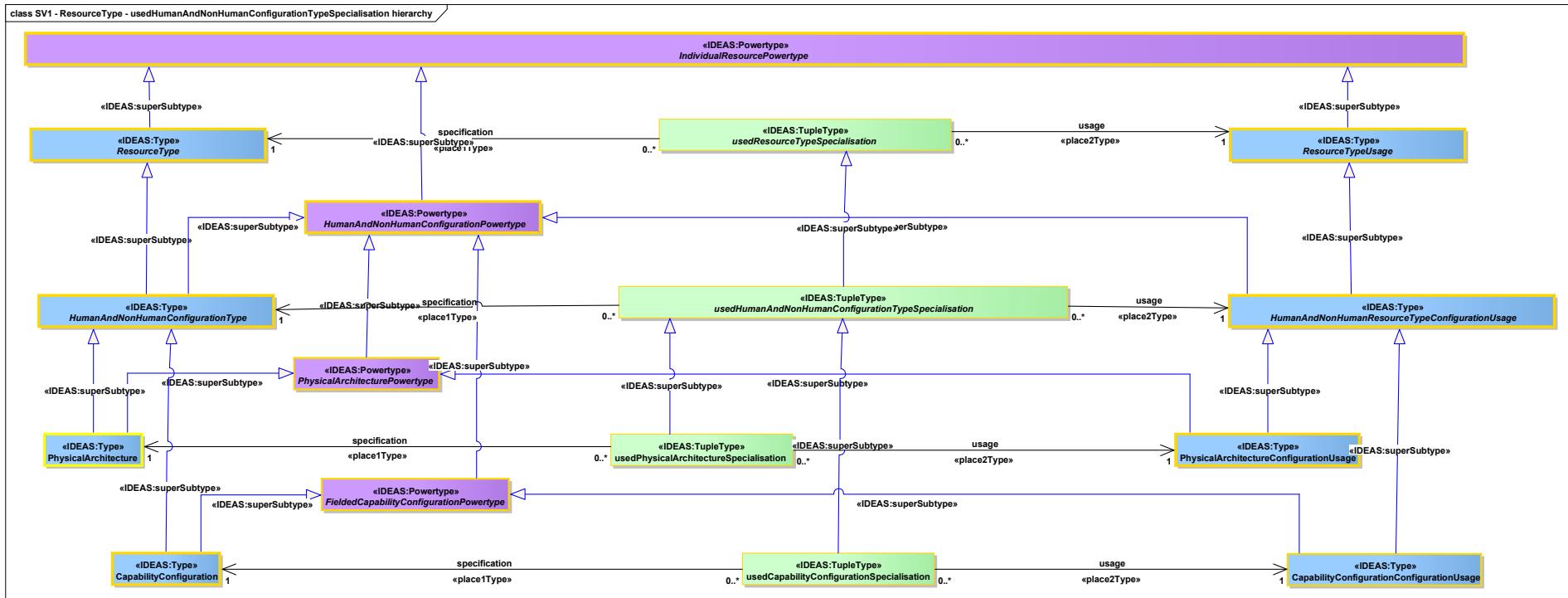
Figure 93 : SV1 - ResourceType - usedHumanAndNonHumanConfigurationTypeSpecialisation hierarchy

Figure 94 : SV1 - ResourceType - usedNonHumanConfigurationTypeSpecialisation hierarchy

This document is no longer extant and has been withdrawn.
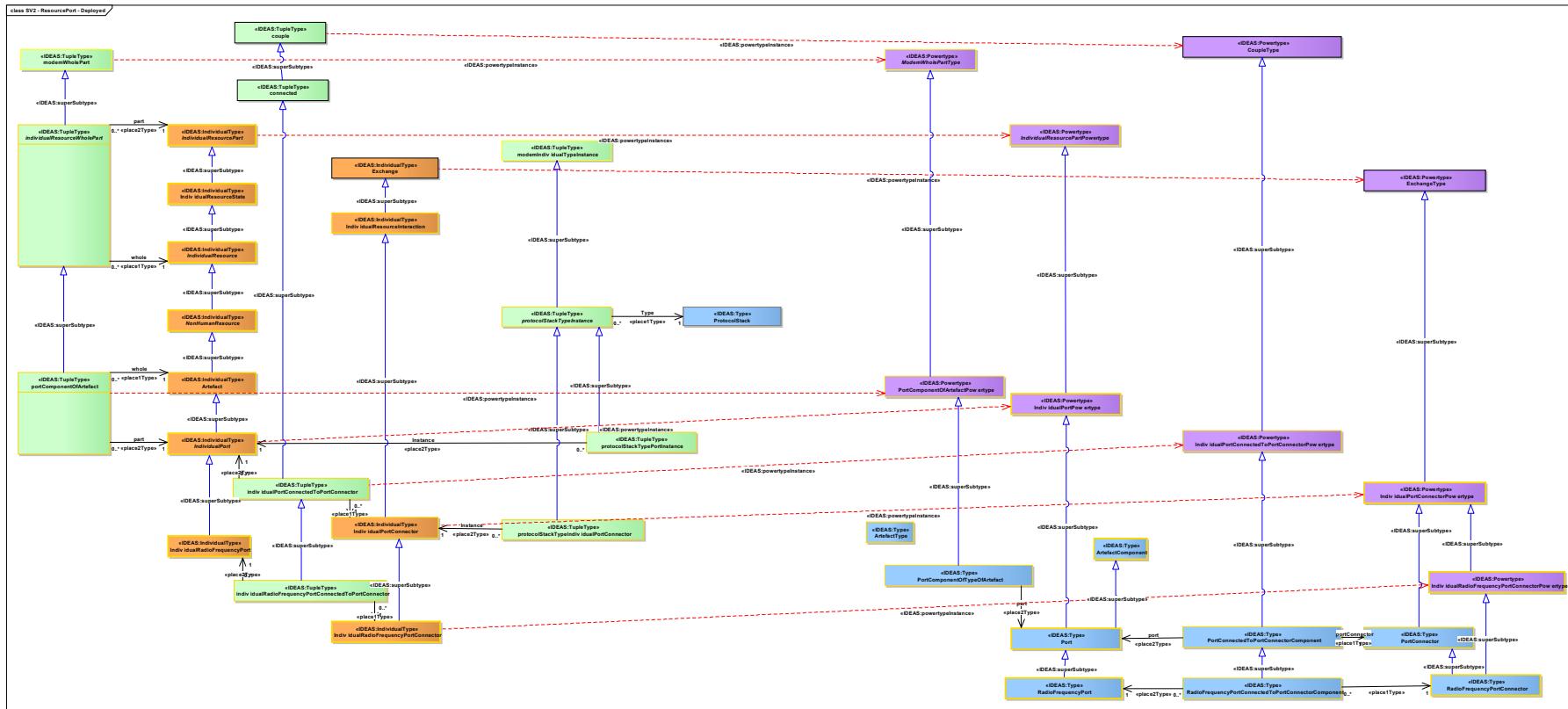
Figure 95 : SV2 - ResourcePort - Deployed

This document is no longer extant and has been withdrawn.
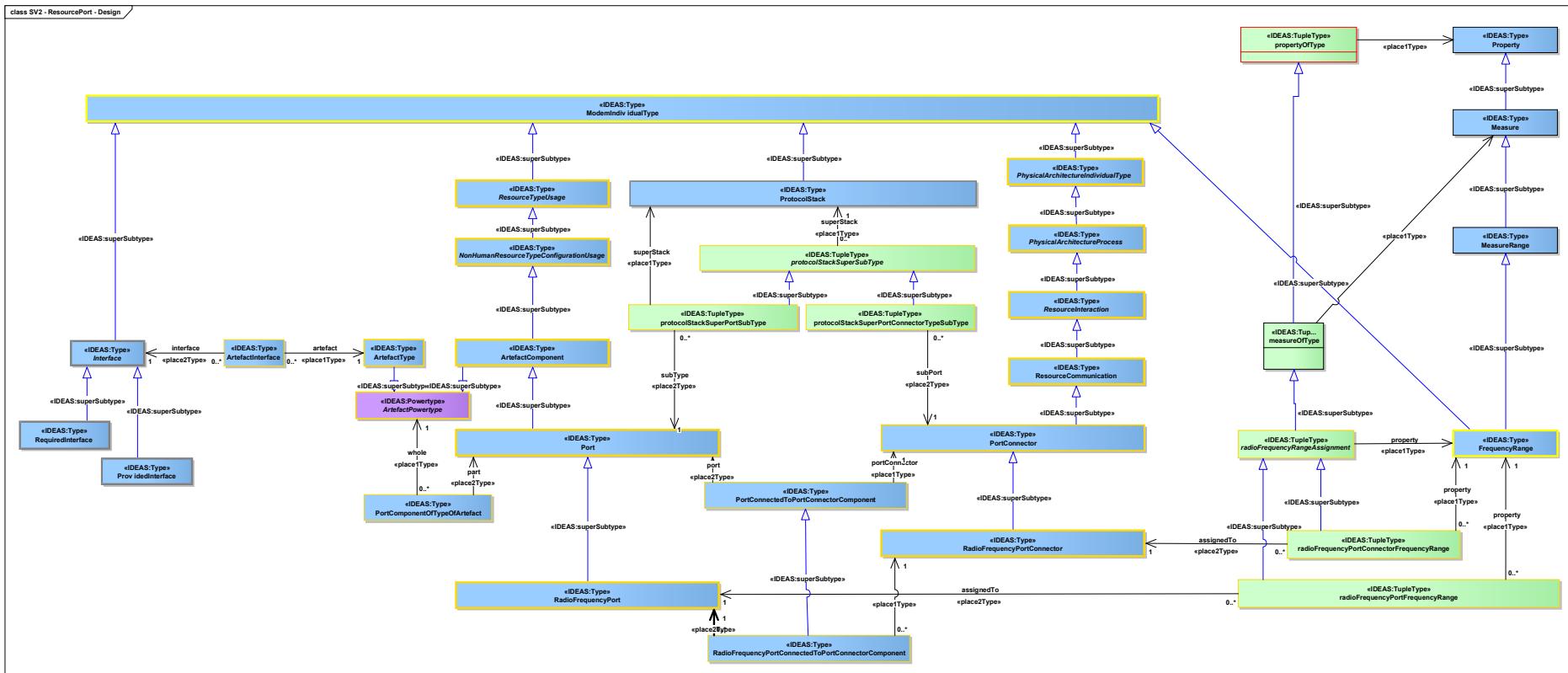
Figure 96 : SV2 - ResourcePort - Design

2.7   Technical standards views

2.7.1   TV-1: Standards profile, TV-2: Standards forecast
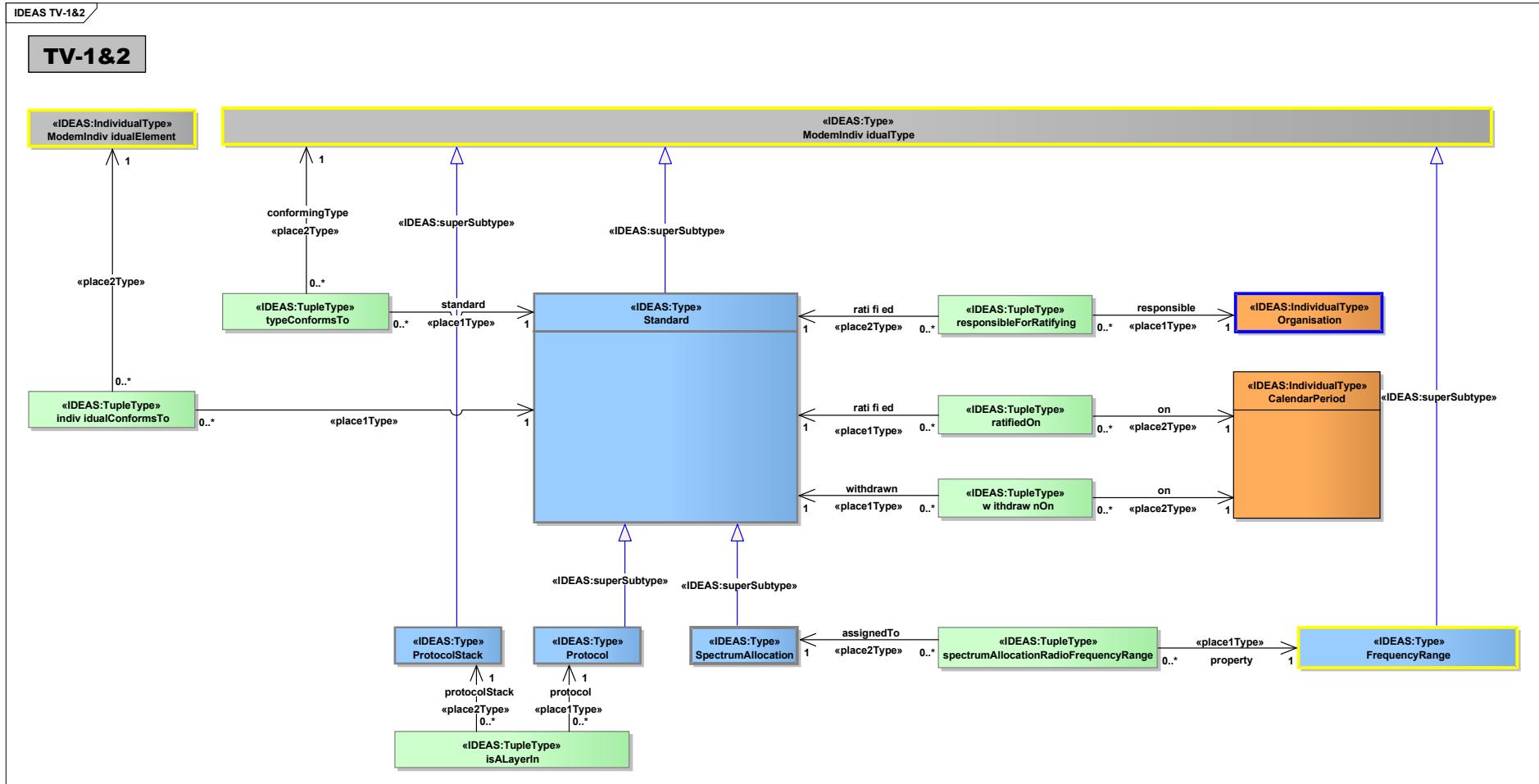
Figure 97 : TV-1&2

2.7.2   TV-3: Standard configuration
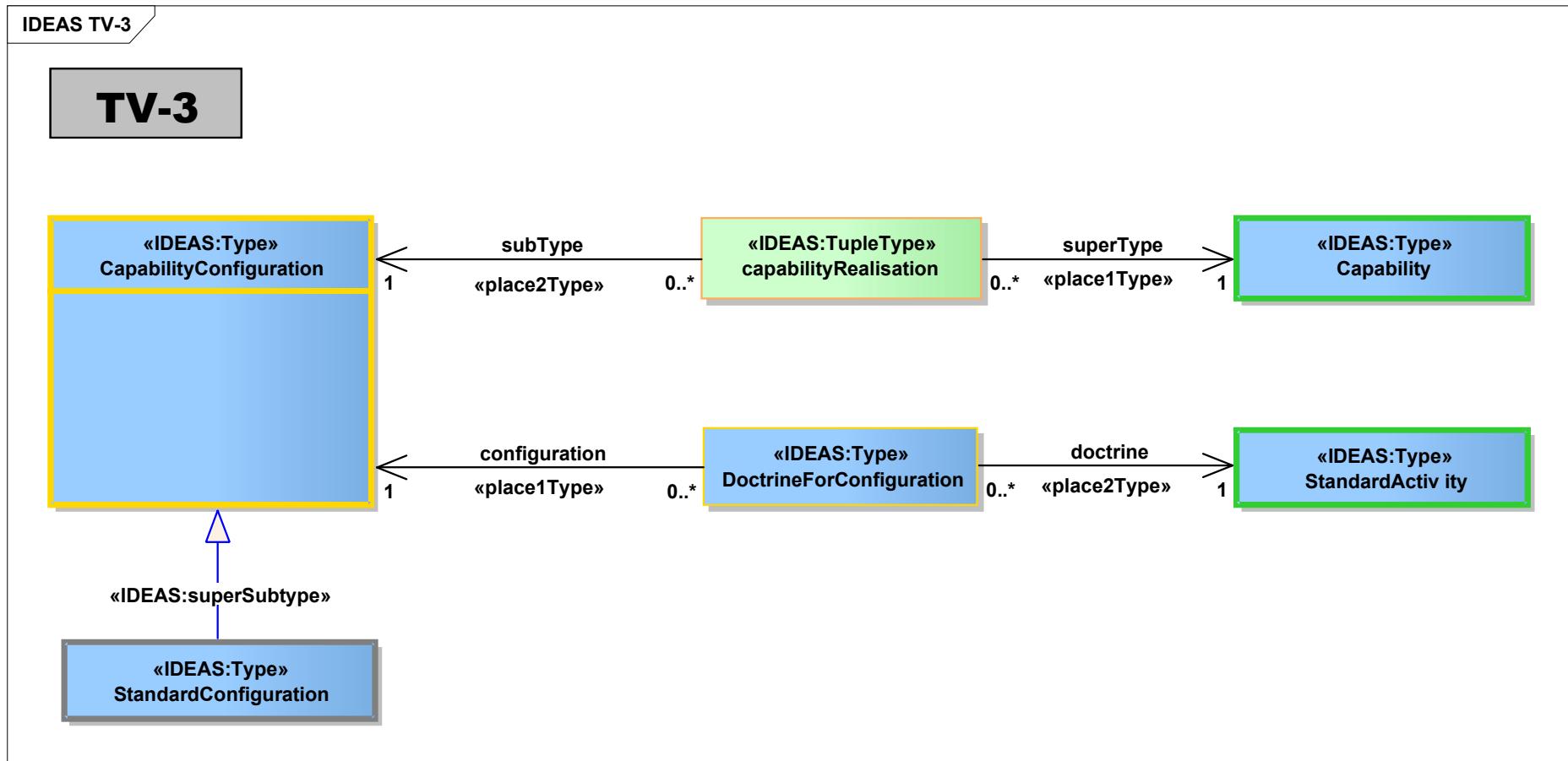
Figure 98 : TV-3
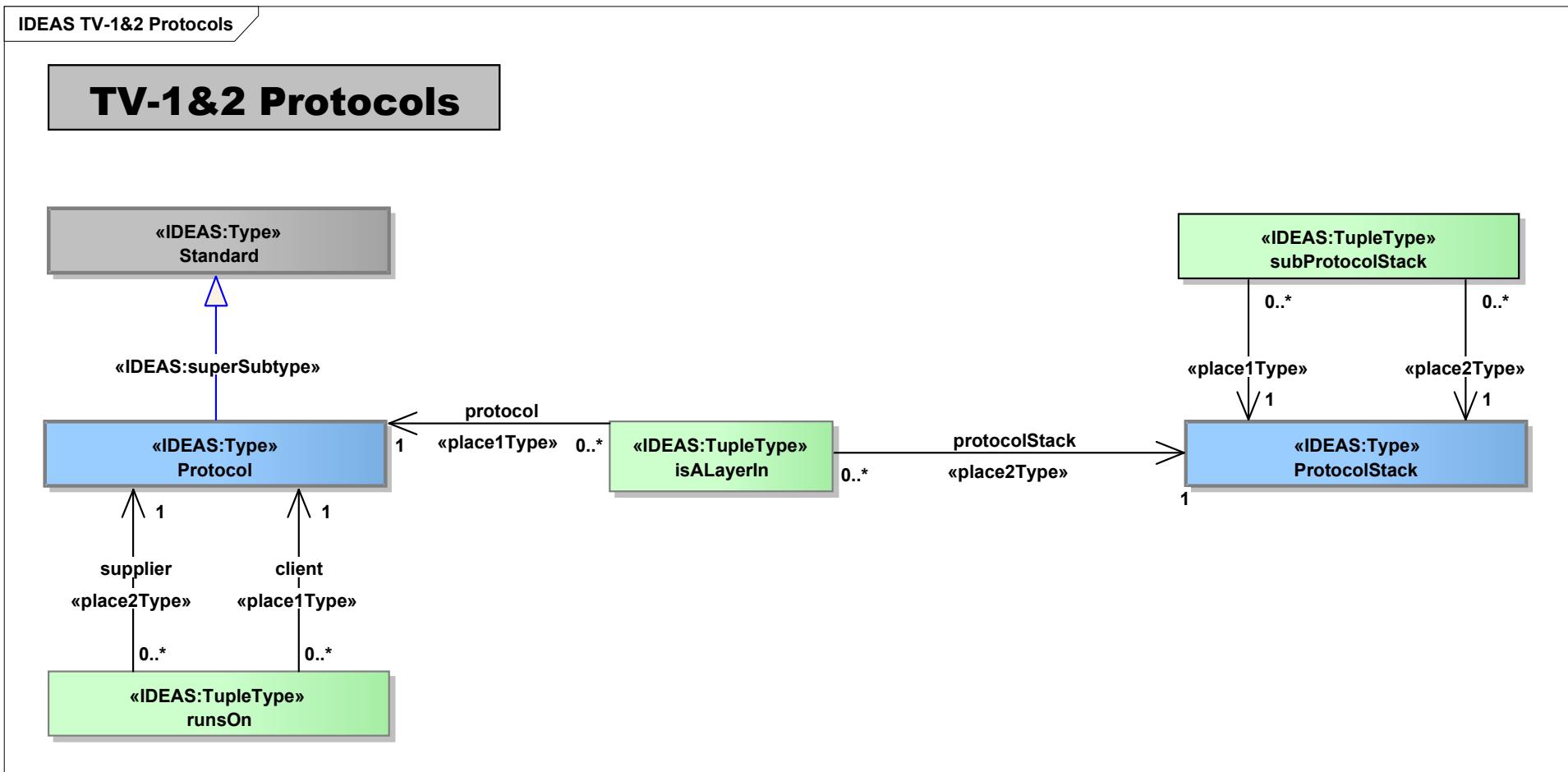
2.7.3 Protocols

Figure 99 : TV-1&2 Protocols

2.7.4 Technical standards Views elements list

Technical Standard Views
AggregateDataType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **AggregateDataType - DataModelTypeRepresentation** *Attributes:* - **A DataModelTypeRepresentation which is an aggregate of other DataModelTypeRepresentations.**
ArrayDataType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ArrayDataType - AggregateDataType** *Attributes:* - **An AggregateDataType whose members are addressed using a numeric index.**
AsynchronousOperation «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **AsynchronousOperation - OperationSpecification** *Attributes:* - **An OperationSpecification where the caller and called do not wait for each other to complete the communication.**
Attribute «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **Attribute - DataModelComponent** *Attributes:* - **A DataModelComponent that is a defined property of an Entity.**
BagDataType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **BagDataType - AggregateDataType** *Attributes:* - **An AggregateDataType whose members are not kept in any particular order - i.e. there is no way to address a particular member.**
BinaryDataType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **BinaryDataType - SimpleDataType** *Attributes:* - **A SimpleDataType whose instances are binary objects.** **Note: Data Models may instantiate several different BinaryDataTypes - e.g. "BLOB", "MPEG", "varbinary", etc.**

CardinalitySpecifier «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
CardinalitySpecifier - ModemIndividualType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
CardinalitySpecifier - IntegerRepresentation
Attributes:
exemplar
An IntegerRepresentation that specifies the cardinality of an EntityRelationshipEnd.

ChoiceDataType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ChoiceDataType - DataModelTypeRepresentation
Attributes:
-
A DataModelTypeRepresentation which represents a choice of datatypes, restricted by the architect to a list. Note: Also known as a SELECT in some data modelling languages (e.g. ISO10303-11).

DataElement «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
DataElement - InteractionElement
Generalization (element - is a subtype of): «IDEAS:superSubtype»
DataElement – SymbolOrSymbolStringType
Attributes:
-
A SymbolOrSymbolStringType that represents interactions between resource elements.

DataModel «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
DataModel - StructuredRepresentation
Generalization (element - is a subtype of): «IDEAS:superSubtype»
DataModel - ModemIndividualType
Attributes:
-
A StructuredRepresentation defining the structure of data, showing classifications of data elements and relationships between them.

DataModelComponent «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
DataModelComponent - Representation
Generalization (element - is a subtype of): «IDEAS:superSubtype»
DataModelComponent - ModemIndividualType
Attributes:
-
A Representation that can be part of a DataModel.

DataModelTypeRepresentation «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
DataModelTypeRepresentation - DataModelComponent
Attributes:

- **A DataModelComponent that can be used to represent the type of something.**
EndOfEntityRelationship «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **EndOfEntityRelationship - ModemThing** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **EndOfEntityRelationship - RepresentationInStructure** *Association (source - target): «place2Type»* **EndOfEntityRelationship - EntityRelationshipEnd** *Association (source - target): «place1Type»* **EndOfEntityRelationship - EntityRelationship** *Attributes:* **-** **A RepresentationStructure where an EntityRelationship has 2 or more EntityRelationshipEnds.**
Entity «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **Entity - DataModelTypeRepresentation** *Attributes:* **-** **A DataModelComponent that defines an item of interest.**
EntityRelationship «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **EntityRelationship - StructuredRepresentation** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **EntityRelationship - DataModelComponent** *Attributes:* **-** **A DataModelComponent that represents a relationship between two or more Entities.**
EntityRelationshipEnd «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **EntityRelationshipEnd - StructuredRepresentation** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **EntityRelationshipEnd - ModemIndividualType** *Attributes:* **-** **A DataModelComponent that is one end of an EntityRelationship.**
EnumerationType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **EnumerationType - DataModelTypeRepresentation** *Attributes:* **-** **A DataModelTypeRepresentation which consists of named values.**

FloatingPointDataType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
FloatingPointDataType - NumericDataType
Attributes:
-
A NumericDataType whose instances are real numbers. Note: Data Models may instantiate several different IntegerDataTypes - e.g. "float", "double", "real", etc.

HashedAggregate «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
HashedAggregate - AggregateDataType
Attributes:
-
An AggregateDataType whose members are indexed using an identifier.

IntegerDataType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IntegerDataType - NumericDataType
Attributes:
-
A NumericDataType whose instances are integer numbers. Note: Data Models may instantiate several different IntegerDataTypes - e.g. "LongInt", "short", "word", etc.

Interface «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
Interface - ModemIndividualType
Attributes:
-
A ModemIndividualType that is an interface either provided or required by another ModemIndividualType.

InterfaceOperation «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
InterfaceOperation - ProcessPartOfBodyType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
InterfaceOperation - TypicalWholePart
Association (source - target): «place1Type»
InterfaceOperation - InterfaceSpecification
Association (source - target): «place2Type»
InterfaceOperation - OperationSpecification
Attributes:
-
A TypicalWholePart that relates an OperationSpecification to its InterfaceSpecification.

InterfaceSpecification «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
InterfaceSpecification - ModemIndividualType
Generalization (element - is a subtype of):«IDEAS:superSubtype»
InterfaceSpecification - BodyType
Attributes:

- A ModemIndividualType that is a part of another ModemIndividualType that defines how it communicates.
ItemInDataModel «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ItemInDataModel - ModemThing** *Generalization (element - is a subtype of):* «IDEAS:superSubtype» **ItemInDataModel - RepresentationInStructure** *Association (source - target):* «place2Type» **ItemInDataModel - DataModelComponent** *Association (source - target):* «place1Type» **ItemInDataModel - DataModel** *Attributes:* - A RepresentationInStructure where a DataModelComponent is part of a DataModel.
ListDataType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ListDataType - AggregateDataType** *Attributes:* - An AggregateDataType whose members are stored and accessed as an ordered list.
LogicalDataType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **LogicalDataType - SimpleDataType** *Attributes:* - A SimpleDataType whose instances are true/false or true/false/unknown. Note: Data Models may instantiate several different LogicalDataTypes - e.g. "Boolean", "YesNo", "BOOL", etc.
MaxAggregateSize «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **MaxAggregateSize - ModemThing** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **MaxAggregateSize - RepresentationInStructure** *Association (source - target):*«place1Type» **MaxAggregateSize - AggregateDataType** *Association (source - target):*«place2Type» **MaxAggregateSize - CardinalitySpecifier** *Attributes:* - A RepresentationInStructure that specifies the maximum size of an AggregateDataType.

MaxCardinalityOfRelationshipEnd «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
MaxCardinalityOfRelationshipEnd - RepresentationInStructure
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
MaxCardinalityOfRelationshipEnd - ModemThing
Association (source - target): **«place2Type»**
MaxCardinalityOfRelationshipEnd - CardinalitySpecifier
Association (source - target): **«place1Type»**
MaxCardinalityOfRelationshipEnd - EntityRelationshipEnd
Attributes:
-
A RepresentationInStructure that asserts a CardinalitySpecifier is part of an EntityRelationshipEnd, and that it represents the maximum cardinality value of that end.
Note: If no Maximum Cardinality is specified (i.e. there is no instance of this tuple type related to the EntityRelationshipEnd) then the default is "many" or "*".

MessageSpecification «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
MessageSpecification - DataElement
Attributes:
-
A DataElement that specifies the content of a message.

MinAggregateSize «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
MinAggregateSize - RepresentationInStructure
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
MinAggregateSize - ModemThing
*Association (source - target):***«place1Type»**
MinAggregateSize - AggregateDataType
*Association (source - target):***«place2Type»**
MinAggregateSize - CardinalitySpecifier
Attributes:
-
A RepresentationInStructure that specifies the minimum size of an AggregateDataType.

MinCardinalityOfRelationshipEnd «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
MinCardinalityOfRelationshipEnd - RepresentationInStructure
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
MinCardinalityOfRelationshipEnd - ModemThing
Association (source - target): **«place2Type»**
MinCardinalityOfRelationshipEnd - CardinalitySpecifier
Association (source - target): **«place1Type»**
MinCardinalityOfRelationshipEnd - EntityRelationshipEnd
Attributes:
-
A RepresentationInStructure that asserts a CardinalitySpecifier is part of an EntityRelationshipEnd, and that it represents the minimum cardinality value of that end. Note: If no Minimum Cardinality is specified (i.e. there is no instance of this tuple type related to the EntityRelationshipEnd) then the default is zero.

NumericDataType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
NumericDataType - SimpleDataType
Attributes:
-
A SimpleDataType whose instances are numbers.

OperationInputParameter «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
OperationInputParameter - TypicalWholePart
Association (source - target):«place1Type»
OperationInputParameter - OperationSpecification
Association (source - target):«place2Type»
OperationInputParameter - OperationParameter
Attributes:
-
A TypicalWholePart where an OperationParameter is passed into a OperationSpecification.

OperationParameter «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
OperationParameter - ModemIndividualType
Attributes:
-
A ModemIndividualType that is a part of an OperationSpecification
OperationParameters are passed in and out of OperationSpecifications.

OperationReadWriteParameter «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
OperationReadWriteParameter - TypicalWholePart
Association (source - target):«place1Type»
OperationReadWriteParameter - OperationSpecification
Association (source - target):«place2Type»
OperationReadWriteParameter - OperationParameter
Attributes:
-
A TypicalWholePart where an OperationParameter is passed into a OperationSpecification that can then be modified and the result read after processing.

OperationReturnParameter «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
OperationReturnParameter - TypicalWholePart
Association (source - target):«place1Type»
OperationReturnParameter - OperationSpecification
Association (source - target):«place2Type»
OperationReturnParameter - OperationParameter
Attributes:
-
A TypicalWholePart where an OperationParameter is passed out of an OperationSpecification.

OperationSpecification «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **OperationSpecification - ModemIndividualType**   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **OperationSpecification - ProcessType**   *Attributes:*   **-**   **A ModemIndividualType that is an invokable part of an InterfaceSpecification.**   **[ABSTRACT]**
Protocol «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **Protocol - Standard**   *Attributes:*   **-**   **A Standard for communication.**
ProtocolStack «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ProtocolStack - ModemIndividualType**   *Attributes:*   **-**   **A ModemIndividualType that is all the Individuals which conform to one or more specified protocols (ordered into a stack) that may be implemented by one or more ResourcePorts. Note: was called "ImplementedProtocol" in M3.**
ProvidedInterface «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ProvidedInterface - Interface**   *Attributes:*   **-**   **An Interface describing what a ServiceSpecification or a ResourceType is capable of providing when invoked by an external element.**
RequiredInterface «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **RequiredInterface - Interface**   *Attributes:*   **-**   **An Interface describing what a ServiceSpecification or a ResourceType requires from an external element.**
SecurityPolicy «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **SecurityPolicy - Constraint**   *Attributes:*   **-**   **A Constraint that is concerned with security.**

SimpleDataType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
SimpleDataType - DataModelTypeRepresentation
Attributes:
-
A DataModelTypeRepresentation that is used to specify the type of a literal (e.g. text, integer, floating point number, etc.)

SpectrumAllocation «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
SpectrumAllocation - Standard
Attributes:
-
A Standard specifying a particular frequency range of the electromagnetic spectrum that is allotted to a particular usage.

Standard «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
Standard - SubjectOfForecast
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
Standard - ModemIndividualType
Attributes:
-
A ratified and peer-reviewed specification that is used to guide or constrain the architecture. A Standard may be applied to any element in the architecture.

StandardConfiguration «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
StandardConfiguration - CapabilityConfiguration
Attributes:
-
A CapabilityConfiguration that has been designated as a standard configuration.

SupportedMessageFormat «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
supportedMessageFormat - ModemThing
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
supportedMessageFormat - couple
Association (source - target): **«place1Type»**
supportedMessageFormat - Interface
Association (source - target): **«place2Type»**
supportedMessageFormat - MessageSpecification
Attributes:
-
A couple that relates an Interface to a MessageSpecification that it can support.

SynchronousOperation «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
SynchronousOperation - OperationSpecification
Attributes:

This document is no longer extant and has been withdrawn.

- **An OperationSpecification where the caller and called wait for each other to complete the communication.**
TextDataType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **TextDataType - SimpleDataType** *Attributes:* **-** **A SimpleDataType whose instances are text literals. Note: Data Models may instantiate several different TextDataTypes - e.g. "String", "XML Text", "WideString", etc.**
aggregateElementType «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **aggregateElementType - ModemThing** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **aggregateElementType - couple** *Association (source - target):«place1Type»* **aggregateElementType - AggregateDataType** *Association (source - target):«place2Type»* **aggregateElementType - DataModelTypeRepresentation** *Attributes:* **-** **A couple that relates an AggregateDataType to the DataModelTypeRepresentation that specifies the data type of each of its elements.**
attributeType «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **attributeType - couple** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **attributeType - ModemThing** *Association (source - target):«place2Type»* **attributeType - DataModelTypeRepresentation** *Association (source - target):«place1Type»* **attributeType - Attribute** *Attributes:* **-** **A couple that relates an Attribute to the DataModelTypeRepresentation that specifies its type.**
choiceElement «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **choiceElement - couple** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **choiceElement - ModemThing** *Association (source - target):«place1Type»* **choiceElement - ChoiceDataType** *Association (source - target):«place2Type»* **choiceElement - DataModelTypeRepresentation** *Attributes:* **-** **A couple that asserts a DataModelTypeRepresentation is a valid choice in a ChoiceDataType.**

conformsTo «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
conformsTo - couple
Generalization (element - is a subtype of):«IDEAS:superSubtype»
conformsTo - ModemThing
Association (source - target):«place1Type»
conformsTo - Standard
Attributes:
-
A couple that asserts a thing in the architecture model conforms to a standard.

dataElementRepresentation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
dataElementRepresentation - representedByDataType
Association (source - target):«place1Type»
dataElementRepresentation - DataElement
Association (source - target):«place2Type»
dataElementRepresentation - DataModelTypeRepresentation
Attributes:
-
A representedByDataType that asserts an DataElement is represented by a DataModelTypeRepresentation.

entityHasAttribute «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
entityHasAttribute - couple
Generalization (element - is a subtype of):«IDEAS:superSubtype»
entityHasAttribute - ModemThing
Association (source - target):«place2Type»
entityHasAttribute - Attribute
Association (source - target):«place1Type»
entityHasAttribute - Entity
Attributes:
-
A couple asserting that an Entity has an Attribute.

entityInRelationship «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
entityInRelationship - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
entityInRelationship - couple
Association (source - target):«place2Type»
entityInRelationship - Entity
Association (source - target):«place1Type»
entityInRelationship - EntityRelationshipEnd
Attributes:
-
A couple relating a RelationshipInDataModel to one of the Entities it relates.

enumerationItem «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
enumerationItem - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
enumerationItem - couple
Association (source - target):«place2Type»
enumerationItem - StringRepresentation
Association (source - target):«place1Type»
enumerationItem - EnumerationType
Attributes:
-
A Couple that relates a StringRepresentation to an EnumerationType of which it is an element.

individualConformsTo «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
individualConformsTo - Standard
Generalization (element - is a subtype of):«IDEAS:superSubtype»
individualConformsTo - conformsTo
Association (source - target):«place2Type»
individualConformsTo - ModemIndividualElement
Generalization (element - is a subtype of):«IDEAS:superSubtype»
individualConformsTo - modemIndividualTypeInstance
Attributes:
-
A modemIndividualTypeInstance that asserts that an element in the architecture conforms to a Standard.

isALayerIn «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IsALayerIn - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
IsALayerIn - superSubtype
Association (source - target):«place2Type»
IsALayerIn - Protocol
Association (source - target):«place1Type»
IsALayerIn - ProtocolStack
Attributes:
-
A superSubtype that asserts that a ProtocolStack is a kind of Protocol. The Protocol is a layer in the ProtocolStack. The order of the layering is determined by the Protocols' runsOn relations. Note: amalgamates "ProtocolLayer" and "ImplementedOn" in M3.

parameterRepresentation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
parameterRepresentation - representedByDataType
Association (source - target):«place2Type»
parameterRepresentation - DataModelTypeRepresentation
Association (source - target):«place1Type»
parameterRepresentation - OperationParameter
Attributes:

This document is no longer extant and has been withdrawn.

- A representedBy that links an OperationParameter to its datatype (DataModelTypeRepresentation).
ratifiedOn «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ratifiedOn - ModemThing** *Association (source - target):*«place2Type» **ratifiedOn - CalendarPeriod** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ratifiedOn - couple** *Association (source - target):*«place1Type» **ratifiedOn - Standard** *Attributes:* - A couple that asserts a Standard has been ratified on a date.
representedByDataType «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **representedByDataType - ModemThing** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **representedByDataType - representedBy** *Association (source - target):*«place2Type» **representedByDataType - DataModelTypeRepresentation** *Attributes:* - A representedBy that asserts a Thing is represented by a DataModelTypeRepresentation.
responsibleForRatifying «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **responsibleForRatifying - couple** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **responsibleForRatifying - ModemThing** *Association (source - target):*«place2Type» **responsibleForRatifying - Standard** *Association (source - target):*«place1Type» **responsibleForRatifying - Organisation** *Attributes:* - A couple that asserts than an Organisation is responsible for the ratification of a standard. Note: was called "RatificationBody" in M3.
runsOn «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **runsOn - couple** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **runsOn - ModemThing** *Association (source - target):*«place1Type» **runsOn - Protocol**

Association (source - target):«place2Type»
runsOn - Protocol
Attributes:
-
A couple that asserts that one Protocol (client) may be implemented on another (supplier). This determines the layer order in the ProtocolStack.

specForInterface «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
SpecForInterface - modemIndividualTypeSpecialisation
Association (source - target):«place2Type»
SpecForInterface - Interface
Association (source - target):«place1Type»
SpecForInterface - InterfaceSpecification
Attributes:
-
A modemIndividualTypeSpecialisation that relates an Interface to the InterfaceSpecification that specifies it.

spectrumAllocationRadioFrequencyRange «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
spectrumAllocationRadioFrequencyRange - FrequencyRange
Generalization (element - is a subtype of):«IDEAS:superSubtype»
spectrumAllocationRadioFrequencyRange - radioFrequencyRangeAssignment
Association (source - target):«place2Type»
spectrumAllocationRadioFrequencyRange - SpectrumAllocation
Attributes:
-
A radioFrequencyRangeAssignment that asserts a spectrum allocation has been assigned to a frequency range.

subProtocolStack «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
subProtocolStack - ProtocolStack
Association (source - target):«place2Type»
subProtocolStack - ProtocolStack
Generalization (element - is a subtype of):«IDEAS:superSubtype»
subProtocolStack - superSubtype
Attributes:
-
A superSubtype that asserts that one ProtocolStack is a superType of another.

subtypeRelationship «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
subtypeRelationship - ModemThing
Generalization (element - is a subtype of):«IDEAS:superSubtype»
subtypeRelationship - couple
Association (source - target):«place1Type»
subtypeRelationship - Entity
Association (source - target):«place2Type»
subtypeRelationship - Entity

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Attributes: - **A couple that asserts that the type represented by one Entity is a subtype of the type represented by the other Entity.**
typeConformsTo «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **typeConformsTo - modemIndividualTypeSpecialisation** *Association (source - target):«place2Type»* **typeConformsTo - ModemIndividualType** *Association (source - target):«place1Type»* **typeConformsTo - Standard** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **typeConformsTo - conformsTo** *Attributes:* - **A modemIndividualTypeSpecialisation that asserts a type in the architecture conforms to a Standard.**
withdrawnOn «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **withdrawnOn - ModemThing** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **WithdrawnOn - couple** *Association (source - target):«place2Type»* **WithdrawnOn - CalendarPeriod** *Association (source - target):«place1Type»* **WithdrawnOn - Standard** *Attributes:* - **A couple that asserts a Standard has been withdrawn on a date.**

2.7.5   Technical standards Views additional diagrams.
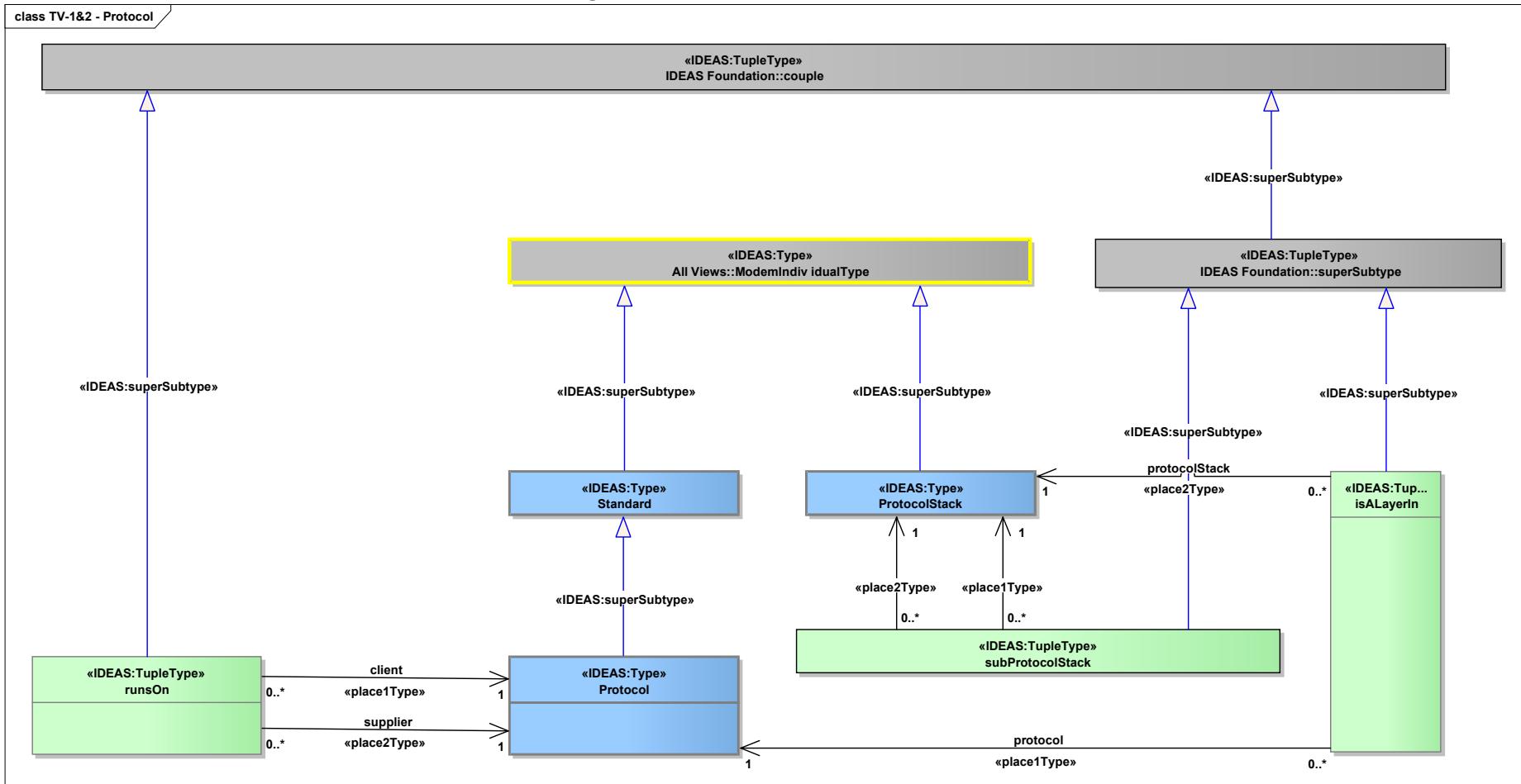
Figure 100 : TV-1&2 - Protocol
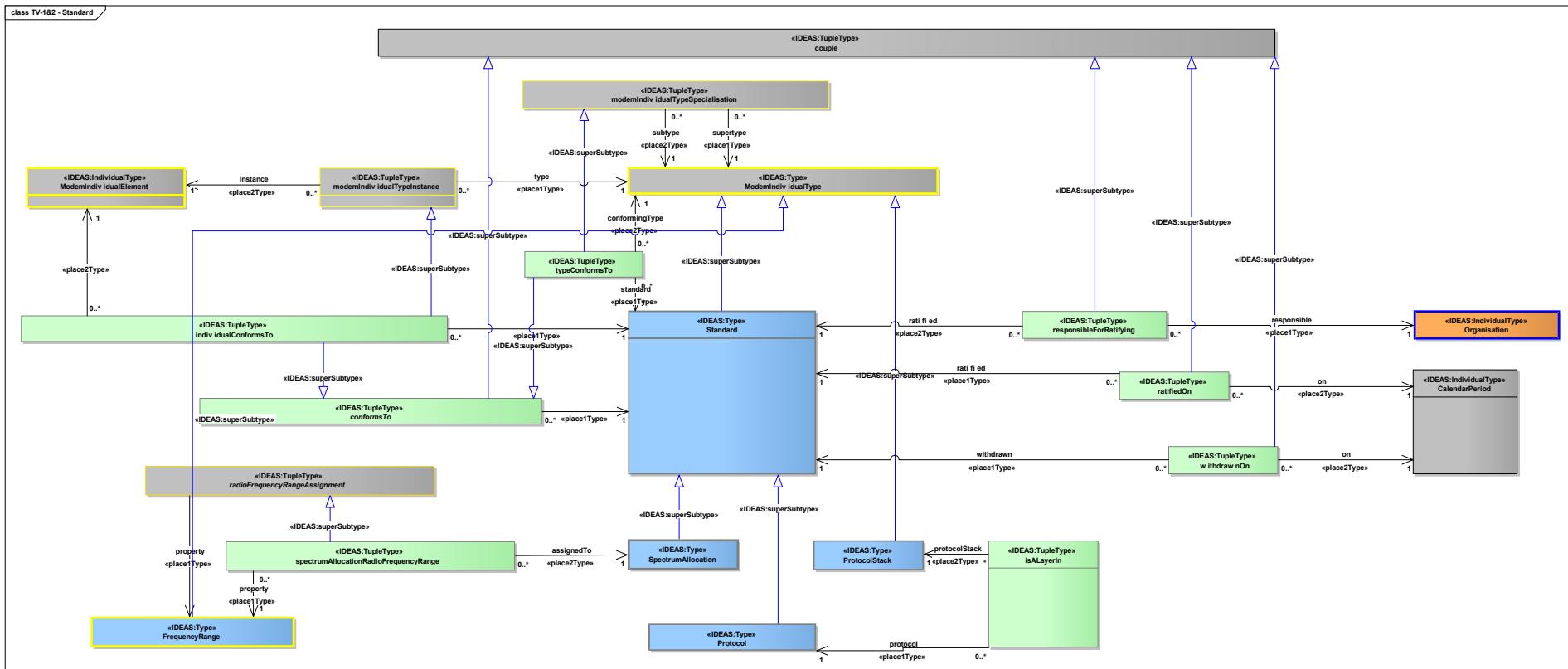
Figure 101 : TV-1&2 - Standard

2.8   Acquisition views

2.8.1   AcV-1: Acquisition clusters
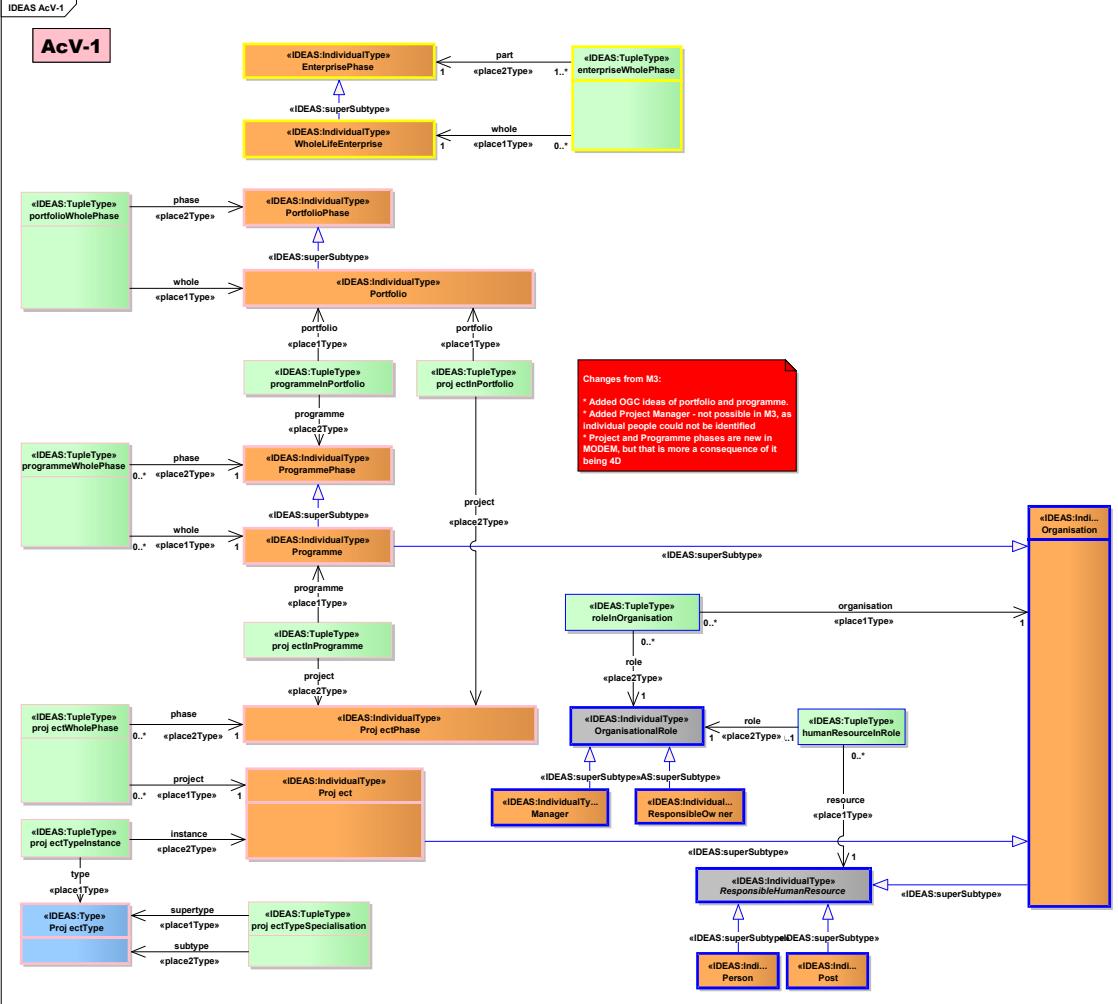
Figure 102 : AcV-1

2.8.2 AcV-2: Programme timelines
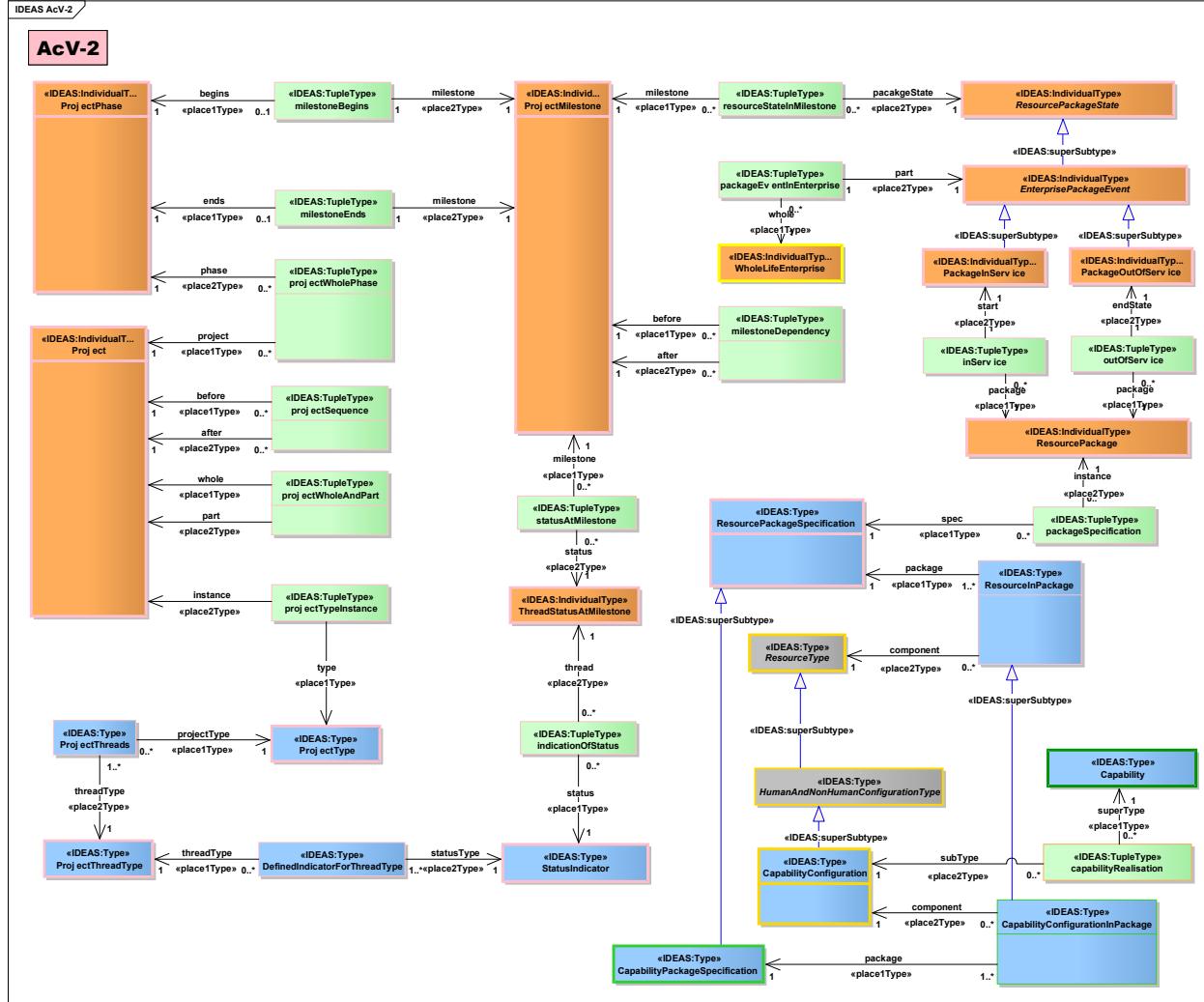
Figure 103 : AcV-2

2.8.3 Acquisition Views elements list

Acquisition Views

DefinedIndicatorForThreadType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
DefinedIndicatorForThreadType - StatusOfThreadType
Association (source - target):«place2Type»
DefinedIndicatorForThreadType - StatusIndicator
Association (source - target):«place1Type»
DefinedIndicatorForThreadType - ProjectThreadType
Attributes:
-
A StatusOfThreadType that specifies a StatusIndicator may be used to classify ProjectThreads of a particular ProjectThreadType.

EnterprisePackageEvent «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
EnterprisePackageEvent- ResourcePackageState
Generalization (element - is a subtype of):«IDEAS:superSubtype»
EnterprisePackageEvent - EnterprisePart
Attributes:
-
A ResourcePackageState that is an event that occurs in a WholeLifeEnterprise - e.g. the introduction of a new Capability at the point of a PackageInService.

OrganisationPackageEvent «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
OrganisationPackageEvent - OrganisationPart
Generalization (element - is a subtype of):«IDEAS:superSubtype»
OrganisationPackageEvent - ResourcePackageState
Attributes:
-
A ResourcePackageState that is an event that occurs in a WholeLifeEnterprise - e.g. the introduction of a new Capability at the point of a PackageInService.

PackageInService «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
PackageInService - EnterprisePackageEvent
Attributes:
-
An IndividualResourceState that marks in in-service point for a ResourcePackage.

PackageOutOfService «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
PackageOutOfService - EnterprisePackageEvent
Attributes:
-
An IndividualResourceState which marks the point at which a ResourcePackage ceases to be in service. Note: the components of the package may go on in service in some other configuration, but the package itself is retired.

This document is no longer extant and has been withdrawn.

Portfolio «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **Portfolio - Undertaking**   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **Portfolio - PortfolioPhase**   *Attributes:*   **-**   **An Undertaking comprised of the Projects and Programmes that are the totality of an Organisation's investment (or segment thereof) in the changes required to achieve its strategic objectives.**   **[Based on OGC Definition]**   **OGC defines a portfolio as the totality of an organisation's investment (or segment thereof) in the changes required to achieve its strategic objectives. Portfolio Management is a coordinated collection of strategic processes and decisions which enable the most effective balance of organisational change and business as usual/operations.**
PortfolioPart «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **PortfolioPart - UndertakingPart**   *Attributes:*   **-**   **An UndertakingPart that is part of a Portfolio.**
PortfolioPhase «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **PortfolioPhase - UndertakingState**   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **PortfolioPhase - PortfolioPart**   *Attributes:*   **-**   **A PortfolioPart that is a temporal part of a Portfolio.**
Programme «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **Programme - ProgrammePhase**   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **Programme - Organisation**   *Attributes:*   **-**   **An Undertaking that is a temporary, flexible organisation created to co-ordinate, direct and oversee the implementation of a set of related Projects and Tasks in order to deliver outcomes and benefits related to the organisation's strategic objectives.**   **A programme is likely to have a lifespan of several years. During a programme lifecycle, projects are initiated, executed, and closed. Programmes provide an umbrella under which these projects can be co-ordinated. The programme integrates the projects so that it can deliver an outcome greater than the sum of its parts.**   **[Adapted from OGC definition]**
ProgrammePart «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **ProgrammePart - OrganisationPart**   *Attributes:*   **-**   **An OrganisationPart that is a part of a Programme.**

ProgrammePhase «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProgrammePhase - ProgrammePart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProgrammePhase - OrganisationState
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProgrammePhase - PortfolioPart
Attributes:
-
A ProgrammePart that is a temporal part of a Programme

Project «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Project - ProjectState
Dependency (element - is instance of): «IDEAS:powertypeInstance»
Project - ProjectPowertype
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Project - Organisation
Attributes:
-
An Undertaking that is a time-limited endeavour to create a specific set of products or services.

ProjectMilestone «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProjectMilestone - ProjectState
Attributes:
-
A ProjectPart that marks the end of one ProjectPhase and possibly the beginning of another.
Note: the temporal extent of a ProjectMilestone is likely to be finite - e.g. there may be milestone meetings, funding reviews, etc. before another Project or ProjectPhase can start.

ProjectPart «IDEAS:IndividualType»
Connectors:
Dependency (element - is instance of): «IDEAS:powertypeInstance»
ProjectPart - ProjectPartType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProjectPart - UndertakingPart
Attributes:
-
A ProcessPart that is a part of a Project - i.e, an Individual whose entire spatio-temporal extent is within the extent of a Project.
Example - a document that is created for a project and only used within that project that is destroyed before the project completes.
Example - a milestone review meeting for a Project
Example - a ProjectPhase

This document is no longer extant and has been withdrawn.

ProjectPhase «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ProjectPhase - ProjectState
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
ProjectPhase - ProjectPhaseType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ProjectPhase - ProgrammePart
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ProjectPhase - PortfolioPart
Attributes:
-
An UndertakingState that is a temporal part of a Project and has been nominated as a phase of a Project.

ProjectState «IDEAS:IndividualType»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ProjectState - OrganisationState
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ProjectState - ProjectPart
Attributes:
-
A ProjectPart that is a temporal part of a Project.

ProjectThread «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ProjectThread - ProjectThreadState
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
ProjectThread - ProjectThreadPowertype
Attributes:
-
A ProjectPart that is an aspect of the Project used for refining the measurement of progress of the project. In UK MOD, this could be one of the defence lines of development, or DOTMLP in the US.
Example: The Training aspect of a helicopter acquisition project.

ProjectThreadState «IDEAS:IndividualType»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ProjectThreadState - ProjectPart
Attributes:
-
A temporal part of a ProjectThread.

ProjectThreadType «IDEAS:Type»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ProjectThreadType - ProjectThreadPowertype
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
ProjectThreadType - ModemIndividualType
Attributes:
-
A ProjectThreadPowertype that is used to classify ProjectThreads.

This document is no longer extant and has been withdrawn.

ProjectThreads «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ProjectThreads - ThreadInProjectType
Association (source - target):«place1Type»
ProjectThreads - ProjectType
Association (source - target):«place2Type»
ProjectThreads - ProjectThreadType
Attributes:
-
A ThreadInProjectType that relates a ProjectType to its ProjectThreadTypes.

ProjectType «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ProjectType - ProjectPowertype
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ProjectType - ModemIndividualType
Attributes:
-
A ProjectType that is used to classify Projects.

ResourceInPackage «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourceInPackage - ModemWholePartType
Association (source - target):«place2Type»
ResourceInPackage - ResourceType
Association (source - target):«place1Type»
ResourceInPackage - ResourcePackageSpecification
Attributes:
-
A ResourceUsage that specifies that a ResourceType is part of a DeliveryPackageSpecification.

ResourcePackage «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourcePackage - ModemIndividualElement
Dependency (element - is instance of):«IDEAS:powertypeInstance»
ResourcePackage - ResourcePackageType
Attributes:
-
A HumanAndNon-HumanConfiguration that is a collection of IndividualResources for a purpose.
Example: All the fully configured aircraft delivered in an acquisition programme.
Example: A force element package put together for a particular operation.
Example: A tranche of new assets delivered into an enterprise.

ResourcePackageSpecification «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
ResourcePackageSpecification - ModemIndividualType
Generalization (element - is a subtype of):«IDEAS:superSubtype»

ResourcePackageSpecification - ResourcePackageType *Attributes:* - **A ResourcePackageType that specifies the types of Resource (i.e. ResourceTypes) that make up a ResourcePackage.**
ResourcePackageState «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ResourcePackageState - IndividualResourceState** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ResourcePackageState - TemporalBorder** *Attributes:* - **A temporal part of a ResourcePackage.**
StatusIndicator «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **StatusIndicator - ModemIndividualType** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **StatusIndicator - ThreadStatusType** *Attributes:* - **A ThreadStatusType that classifies a ThreadStatusAtMilestone to indicate its status.**
ThreadInProjectType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ThreadInProjectType - ProcessWholePartType** *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ThreadInProjectType - ModemWholePartType** *Attributes:* - **The powertype of threadInProject.**
ThreadStatusAtMilestone «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **ThreadStatusAtMilestone - ProjectThreadState** *Dependency (element - is instance of):*«IDEAS:powertypeInstance» **ThreadStatusAtMilestone - ThreadStatusType** *Attributes:* - **A ProjectThreadState that is part of a ProjectMilestone.**
capabilityPackageDeliversCapability «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **capabilityPackageDeliversCapability - modemIndividualTypeSpecialisation** *Association (source - target):*«place1Type» **capabilityPackageDeliversCapability - Capability** *Association (source - target):*«place2Type»

capabilityPackageDeliversCapability - CapabilityPackageSpecification *Attributes:* - A modemIndividualTypeSpecialisation where a CapabilityPackageSpecification provides a Capability.
inService «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* inService - individualResourceState *Generalization (element - is a subtype of):«IDEAS:superSubtype»* inService - startBorder *Association (source - target):«place1Type»* inService - ResourcePackage *Association (source - target):«place2Type»* inService - PackageInService *Attributes:* - A startBorder that indicates that an PackageInService marks the introduction into service of a ResourcePackage.
indicationOfStatus «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* indicationOfStatus - modemIndividualTypeInstance *Association (source - target):«place1Type»* indicationOfStatus - StatusIndicator *Association (source - target):«place2Type»* indicationOfStatus - ThreadStatusAtMilestone *Attributes:* - A modemIndividualTypeInstance where a ThreadStatusAtMilestone is classified by a StatusIndicator.
milestoneBegins «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* milestoneBegins - startBoundary *Generalization (element - is a subtype of): «IDEAS:superSubtype»* milestoneBegins - milestoneInProject *Association (source - target): «place1Type»* milestoneBegins - ProjectPhase *Association (source - target): «place2Type»* milestoneBegins - ProjectMilestone *Attributes:* - A startBoundary that asserts a ProjectMilestone marks the beginning of a Project or ProjectPhase.
milestoneDependency «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* milestoneDependency - ModemThing *Generalization (element - is a subtype of):«IDEAS:superSubtype»* milestoneDependency - beforeAfter *Association (source - target):«place2Type»*

milestoneDependency - ProjectMilestone
Association (source - target):«place1Type»
milestoneDependency - ProjectMilestone
Attributes:
-
A beforeAfter that asserts one ProjectMilestone shall occur before the other. Note: This is intended to related milestones from different projects where progress in one project depends on the other.

milestoneEnds «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
milestoneEnds - endBoundary
Generalization (element - is a subtype of): «IDEAS:superSubtype»
milestoneEnds - milestoneInProject
Association (source - target): «place1Type»
milestoneEnds - ProjectPhase
Association (source - target): «place2Type»
milestoneEnds - ProjectMilestone
Attributes:
-
An endBoundary that asserts a ProjectMilestone marks the end of a Project or ProjectPhase.

milestoneInProject «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
milestoneInProject - projectTemporalPart
Association (source - target):«place2Type»
milestoneInProject - ProjectMilestone
Association (source - target):«place1Type»
milestoneInProject - ProjectPhase
Attributes:
-
A projectWholePart that asserts that a ProjectMilestone is part of a Project or ProjectPhase.

outOfService «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
outOfService - endBorder
Generalization (element - is a subtype of):«IDEAS:superSubtype»
outOfService - individualResourceState
Association (source - target):«place2Type»
outOfService - PackageOutOfService
Association (source - target):«place1Type»
outOfService - ResourcePackage
Attributes:
-
An endBorder that indicates that an PackageOutOfService marks the termination of service of a ResourcePackage.

packageEventInEnterprise «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
packageEventInEnterprise - enterpriseWholePart
Association (source - target):«place2Type»

packageEventInEnterprise - EnterprisePackageEvent
Association (source - target):«place1Type»
packageEventInEnterprise - WholeLifeEnterprise
Attributes:
-
An enterpriseWholePart where a EnterprisePackageEvent is part of a WholeLifeEnterprise - e.g. the package is rolled-out into the enterprise.

packageSpecification «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
packageSpecification - modemIndividualTypeInstance
Association (source - target): «place2Type»
packageSpecification - ResourcePackage
Association (source - target): «place1Type»
packageSpecification - ResourcePackageSpecification
Attributes:
-
A modemIndividualTypeInstance that relates a ResourcePackage to the ResourcePackageSpecification that specifies the types of Resource it consists of.

portfolioWholeAndPart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
portfolioWholeAndPart - undertakingWholeAndPart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
portfolioWholeAndPart - portfolioWholePhase
Association (source - target): «place2Type»
portfolioWholeAndPart - Portfolio
Association (source - target): «place1Type»
portfolioWholeAndPart - Portfolio
Attributes:
-
An undertakingWholeAndPart/ portfolioWholePhase where both the whole and part are Portfolios.

portfolioWholePart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
portfolioWholePart - undertakingWholePart
Association (source - target): «place2Type»
portfolioWholePart - PortfolioPart
Association (source - target): «place1Type»
portfolioWholePart - Portfolio
Attributes:
-
An undertakingWholePart where the whole is a Portfolio and the part is a PortfolioPart.

portfolioWholePhase «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
portfolioWholePhase - undertakingWholeState
Generalization (element - is a subtype of): «IDEAS:superSubtype»
portfolioWholePhase - portfolioWholePart
Association (source - target): «place2Type»

portfolioWholePhase - PortfolioPhase
Association (source - target): «place1Type»
portfolioWholePhase - Portfolio
Attributes:
-
A portfolioWholePart where the part is a temporal part and is a PortfolioPhase.

programmeInPortfolio «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
programmeInPortfolio - portfolioWholePart
Association (source - target): «place1Type»
programmeInPortfolio - Portfolio
Association (source - target): «place2Type»
programmeInPortfolio - ProgrammePhase
Attributes:
-
A portfolioWholePart where the part is a ProgrammePhase.

programmeWholeAndPart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
programmeWholeAndPart - programmeWholePhase
Association (source - target): «place2Type»
programmeWholeAndPart - Programme
Association (source - target): «place1Type»
programmeWholeAndPart - Programme
Attributes:
-
A programmeWholePhase where both the whole and part are Programmes.

programmeWholePart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
programmeWholePart - undertakingWholePart
Association (source - target): «place2Type»
programmeWholePart - ProgrammePart
Association (source - target): «place1Type»
programmeWholePart - Programme
Attributes:
-
An undertakingWholePart where the whole is a Programme and the part is a ProgrammePart.

programmeWholePhase «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
programmeWholePhase programmeWholePart
Association (source - target): «place2Type»
programmeWholePhase - ProgrammePhase
Association (source - target): «place1Type»
programmeWholePhase - Programme
Attributes:

-
A programmeWholePart where the part is temporal part and is a ProgrammePhase.

projectInPortfolio «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
projectInPortfolio - portfolioWholePart
Association (source - target): «place1Type»
projectInPortfolio - Portfolio
Association (source - target): «place2Type»
projectInPortfolio - ProjectPhase
Attributes:
-
A portfolioWholePart where the part is a ProjectPhase.

projectInProgramme «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
projectInProgramme - programmeWholePart
Association (source - target): «place1Type»
projectInProgramme - Programme
Association (source - target): «place2Type»
projectInProgramme - ProjectPhase
Attributes:
-
A programmeWholePart where the part is a ProjectPhase.
Note that because projects may move from one programme to another (e.g. in a re-organisation), it is a ProjectPhase that is part of the Programme. ProjectPhase is a supertype of Project, so this still allows for the limit case where a Project is part of a Programme for its whole life.

projectSequence «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
projectSequence - beforeAfter
Generalization (element - is a subtype of):«IDEAS:superSubtype»
projectSequence - ModemThing
Association (source - target):«place2Type»
projectSequence - Project
Association (source - target):«place1Type»
projectSequence - Project
Attributes:
-
A beforeAfter that asserts one Project cannot start until another has finished.

projectTemporalPart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
projectTemporalPart - undertakingWholeState
Generalization (element - is a subtype of):«IDEAS:superSubtype»
projectTemporalPart - projectWholePart
Association (source - target):«place2Type»
projectTemporalPart - ProjectState
Association (source - target):«place1Type»

projectTemporalPart - Project *Attributes:* **-** **An undertakingWholeState that relates a Project to another ProjectState that is a temporal part of it.**
projectTypeInstance «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **projectTypeInstance - modemIndividualTypeInstance** *Association (source - target):* **«place2Type»** **projectTypeInstance - Project** *Association (source - target):* **«place1Type»** **projectTypeInstance - ProjectType** *Attributes:* **-** **A modafIndividualTypeInstance that asserts a Project is an instance of a ProjectType.**
projectWholeAndPart «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **projectWholeAndPart - projectWholePart** *Association (source - target):* **«place2Type»** **projectWholeAndPart - Project** *Association (source - target):* **«place1Type»** **projectWholeAndPart - Project** *Attributes:* **-** **A projectWholePart where both the whole and part are Projects.**
projectWholePart «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **projectWholePart - processWholePart** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **projectWholePart - modemWholePart** *Association (source - target):* **«place2Type»** **projectWholePart - ProjectPart** *Association (source - target):* **«place1Type»** **projectWholePart - Project** *Attributes:* **-** **A processWholePart that relates a Project to a ProjectPart that is entirely within the extent of the Project.**
projectWholePhase «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **projectWholePhase - projectTemporalPart** *Association (source - target):* **«place2Type»** **projectWholePhase - ProjectPhase** *Association (source - target):* **«place1Type»** **projectWholePhase - Project** *Attributes:*

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- A projectPhaseTemporalPart where the whole is a Project.
resourceStateInMilestone «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **resourceStateInMilestone - modemWholePart** *Association (source - target): «place1Type»* **resourceStateInMilestone - ProjectMilestone** *Association (source - target): «place1Type»* **resourceStateInMilestone - ResourcePackageState** *Attributes:* - A modemWholePart that asserts a ResourcePackageState occurs within a ProjectMilestone.
statusAtMilestone «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **statusAtMilestone - modemWholePart** *Association (source - target): «place1Type»* **statusAtMilestone - ProjectMilestone** *Association (source - target):«place2Type»* **statusAtMilestone - ThreadStatusAtMilestone** *Attributes:* - A modemWholePart which relates a ThreadStatusAtMilestone to the ProjectMilestone it is part of.
statusOfThread «IDEAS:TupleType» *Connectors:* *Dependency (element - is instance of):«IDEAS:powertypeInstance»* **statusOfThread - StatusOfThreadType** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **statusOfThread - threadTemporalWholePart** *Association (source - target):«place2Type»* **statusOfThread - ThreadStatusAtMilestone** *Association (source - target):«place1Type»* **statusOfThread - ProjectThread** *Attributes:* - A threadTemporalWholePart that relates a ProjectThread to a ThreadStatus that is temporal part of the thread.
threadInProject «IDEAS:TupleType» *Connectors:* *Dependency (element - is instance of):«IDEAS:powertypeInstance»* **threadInProject - ThreadInProjectType** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **threadInProject - projectWholePart** *Association (source - target):«place1Type»* **threadInProject - Project** *Association (source - target):«place2Type»* **threadInProject - ProjectThread** *Attributes:*

- **A projectWholePart that relates a Project to a ProjectThread that is part of it.**
threadTemporalWholePart «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):*«IDEAS:superSubtype» **threadTemporalWholePart - modemTemporalWholePart** *Association (source - target):*«place2Type» **threadTemporalWholePart - ProjectThreadState** *Association (source - target):*«place1Type» **threadTemporalWholePart - ProjectThread** *Attributes:* - **A modemTemporalWholePart that relates a ProjectThread to one of its states.**

2.8.4   Acquisition Views additional diagrams.
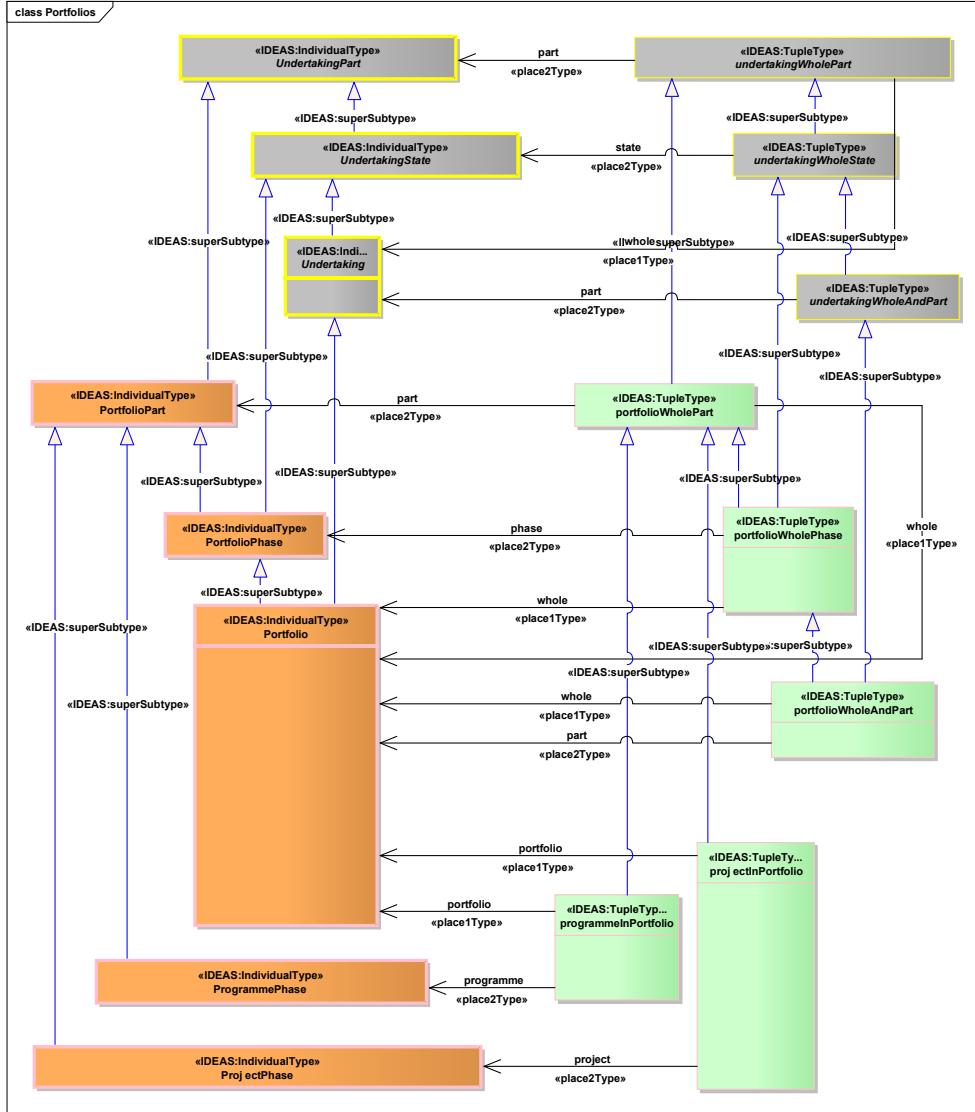
Figure 104 : Portfolios
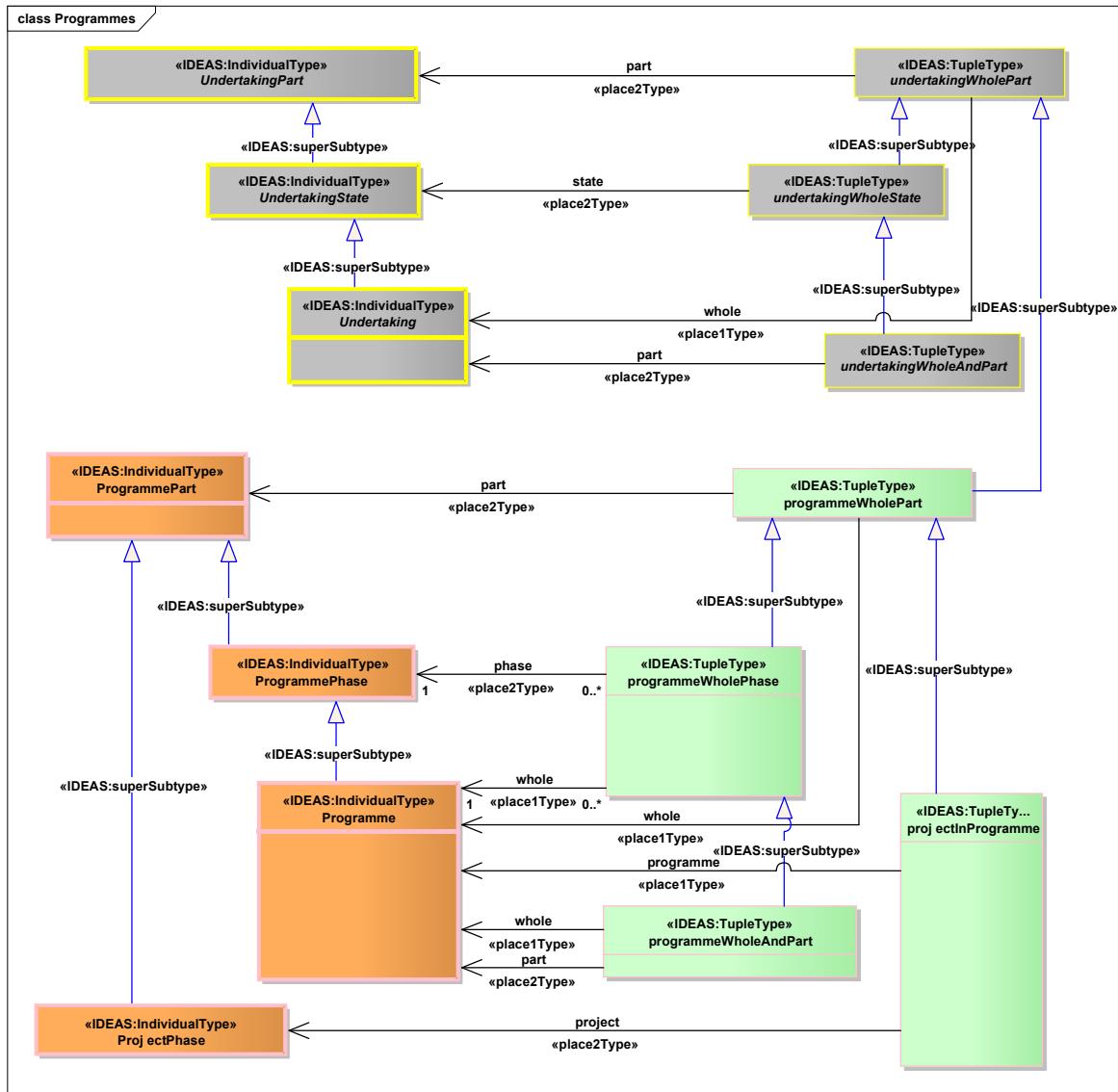
Figure 105 : Programmes
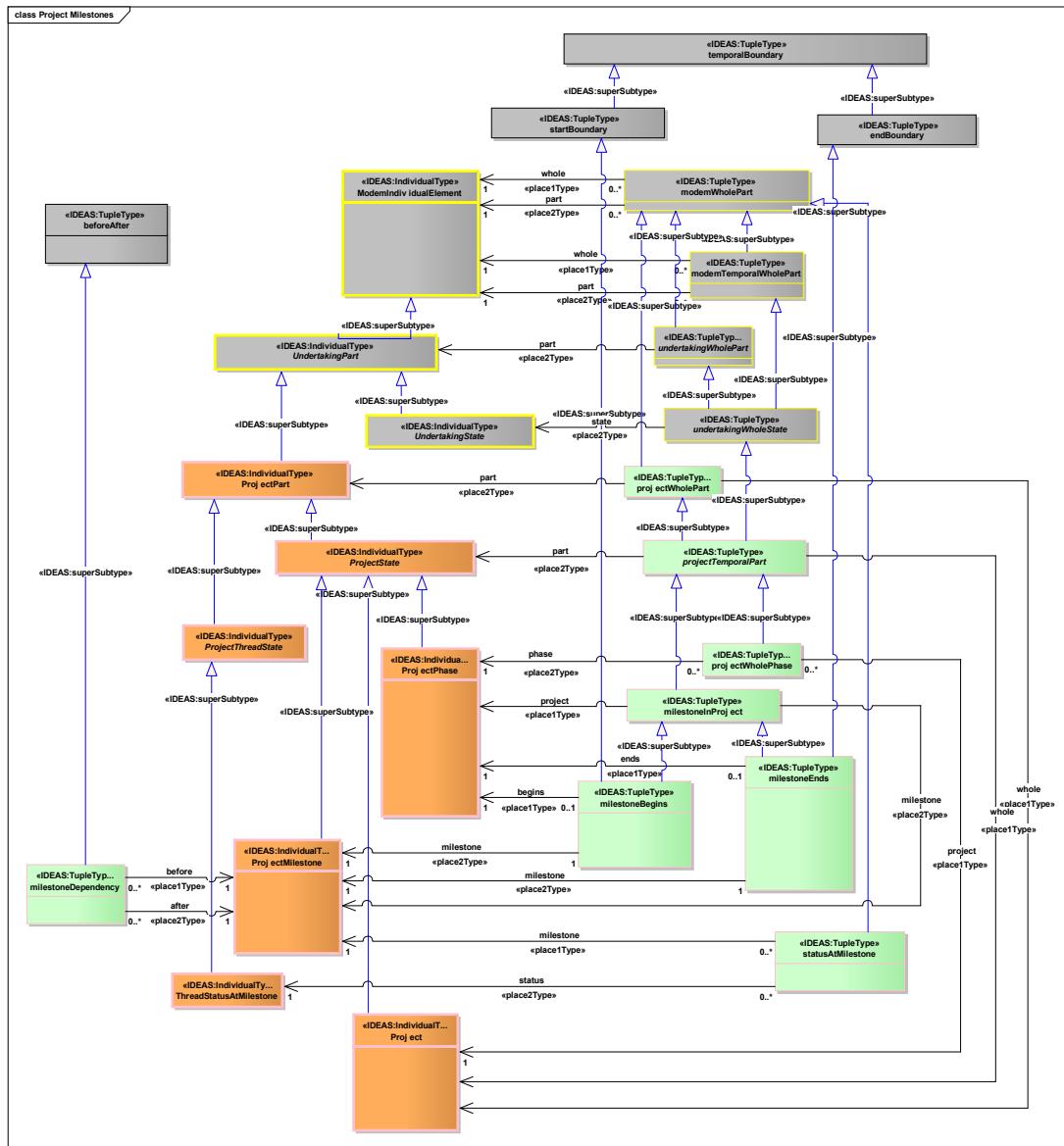
Figure 106 : Project Milestones
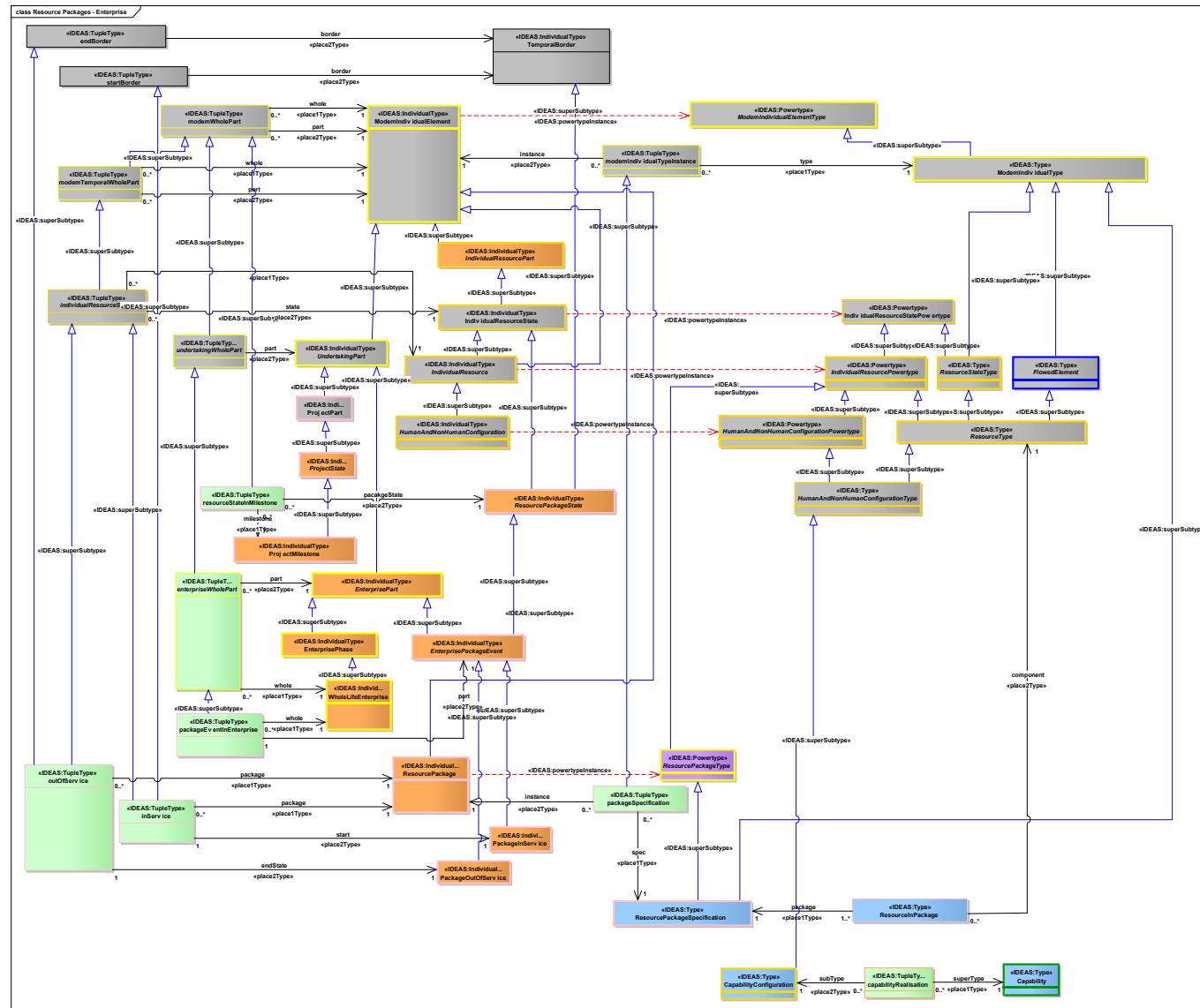
Figure 107 : Resource Packages - Enterprise

3.   Additional information

3.1   Introduction

This section contains the following:

- The IDEAS foundation
- Additions made to the IDEAS foundation in order to deal with MODAF
- IDEAS patterns used to bridge the gap between the IDEAS foundation and MODAF

3.2   The IDEAS foundation

3.2.1   IDEAS Foundation elements list

IDEAS Foundation
couple «IDEAS:TupleType» *Connectors:* *Association (source - target):*«place2Type» couple - Thing *Dependency (element - is an instance of):*«IDEAS:powertypeInstance» couple - CoupleType *Association (source - target):*«place1Type» couple - Thing *Generalization (element - is a specialization of):*«IDEAS:superSubtype» couple - tuple *Attributes:* - A tuple with two places.
Individual «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» Individual - Thing *Dependency (element - is an instance of):*«IDEAS:powertypeInstance» Individual - IndividualType *Attributes:* - A Thing that has spatio-temporal extent. Note1 - this may be some that existed in the past, exists now, or may exist in some future possible world. Note2 - the Individual may be scattered - i.e. it is the fusion of several disconnect parts. Examples: * Earth * The Eiffel Tower * Me, You * Me and You * France * Sir Isaac Newton

IndividualType «IDEAS:Powertype»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
IndividualType - Type
Dependency (element - is an instance of):«IDEAS:powertypeInstance»
IndividualType - IndividualTypeType
Dependency (element - is an instance of):«IDEAS:typeInstance»
IndividualType - Powertype
Attributes:
-
The Powertype of Individual.
Examples:
* Cars
* Boats
* Mountains
* Planets
* Deliveries
* Organisations

Powertype «IDEAS:Type»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
Powertype - Type
Attributes:
-
A Powertype is a set of all the subsets of a given Type.

powertypeInstance «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
powertypeInstance - typeInstance
Association (source - target):«place1Type»
powertypeInstance - Powertype
Association (source - target):«place2Type»
powertypeInstance - Type
Attributes:
-
A typeInstance that asserts that the a Type is the Powertype of the type which is the instance.
Note: A powertype is the set of all subsets of a given type.

superSubtype «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
superSubtype - Type
Association (source - target):«place2Type»
superSubtype - Type
Generalization (element - is a specialization of):«IDEAS:superSubtype»
superSubtype - couple
Dependency (element - is an instance of):«IDEAS:powertypeInstance»
superSubtype - SuperSubtypeType
Attributes:
-

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A couple relating two Types which asserts that one type is a subset of the other.

Note - This is the standard super-sub-type relation where the sub-type can either be a proper sub-type or an improper sub-type of the super-type. (An improper sub-type of a type is the type itself. A proper sub-type of a type is not the type itself.) This relation holds between types, where every instance of the sub-type is also an instance of the super-type. Hence the type, Humans, is a sub-type of the type, Animals, because every instance of a Human is also an instance of Animal.

Examples:
* VW Golfs is a subtype of Cars
* People over 2m tall is a subtype of People
* Types of Pump is a subtype Types of Equipment

Thing «IDEAS:Type»

Connectors:

-

Attributes:

-

The union of Individual, Type, and tuple.

---

tuple «IDEAS:TupleType»

Connectors:

Association (source - target):«placeType»

tuple - Thing

Generalization (element - is a specialization of):«IDEAS:superSubtype»

tuple - Thing

Dependency (element - is an instance of):«IDEAS:powertypeInstance»

tuple - TupleType

Attributes:

-

A relationship between two or more things.

Note: Tuples are identified by their places (i.e. the ends of the relationship).

Examples:
* The year 2004 is after the year 2001
* My car is and instance of the type "VW Golfs"
* The type "VW Golfs" is a subtype of the type "Cars"

TupleType «IDEAS:Powertype»

Connectors:

Generalization (element - is a specialization of):«IDEAS:superSubtype»

TupleType - PlaceableType

Dependency (element - is an instance of):«IDEAS:typeInstance»

TupleType- Powertype

Generalization (element - is a specialization of):«IDEAS:superSubtype»

TupleType - Type

Dependency (element - is an instance of):«IDEAS:powertypeInstance»

TupleType - TupleTypeType

Association (source - target):«placeType»

TupleType - Type

Attributes:

-

The Powertype of tuple.

Examples:
* wholePart
* beforeAfter
* typeInstance

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* superSubtype
Type «IDEAS:Type»   *Connectors:*   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»   **Type - Thing**   *Attributes:*   **-**   **A set (or class) of Things.**   **Note1: Types are identified by their members (i.e. all the things of that type).**   **Note2: The IDEAS Foundation is a higher-order ontology, so Types may have members that are also Types.**   **Examples:**   *** Cars**   *** Volkswagen Beetles**   *** Red Things**   *** Naval Commanders**   *** Ranks**
typeInstance «IDEAS:TupleType»   *Connectors:*   *Association (source - target):*«place2Type»   **typeInstance - Thing**   *Association (source - target):*«place1Type»   **typeInstance - Type**   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»   **typeInstance - couple**   *Attributes:*   **-**   **A couple that asserts that a Thing is a member of a Type.**   **Examples:**   *** I am a member of the type People (hard to believe, but true)**   *** Field Marshal is of the type Rank**   *** Viscount Bernard Montgomery is of the type Person**   *** The state of Viscount Bernard Montgomery from 1945 to his death is of type Field Marshal**
wholePart «IDEAS:TupleType»   *Connectors:*   *Association (source - target):*«place1Type»   **wholePart - Individual**   *Association (source - target):*«place2Type»   **wholePart - Individual**   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»   **wholePart - couple**   *Dependency (element - is an instance of):*«IDEAS:powertypeInstance»   **wholePart - WholePartType**   *Attributes:*   **-**   **A couple that asserts one (part) Individual is part of another (whole) Individual.**   **Note - This is the standard whole-part relation where the whole can either be a proper part or an improper part of the part. (An improper part of a whole is the whole itself. Whereas a chocolate chip would be a proper part of a cookie, only the entire cookie is an improper part of itself)**   **Examples:**   *** My head is part of Me**

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* January 2004 is part of 2004
* The opening shot of the First World War is part of the First World War
* The Border of France is part of France
* The Border of France and Belgium is part of the Border of France
* The Border of France and Belgium is part of the Border of Belgium

IDEAS Disjoint

SetOfDisjointIndividuals «IDEAS:Type»
Connectors:
Generalization (element - is a specialization of): «IDEAS:superSubtype»
SetOfDisjointIndividuals - SetOfDisjointThings
Generalization (element - is a specialization of):«IDEAS:superSubtype»
SetOfDisjointIndividuals - IndividualType
Attributes:
-
An IndividualType and a SetOfDisjointThings whose instances are types all of whose instances are Individuals and each instance is disjoint, i.e. has no common part.
This mirrors at the mereological level the mathematical notion of disjoint sets - see a DisjointType.

SetOfDisjointThings «IDEAS:Type»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
SetOfDisjointThings - Type
Attributes:
-
A Type whose instances are types, where for each of them, all their instances are pairwise disjoint.

SetOfDisjointTypes «IDEAS:Type»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
SetOfDisjointTypes - SetOfDisjointThings
Attributes:
-
A SetOfDisjointThings whose instances are Types(i) all of whose instances are Types(ii) where each Type(ii) is disjoint, i.e. has no common instance, from all others.
This corresponds to the mathematical notion of disjoint sets - see a definition below:
Two or more sets which have no elements in common. For example, the sets A = {a,b,c} and B = {d,e,f} are disjoint. (from http://www.mathwords.com/d/disjoint_sets.htm)

IDEAS Intersection

IntersectionOfSetOfOverlappingIndividuals «IDEAS:Type»
Connectors:
Association (source - target):«place1Type»
IntersectionOfSetOfOverlappingIndividuals - SetOfOverlappingIndividuals
Generalization (element - is a specialization of):«IDEAS:superSubtype»
IntersectionOfSetOfOverlappingIndividuals - IntersectionOfSetOfOverlappingThings
Association (source - target):«place2Type»
IntersectionOfSetOfOverlappingIndividuals - SingletonIndividualType
Generalization (element - is a specialization of):«IDEAS:superSubtype»
IntersectionOfSetOfOverlappingIndividuals - WholePartType
Attributes:
-
A WholePartType and an IntersectionOfSetOfOverlappingThings whose instances contain all wholePart couples that link SetOfOverlappingIndividuals with their overlapping parts.

IntersectionOfSetOfOverlappingThings «IDEAS:Type»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
IntersectionOfSetOfOverlappingThings - CoupleType
Association (source - target):«place1Type»
IntersectionOfSetOfOverlappingThings - SetOfOverlappingThings
Association (source - target):«place2Type»
IntersectionOfSetOfOverlappingThings - Singleton
Attributes:
-
A CoupleType whose instances are couples that link the intersection of a set of Things with its sum.
For more details, see its sub-types: IntersectionOfSetOfOverlappingTypes and IntersectionOfSetOfOverlappingIndividuals

IntersectionOfSetOfOverlappingTypes «IDEAS:Type»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
IntersectionOfSetOfOverlappingTypes - IntersectionOfSetOfOverlappingThings
Generalization (element - is a specialization of):«IDEAS:superSubtype»
IntersectionOfSetOfOverlappingTypes - SuperSubtypeType
Association (source - target):«place1Type»
IntersectionOfSetOfOverlappingTypes - SetOfOverlappingTypes
Attributes:
-
A SuperSubtypeType and an IntersectionOfSetOfOverlappingThings that contains all superSubtype couples that link a SetOfOverlappingTypes with the Types formed by their intersection.

IDEAS Numbers

RealNumberType «IDEAS:Powertype»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
RealNumberType - Type
Attributes:
-
The Powertype of RealNumber

Integer «IDEAS:Type»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
Integer - Number
Attributes:
-
A RationalNumber that can be written without a fractional or decimal component.
Example: 65, 7, and −56 are integers; 1.6 and 1½ are not integers.
Note: In other terms, integers are the numbers one can count with items such as apples or fingers, and their negatives, as well as 0.

Number «IDEAS:Type»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
Number - Type
Attributes:
-
A Type that is a number - i.e. a RealNumber or an Integer

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RealNumber «IDEAS:Type»   _Connectors:_   _Generalization (element - is a specialization of):«IDEAS:superSubtype»_   **RealNumber - Number**   _Dependency (element - is an instance of):«IDEAS:powertypeInstance»_   **RealNumber - RealNumberType**   _Attributes:_   **-**   **A Type that is a Dedekind cut of the set of rational numbers.**   **Note: There are different definitions for Real Number in mathematics**
ScaleMapping «IDEAS:Type»   _Connectors:_   _Association (source - target):«place1Type»_   **ScaleMapping - MeasureCategory**   _Generalization (element - is a specialization of):«IDEAS:superSubtype»_   **ScaleMapping - CoupleType**   _Association (source - target):«place2Type»_   **ScaleMapping - RealNumberType**   _Attributes:_   **-**   **A CoupleType whose members are all the couples linking MeasurePoints to RealNumbers. The CoupleType (i.e. the set of couples) represents the scale.**
IDEAS Overlap
SetOfOverlappingIndividuals «IDEAS:Type»   _Connectors:_   _Generalization (element - is a specialization of):«IDEAS:superSubtype»_   **SetOfOverlappingIndividuals - SetOfOverlappingThings**   _Generalization (element - is a specialization of):«IDEAS:superSubtype»_   **SetOfOverlappingIndividuals - IndividualType**   _Attributes:_   **-**   **An IndividualType and a SetOfOverlappingThings whose instances are types all of whose instances are Individuals and each instance overlaps all others, i.e. there is a part common to all instances.**
SetOfOverlappingThings «IDEAS:Type»   _Connectors:_   _Generalization (element - is a specialization of):«IDEAS:superSubtype»_   **SetOfOverlappingThings - Type**   _Attributes:_   **-**   **A Type whose instances are types, where for each of them, all their instances overlap all other instances.**
SetOfOverlappingTypes «IDEAS:Type»   _Connectors:_   _Generalization (element - is a specialization of):«IDEAS:superSubtype»_   **SetOfOverlappingTypes - SetOfOverlappingThings**   _Attributes:_   **-**   **A SetOfOverlappingThings whose instances are Types(i) all of whose instances are Types(ii) where each Type(ii) overlaps all others, i.e. there is at least one instance common to all Types(ii)**

SetOfProperOverlappingIndividuals «IDEAS:Type»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
SetOfProperOverlappingIndividuals - SetOfProperOverlappingThings
Generalization (element - is a specialization of):«IDEAS:superSubtype»
SetOfProperOverlappingIndividuals - SetOfOverlappingIndividuals
Attributes:
-
A SetOfOverlappingIndividuals and a SetOfProperOverlappingThings whose instances are types, where for each of them, none of their instances is a strict part of any other.

SetOfProperOverlappingThings «IDEAS:Type»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
SetOfProperOverlappingThings - SetOfOverlappingThings
Attributes:
-
A SetOfOverlappingThings whose instances are types, where for each of them, none of their instances is a strict subtype or part of any other.

SetOfProperOverlappingTypes «IDEAS:Type»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
SetOfProperOverlappingTypes - SetOfOverlappingTypes
Generalization (element - is a specialization of):«IDEAS:superSubtype»
SetOfProperOverlappingTypes - SetOfProperOverlappingThings
Attributes:
-
A SetOfOverlappingTypes and a SetOfProperOverlappingThings whose instances are types, where for each of them, none of their instances is a strict subtype of any other.

SingletonIndividualType «IDEAS:Type»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
SingletonIndividualType - IndividualType
Generalization (element - is a specialization of):«IDEAS:superSubtype»
SingletonIndividualType - Singleton
Attributes:
-
A Singleton and an IndividualType - i.e. a set containing exactly one Individual.

IDEAS Periods of time

April «IDEAS:IndividualType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
April - CalendarMonth
Attributes:
-
A CalendarMonth that is an April

August «IDEAS:IndividualType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
August - CalendarMonth
Attributes:
-

A CalendarMonth that is an August
CalendarPeriod «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»   **CalendarPeriod - Period**   *Attributes:*   **-**   **A Period that corresponds to a recognised date or time**   **Examples:**   **1st June 1974**   **1885**   **14:44:01 on 2nd June 1974**   **December 2008**
Day «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»   **Day - CalendarPeriod**   *Attributes:*   **-**   **A CalendarPeriod that is a named day in a SevenDayWeek.**
December «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»   **December - CalendarMonth**   *Attributes:*   **-**   **A CalendarMonth that is a December**
February «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»   **February - CalendarMonth**   *Attributes:*   **-**   **A CalendarMonth that is a February**
FractionOfASecond «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»   **FractionOfASecond - CalendarPeriod**   *Attributes:*   **-**   **A CalendarPeriod that is shorter than a Second**
Friday «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»   **Friday - Day**   *Attributes:*   **-**   **A Day that is a Friday**

Hour «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **Hour - CalendarPeriod** *Attributes:* **-** **A Calendar Period that is 60 minutes. An hour roughly corresponds to 1/24th of a median earth day**
January «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **January - CalendarMonth** *Attributes:* **-** **A CalendarMonth that is a January** **Examples:** *** January 2008** *** January 1592**
July «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **July - CalendarMonth** *Attributes:* **-** **A CalendarMonth that is a July**
June «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **June - CalendarMonth** *Attributes:* **-** **A CalendarMonth that is a June**
March «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **March - CalendarMonth** *Attributes:* **-** **A CalendarMonth that is a March**
May «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **May - CalendarMonth** *Attributes:* **-** **A CalendarMonth that is a May**

Millisecond «IDEAS:IndividualType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
Millisecond - FractionOfASecond
Attributes:
-
A CalendarPeriod that corresponds to one thousandth of a Second.

Minute «IDEAS:IndividualType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
Minute - CalendarPeriod
Attributes:
-
A CalendarPeriod that corresponds to sixty seconds

Monday «IDEAS:IndividualType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
Monday - Day
Attributes:
-
A Day that is a Monday

CalendarMonth «IDEAS:IndividualType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
CalendarMonth - CalendarPeriod
Attributes:
-
A CalendarPeriod that is a Month in the Gregorian Calendar

Nanosecond «IDEAS:IndividualType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
Nanosecond - FractionOfASecond
Attributes:
-
A CalendarPeriod that corresponds to one billionth of a Second

November «IDEAS:IndividualType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
November - CalendarMonth
Attributes:
-
A CalendarMonth that is a November

October «IDEAS:IndividualType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
October - CalendarMonth
Attributes:
-

A CalendarMonth that is an October
Saturday «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialization of):***«IDEAS:superSubtype»**   **Saturday - Day**   *Attributes:*   **-**   **A Day that is a Saturday**
Second «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialization of):***«IDEAS:superSubtype»**   **Second - CalendarPeriod**   *Attributes:*   **-**   **A CalendarPeriod that corresponds to the period of time defined as one second by the International System of Units (SI).**
September «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialization of):***«IDEAS:superSubtype»**   **September - CalendarMonth**   *Attributes:*   **-**   **A CalendarMonth that is a September**
SevenDayWeek «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialization of):***«IDEAS:superSubtype»**   **SevenDayWeek - CalendarPeriod**   *Attributes:*   **-**   **A CalendarPeriod that is a grouping of seven Days**
Sunday «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialization of):***«IDEAS:superSubtype»**   **Sunday - Day**   *Attributes:*   **-**   **A Day that is a Sunday**
TenthOfSecond «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialization of):* **«IDEAS:superSubtype»**   **TenthOfSecond - FractionOfASecond**   *Attributes:*   **-**   **A CalendarPeriod that corresponds to 0.1 Seconds**
Thursday «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialization of):***«IDEAS:superSubtype»**   **Thursday - Day**   *Attributes:*

- A Day that is a Thursday
Tuesday «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a specialization of):* «IDEAS:superSubtype» **Tuesday - Day** *Attributes:* - A Day that is a Tuesday
Wednesday «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **Wednesday - Day** *Attributes:* - A Day that is a Wednesday
Year «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **Year - CalendarPeriod** *Attributes:* - **A CalendarPeriod that corresponds to the time between two recurrences of an event related to the orbit of the Earth around the Sun**
YearQuarter «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **YearQuarter - CalendarPeriod** *Attributes:* - **A CalendarPeriod that corresponds to three Months**
timeSuperTypeDurationSubtype «IDEAS:TupleType» *Connectors:* *Association (source - target):*«place1Type» **timeSuperTypeDurationSubtype - Duration** *Association (source - target):*«place2Type» **timeSuperTypeDurationSubtype - Time** *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **timeSuperTypeDurationSubtype - superSubtype** *Attributes:* - **Asserts that a given Time is the supertype of a Duration.**
Duration «IDEAS:Type» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **Duration - PeriodType** *Attributes:* - **A PeriodType that is an arbitrary period of time**

Examples:
20 Minutes - the set of all 20 minute periods
3.345 Nanoseconds- the set of all 3.345 Nanosecond periods
7000 Years- the set of all 7000 Year periods
IDEAS Namespace
DateTimeName «IDEAS:Type»   *__Connectors:__*   *Generalization (element - is a specialization of):*__«IDEAS:superSubtype»__   **DateTimeName - Name**   *__Attributes:__*   **-**   **A Name that represents a CalendarPeriod**
ISO8601-YYYY «IDEAS:NamingScheme»   *__Connectors:__*   *Generalization (element - is a specialization of):*__«IDEAS:superSubtype»__   **ISO8601-YYYY - ISO8601DateTime**   *Dependency (element - is an instance of):*__«IDEAS:typeInstance»__   **ISO8601-YYYY - NamingScheme**   *__Attributes:__*   **-**   **An ISO8601DateTime that is a a Representation of a Year**   **Example:**   **1994**
ISO8601-YYYY-MM «IDEAS:NamingScheme»   *__Connectors:__*   *Dependency (element - is an instance of):*__«IDEAS:typeInstance»__   **ISO8601-YYYY-MM - NamingScheme**   *Generalization (element - is a specialization of):*__«IDEAS:superSubtype»__   **ISO8601-YYYY-MM - ISO8601DateTime**   *__Attributes:__*   **-**   **An ISO8601DateTime that is a a Representation of a Month.**   **Example:**   **1994-05**
ISO8601-YYYY-MM-DD «IDEAS:NamingScheme»   *__Connectors:__*   *Dependency (element - is an instance of):*__«IDEAS:typeInstance»__   **ISO8601-YYYY-MM-DD - NamingScheme**   *Generalization (element - is a specialization of):*__«IDEAS:superSubtype»__   **ISO8601-YYYY-MM-DD - ISO8601DateTime**   *__Attributes:__*   **-**   **An ISO8601DateTime that is a a Representation of a SevenDayWeek.**   **Example:**   **1994-W20**

ISO8601-YYYY-MM-DDThh «IDEAS:NamingScheme»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
ISO8601-YYYY-MM-DDThh - ISO8601DateTime
Dependency (element - is an instance of):«IDEAS:typeInstance»
ISO8601-YYYY-MM-DDThh - NamingScheme
Attributes:
-
An ISO8601DateTime that is a a Representation of a SevenDayWeek.
Example:
1994-W20

ISO8601-YYYY-MM-DDThh:mm «IDEAS:NamingScheme»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
ISO8601-YYYY-MM-DDThh:mm - ISO8601DateTime
Dependency (element - is an instance of):«IDEAS:typeInstance»
ISO8601-YYYY-MM-DDThh:mm - NamingScheme
Attributes:
-
An ISO8601DateTime that is a a Representation of a SevenDayWeek.
Example:
1994-W20

ISO8601-YYYY-MM-DDThh:mm:ss «IDEAS:NamingScheme»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
ISO8601-YYYY-MM-DDThh:mm:ss - ISO8601DateTime
Dependency (element - is an instance of):«IDEAS:typeInstance»
ISO8601-YYYY-MM-DDThh:mm:ss - NamingScheme
Attributes:
-
An ISO8601DateTime that is a a Representation of a SevenDayWeek.
Example:
1994-W20

ISO8601-YYYY-MM-DDThh:mm:ss. «IDEAS:NamingScheme»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
ISO8601-YYYY-MM-DDThh:mm:ss. - ISO8601DateTime
Dependency (element - is an instance of):«IDEAS:typeInstance»
ISO8601-YYYY-MM-DDThh:mm:ss. - NamingScheme
Attributes:
An ISO8601DateTime that is a a Representation of a SevenDayWeek.
Example:
1994-W20

ISO8601-YYYY-Qq «IDEAS:NamingScheme»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
ISO8601-YYYY-Qq - ISO8601DateTime
Dependency (element - is an instance of):«IDEAS:typeInstance»

ISO8601-YYYY-Qq - NamingScheme

Attributes:

-

An ISO8601DateTime that is a a Representation of a Quarter.
Note: this is a non-standard extension of the ISO8601 format
Example:
1994-Q2

ISO8601-YYYY-Www «IDEAS:NamingScheme»

Connectors:

Generalization (element - is a specialization of):«IDEAS:superSubtype»
ISO8601-YYYY-Www - ISO8601DateTime
Dependency (element - is an instance of):«IDEAS:typeInstance»
ISO8601-YYYY-Www - NamingScheme

Attributes:

-

An ISO8601DateTime that is a a Representation of a SevenDayWeek.
Example:
1994-W20

ISO8601DateTime «IDEAS:Type»

Connectors:

Generalization (element - is a specialization of):«IDEAS:superSubtype»
ISO8601DateTime - DateTimeName

Attributes:

-

A DateTimeName that represents a CalendarPeriod in the extended format recommended by ISO8601

dayNamedByISO8601 «IDEAS:TupleType»

Connectors:

Generalization (element - is a specialization of):«IDEAS:superSubtype»
dayNamedByISO8601 - namedByDateTimeName
Association (source - target):«place2Type»
dayNamedByISO8601 - ISO8601-YYYY-MM-DD
Association (source - target):«place1Type»
dayNamedByISO8601 - Day

Attributes:

-

A namedBy that asserts that an ISO8601-YYYY-MM-DD names a Day

fractionOfASecondNamedByISO8601 «IDEAS:TupleType»

Connectors:

Generalization (element - is a specialization of):«IDEAS:superSubtype»
fractionOfASecondNamedByISO8601 - namedByDateTimeName
Association (source - target):«place2Type»
fractionOfASecondNamedByISO8601 - ISO8601-YYYY-MM-DDThh:mm:ss.
Association (source - target):«place1Type»
fractionOfASecondNamedByISO8601 - FractionOfASecond

Attributes:

-

A namedBy that asserts that an ISO8601-YYYY-MM-DDThh:mm:ss. names a FractionOfASecond

hourNamedByISO8601 «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
hourNamedByISO8601 - namedByDateTimeName
Association (source - target):«place2Type»
hourNamedByISO8601 - ISO8601-YYYY-MM-DDThh
Association (source - target):«place1Type»
hourNamedByISO8601 - Hour
Attributes:
-
A namedBy that asserts that an ISO8601-YYYY-MM-DDThh names an hour

minuteNamedByISO8601 «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
minuteNamedByISO8601 - namedByDateTimeName
Association (source - target):«place2Type»
minuteNamedByISO8601 - ISO8601-YYYY-MM-DDThh:mm
Association (source - target):«place1Type»
minuteNamedByISO8601 - Minute
Attributes:
-
A namedBy that asserts that an ISO8601-YYYY-MM-DDThh:mm names a Minute

monthNamedByISO8601 «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
monthNamedByISO8601 - namedByDateTimeName
Association (source - target):«place2Type»
monthNamedByISO8601 - ISO8601-YYYY-MM
Association (source - target):«place1Type»
monthNamedByISO8601 - CalendarMonth
Attributes:
-
A namedBy that asserts that an ISO8601-YYYY-MM names a Month

namedByDateTimeName «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
namedByDateTimeName - namedBy
Association (source - target):«place1Type»
namedByDateTimeName - CalendarPeriod
Association (source - target):«place2Type»
namedByDateTimeName - DateTimeName
Attributes:
-
A namedBy that asserts a CalendarPeriod is represented by a DateTimeName

quarterNamedByISO8601 «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
quarterNamedByISO8601 - namedByDateTimeName
Association (source - target):«place2Type»
quarterNamedByISO8601 - ISO8601-YYYY-Qq
Association (source - target):«place1Type»
quarterNamedByISO8601 - YearQuarter
Attributes:
-
A namedBy that asserts that an ISO8601-YYYY-Qq names a YearQuarter

secondNamedByISO8601 «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
secondNamedByISO8601 - namedByDateTimeName
Association (source - target):«place2Type»
secondNamedByISO8601 - ISO8601-YYYY-MM-DDThh:mm:ss
Association (source - target):«place1Type»
secondNamedByISO8601 - Second
Attributes:
-
A namedBy that asserts that a nISO8601-YYYY-MM-DDThh:mm:ss names a Second

weekNamedByISO8601 «IDEAS:TupleType»
Connectors:
Association (source - target):«place2Type»
weekNamedByISO8601 - ISO8601-YYYY-Www
Generalization (element - is a specialization of):«IDEAS:superSubtype»
weekNamedByISO8601 - namedByDateTimeName
Association (source - target):«place1Type»
weekNamedByISO8601 - SevenDayWeek
Attributes:
-
A namedBy that asserts that an ISO8601-YYYY-Www names a SevenDayWeek

yearNamedByISO8601 «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
yearNamedByISO8601 - namedByDateTimeName
Association (source - target):«place1Type»
yearNamedByISO8601 - Year
Association (source - target):«place2Type»
yearNamedByISO8601 - ISO8601-YYYY
Attributes:
-
A namedBy that asserts that an ISO8601-YYYY names a Year

This document is no longer extant and has been withdrawn.

IDEAS Powertypes
BeforeAfterType «IDEAS:Powertype»   *Connectors:*   *Association (source - target):*«place1Type»   **BeforeAfterType - IndividualType**   *Association (source - target):*«place2Type»   **BeforeAfterType - IndividualType**   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»   **BeforeAfterType - CoupleType**   *Attributes:*   -   **A TupleType that is Powertype of beforeAfter**
CoupleType «IDEAS:Powertype»   *Connectors:*   *Dependency (element - is an instance of):*«IDEAS:typeInstance»   **CoupleType - Powertype**   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»   **CoupleType - TupleType**   *Association (source - target):*«place2Type»   **CoupleType - Type**   *Association (source - target):*«place1Type»   **CoupleType - Type**   *Attributes:*   -   **The TupleType that is the Powertype of couple**
DescriptionType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»   **DescriptionType - RepresentationType**   *Attributes:*   -   **A RepresentationType that is the Powertype of Description**
IndividualTypeType «IDEAS:Powertype»   *Connectors:*   *Dependency (element - is an instance of):*«IDEAS:powertypeInstance»   **IndividualTypeType - IndividualTypeTypeType**   *Dependency (element - is an instance of):*«IDEAS:typeInstance»   **IndividualTypeType - Powertype**   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»   **IndividualTypeType - Type**   *Attributes:*   -   **A PlaceableType that is the Powertype of IndividualType**
IndividualTypeTypeType «IDEAS:Powertype»   *Connectors:*   *Dependency (element - is an instance of):*«IDEAS:typeInstance»   **IndividualTypeTypeType - Powertype**   *Generalization (element - is a specialization of):*«IDEAS:superSubtype»

This document is no longer extant and has been withdrawn.

IndividualTypeTypeType - Type *Attributes:* - **A PlaceableType that is the Powertype of IndividualTypeType**
InstantType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a specialization of):«IDEAS:superSubtype»* **InstantType - IndividualType** *Attributes:* - **An IndividualType that is the Powertype of Instant**
NameType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a specialization of):«IDEAS:superSubtype»* **NameType - RepresentationType** *Attributes:* - **A RepresentationType that is the Powertype of Name**
PeriodType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a specialization of):«IDEAS:superSubtype»* **PeriodType - IndividualType** *Attributes:* - **An IndividualType that is the Powertype of Period**
PlaceableType «IDEAS:Type» *Connectors:* *Generalization (element - is a specialization of):«IDEAS:superSubtype»* **PlaceableType - Type** *Attributes:* - **A Type which has placeTypes defined for it - e.g. TupleType and its powertype levels.**
RepresentationType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a specialization of):«IDEAS:superSubtype»* **RepresentationType - Type** *Attributes:* - **A Type that is the Powertype of Representation**
SuperSubtypeType «IDEAS:Powertype» *Connectors:* *Dependency (element - is an instance of):«IDEAS:powertypeInstance»* **SuperSubtypeType - SuperSubtypeTypeType** *Generalization (element - is a specialization of):«IDEAS:superSubtype»* **SuperSubtypeType - CoupleType** *Attributes:* - **A CoupleType that is the Powertype of superSubtype**

SuperSubtypeTypeType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **SuperSubtypeTypeType - TupleTypeType** *Attributes:* **-** **A TupleTypeType that is the Powertype of SuperSubtypeType**
TemporalWholePartType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **TemporalWholePartType - WholePartType** *Attributes:* **-** **A WholePartType that is the Powertype of temporalWholePart**
TupleTypeType «IDEAS:Powertype» *Connectors:* *Association (source - target):*«placeType» **TupleTypeType - Type** *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **TupleTypeType - PlaceableType** *Dependency (element - is an instance of):*«IDEAS:powertypeInstance» **TupleTypeType - TupleTypeTypeType** *Dependency (element - is an instance of):*«IDEAS:typeInstance» **TupleTypeType - Powertype** *Attributes:* **-** **A PlaceableType that is the Powertype of TupleType**
TupleTypeTypeType «IDEAS:Powertype» *Connectors:* *Association (source - target):*«placeType» **TupleTypeTypeType - Type** *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **TupleTypeTypeType - PlaceableType** *Dependency (element - is an instance of):*«IDEAS:typeInstance» **TupleTypeTypeType - Powertype** *Dependency (element - is an instance of):*«IDEAS:typeInstance» **TupleTypeTypeType - PlaceableType** *Attributes:* **-** **A PlaceableType that is the Powertype of TupleTypeType**
WholePartType «IDEAS:Powertype» *Connectors:* *Association (source - target):*«place1Type» **WholePartType - IndividualType** *Association (source - target):*«place2Type» **WholePartType - IndividualType** *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **WholePartType - CoupleType**

Attributes:
-
A CoupleType that is the Powertype of wholePart

IDEAS Singletons, Doubletons etc

doubletonTypeInstance «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
doubletonTypeInstance - Doubleton
Generalization (element - is a specialization of):«IDEAS:superSubtype»
doubletonTypeInstance - typeInstance
Attributes:
-
A typeInstance that asserts a Thing is an instance of a Doubleton

quadrupletonTypeInstance «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
quadrupletonTypeInstance - Quadrupleton
Generalization (element - is a specialization of):«IDEAS:superSubtype»
quadrupletonTypeInstance - typeInstance
Attributes:
-
A typeInstance that asserts a Thing is an instance of a Quadrupleton

quintupletonTypeInstance - «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
quintupletonTypeInstance - Quintupleton
Generalization (element - is a specialization of):«IDEAS:superSubtype»
quintupletonTypeInstance - typeInstance
Attributes:
-
A typeInstance that asserts a Thing is an instance of a Quintupleton

singletonTypeInstance «IDEAS:TupleType»
Connectors:
Association (source - target):«place1Type»
singletonTypeInstance - Singleton
Generalization (element - is a specialization of):«IDEAS:superSubtype»
singletonTypeInstance - typeInstance
Attributes:
-
A typeInstance that asserts a Thing is an instance of a Singleton

tripletonTypeInstance «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
tripletonTypeInstance - typeInstance
Association (source - target):«place1Type»
tripletonTypeInstance - Tripleton
Attributes:
-

A typeInstance that asserts a Thing is an instance of a Tripleton
Doubleton «IDEAS:Type» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **Doubleton - Type** *Attributes:* **-** **A Type that has exactly two instances**
Quadrupleton «IDEAS:Type» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **Quadrupleton - Type** *Attributes:* **-** **A Type that has exactly four instances**
Quintupleton «IDEAS:Type» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **Quintupleton - Type** *Attributes:* **-** **A Type that has exactly five instances**
Singleton «IDEAS:Type» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **Singleton - Type** *Attributes:* **-** **A Type with only one instance**
Tripleton «IDEAS:Type» *Connectors:* *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **Tripleton - Type** *Attributes:* **-** **A Type that has exactly three instances**
IDEAS Sum, fusion and union
FusionOfSetOfIndividuals «IDEAS:Type» *Connectors:* *Association (source - target):*«place2Type» **FusionOfSetOfIndividuals - IndividualType** *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **FusionOfSetOfIndividuals - WholePartType** *Generalization (element - is a specialization of):*«IDEAS:superSubtype» **FusionOfSetOfIndividuals - SumOfSetOfThings** *Association (source - target):*«place1Type» **FusionOfSetOfIndividuals - SingletonIndividualType** *Attributes:*

- **A SumOfSetOfThings and a WholePartType whose instances link the fusion of a set of Individuals with its fused whole.** **In other words, this relates an IndividualType (a collection of Individuals) to its mereological sum.** **See http://plato.stanford.edu/entries/mereology/#Sum**
PartitionOfSetOfDisjointIndividuals «IDEAS:Type» _**Connectors:**_ _Association (source - target):_**«place2Type»** **PartitionOfSetOfDisjointIndividuals - SetOfDisjointIndividuals** _Generalization (element - is a specialization of):_**«IDEAS:superSubtype»** **PartitionOfSetOfDisjointIndividuals - PartitionOfSetOfDisjointThings** _Generalization (element - is a specialization of):_**«IDEAS:superSubtype»** **PartitionOfSetOfDisjointIndividuals - FusionOfSetOfIndividuals** _**Attributes:**_ - **A FusionOfSetOfIndividuals whose fusioned Type is a SetOfDisjointIndividuals.** **This is a division of a Individual into disjoint parts.**
PartitionOfSetOfDisjointThings «IDEAS:Type» _**Connectors:**_ _Association (source - target):_**«place2Type»** **PartitionOfSetOfDisjointThings - SetOfDisjointThings** _Generalization (element - is a specialization of):_**«IDEAS:superSubtype»** **PartitionOfSetOfDisjointThings - SumOfSetOfThings** _**Attributes:**_ - **A SumOfSetOfThings whose summed Type is a SetOfDisjointThings.** **This is a division of a Thing into disjoint parts/sub-types.**
PartitionOfSetOfDisjointTypes «IDEAS:Type» _**Connectors:**_ _Association (source - target):_**«place2Type»** **PartitionOfSetOfDisjointTypes - SetOfDisjointTypes** _Generalization (element - is a specialization of):_**«IDEAS:superSubtype»** **PartitionOfSetOfDisjointTypes - UnionOfSetOfTypes** _Generalization (element - is a specialization of):_**«IDEAS:superSubtype»** **PartitionOfSetOfDisjointTypes - PartitionOfSetOfDisjointThings** _**Attributes:**_ - **A UnionOfSetOfTypes whose unioned Type is a SetOfDisjointTypes** **This is a division of a Type into disjoint subTypes.** **See http://en.wikipedia.org/wiki/Partition_of_a_set and http://en.wikipedia.org/wiki/Partition_of_a_set.**
SumOfSetOfThings «IDEAS:Type» _**Connectors:**_ _Association (source - target):_**«place2Type»** **SumOfSetOfThings - Type** _Generalization (element - is a specialization of):_**«IDEAS:superSubtype»** **SumOfSetOfThings - CoupleType** _Association (source - target):_**«place1Type»** **SumOfSetOfThings - Singleton** _**Attributes:**_

This document is no longer extant and has been withdrawn.

-
A CoupleType whose instances are couples that link the sum of a set of Things with its sum.
For more detail, see its subTypes - UnionOfSetOfTypes and FusionOfSetOfIndividuals.

UnionOfSetOfTypes «IDEAS:Type»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
UnionOfSetOfTypes - SuperSubtypeType
Generalization (element - is a specialization of):«IDEAS:superSubtype»
UnionOfSetOfTypes - SumOfSetOfThings
Association (source - target):«place2Type»
UnionOfSetOfTypes - Type
Attributes:
-
A SumOfSetOfThings and a SuperSubtypeType whose instances are couples that link the union of a set of Types with these Types.
In other words, this relates a Type (a collection of Types) to its set-theoretic sum (aka union).

IDEAS Tuples

quadruple «IDEAS:TupleType»
Connectors:
Association (source - target):«place2Type»
quadruple - Thing
Association (source - target):«place1Type»
quadruple - Thing
Association (source - target):«place4Type»
quadruple - Thing
Association (source - target):«place3Type»
quadruple - Thing
Generalization (element - is a specialization of):«IDEAS:superSubtype»
quadruple - tuple
Attributes:
-
A tuple which has four places

quintuple «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialization of):«IDEAS:superSubtype»
quintuple - tuple
Association (source - target):«place2Type»
quintuple - Thing
Association (source - target):«place3Type»
quintuple - Thing
Association (source - target):«place5Type»
quintuple - Thing
Association (source - target):«place1Type»
quintuple - Thing
Association (source - target):«place4Type»
quintuple - Thing
Attributes:
-
A tuple which has five places

triple «IDEAS:TupleType» *Connectors:* *Association (source - target):«place3Type»* **triple - Thing** *Association (source - target):«place2Type»* **triple - Thing** *Association (source - target):«place1Type»* **triple - Thing** *Generalization (element - is a specialization of):«IDEAS:superSubtype»* **triple - tuple** *Attributes:* **-** **A tuple which has three places**

IDEAS Temporal whole part
endBoundary «IDEAS:TupleType» *Connectors:* *Generalization (element - is a specialization of):«IDEAS:superSubtype»* **endBoundary - temporalBoundary** *Attributes:* **-** **A temporalBoundary where the boundary is a end boundary of the whole.**
startBoundary «IDEAS:TupleType» *Connectors:* *Generalization (element - is a specialization of):«IDEAS:superSubtype»* **startBoundary - temporalBoundary** *Attributes:* **-** **A temporalBoundary where the boundary is a start boundary of the whole.**
temporalBoundary «IDEAS:TupleType» *Connectors:* *Generalization (element - is a specialization of):«IDEAS:superSubtype»* **temporalBoundary - temporalWholePart** *Association (source - target):«place2Type»* **temporalBoundary - Individual** *Attributes:* **-** **A temporalWholePart where the part is a temporal boundary of the whole.**
temporalWholePart «IDEAS:TupleType» *Connectors:* *Generalization (element - is a specialization of):«IDEAS:superSubtype»* **temporalWholePart - wholePart** *Dependency (element - is an instance of):«IDEAS:powertypeInstance»* **temporalWholePart - TemporalWholePartType** *Attributes:* **-** **A wholePart that asserts the spatial extent of the (whole) individual is co-extensive with the spatial extent of the (part) individual for a particular period of time.**

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IDEAS BeforeAfter
beforeAfter «IDEAS:TupleType»
Connectors:
Association (source - target): «place1Type»
beforeAfter - Individual
Association (source - target): «place2Type»
beforeAfter - Individual
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
beforeAfter - couple
Dependency (element - is instance of): «IDEAS:powertypeInstance»
beforeAfter - BeforeAfterType
Attributes:
-
A couple that asserts one Individual's temporal extent is completely before the temporal extent of another.

IDEAS Intentional construction
IntentionallyConstructedIndividual «IDEAS:IndividualType»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
IntentionallyConstructedIndividual - Individual
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
IntentionallyConstructedIndividual - IntentionallyConstructedThing
Attributes:
-
An Individual that is an IntentionallyConstructedThing
intentionallyConstructedTuple «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
intentionallyConstructedTuple - IntentionallyConstructedThing
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
intentionallyConstructedTuple - tuple
Attributes:
-
A tuple that is an IntentionallyConstructedThing
IntentionallyConstructedThing «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
IntentionallyConstructedThing - Thing
Attributes:
-
A Thing that is intentionally constructed.
These are Things that society has come to identify as significant - e.g. money, marriage
For more information on this refer to "The Construction of Social Reality" by John Searle ISBN 01402.35906
IntentionallyConstructedType «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
IntentionallyConstructedType - Type
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
IntentionallyConstructedType - IntentionallyConstructedThing

Attributes: - **A Type that is an IntentionallyConstructedThing**
IDEAS Properties & Measures
propertyOfIndividual «IDEAS:TupleType» *Connectors:* *Generalization (element - is a specialisation of): «IDEAS:superSubtype»* **propertyOfIndividual - typeInstance** *Association (source - target): «place1Type»* **propertyOfIndividual - Property** *Association (source - target): «place2Type»* **propertyOfIndividual - Individual** *Attributes:* - **A typeInstance that asserts an Individual is an instance of a Property - i.e. the Individual "has" a property** **Examples:** **A product being "expensive"** **A laptop weighing 2.2kg** **A car travelling between 40 and 50 km/h**
propertyOfType «IDEAS:TupleType» *Connectors:* *Association (source - target): «place1Type»* **propertyOfType - Property** *Association (source - target): «place2Type»* **propertyOfType - IndividualType** *Generalization (element - is a specialisation of): «IDEAS:superSubtype»* **propertyOfType - superSubtype** *Attributes:* - **A superSubtype that asserts an IndividualType is a subtype of a Property - i.e. it asserts all members of the Individual type "have" a property** **Examples:** **All London Buses are red** **All Porsche 911 2.2S have a mass between 900 and 960 kg** **All atoms of mercury have an atomic weight of 200.59 ·mol−**
MeasureType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a specialisation of): «IDEAS:superSubtype»* **MeasureType - IndividualTypeType** *Attributes:* - **The IndividualTypeType that is the powertype of Measure**
dispositionManifestation «IDEAS:TupleType» *Connectors:* *Association (source - target): «place2Type»* **dispositionManifestation - CategoricalProperty** *Association (source - target): «place1Type»* **dispositionManifestation - DispositionalProperty** *Generalization (element - is a specialisation of): «IDEAS:superSubtype»*

dispositionManifestation - couple *Attributes:* - A couple that asserts a CategoricalProperty has members that manifest a DispositionalProperty
electricCurrentInAmperes «IDEAS:TupleType» *Connectors:* *Association (source - target): «place1Type»* electricCurrentInAmperes - ElectricCurrent *Association (source - target): «place2Type»* electricCurrentInAmperes - ValueInAmperes *Generalization (element - is a specialisation of): «IDEAS:superSubtype»* electricCurrentInAmperes - measureNamedNumericallyBy *Attributes:* - A measureNamedNumericallyBy that names an ElectricCurrent with its ValueInAmperes
frequencyInHertz «IDEAS:TupleType» *Connectors:* *Generalization (element - is a specialisation of): «IDEAS:superSubtype»* frequencyInHertz - measureNamedNumericallyBy *Association (source - target): «place1Type»* frequencyInHertz - Frequency *Association (source - target): «place2Type»* frequencyInHertz - ValueInHertz *Attributes:* - A measureNamedNumericallyBy that names a Frequency with its ValueInHertz
lengthInMetres «IDEAS:TupleType» *Connectors:* *Association (source - target): «place1Type»* lengthInMetres - Length *Association (source - target): «place2Type»* lengthInMetres - ValueInMetres *Generalization (element - is a specialisation of): «IDEAS:superSubtype»* lengthInMetres - measureNamedNumericallyBy *Attributes:* - A measureNamedNumericallyBy that names a Length with its ValueInMetres
lowerBoundOfMeasureRange «IDEAS:TupleType» *Connectors:* *Association (source - target): «place2Type»* lowerBoundOfMeasureRange - MeasurePoint *Association (source - target): «place1Type»* lowerBoundOfMeasureRange - MeasureRange *Generalization (element - is a specialisation of): «IDEAS:superSubtype»* lowerBoundOfMeasureRange - superSubtype *Attributes:* - A superSubtype that asserts the MeasureInstance that is the lower bound (i.e. minimum measure) of a MeasureRange

luminousIntensityInCandela «IDEAS:TupleType»
Connectors:
Association (source - target): «place2Type»
luminousIntensityInCandela - ValueInCandela
Association (source - target): «place1Type»
luminousIntensityInCandela - LuminousIntensity
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
luminousIntensityInCandela - measureNamedNumericallyBy
Attributes:
-
A measureNamedNumericallyBy that names a LuminousIntensity with its ValueInCandela

massInKilograms «IDEAS:TupleType»
Connectors:
Association (source - target): «place1Type»
massInKilograms - Mass
Association (source - target): «place2Type»
massInKilograms - ValueInKilograms
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
massInKilograms - measureNamedNumericallyBy
Attributes:
-
A measureNamedNumericallyBy that names a Mass with its ValueInKilograms

measureNamedNumericallyBy «IDEAS:TupleType»
Connectors:
Association (source - target): «place1Type»
measureNamedNumericallyBy - MeasurePoint
Association (source - target): «place2Type»
measureNamedNumericallyBy - NumericMeasureRepresentation
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
measureNamedNumericallyBy - namedBy
Attributes:
-
A namedBy that asserts that a MeasureInstance has a NumericMeasureRepresentation

measureOfIndividual «IDEAS:TupleType»
Connectors:
Association (source - target): «place1Type»
measureOfIndividual - Measure
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
measureOfIndividual - propertyOfIndividual
Attributes:
-
A propertyOfIndividual that asserts an Individual is an instance of a Measure - i.e. the Individual "has" a property corresponding to the Measure.
Examples:
A laptop weighing 2.2kg
A car travelling between 40 and 50 km/h

measureOfType «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
measureOfType - propertyOfType
Association (source - target): «place1Type»
measureOfType - Measure
Attributes:
-
A propertyOfType that asserts an IndividualType is a subtype of a Measure - i.e. it asserts all members of the Individual type have a property corresponding to the Measure
Examples:
All Porsche 911 2.2S have a mass between 900 and 960 kg
All atoms of mercury have an atomic weight of 200.59 ·mol−

measureTypeInstance «IDEAS:TupleType»
Connectors:
Association (source - target): «place2Type»
measureTypeInstance - Measure
Association (source - target): «place1Type»
measureTypeInstance - MeasureCategory
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
measureTypeInstance - typeInstance
Attributes:
-
A typeInstance that asserts a Measure is an instance of a MeasureCategory.
Examples:
2kg is a mass
40m/s is a velocity

temperatureInKelvin «IDEAS:TupleType»
Connectors:
Association (source - target): «place1Type»
temperatureInKelvin - ThermodynamicTemperature
Association (source - target): «place2Type»
temperatureInKelvin - ValueInKelvin
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
temperatureInKelvin - measureNamedNumericallyBy
Attributes:
-
A measureNamedNumericallyBy that names a ThermodynamicTemperature with its ValueInKelvin

timeInSeconds «IDEAS:TupleType»
Connectors:
Association (source - target): «place2Type»
timeInSeconds - ValueInSeconds
Association (source - target): «place1Type»
timeInSeconds - Time
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
timeInSeconds - measureNamedNumericallyBy
Attributes:
-
A measureNamedNumericallyBy that names a Time with its ValueInSeconds

upperBoundOfMeasureRange «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
upperBoundOfMeasureRange - superSubtype
Association (source - target): **«place2Type»**
upperBoundOfMeasureRange - MeasurePoint
Association (source - target): **«place1Type»**
upperBoundOfMeasureRange - MeasureRange
Attributes:
-
A superSubtype that asserts the MeasureInstance that is the upper bound (i.e. maximum measure) of a MeasureRange

CategoricalMeasure «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
CategoricalMeasure - CategoricalProperty
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
CategoricalMeasure - Measure
Attributes:
-
A CategoricalProperty and a Measure - i.e. a CategoricalProperty that is measureable

CategoricalProperty «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
CategoricalProperty - Property
Attributes:
-
A Property that is always exhibited by its instances (Individuals). Formally, a CategoricalProperty is the set of things that have a property simpliciter without reference to the capability to manifest another property (as is the case with DispositionalProperties (qv.)). So, for example, the property of 'flying at Mach 2' is a CategoricalProperty, whereas 'being capable of flying at Mach 2' is not.
Examples:
10kg
40cm
Fitting in an ISO container

DispositionalMeasure «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
DispositionalMeasure - DispositionalProperty
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
DispositionalMeasure - Measure
Attributes:
-
A MeasureableProperty and a DispositionalProperty whose members share a common property that is measurable.

DispositionalProperty «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
DispositionalProperty - Property
Attributes:
-
A Property whose members are Individuals that have a property of being capable to manifest a CategoricalProperty under certain conditions other things being equal. It is critical when describing the disposition to

specify the conditions both for the dispositional and the categorical property that is capable of being manifested. These can range from quite stringent conditions, the DispositionalProperty of 'being capable of flying at Mach 2, at a moment's notice' to the more lax, the property of 'being capable of flying at Mach 2, once suitably configured'. Note that these have the same manifestation - the categorical property of 'flying at Mach 2'. Similarly, it is often critical to describe in detail the conditions that apply to the CategoricalProperty that can be manifested, so, for example, 'flying at Mach 2, in good weather'.

Example:
Ability to fly at Mach 2
Ability to strike a target 10km away
Ability to dissolve in water

ElectricCurrent «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
ElectricCurrent - MeasurePoint
Dependency (element - is instance of): **«IDEAS:typeInstance»**
ElectricCurrent - MeasureCategory
Attributes:
-
A MeasureInstance whose members are Individuals that all have the same electric current flowing through them
Examples:
5 Amps
13 Amps

Frequency «IDEAS:Type»
Connectors:
Dependency (element - is instance of): **«IDEAS:typeInstance»**
Frequency - MeasureCategory
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
Frequency - MeasurePoint
Attributes:
-
A MeasureInstance whose instances are Individuals that all oscillate at the same frequency
Examples:
100Hz
60GHz

Length «IDEAS:Type»
Connectors:
Dependency (element - is instance of): **«IDEAS:typeInstance»**
Length - MeasureCategory
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
Length - MeasurePoint
Attributes:
-
A MeasureInstance whose instances are Individuals that all have the same length
Examples:
2mm
8 miles

LuminousIntensity «IDEAS:Type»
Connectors:
Dependency (element - is instance of): **«IDEAS:typeInstance»**
LuminousIntensity - MeasureCategory
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**

LuminousIntensity - MeasurePoint *Attributes:* - A MeasureInstance whose members are Individuals that all have the same luminous intensity Examples: 5 Candela 20 Candle Power 4 hefnerkerze
Mass «IDEAS:Type» *Connectors:* *Generalization (element - is a specialisation of): «IDEAS:superSubtype»* **Mass - MeasurePoint** *Dependency (element - is instance of): «IDEAS:typeInstance»* **Mass - MeasureCategory** *Attributes:* - A MeasureInstance whose members are Individuals that all have the same mass Examples: 2kg 2.8lbs
MeasureCategory «IDEAS:Type» *Connectors:* *Generalization (element - is a specialisation of): «IDEAS:superSubtype»* **MeasureCategory - MeasureType** *Attributes:* - A MeasureType whose members are recognised types of MeasureInstance. Examples: Mass (included in IDEAS) Length (included in IDEAS) Velocity Hardness
MeasurePoint «IDEAS:Type» *Connectors:* *Generalization (element - is a specialisation of): «IDEAS:superSubtype»* **MeasurePoint - Measure** *Attributes:* - A Measure whose members are Individuals that all share a common property that can be measured. Examples: 2kg 4 weeks 2km
MeasureNamingScheme «IDEAS:Type» *Connectors:* *Generalization (element - is a specialisation of): «IDEAS:superSubtype»* **MeasureNamingScheme - NamingScheme** *Attributes:*

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- **A NamingScheme used for numerically representing MeasureInstances**
MeasureRange «IDEAS:Type» *Connectors:* *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»** **MeasureRange - Measure** *Attributes:* - **A Measure that is characterised by two MeasurePoints that define its upper and lower bounds.**
Measure «IDEAS:Type» *Connectors:* *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»** **Measure - MeasureType** *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»** **Measure - Property** *Attributes:* - **An Property whose members are Individuals that all share a common, measurable property, or whose properties lie within a MeasureRange.** **Examples:** **2kg** **4 weeks** **2km**
NumericMeasureRepresentation «IDEAS:Type» *Connectors:* *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»** **NumericMeasureRepresentation - FloatingPointRepresentation** *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»** **NumericMeasureRepresentation - Name** *Attributes:* - **A Name and a FloatingPointRepresentation that identifies a MeasureInstance using a numeric representation**
Property «IDEAS:Type» *Connectors:* *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»** **Property - IndividualType** *Attributes:* - **An IndividualType whose members all exhibit a common trait or feature. Often the Individuals are states having a property (the state of being 18 degrees centigrade), where this property can be a CategoricalProperty (qv.) or a DispositionalProperty (qv.).** **Examples:** **Ability to fly at Mach 2** **10kg**
SiUnitRepresentationScheme «IDEAS:Type» *Connectors:* *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»** **SiUnitRepresentationScheme - MeasureNamingScheme** *Attributes:* -

A MeasureNamingScheme whose members are representations of SI Units.
ThermodynamicTemperature «IDEAS:Type» ***Connectors:*** *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»** **ThermodynamicTemperature - MeasurePoint** *Dependency (element - is instance of):* **«IDEAS:typeInstance»** **ThermodynamicTemperature - MeasureCategory** ***Attributes:*** **-** **A MeasureInstance whose members are Individuals that all have the same thermodynamic temperature** **Examples:** **4 deg K** **12 deg F** **22 deg C**
Time «IDEAS:Type» ***Connectors:*** *Dependency (element - is instance of):* **«IDEAS:typeInstance»** **Time - MeasureCategory** *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»** **Time - MeasurePoint** ***Attributes:*** **-** **A MeasureInstance whose members are Individuals that have a particular temporal dimension of the same length.** **Examples:** **22 seconds** **14 weeks** **The time taken for light to travel 2km in a vacuum**
ValueInAmperes «IDEAS:Type» ***Connectors:*** *Dependency (element - is instance of):* **«IDEAS:typeInstance»** **ValueInAmperes - SiUnitRepresentationScheme** *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»** **ValueInAmperes - NumericMeasureRepresentation** ***Attributes:*** **-** **A NumericMeasureRepresentation that represents an ElectricCurrent in amperes**
ValueInCandela «IDEAS:Type» ***Connectors:*** *Dependency (element - is instance of):* **«IDEAS:typeInstance»** **ValueInCandela - SiUnitRepresentationScheme** *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»** **ValueInCandela - NumericMeasureRepresentation** ***Attributes:*** **-** **A NumericMeasureRepresentation that represents a LuminousIntensity in candela**

ValueInHertz «IDEAS:Type»
Connectors:
Dependency (element - is instance of): «IDEAS:typeInstance»
ValueInHertz - SiUnitRepresentationScheme
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
ValueInHertz - NumericMeasureRepresentation
Attributes:
-
A NumericMeasureRepresentation that represents a Frequency in hertz

ValueInKelvin «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
ValueInKelvin - NumericMeasureRepresentation
Dependency (element - is instance of): «IDEAS:typeInstance»
ValueInKelvin - SiUnitRepresentationScheme
Attributes:
-
A NumericMeasureRepresentation that represents a ThermodynamicTemperature in degrees kelvin

ValueInKilograms «IDEAS:Type»
Connectors:
Dependency (element - is instance of): «IDEAS:typeInstance»
ValueInKilograms - SiUnitRepresentationScheme
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
ValueInKilograms - NumericMeasureRepresentation
Attributes:
A NumericMeasureRepresentation that represents a Mass in kilograms

ValueInMetres «IDEAS:Type»
Connectors:
Dependency (element - is instance of): «IDEAS:typeInstance»
ValueInMetres - SiUnitRepresentationScheme
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
ValueInMetres - NumericMeasureRepresentation
Attributes:
-
A NumericMeasureRepresentation that represents a Length in metres

ValueInSeconds «IDEAS:Type»
Connectors:
Dependency (element - is instance of):«IDEAS:typeInstance»
ValueInSeconds - SiUnitRepresentationScheme
Generalization (element - is a specialisation of):«IDEAS:superSubtype»
ValueInSeconds - NumericMeasureRepresentation
Attributes:
-
A NumericMeasureRepresentation that represents a Time in seconds

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IDEAS Period or Instant
Instant «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»**   **Instant - PeriodOrInstant**   *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»**   **Instant - InstantType**   *Attributes:*   **-**   **A PeriodOrInstant whose temporal extent tends towards zero.**
Period «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»**   **Period - PeriodOrInstant**   *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»**   **Period - PeriodType**   *Attributes:*   **-**   **A PeriodOrInstant whose temporal extent is greater than zero**
PeriodOrInstant «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»**   **PeriodOrInstant - Individual**   *Attributes:*   **-**   **An Individual whose spatial extent is infinite, but whose temporal extent is finite or zero.**
happensIn «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»**   **happensIn - wholePart**   *Association (source - target):* **«place1Type»**   **happensIn - PeriodOrInstant**   *Attributes:*   **-**   **A wholePart that asserts that an Individual is a part of a PeriodOrInstant.**   **Note: IDEAS is 4D, so this means the individual [part] is entirely within the extent of the PeriodOrInstant [in]**
IDEAS Representation
NumericSign «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a specialisation of):* **«IDEAS:superSubtype»**   **NumericSign - Sign**   *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»**   **NumericSign - NumericSignType**   *Attributes:*   **-**   **A Sign that signifies a number.**   **Also known as a numeral.**

Sign «IDEAS:IndividualType»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
Sign - Individual
Dependency (element - is instance of): «IDEAS:powertypeInstance»
Sign - SignType
Attributes:
-
An Individual that signifies a Thing.
Example: 'BOSTON' signifies BOSTON

IDEASName «IDEAS:Powertype»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
IDEASName - StringRepresentation
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
IDEASName - Name
Dependency (element - is instance of): «IDEAS:typeInstance»
IDEASName - UniqueNamingScheme
Attributes:
-
A Name used by the IDEAS model to uniquely identify a Thing.

NumericSignType «IDEAS:Powertype»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
NumericSignType - SignType
Attributes:
-
A SignType that is the Powertype of NumericSign

SignType «IDEAS:Powertype»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
SignType - IndividualType
Attributes:
-
An IndividualType that is the Powertype of Sign.

describedBy «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
describedBy - representedBy
Association (source - target): «place2Type»
describedBy - Description
Attributes:
-
A representedBy that asserts that a Description describes a Thing.

descriptionSchemeInstance «IDEAS:TupleType»
Connectors:
Association (source - target): «place2Type»
descriptionSchemeInstance - Description
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
descriptionSchemeInstance - representationSchemeInstance
Association (source - target): «place1Type»
descriptionSchemeInstance - DescriptionScheme
Attributes:
-
A representationSchemeInstance that asserts a Description is a member of a DescriptionScheme.

namedBy «IDEAS:TupleType»
Connectors:
Association (source - target): «place2Type»
namedBy - Name
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
namedBy - representedBy
Association (source - target): «place1Type»
namedBy - Thing
Attributes:
-
A couple that asserts that a Name describes a Thing.

namingSchemeInstance «IDEAS:TupleType»
Connectors:
Association (source - target): «place2Type»
namingSchemeInstance - Name
Association (source - target): «place1Type»
namingSchemeInstance - NamingScheme
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
namingSchemeInstance - representationSchemeInstance
Attributes:
-
A representationSchemeInstance that asserts a Name is a member of a NamingScheme.

representationSchemeInstance «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
representationSchemeInstance - typeInstance
Association (source - target): «place1Type»
representationSchemeInstance - RepresentationScheme
Association (source - target): «place2Type»
representationSchemeInstance - Representation
Attributes:
-
A typeInstance that asserts a Representation is a member of a RepresentationScheme.

representedBy «IDEAS:TupleType»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
representedBy - couple
Association (source - target): «place2Type»
representedBy - Representation
Attributes:
-
A couple that asserts that a Representation represents a Thing.

Description «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
Description - Representation
Dependency (element - is instance of): «IDEAS:powertypeInstance»
Description - DescriptionType
Attributes:
-
A Representation that describes a Thing

DescriptionScheme «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
DescriptionScheme - DescriptionType
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
DescriptionScheme - RepresentationScheme
Attributes:
A RepresentationScheme and DescriptionType whose members are intentionally descriptions

FloatingPointRepresentation «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
FloatingPointRepresentation - NumericSignType
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
FloatingPointRepresentation - Representation
Attributes:
exemplar
A NumericSignType and Representation in which a string of digits (or bits) represents a rational number.
See http://en.wikipedia.org/wiki/Floating_point

IntegerRepresentation «IDEAS:Type»
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
IntegerRepresentation - NumericSignType
Generalization (element - is a specialisation of): «IDEAS:superSubtype»
IntegerRepresentation - Representation
Attributes:
exemplar
A NumericSignType and Representation in which a string of digits (or bits) represents an integer.

This document is no longer extant and has been withdrawn.

Name «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
Name - Representation
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
Name - NameType
Generalization (element - is a specialisation of): **«superSubtype»**
Name - IndividualType
Attributes:
-
A Representation that identifies a Thing.
Implementation note: The inherited exemplarString provides a written example of the uttered name.
Example:
'USA' names the United States of America

NamingScheme «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
NamingScheme - Type
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
NamingScheme - RepresentationScheme
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
NamingScheme - NameType
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
NamingScheme - IndividualTypeType
Attributes:
-
An NameType and a RepresentationScheme whose members are intentionally Names.
Examples:
ISO 3166 Country Codes
IdeasNames

Representation «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
Representation - SignType
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
Representation - RepresentationType
Attributes:
exemplar
A SignType where all the individual Signs are intended to signify the same Thing.

RepresentationScheme «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
RepresentationScheme - RepresentationType
Attributes:
-
A RepresentationType that is a collection of Representations that are intended to be the preferred Representations in certain contexts.

StringDescription «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
StringDescription - StringRepresentation
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
StringDescription - Description
Attributes:
-
A Description and a StringRepresentations that is a description expressed as text

StringName «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
StringName - StringRepresentation
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
StringName - Name
Attributes:
-
A Name and a StringRepresentations that is a name expressed as text

StringRepresentation «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
StringRepresentation - Representation
Attributes:
exemplar
A Representation whose all members are all strings.

UniqueNamingScheme «IDEAS:Type»
Connectors:
Generalization (element - is a specialisation of): **«IDEAS:superSubtype»**
UniqueNamingScheme - NamingScheme
Attributes:
-
A NamingScheme where different Names will not contain tokens of the same Representation Type.
Example:
A UniqueNamingScheme would not have two names that used tokens of the character string 'USA' to name two different things. This does not exclude the possibility that the same thing may have two names within the scheme. For example, a scheme could contain the Names 'US' and 'USA', which both name the United States of America."

3.3 IDEAS Foundation additions

3.3.1 IDEAS foundation addition diagrams
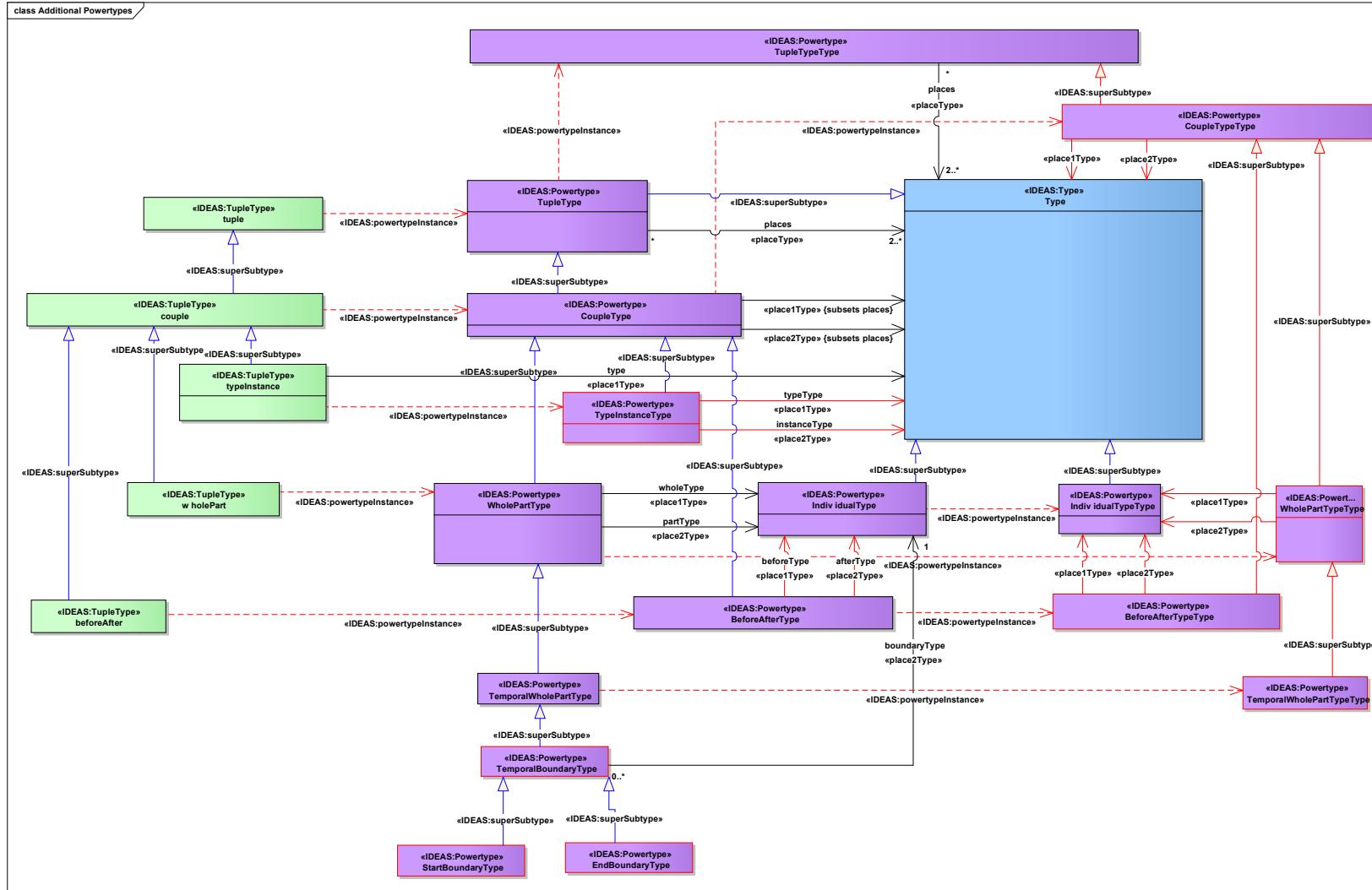
Figure 108 : Additional Powertypes
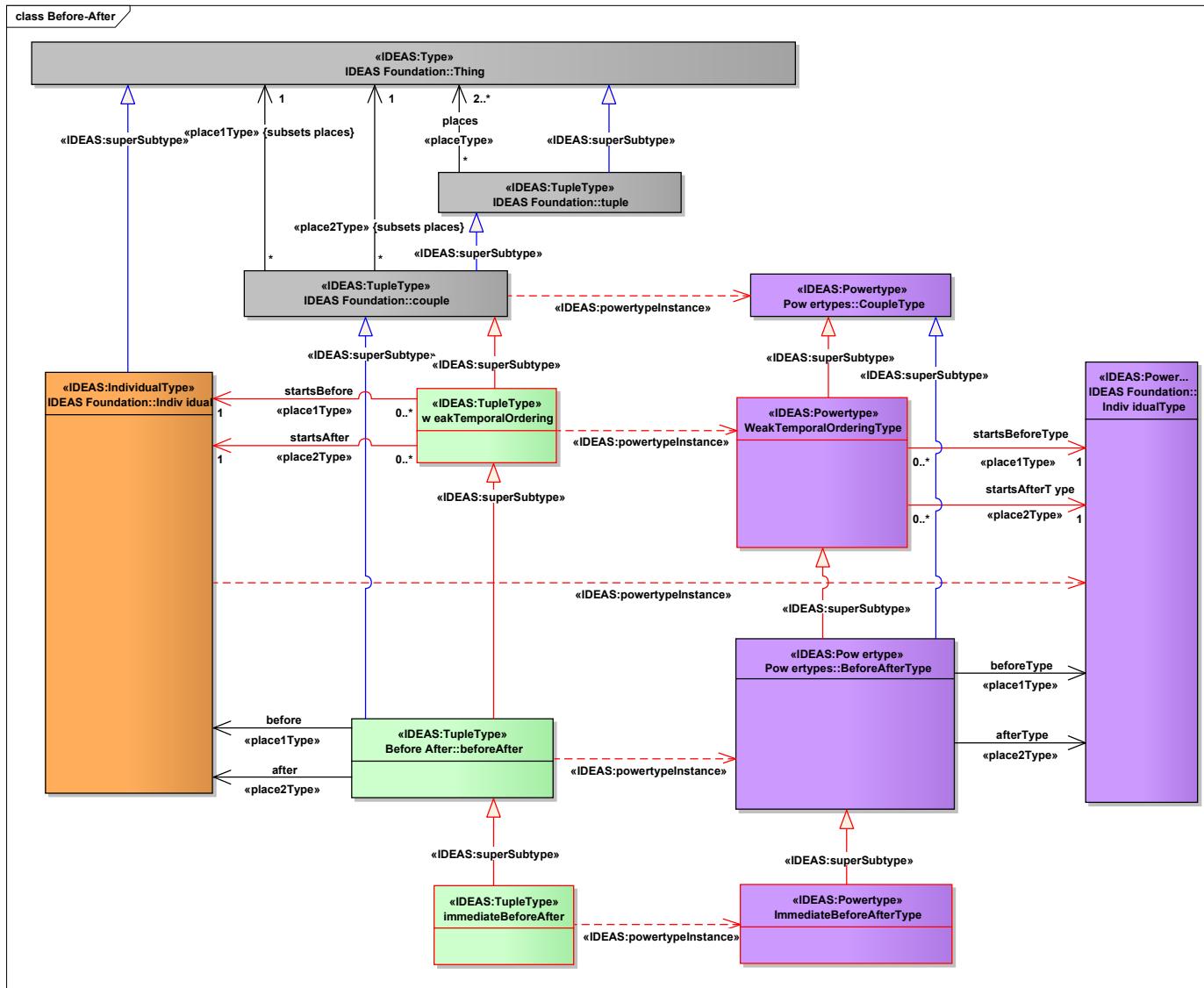
Figure 109 : Before - After

This document is no longer extant and has been withdrawn.
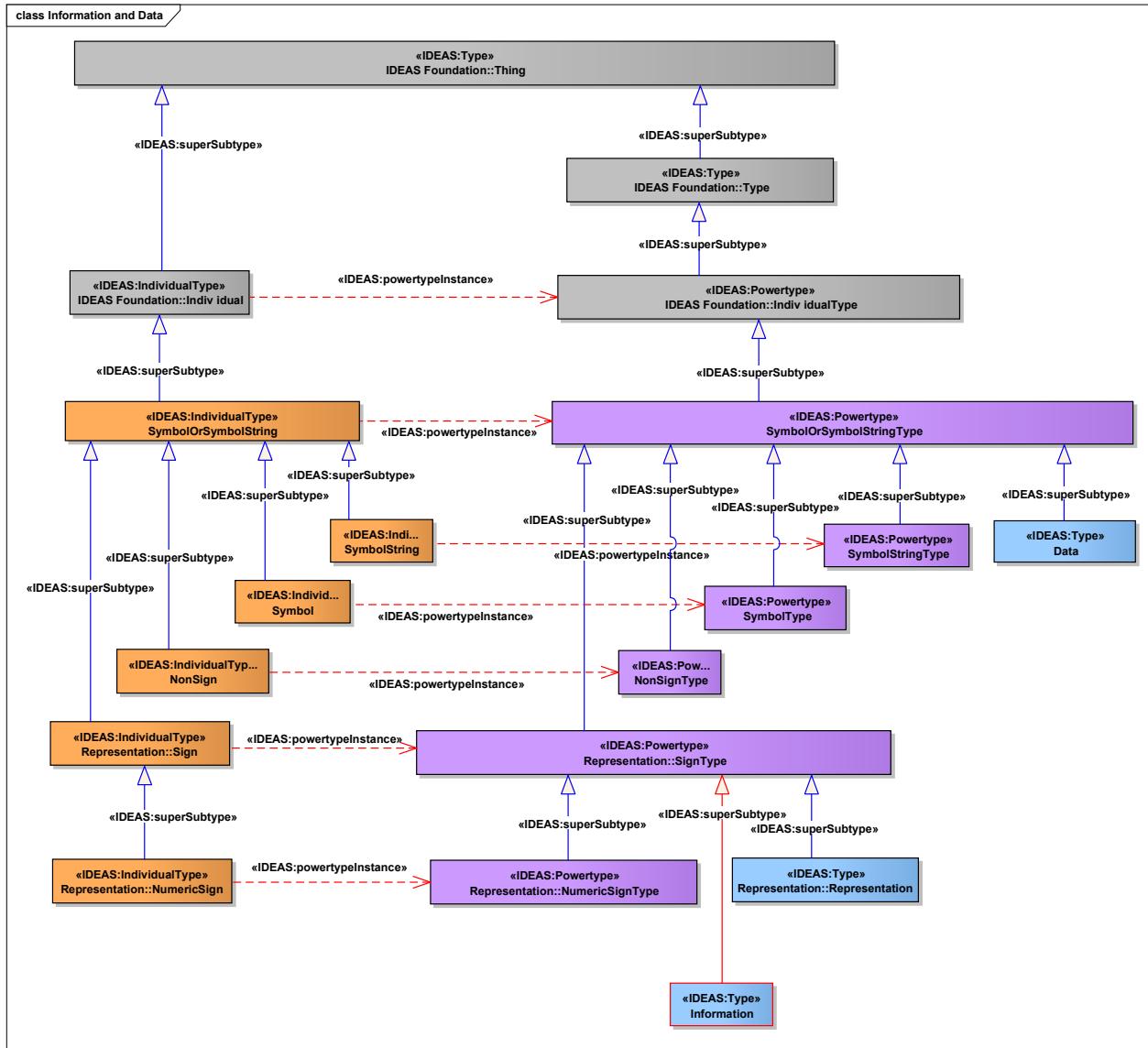
Figure 110 : Information and Data

class Property Assignment

«IDEAS:Powertype»
Indiv idualType

«IDEAS:TupleType»
typeInstance

«IDEAS:TupleType»
superSubtype

«IDEAS:powertypeInstance»

«IDEAS:superSubtype»

«IDEAS:IndividualTyp...
Indiv idual

«IDEAS:superSubtype»

«place2Type»

«IDEAS:TupleType»
propertyOfType

«IDEAS:superSubtype»

«IDEAS:Type»
Property

«IDEAS:superSubtype»

«place2Type»

«IDEAS:TupleType»
propertyOfIndiv idual

«place1Type»

«place1Type»

«IDEAS:superSubtype»

«IDEAS:superSubtype»

«IDEAS:TupleType»
measureOfType

«place1Type»

«IDEAS:Type»
Measure

«IDEAS:superSubtype»

«place2Type»

«IDEAS:TupleType»
measureOfIndiv idual

«place1Type»

Figure 111 : Property Assignment

This document is no longer extant and has been withdrawn.
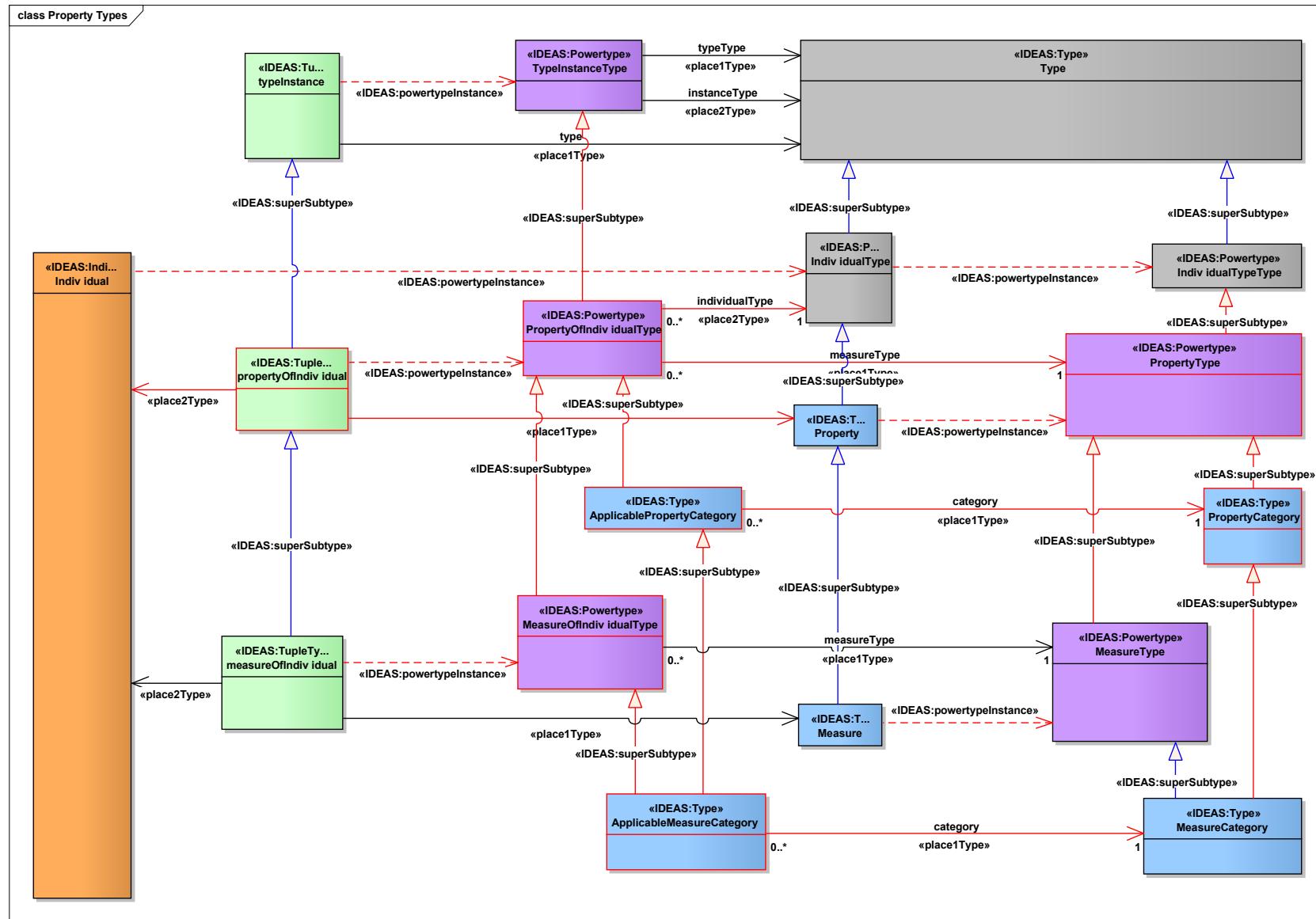
Figure 112 : Property types
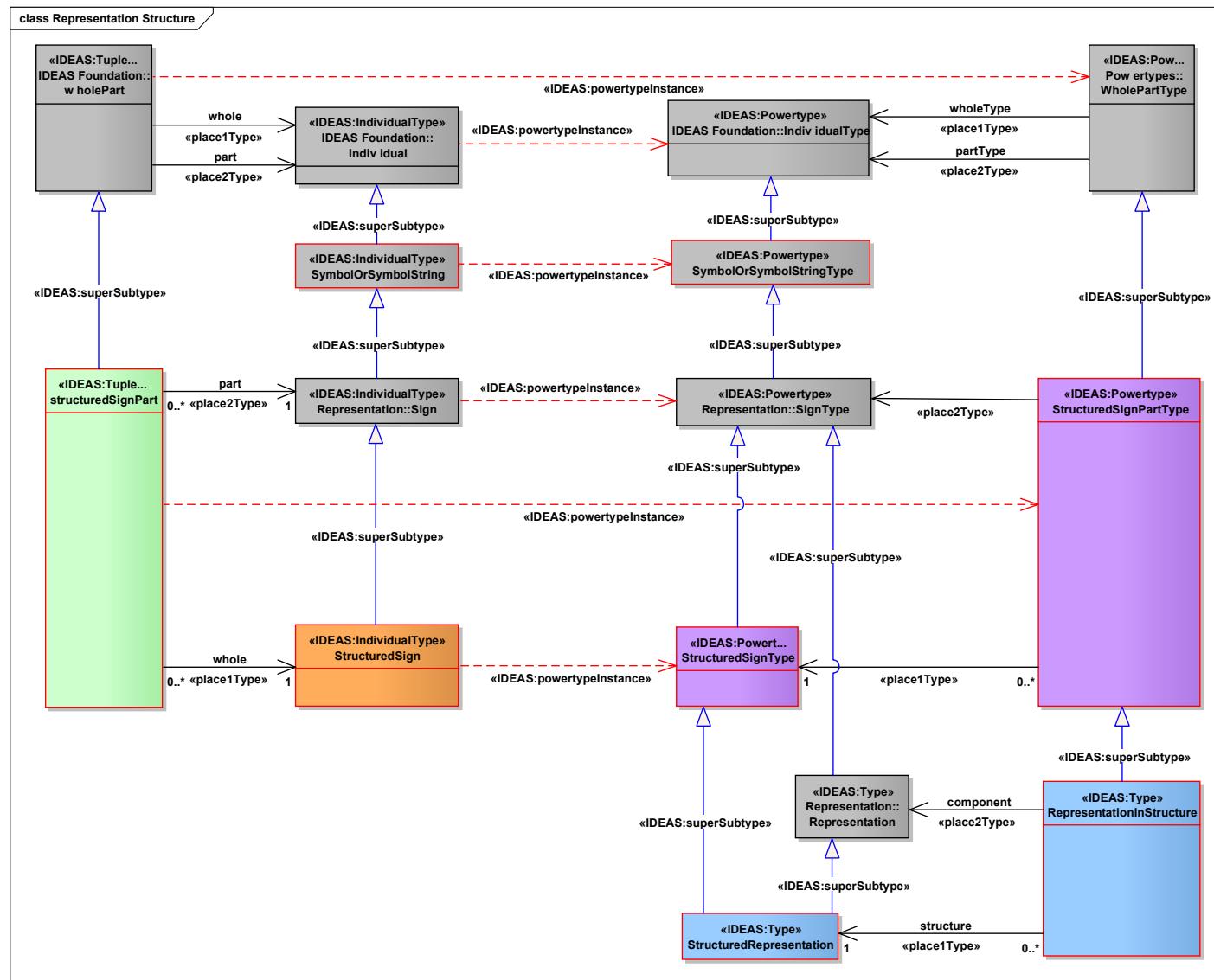
Figure 113 : Representation Structure
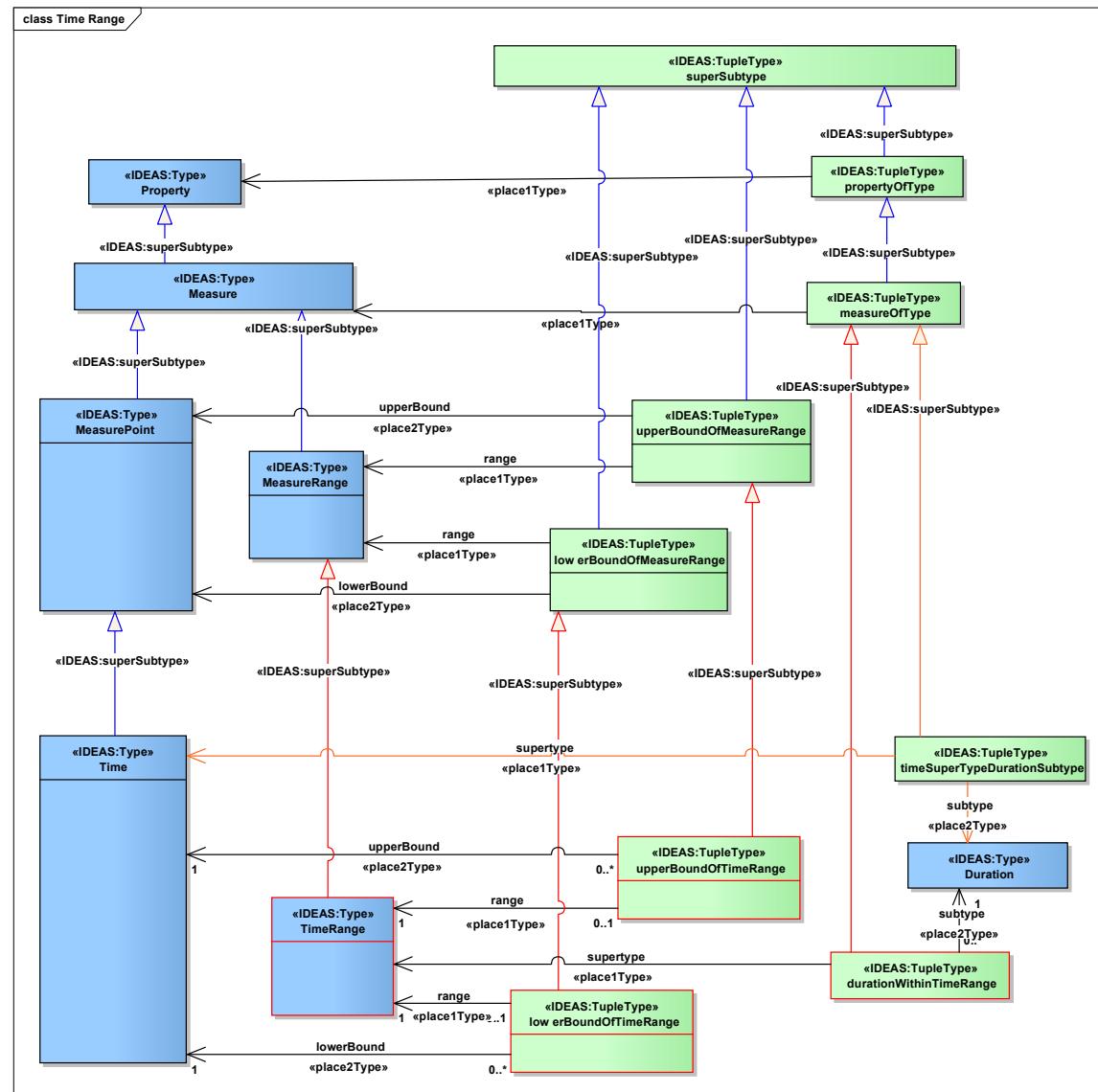
Figure 114 : Time Range

This document is no longer extant and has been withdrawn.

3.3.2   IDEAS Foundation addition elements list

Naming schemes
ModemName «IDEAS:UniqueNamingScheme»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **ModemName - StringRepresentation**   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **ModemName - Name**   *Attributes:*   **-**   **A Name that originates in the MODEM Architecture Framework (MODEM).**

IDEAS Foundation additions
ApplicableMeasureCategory «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ApplicableMeasureCategory - MeasureOfIndividualType**   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ApplicableMeasureCategory - ApplicablePropertyCategory**   *Association (source - target):*«place1Type»   **ApplicableMeasureCategory - MeasureCategory**   *Attributes:*   **-**   **A MeasureOfIndividualType that asserts a given IndividualType has instances which may have properties that are instances of a MeasureCategory.**
ApplicablePropertyCategory «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **ApplicablePropertyCategory - PropertyOfIndividualType**   *Association (source - target):*«place1Type»   **ApplicablePropertyCategory - PropertyCategory**   *Attributes:*   **-**   **A PropertyOfIndividualType that asserts a given IndividualType has instances which may have properties that are instances of a PropertyCategory.**
BeforeAfterTypeType «IDEAS:Powertype»   *Connectors:*   *Association (source - target):* «place1Type»   **BeforeAfterTypeType - IndividualTypeType**   *Association (source - target):* «place2Type»   **BeforeAfterTypeType - IndividualTypeType**   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **BeforeAfterTypeType - CoupleTypeType**   *Attributes:*   **-**   **The powertype of BeforeAfterType**
CoupleTypeType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **CoupleTypeType - TupleTypeType**   *Association (source - target):* «place1Type»

This document is no longer extant and has been withdrawn.

CoupleTypeType - Type   *Association (source - target):* «place2Type»   **CoupleTypeType - Type**   *Attributes:*   -   The powertype of CoupleType
Data «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **Data - SymbolOrSymbolStringType**   *Attributes:*   -   A SymbolOrSymbolStringType that is a non arbitrary set of Symbols which may or may not convey meaning.
EndBoundaryType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **EndBoundaryType - TemporalBoundaryType**   *Attributes:*   -   The powertype of endBoundary.
ImmediateBeforeAfterType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **ImmediateBeforeAfterType - BeforeAfterType**   *Attributes:*   -   The powertype of immediateBeforeAfter.
Information «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **Information - SignType**   *Attributes:*   -   A SignType that is a non-arbitrary set of Signs which together convey meaning.
MeasureOfIndividualType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of):*«IDEAS:superSubtype»   **MeasureOfIndividualType - PropertyOfIndividualType**   *Association (source - target):*«place1Type»   **MeasureOfIndividualType - MeasureType**   *Attributes:*   -   The powertype of measureOfIndividual.
NonSign «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of):* «IDEAS:superSubtype»   **NonSign - SymbolOrSymbolString**   *Dependency (element - is instance of):* «IDEAS:powertypeInstance»

NonSign - NonSignType _Attributes:_ A SymbolOrSymbolString does not refer to anything. An example of this would be the symbol string that makes up an encryption key.
NonSignType «IDEAS:Powertype» _Connectors:_ _Generalization (element - is a subtype of):_ «IDEAS:superSubtype» **NonSignType - SymbolOrSymbolStringType** _Attributes:_ - The powertype of NonSign.
PropertyCategory «IDEAS:Type» _Connectors:_ _Generalization (element - is a subtype of):_«IDEAS:superSubtype» **PropertyCategory - PropertyType** _Attributes:_ - A PropertyType that specifies a recognised type of Property.
PropertyOfIndividualType «IDEAS:Powertype» _Connectors:_ _Generalization (element - is a subtype of):_«IDEAS:superSubtype» **PropertyOfIndividualType - TypeInstanceType** _Association (source - target):_«place2Type» **PropertyOfIndividualType «IDEAS:Powertype»** **PropertyOfIndividualType - IndividualType** _Association (source - target):_«place1Type» **PropertyOfIndividualType - PropertyType** _Attributes:_ - The powertype of propertyOfIndividual.
PropertyType «IDEAS:Powertype» _Connectors:_ _Generalization (element - is a subtype of):_«IDEAS:superSubtype» **PropertyType - IndividualTypeType** _Attributes:_ - The powertype of Property.
RepresentationInStructure «IDEAS:Type» _Connectors:_ _Generalization (element - is a subtype of):_ «IDEAS:superSubtype» **RepresentationInStructure - StructuredSignPartType** _Association (source - target):_ «place2Type» **RepresentationInStructure - Representation** _Association (source - target):_ «place1Type» **RepresentationInStructure - StructuredRepresentation** _Attributes:_ - A StructuredSignPartType that asserts a Representation is part of a StructuredRepresentation.

StartBoundaryType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **StartBoundaryType - TemporalBoundaryType** *Attributes:* **-** **The powertype of startBoundary.**
StructuredRepresentation «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **StructuredRepresentation - StructuredSignType** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **StructuredRepresentation - Representation** *Attributes:* **-** **A Representation that has parts that are also Representations.**
StructuredSign «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **StructuredSign - Sign** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **StructuredSign - StructuredSignType** *Attributes:* **-** **A Sign that has parts that are also Signs.**
StructuredSignPartType «IDEAS:Powertype» *Connectors:* *Association (source - target): «place2Type»* **StructuredSignPartType - SignType** *Association (source - target): «place1Type»* **StructuredSignPartType - StructuredSignType** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **StructuredSignPartType - WholePartType** *Attributes:* **-** **The powertype of structuredSignPart.**
StructuredSignType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **StructuredSignType - SignType** *Attributes:* **-** **The powertype of StructuredSign.**
Symbol «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **Symbol - SymbolOrSymbolString** *Dependency (element - is instance of): «IDEAS:powertypeInstance»*

Symbol - SymbolType _Attributes:_ - **A SymbolOrSymbolType that is a single Symbol.**
SymbolOrSymbolString «IDEAS:IndividualType» _Connectors:_ _Generalization (element - is a subtype of): «IDEAS:superSubtype»_ **SymbolOrSymbolString - Individual** _Dependency (element - is instance of): «IDEAS:powertypeInstance»_ **SymbolOrSymbolString - SymbolOrSymbolStringType** _Attributes:_ - **An Individual that collects either symbols or strings.**
SymbolOrSymbolStringType «IDEAS:Powertype» _Connectors:_ _Generalization (element - is a subtype of): «IDEAS:superSubtype»_ **SymbolOrSymbolStringType - IndividualType** _Attributes:_ - **The powertype of SymbolOrSymbolString.**
SymbolString «IDEAS:IndividualType» _Connectors:_ _Generalization (element - is a subtype of): «IDEAS:superSubtype»_ **SymbolString - SymbolOrSymbolString** **Dependency (element - is instance of): «IDEAS:powertypeInstance»** **SymbolString - SymbolStringType** _Attributes:_ - **A SymbolOrSymbolString whose extent is the fusion of two or more Symbols.**
SymbolStringType «IDEAS:Powertype» _Connectors:_ _Generalization (element - is a subtype of): «IDEAS:superSubtype»_ **SymbolStringType - SymbolOrSymbolStringType** _Attributes:_ - **The powertype of SymbolString.**
SymbolType «IDEAS:Powertype» _Connectors:_ _Generalization (element - is a subtype of): «IDEAS:superSubtype»_ **SymbolType - SymbolOrSymbolStringType** _Attributes:_ - **The powertype of Symbol.**
TemporalBoundaryType «IDEAS:Powertype» _Connectors:_ _Generalization (element - is a subtype of): «IDEAS:superSubtype»_ **TemporalBoundaryType - TemporalWholePartType** _Association (source - target): «place2Type»_

TemporalBoundaryType - IndividualType   *Attributes:*   **-**   **The powertype of temporalBoundary.**
TemporalWholePartTypeType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **TemporalWholePartTypeType - WholePartTypeType**   *Attributes:*   **-**   **The powertype of TemporalWholePartType.**
TimeRange «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **TimeRange - MeasureRange**   *Attributes:*   **-**   **A MeasureRange where the bounds are Times.**
TypeInstanceType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **TypeInstanceType - CoupleType**   *Association (source - target): «place2Type»*   **TypeInstanceType - Type**   *Association (source - target): «place1Type»*   **TypeInstanceType - Type**   *Attributes:*   **-**   **The powertype of typeInstance.**
WeakTemporalOrderingType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **WeakTemporalOrderingType - CoupleType**   *Association (source - target): «place2Type»*   **WeakTemporalOrderingType - IndividualType**   *Association (source - target): «place1Type»*   **WeakTemporalOrderingType - IndividualType**   *Attributes:*   **-**   **The powertype of weakTemporalOrdering.**
WholePartTypeType «IDEAS:Powertype»   *Connectors:*   *Association (source - target): «place1Type»*   **WholePartTypeType - IndividualTypeType**   *Association (source - target): «place2Type»*   **WholePartTypeType - IndividualTypeType**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **WholePartTypeType - CoupleTypeType**

Attributes:

-

The powertype of WholePartType.

ZeroDurationIndividual «IDEAS:IndividualType»

Connectors:

Dependency (element - is instance of): **«IDEAS:powertypeInstance»**

ZeroDurationIndividual - ZeroDurationIndividualType

Generalization (element - is a subtype of): **«IDEAS:superSubtype»**

ZeroDurationIndividual - Individual

Attributes:

-

An Individual whose temporal extent is zero, but whose spatial extent is not zero (i.e. finite or infinite).

ZeroDurationIndividualType «IDEAS:Powertype»

Connectors:

Generalization (element - is a subtype of): **«IDEAS:superSubtype»**

ZeroDurationIndividualType - IndividualType

Attributes:

-

The powertype of ZeroDurationIndividual.

durationWithinTimeRange «IDEAS:TupleType»

Connectors:

Generalization (element - is a subtype of): **«IDEAS:superSubtype»**

durationWithinTimeRange - measureOfType

Association (source - target): **«place2Type»**

durationWithinTimeRange - Duration

Association (source - target): **«place1Type»**

durationWithinTimeRange - TimeRange

Attributes:

-

A superSubtype where the subtype is the set of all periods that fall within the lower and upper bounds of the TimeRange which is the supertype.

immediateBeforeAfter «IDEAS:TupleType»

Connectors:

Dependency (element - is instance of): **«IDEAS:powertypeInstance»**

immediateBeforeAfter - ImmediateBeforeAfterType

Generalization (element - is a subtype of): **«IDEAS:superSubtype»**

immediateBeforeAfter - beforeAfter

Attributes:

-

A beforeAfter where the preceding Individual's temporal end adjoins the temporal start of the following Individual - i.e. one individual immediate follows the other.

lowerBoundOfTimeRange «IDEAS:TupleType»

Connectors:

Generalization (element - is a subtype of): **«IDEAS:superSubtype»**

lowerBoundOfTimeRange - lowerBoundOfMeasureRange

Association (source - target): **«place2Type»**

lowerBoundOfTimeRange - Time

Association (source - target): **«place1Type»**

lowerBoundOfTimeRange - TimeRange

Attributes:

This document is no longer extant and has been withdrawn.

- A lowerBoundOfMeasureRange where the lower bound is a Time and the range is s TimeRange.
propertyOfIndividual «IDEAS:TupleType» *Connectors:* *Dependency (element - is instance of):*«IDEAS:powertypeInstance» **propertyOfIndividual - PropertyOfIndividualType** *Generalization (element - is a subtype of):* «IDEAS:superSubtype» **propertyOfIndividual - typeInstance** *Association (source - target):* «place2Type» **propertyOfIndividual - Individual** *Association (source - target):* «place1Type» **propertyOfIndividual - Property** *Attributes:* - A typeInstance where the type is a Property and the instance is an Individual that asserts the Individual "has" the property.
propertyOfType «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):* «IDEAS:superSubtype» **propertyOfType - superSubtype** *Association (source - target):* «place2Type» **propertyOfType - IndividualType** *Association (source - target):* «place1Type» **propertyOfType - Property** *Attributes:* - A superSubtype where the subtype is an IndividualType and the supertype is a Property that asserts all members of the IndividualType "have" the Property.
structuredSignPart «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):* «IDEAS:superSubtype» **structuredSignPart - wholePart** *Dependency (element - is instance of):* «IDEAS:powertypeInstance» **structuredSignPart - StructuredSignPartType** *Association (source - target):* «place2Type» **structuredSignPart - Sign** *Association (source - target):* «place1Type» **structuredSignPart - StructuredSign** *Attributes:* - A wholePart where a StructuredSign has a part that is a Sign.
upperBoundOfTimeRange «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):* «IDEAS:superSubtype» **upperBoundOfTimeRange - upperBoundOfMeasureRange** *Association (source - target):* «place1Type» **upperBoundOfTimeRange - TimeRange** *Association (source - target):* «place2Type» **upperBoundOfTimeRange - Time** *Attributes:*

- An upperBoundOfMeasureRange where the upper bound is a Time and the range is s TimeRange.
weakTemporalOrdering «IDEAS:TupleType» *Connectors:* *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»** **weakTemporalOrdering - WeakTemporalOrderingType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **weakTemporalOrdering - couple** *Association (source - target):* **«place2Type»** **weakTemporalOrdering - Individual** *Association (source - target):* **«place1Type»** **weakTemporalOrdering - Individual** *Attributes:* - A couple that asserts one Individual starts before another - i.e. the start temporal boundary of one occurs before the start temporal boundary of the other. Note: this includes cases where one Individual starts *and* ends before the other (see beforeAfter).
SingletonIndividualTypeType «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **SingletonIndividualTypeType -Singleton** *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **SingletonIndividualTypeType - IndividualTypeType** *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **SingletonIndividualTypeType - SetOfOwnedStateSets** *Attributes:* - An IndividualTypeType that has only one member.
singletonIndividualTypeTypeInstance «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):***«IDEAS:superSubtype»** **singletonIndividualTypeTypeInstance - singletonTypeInstance** *Association (source - target):***«place2Type»** **singletonIndividualTypeTypeInstance - IndividualType** *Association (source - target):***«place1Type»** **singletonIndividualTypeTypeInstance - SingletonIndividualTypeType** *Attributes:* - A singletonTypeInstance where the type is a SingletonIndividualTypeType and the instance is an IndividualType.
incompletePartitionOfSetsOfIndividuals «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **incompletePartitionOfSetsOfIndividuals - WholePartType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **incompletePartitionOfSetsOfIndividuals - incompletePartitionOfSetsOfThings** *Association (source - target):* **«place2Type»** **incompletePartitionOfSetsOfIndividuals - SetOfDisjointIndividuals** *Attributes:* -

This document is no longer extant and has been withdrawn.

An instance of this type contains all wholes-parts couples that link an element with each type in a set of disjoint elements that incompletely partition it. The ontic cardinalities are different from the epistemic ones.

incompletePartitionOfSetsOfThings «IDEAS:Type»

Connectors:

Generalization (element - is a subtype of): «IDEAS:superSubtype»

incompletePartitionOfSetsOfThings - CoupleType

Association (source - target): «place1Type»

incompletePartitionOfSetsOfThings - Singleton

Association (source - target): «place2Type»

incompletePartitionOfSetsOfThings - SetOfDisjointThings

Attributes:

-

An instance of this type contains all couples that link the incomplete partition of a set of objects with the object being partitioned. In this framework, an complete partition (AKA a partition) is the limiting case of a partition. For more detail, see its sub-types.

incompletePartitionOfSetsOfTypes «IDEAS:Type»

Connectors:

Generalization (element - is a subtype of): «IDEAS:superSubtype»

incompletePartitionOfSetsOfTypes - SuperSubtypeType

Generalization (element - is a subtype of): «IDEAS:superSubtype»

incompletePartitionOfSetsOfTypes - incompletePartitionOfSetsOfThings

Association (source - target): «place2Type»

incompletePartitionOfSetsOfTypes - SetOfDisjointTypes

Attributes:

-

An instance of this type contains all super-sub-types couples that link a type with each type in a set of disjoint types that incompletely partition it. The ontic cardinalities are different from the epistemic ones.

3.4 Patterns

3.4.1 Body capable of process diagrams
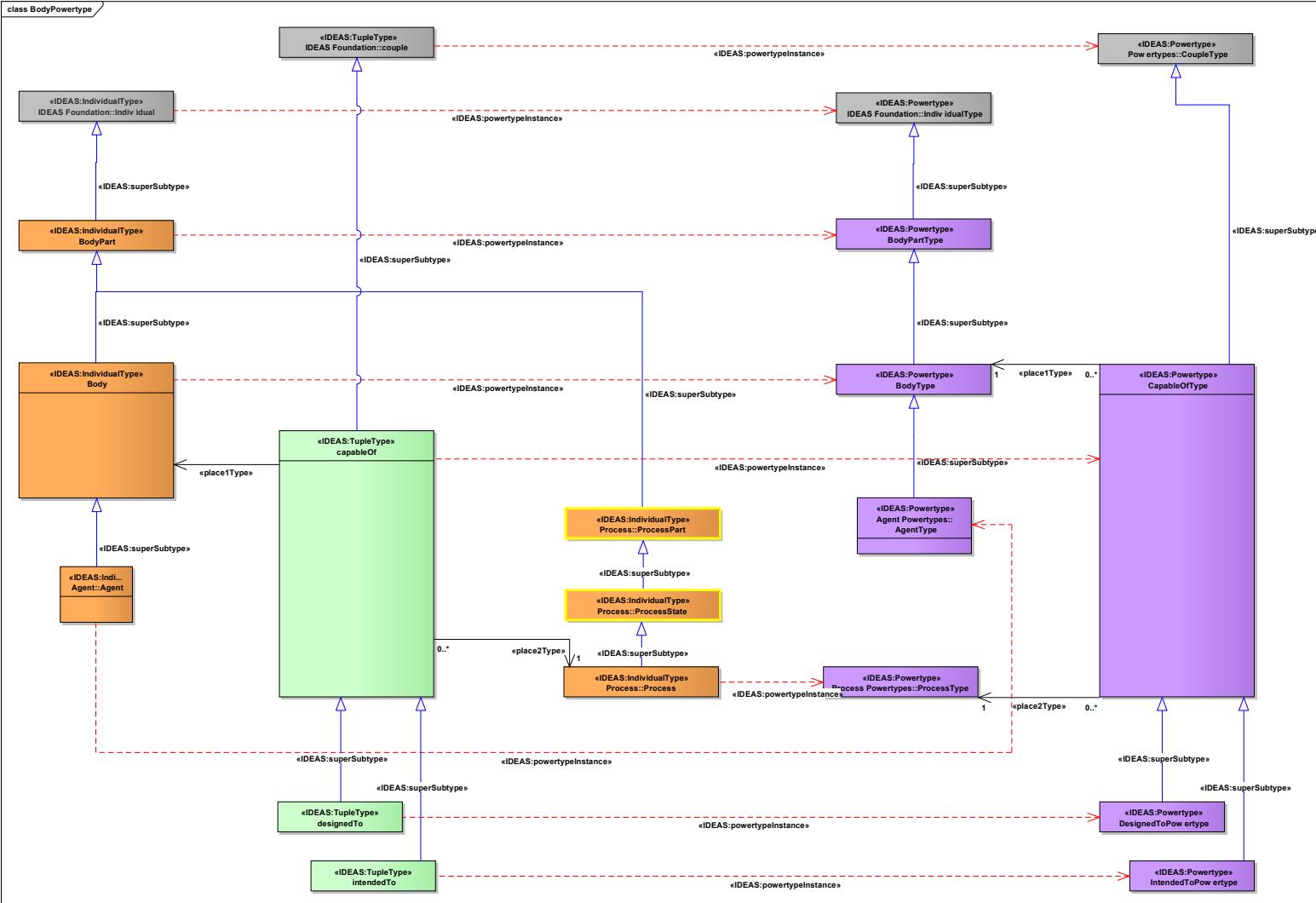
Figure 115 : BodyPowertype

This document is no longer extant and has been withdrawn.
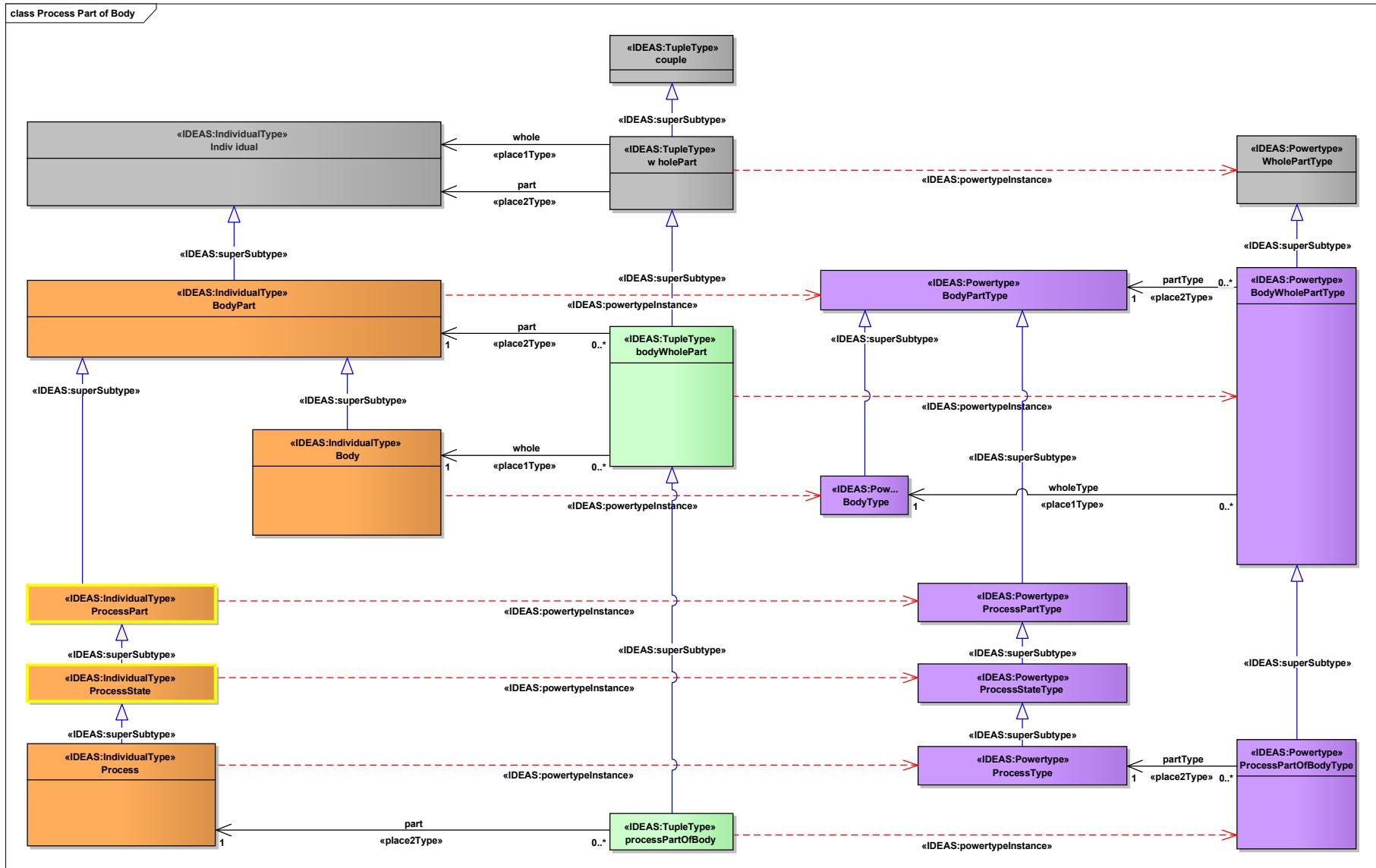
Figure 116 : Process Part of Body

3.4.2 Body capable of process elements list

Foundation additions Body capable of process
Body «IDEAS:IndividualType» *Connectors:* *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»** **Body - BodyType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **Body - BodyPart** *Attributes:* **-** **An Individual that is capable of performing a Process.**
BodyPart «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **BodyPart - Individual** *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»** **BodyPart - BodyPartType** *Attributes:* **-** **An Individual that is a part of a Body.**
BodyPartType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **BodyPartType - IndividualType** *Attributes:* **-** **The powertype of BodyPart.**
BodyType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **BodyType - BodyPartType** *Attributes:* **-** **The powertype of Body.**
BodyWholePartType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **BodyWholePartType - WholePartType** *Association (source - target):* **«place2Type»** **BodyWholePartType - BodyPartType** *Association (source - target):* **«place1Type»** **BodyWholePartType - BodyType** *Attributes:* **-** **The powertype of bodyWholePart.**

CapableOfType «IDEAS:Powertype» *Connectors:* *Association (source - target):* **«place2Type»** **CapableOfType - ProcessType** *Association (source - target):* **«place1Type»** **CapableOfType - BodyType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **CapableOfType - CoupleType** *Attributes:* **-** **A powertype of capableOf.**
DesignedToPowertype «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **DesignedToPowertype - CapableOfType** *Attributes:* **-** **A powertype of designedTo.**
IntendedToPowertype «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **IntendedToPowertype - CapableOfType** *Attributes:* **-** **A powertype of intendedTo.**
ProcessPartOfBodyType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ProcessPartOfBodyType - BodyWholePartType** *Association (source - target):* **«place2Type»** **ProcessPartOfBodyType - ProcessType** *Attributes:* **-** **The powertype of processPartOfBody.**
bodyTypeSuperSubType «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **bodyTypeSuperSubType - superSubtype** *Association (source - target):* **«place2Type»** **bodyTypeSuperSubType - BodyType** *Association (source - target):* **«place1Type»** **bodyTypeSuperSubType - BodyType** *Attributes:* **-** **A superSubtype whose superType and subType are BodyTypes.**

bodyWholePart «IDEAS:TupleType»
Connectors:
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
bodyWholePart - BodyWholePartType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
bodyWholePart - wholePart
Association (source - target): **«place2Type»**
bodyWholePart - BodyPart
Association (source - target): **«place1Type»**
bodyWholePart - Body
Attributes:
-
A wholePart that asserts an Individual is part of a Body.

capableOf «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
capableOf - couple
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
capableOf - CapableOfType
Association (source - target): **«place1Type»**
capableOf - Body
Association (source - target): **«place2Type»**
capableOf - Process
Attributes:
-
A couple that asserts that a Body is capable of having a Process as part of it.

designedTo «IDEAS:TupleType»
Connectors:
*Dependency (element - is instance of):***«IDEAS:powertypeInstance»**
designedTo - DesignedToPowertype
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
designedTo - capableOf
Attributes:
-
A capableOf that asserts that a Body is designed to have a Process as part of it.

intendedTo «IDEAS:TupleType»
Connectors:
*Generalization (element - is a subtype of):***«IDEAS:superSubtype»**
intendedTo - capableOf
*Dependency (element - is instance of):***«IDEAS:powertypeInstance»**
intendedTo - IntendedToPowertype
Attributes:
-
A capableOf that asserts that a Body is intended to have a Process as part of it.

processPartOfBody «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
processPartOfBody - bodyWholePart
Dependency (element - is instance of): «IDEAS:powertypeInstance»
processPartOfBody - ProcessPartOfBodyType
Association (source - target): «place2Type»
processPartOfBody - Process
Attributes:
-
A bodyWholePart where the part is an entire Process - i.e. the process is entirely within the extent of the Body.

3.4.3 Temporal border diagrams
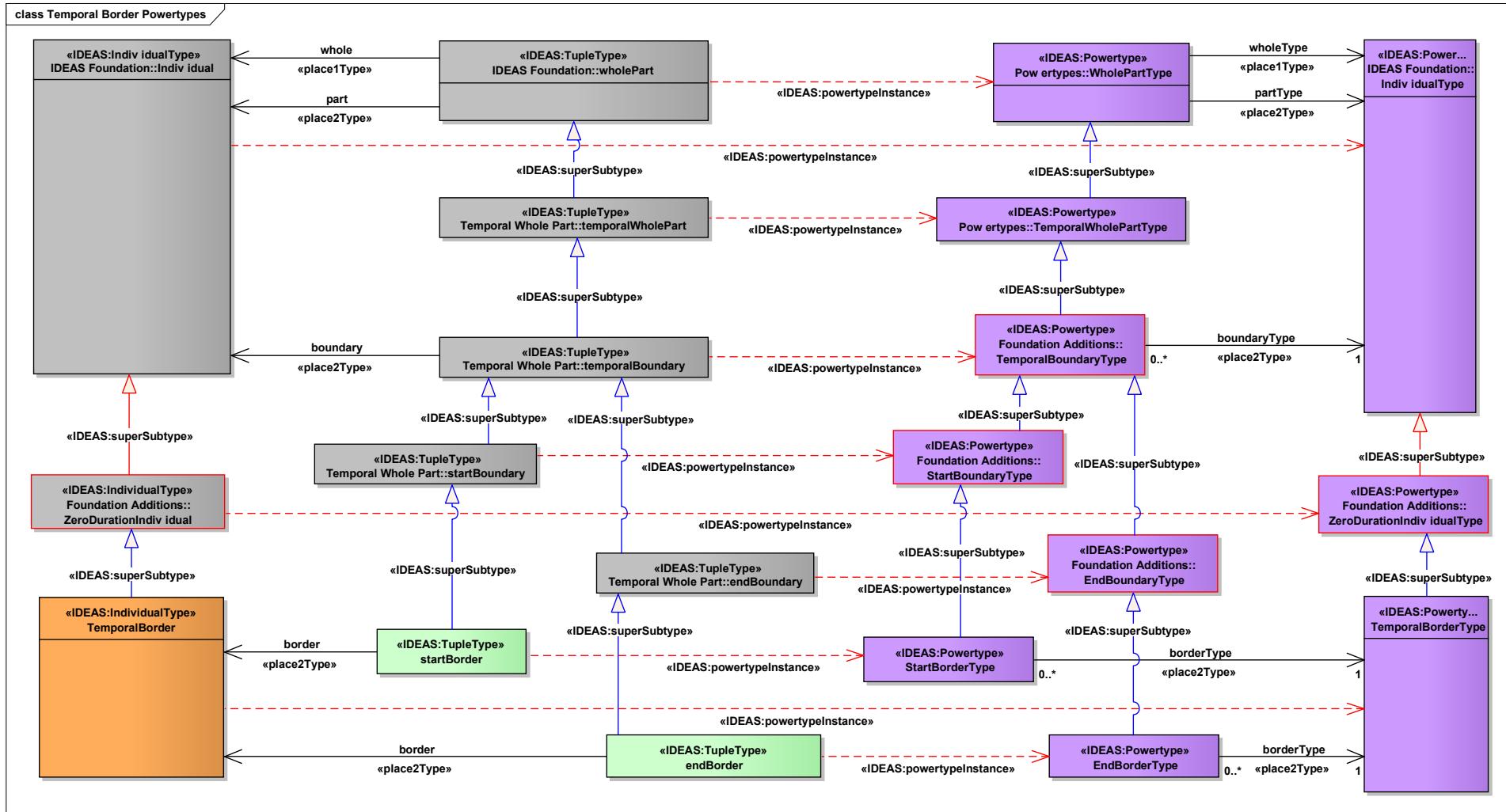
Figure 117: Temporal Border Powertypes

3.4.4 Temporal border elements list

Temporal border
EndBorderType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **EndBorderType - EndBoundaryType** *Association (source - target):* **«place2Type»** **EndBorderType - TemporalBorderType** *Attributes:* **-** **The powertype of endBorder.**
StartBorderType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **StartBorderType - StartBoundaryType** *Association (source - target):* **«place2Type»** **StartBorderType - TemporalBorderType** *Attributes:* **-** **The powertype of startBorder.**
TemporalBorder «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **TemporalBorder - ZeroDurationIndividual** *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»** **TemporalBorder - TemporalBorderType** *Attributes:* **-** **An Individual whose temporal extent is instantaneous, and whose spatial extent corresponds with the start or end of the Individuals for which it is the temporal border.**
TemporalBorderType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **TemporalBorderType - ZeroDurationIndividualType** *Attributes:* **-** **The powertype of TemporalBorder.**
endBorder «IDEAS:TupleType» *Connectors:* *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»** **endBorder - EndBorderType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **endBorder - endBoundary** *Association (source - target):* **«place2Type»** **endBorder - TemporalBorder** *Attributes:* **-** **An endBoundary where the boundary is a TemporalBorder.**

startBorder «IDEAS:TupleType»
Connectors:
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
startBorder - StartBorderType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
startBorder - startBoundary
Association (source - target): **«place2Type»**
startBorder - TemporalBorder
Attributes:
-
A startBoundary where the boundary is a TemporalBorder.

3.4.5 **State and interaction diagrams**

class 10 - improper instance-wise disjoint state sets
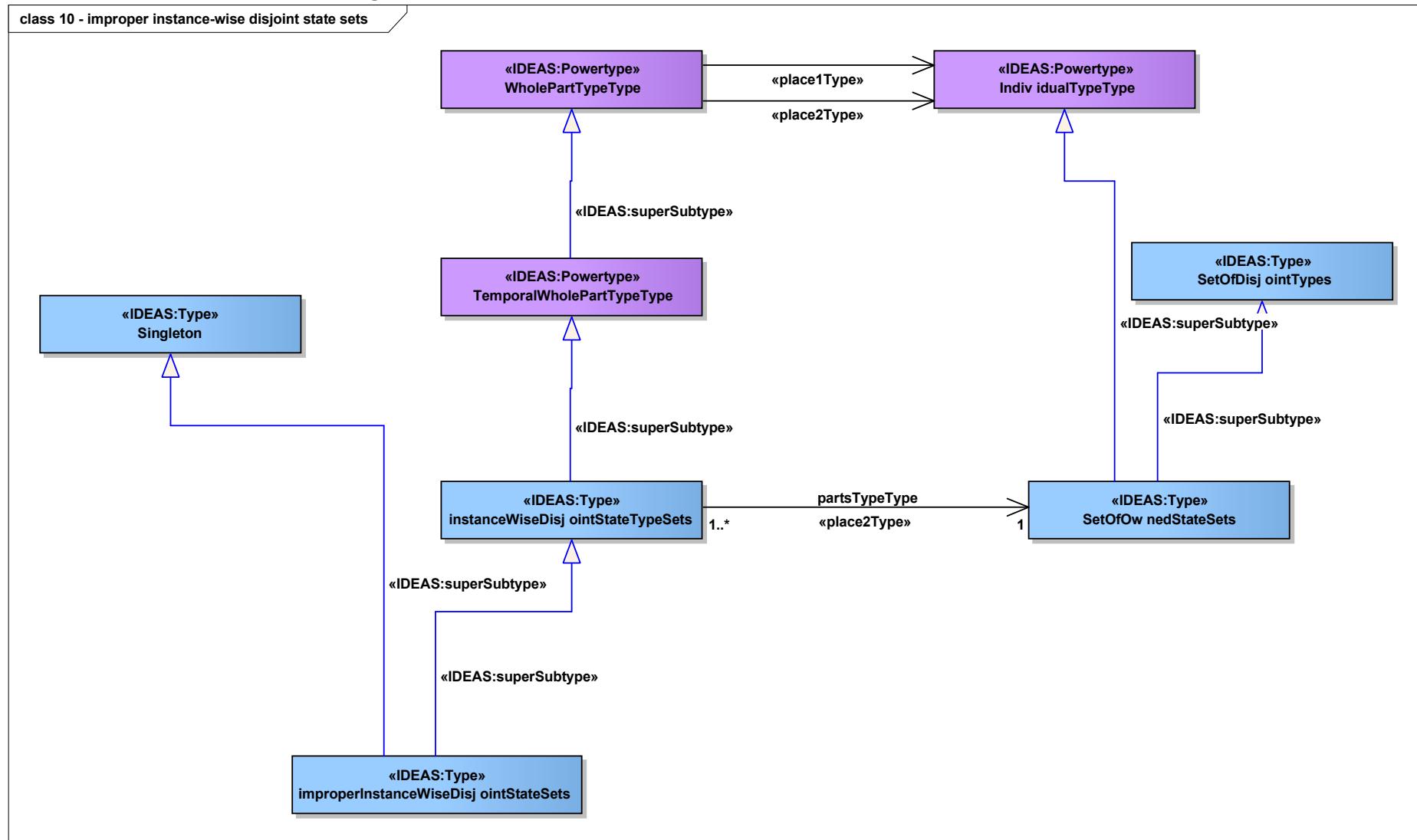
Figure 118 : improper instance-wise disjoint state sets
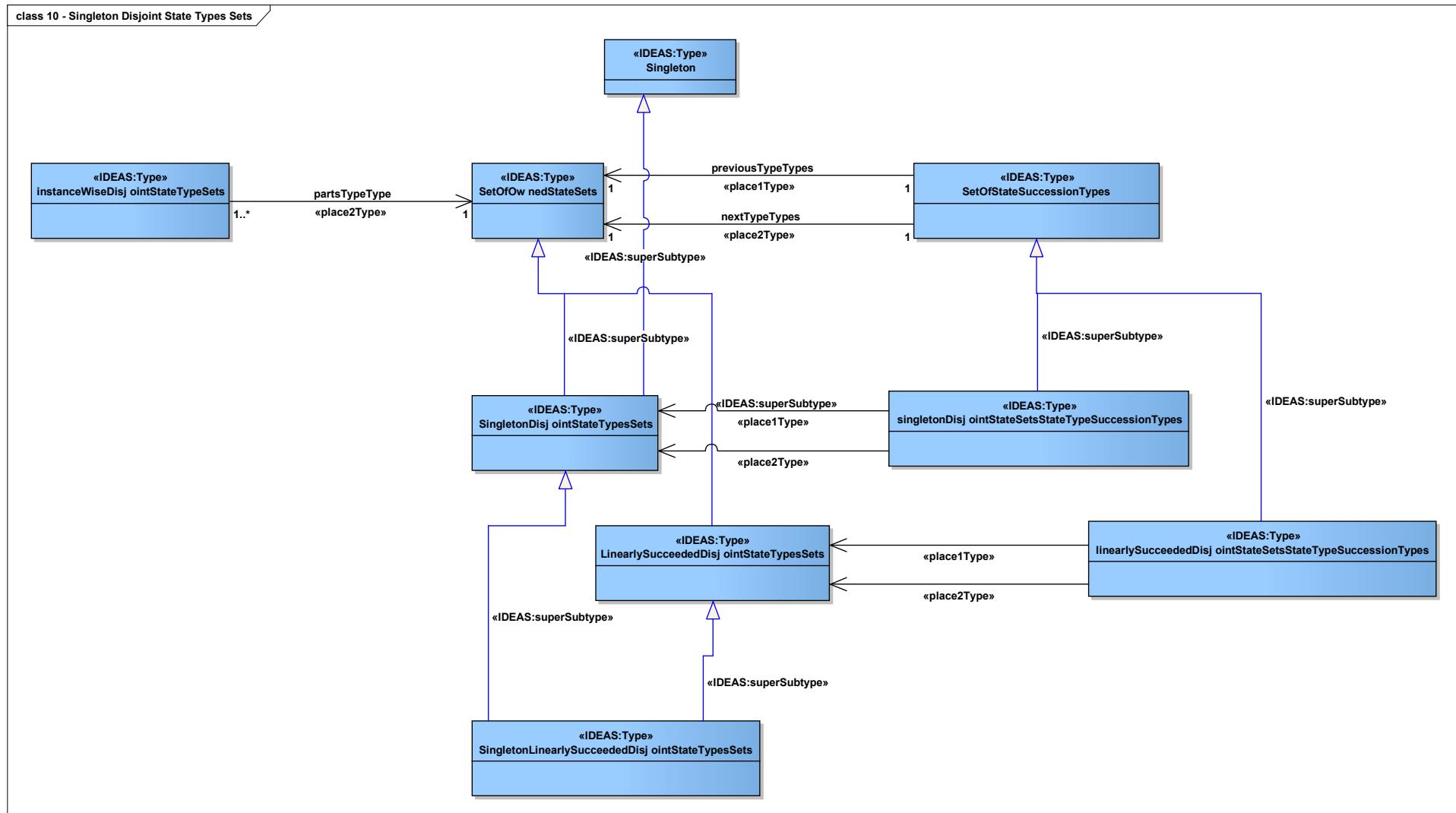
Figure 119 : Singleton Disjoint State Types Sets

This document is no longer extant and has been withdrawn.
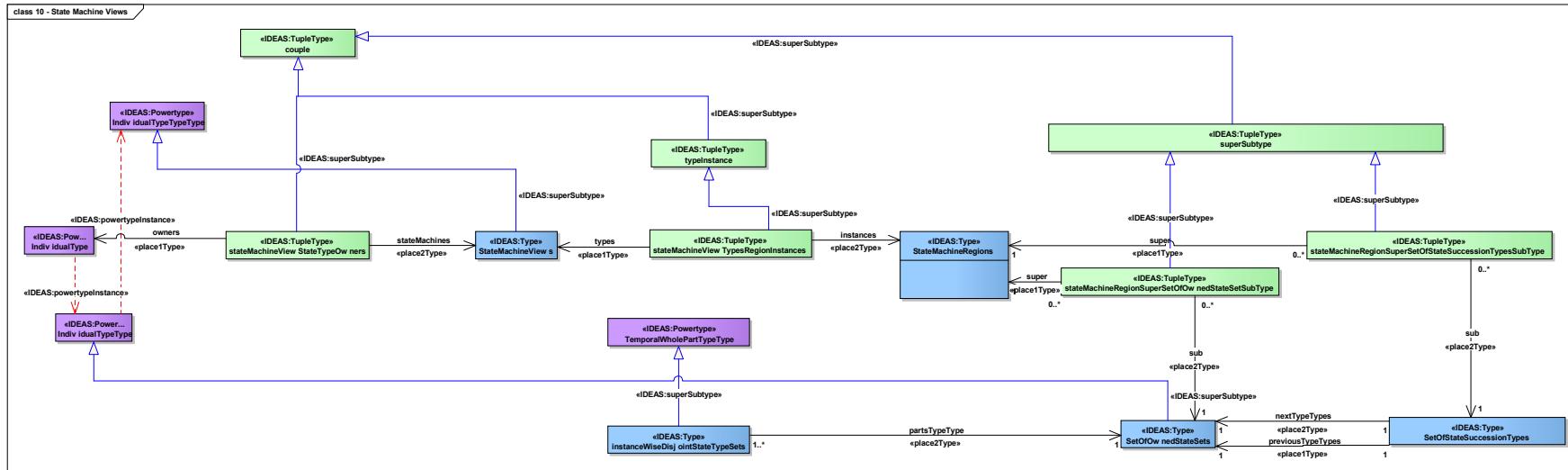
Figure 120 : State Machine Views
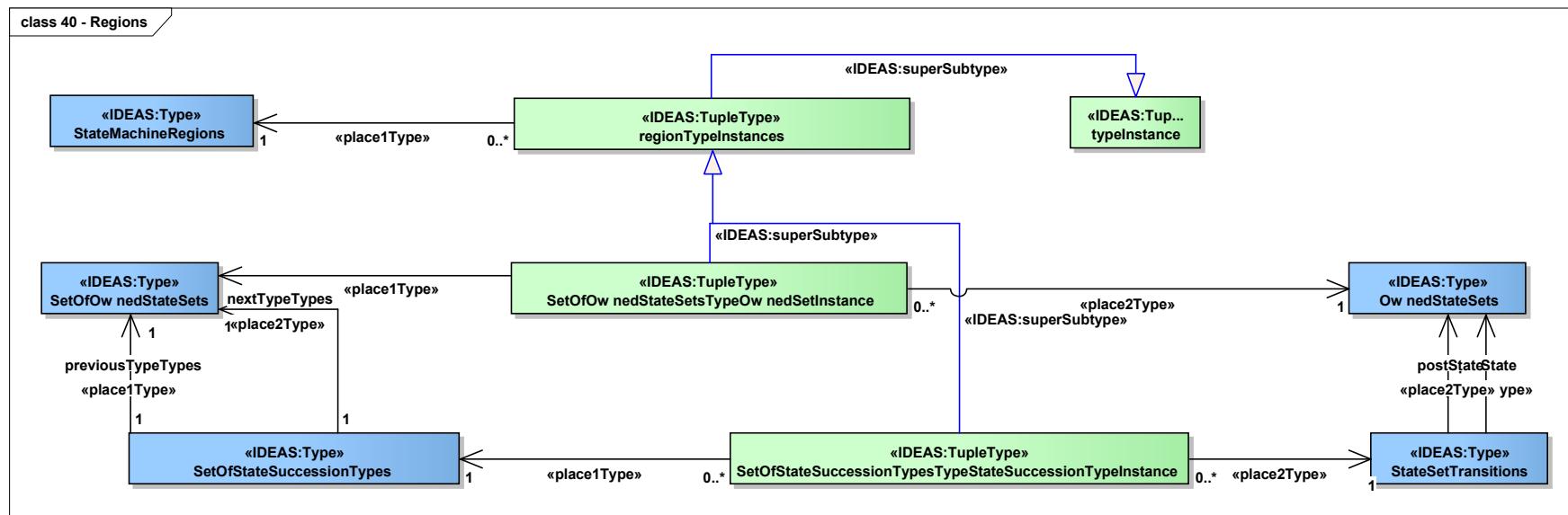
Figure 121 : Regions

This document is no longer extant and has been withdrawn.
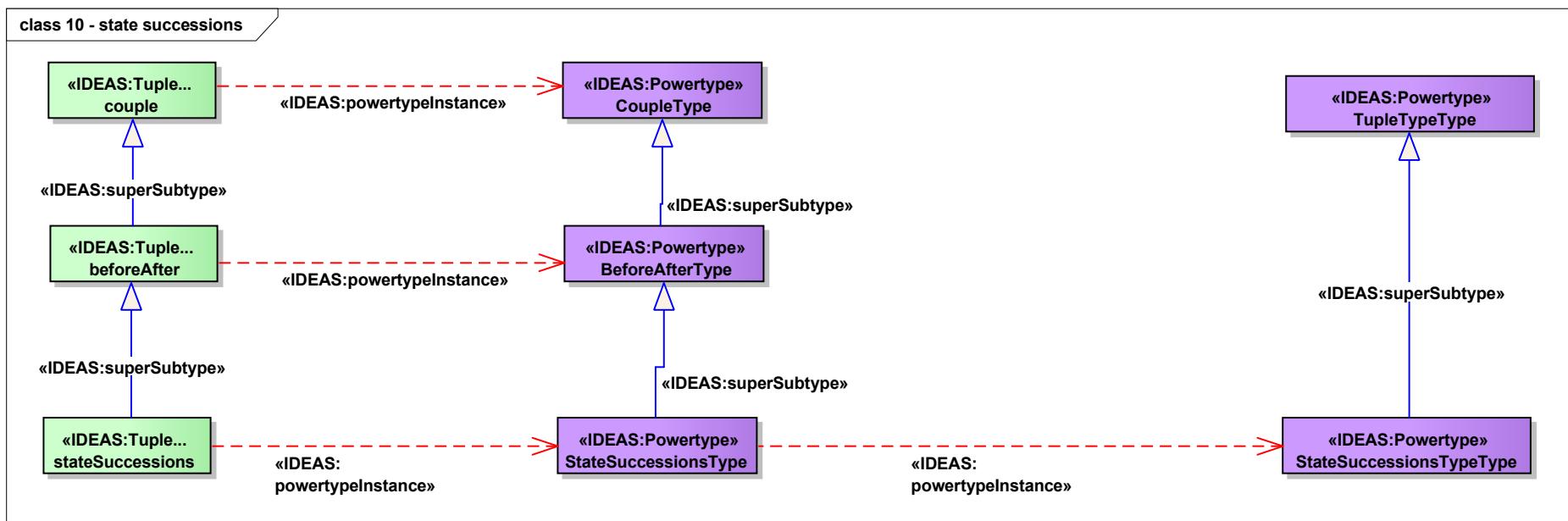
Figure 122 : state successions
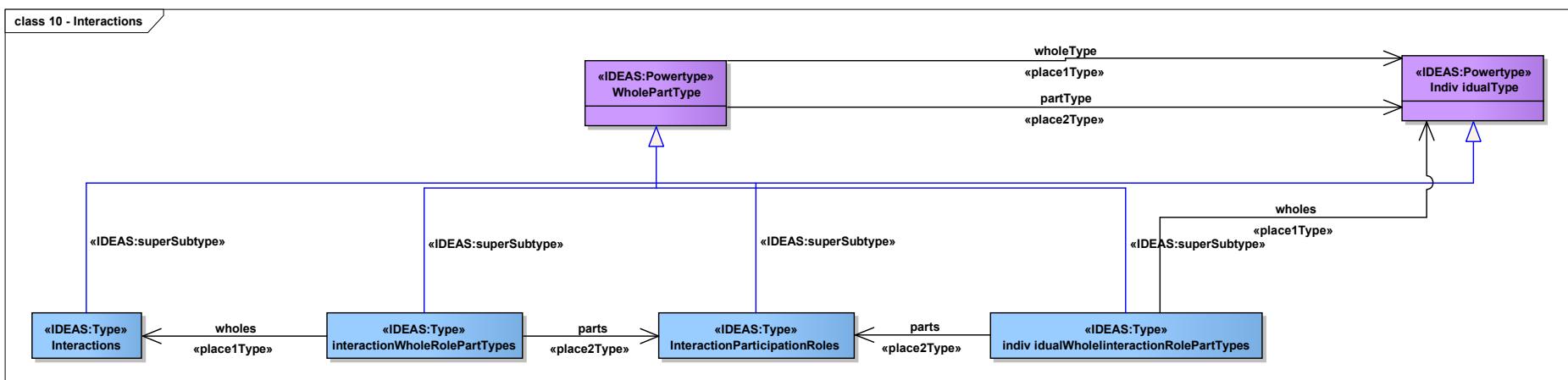
Figure 123 : Interactions

This document is no longer extant and has been withdrawn.

class 20 - Interaction Views

«IDEAS:Type»
Type

«IDEAS:Tup...»
typeInstance

type
«place1Type»

«IDEAS:superSubtype»

«IDEAS:superSubtype»

«IDEAS:Type»
InteractionView s

typeTypes
«place1Type»

«IDEAS:TupleType»
interactionView TypesInstances

«IDEAS:superSubtype»

«IDEAS:TupleType»
interactionView TypesInteractionSingletonInstances

«IDEAS:superSubtype»

instanceTypes
«place2Type»

«IDEAS:Type»
InteractionSingleton

«IDEAS:superSubtype»

«place1Type»

«IDEAS:TupleType»
interactionView TypesInteractionWholeRoleView PartSetsInstances

«IDEAS:superSubtype»

instanceTypes
«place2Type»

«IDEAS:Type»
InteractionWholeRoleView PartsSets

«IDEAS:superSubtype»

«place2Type»

«IDEAS:TupleType»
interactionView TypesInteractionRoleView SetsInstances

instanceTypes
«place2Type»

«IDEAS:superSubtype»

«IDEAS:Type»
InteractionRolesView Sets

«place2Type»

«IDEAS:TupleType»
interactionView TypesWholeInteractionRoleView SetsPartsInstances

instanceTypes
«place2Type»

«IDEAS:Type»
WholeInteractionRoleView SetsParts

«IDEAS:TupleType»
interactionView typesSendReceiv eView SetInstances

instance types
«place2Type»

«IDEAS:Type»
SendReceiv eInteractingStateTypesView Set

«IDEAS:TupleType»
interactionView TypesInteractionRoleStateMachineView sInstances

instanceTypes
«place2Type»

«IDEAS:Type»
InteractionRoleStateMachineView s

Figure 124 : Interaction Views

This document is no longer extant and has been withdrawn.
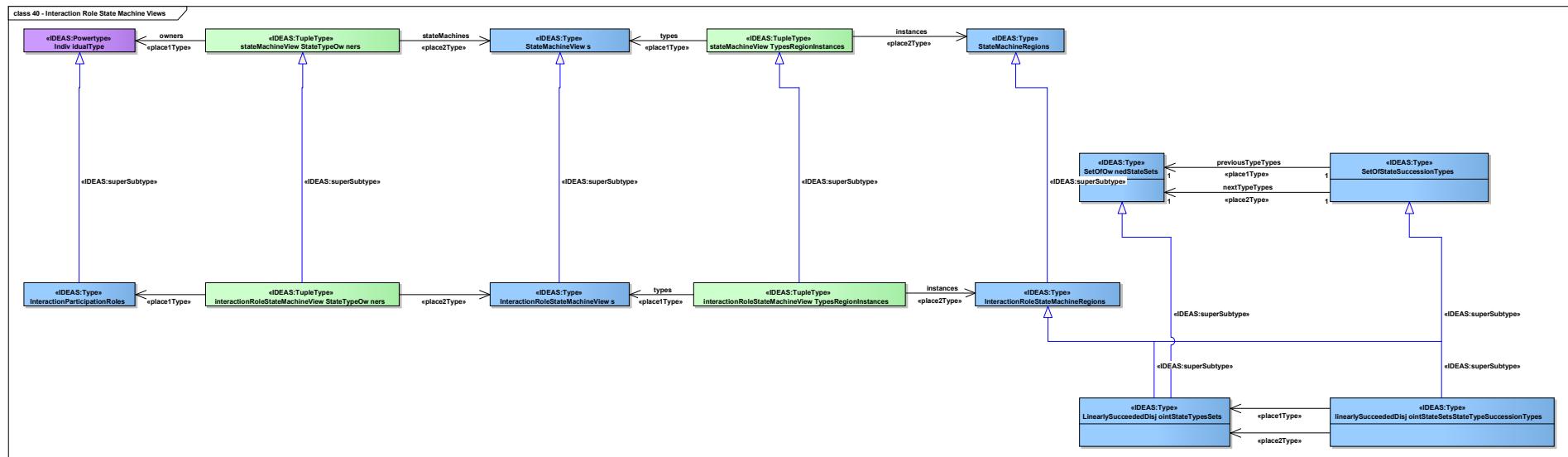
Figure 125 : Interaction Role State Machine Views
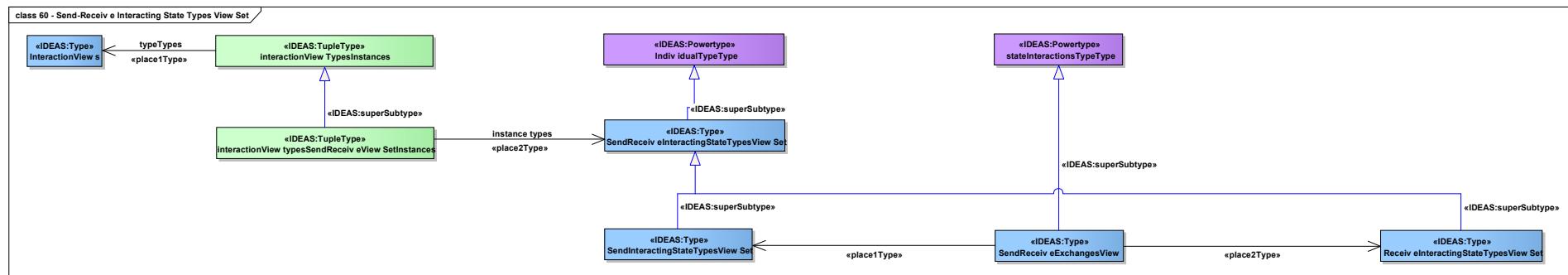
Figure 126 : Send-Receive Interacting State Types View Set

class 10 - state interactions

«IDEAS:Tupl...
couple

«IDEAS:powertypeInstance»

«IDEAS:Powertype»
CoupleType

«IDEAS:Powertype»
TupleTypeType

«IDEAS:superSubtype»

«IDEAS:superSubtype»

«IDEAS:Tupl...
beforeAfter

«IDEAS:powertypeInstance»

«IDEAS:Powertype»
BeforeAfterType

«IDEAS:superSubtype»

«IDEAS:superSubtype»

«IDEAS:superSubtype»

«IDEAS:Tupl...
stateInteractions

«IDEAS:powertypeInstance»

«IDEAS:Powertype»
stateInteractionsType

«IDEAS:powertypeInstance»

«IDEAS:Powertype»
stateInteractionsTypeType
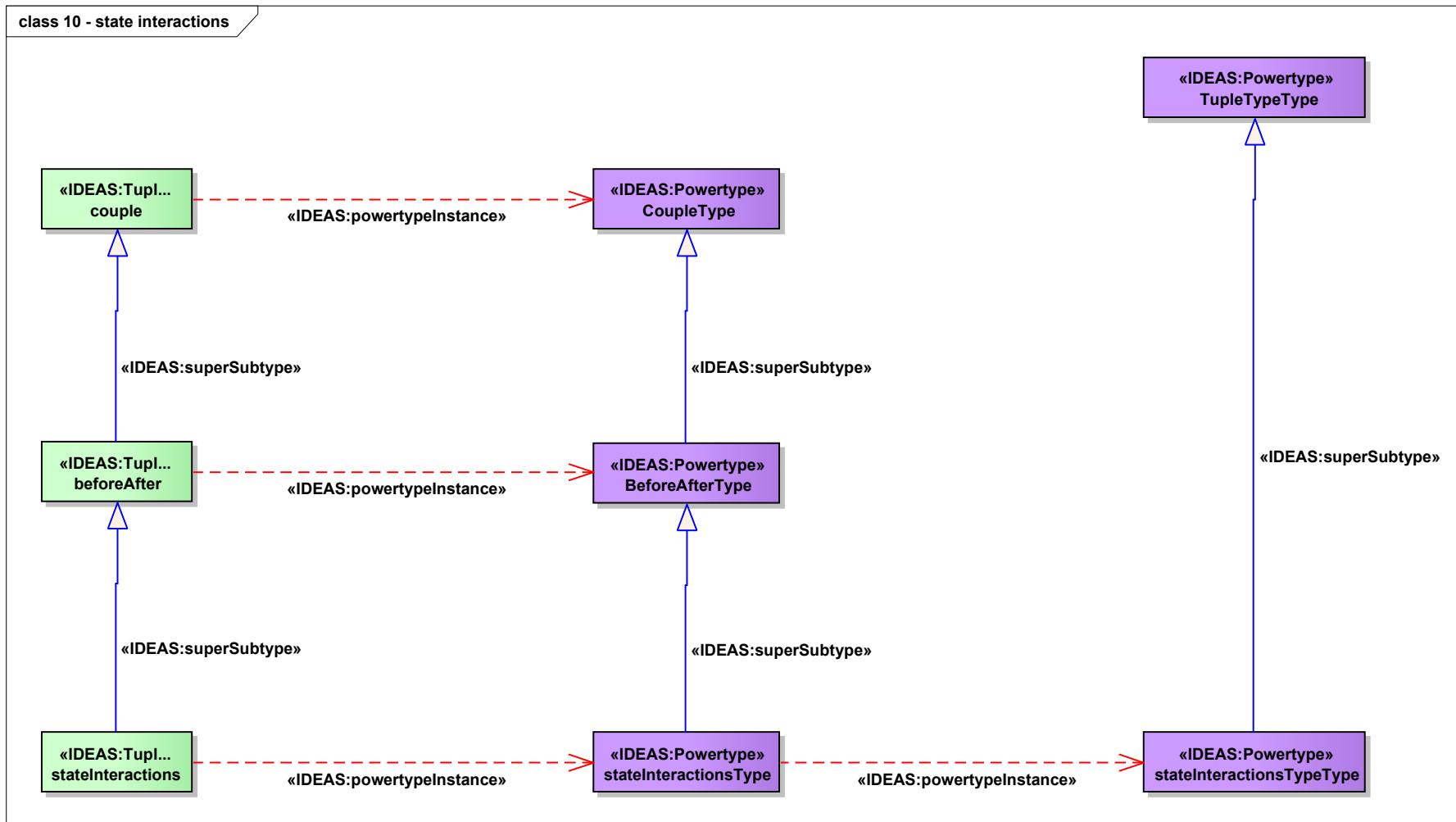
Figure 127 : state interactions

This document is no longer extant and has been withdrawn.
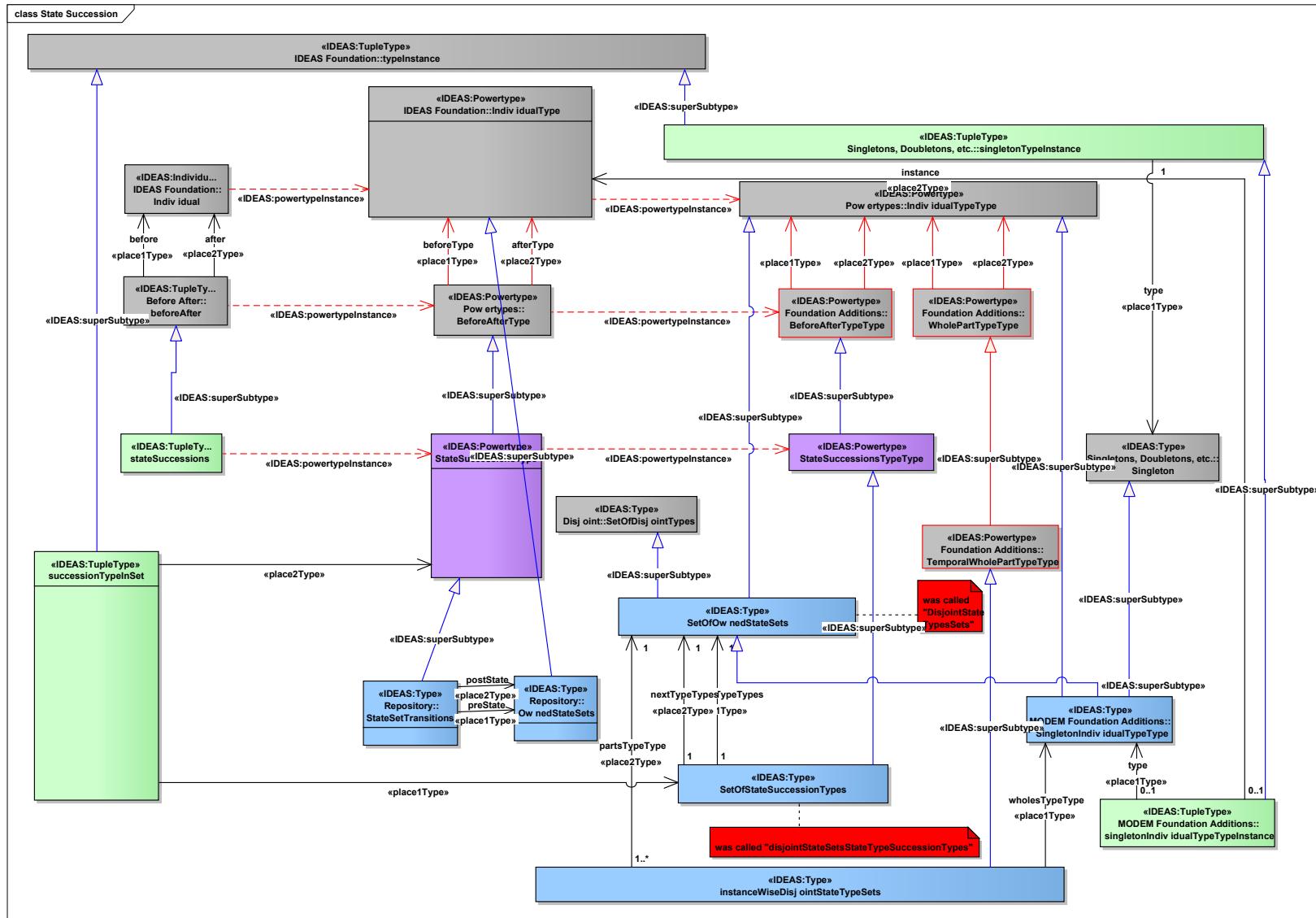
Figure 128 : State Succession

3.4.6 State and interactions elements list

State machine views
OwnedStateSets «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* «IDEAS:superSubtype» OwnedStateSets - IndividualType *Dependency (element - is instance of):* «IDEAS:powertypeInstance» OwnedStateSets - OwnedStateSetsType *Attributes:* - An IndividualType that contains all the state for an owning IndividualType.
OwnedStateSetsType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* «IDEAS:superSubtype» OwnedStateSetsType - IndividualTypeType *Attributes:* - A powertype of OwnedStateSetsType.
SetOfOwnedStateSetsTypeOwnedSetInstance «IDEAS:TupleType» *Connectors:* *Association (source - target):* «place1Type» SetOfOwnedStateSetsTypeOwnedSetInstance - SetOfOwnedStateSets *Generalization (element - is a subtype of):* «IDEAS:superSubtype» SetOfOwnedStateSetsTypeOwnedSetInstance - RegionTypeInstances *Association (source - target):* «place2Type» SetOfOwnedStateSetsTypeOwnedSetInstance - OwnedStateSets *Attributes:* - A regionTypeInstance that asserts an OwnedStateSet is an instance of a SetOfOwnedStateSets.
SetOfStateSuccessionTypesTypeStateSuccessionTypeInstance «IDEAS:TupleType» *Connectors:* *Association (source - target):* «place2Type» SetOfStateSuccessionTypesTypeStateSuccessionTypeInstance - StateSetTransitions *Generalization (element - is a subtype of):* «IDEAS:superSubtype» SetOfStateSuccessionTypesTypeStateSuccessionTypeInstance - RegionTypeInstances *Association (source - target):* «place1Type» SetOfStateSuccessionTypesTypeStateSuccessionTypeInstance - SetOfStateSuccessionTypes *Attributes:* - A regionTypeInstance that asserts an StateSetTransitions is an instance of a SetOfStateSuccessionTypes.
StateMachineRegions «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of):* «IDEAS:superSubtype» StateMachineRegions - Type *Attributes:* - A Type that has a subTypes one SetOfOwnedStateSets and its associated SetOfStateSuccessionTypes.

This document is no longer extant and has been withdrawn.

StateMachineViews «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **StateMachineViews - IndividualTypeTypeType** *Attributes:* - **An IndividualTypeTypeType that contains one or more StateMachineViews as instances.**
StateSetTransitions «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **StateSetTransitions - transitions** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **StateSetTransitions - stateSetTransitionsType** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **StateSetTransitions - stateSuccessionsType** *Association (source - target): «place2Type»* **StateSetTransitions - OwnedStateSets** *Association (source - target): «place1Type»* **StateSetTransitions - OwnedStateSets** *Attributes:* - **A Transitions and a stateSuccessionType that asserts transitions for an OwnedStateSets.**
regionTypeInstances «IDEAS:TupleType» *Connectors:* *Association (source - target):«place1Type»* **regionTypeInstances - StateMachineRegions** *Generalization (element - is a subtype of):«IDEAS:superSubtype»* **regionTypeInstances - typeInstance** *Attributes:* - **A typeInstance that asserts a StateMachineRegion is a type of some instance.**
stateMachineRegionSuperSetOfOwnedStateSetSubType «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **stateMachineRegionSuperSetOfOwnedStateSetSubType - superSubtype** *Association (source - target): «place2Type»* **stateMachineRegionSuperSetOfOwnedStateSetSubType - SetOfOwnedStateSets** *Association (source - target): «place1Type»* **stateMachineRegionSuperSetOfOwnedStateSetSubType - StateMachineRegions** *Attributes:* - **A superSubType that asserts a SetOfOwnedStateSets is a subType of a StateMachineRegion.**
stateMachineRegionSuperSetOfStateSuccessionTypesSubType «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **stateMachineRegionSuperSetOfStateSuccessionTypesSubType - superSubtype** *Association (source - target): «place2Type»* **stateMachineRegionSuperSetOfStateSuccessionTypesSubType - SetOfStateSuccessionTypes**

Association (source - target): «place1Type»
stateMachineRegionSuperSetOfStateSuccessionTypesSubType - StateMachineRegions
<u>*Attributes:*</u>
-
A superSubType that asserts a SetOfStateSuccessionTypes is a subType of a StateMachineRegion.

stateMachineViewStateTypeOwners «IDEAS:TupleType»
<u>*Connectors:*</u>
Generalization (element - is a subtype of): «IDEAS:superSubtype»
stateMachineViewStateTypeOwners - couple
Association (source - target): «place1Type»
stateMachineViewStateTypeOwners - IndividualType
Association (source - target): «place2Type»
stateMachineViewStateTypeOwners - StateMachineViews
<u>*Attributes:*</u>
-
A couple that asserts that an IndividualType is a type of owner of a StateMachine View.

stateMachineViewTypesRegionInstances «IDEAS:TupleType»
<u>*Connectors:*</u>
Generalization (element - is a subtype of): «IDEAS:superSubtype»
stateMachineViewTypesRegionInstances - typeInstance
Association (source - target): «place2Type»
stateMachineViewTypesRegionInstances - StateMachineRegions
Association (source - target): «place1Type»
stateMachineViewTypesRegionInstances - StateMachineViews
<u>*Attributes:*</u>
-
A typeInstance that asserts a StateMachineRegion is an instance of a StateMachineViews.

stateSetOwners «IDEAS:Type»
<u>*Connectors:*</u>
Generalization (element - is a subtype of): «IDEAS:superSubtype»
stateSetOwners - TemporalWholePartType
Dependency (element - is instance of): «IDEAS:powertypeInstance»
stateSetOwners - stateSetOwnersType
Association (source - target): «place2Type»
stateSetOwners - OwnedStateSets
Association (source - target): «place1Type»
stateSetOwners - IndividualType
<u>*Attributes:*</u>
-
A TemporalWholeParttype that asserts an OwnedStateSet is a type of temporal part of the owning IndividualType.

stateSetOwnersType «IDEAS:Powertype»
<u>*Connectors:*</u>
Generalization (element - is a subtype of): «IDEAS:superSubtype»
stateSetOwnersType - TemporalWholePartTypeType
<u>*Attributes:*</u>
-
A powertype of StateSetOwners.

stateSetTransitionsType «IDEAS:Powertype»
**Connectors:**
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
stateSetTransitionsType - StateSuccessionsTypeType
**Attributes:**
-
A powertype of StateSetTransitions.

transitions «IDEAS:Type»
**Connectors:**
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
transitions - CoupleType
**Attributes:**
-
A CoupleType.

|---|
| **Interaction view patterns** |

InteractionParticipationRoles «IDEAS:Type»
**Connectors:**
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
InteractionParticipationRoles - IndividualType
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
InteractionParticipationRoles - InteractionParticipationRolesType
**Attributes:**
-
An IndividualType that is the type of participation of an Individual in an Interaction. For example, 'Waiter role in Eat Restaurant Meal'.

InteractionParticipationRolesType «IDEAS:Powertype»
**Connectors:**
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
InteractionParticipationRolesType - IndividualTypeType
**Attributes:**
-
The powertype of InteractionParticipationRoles.

InteractionRoleStateMachineRegions «IDEAS:Type»
**Connectors:**
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
InteractionRoleStateMachineRegions - StateMachineRegions
**Attributes:**
-
A StateMachineRegions for a InteractionRoleStateMachineView.

InteractionRoleStateMachineViews «IDEAS:Type»
**Connectors:**
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
InteractionRoleStateMachineViews - StateMachineViews
**Attributes:**
-
A StateMachineView for a InteractionParticipationRole.

InteractionRolesViewSets «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
InteractionRolesViewSets - InteractionParticipationRolesType
Attributes:
-
A InteractionParticipationRolesType that is a set of the InteractionParticipationRoles in the InteractionView.

InteractionSingleton «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
InteractionSingleton - InteractionsType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
InteractionSingleton - Singleton
Attributes:
-
An InteractionType and a Singleton.

InteractionViews «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
InteractionViews - Type
Attributes:
-
A Type that contains as instances all the elements of the view.

InteractionWholeRoleViewPartsSets «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
InteractionWholeRoleViewPartsSets - WholePartTypeType
Association (source - target): «place1Type»
InteractionWholeRoleViewPartsSets - InteractionSingleton
Association (source - target): «place2Type»
InteractionWholeRoleViewPartsSets - InteractionRolesViewSets
Attributes:
-
A WholePartTypeType that asserts the InteractionParticipationRolesType is a type of part of the InteractionSingleton.

Interactions «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Interactions - IndividualType
Dependency (element - is instance of): «IDEAS:powertypeInstance»
Interactions - InteractionsType
Attributes:
-
An IndividualType that is composed of types of particpating Individuals. For example, 'Eat Restaurant Meal'.

InteractionsType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
InteractionsType - IndividualTypeType
Attributes:

This document is no longer extant and has been withdrawn.

- **The powertype of Interactions.**
ReceiveInteractingStateTypesViewSet «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **ReceiveInteractingStateTypesViewSet - SendReceiveInteractingStateTypesViewSet** *Attributes:* - **A SendReceiveInteractingStateTypesViewSet that contains a type of receiving state in the view.**
SendInteractingStateTypesViewSet «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **SendInteractingStateTypesViewSet - SendReceiveInteractingStateTypesViewSet** *Attributes:* - **A SendReceiveInteractingStateTypesViewSet that contains a type of sending state in the view.**
SendReceiveExchangesView «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **SendReceiveExchangesView - stateInteractionsTypeType** *Association (source - target): «place2Type»* **SendReceiveExchangesView - ReceiveInteractingStateTypesViewSet** *Association (source - target): «place1Type»* **SendReceiveExchangesView - SendInteractingStateTypesViewSet** *Attributes:* - **A stateInteractionsTypeType that asserts one type of state sends an exchange and another receives the exchange.**
SendReceiveInteractingStateTypesViewSet «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **SendReceiveInteractingStateTypesViewSet - IndividualTypeType** *Attributes:* - **An IndividualTypeType that contains a type of sending or receiving state in the view.**
WholeInteractionRoleViewSetsParts «IDEAS:Type» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **WholeInteractionRoleViewSetsParts - WholePartTypeType** *Association (source - target): «place2Type»* **WholeInteractionRoleViewSetsParts - InteractionRolesViewSets** *Attributes:* - **A WholePartTypeType that asserts the InteractionParticipationRolesType is a type of part of the type Individual participating in the Interaction.**

individualWholeIinteractionRolePartTypes «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of):«IDEAS:superSubtype»
individualWholeIinteractionRolePartTypes - WholePartType
Association (source - target):«place2Type»
individualWholeIinteractionRolePartTypes - InteractionParticipationRoles
Association (source - target):«place1Type»
individualWholeIinteractionRolePartTypes - IndividualType
Attributes:
-
A WholePartType that asserts an InteractionParticipationRole is a type of part of an IndividualType.

interactionRoleStateMachineViewStateTypeOwners «IDEAS:TupleType»
Connectors:
Association (source - target): «place1Type»
interactionRoleStateMachineViewStateTypeOwners - InteractionParticipationRoles
Association (source - target): «place2Type»
interactionRoleStateMachineViewStateTypeOwners - InteractionRoleStateMachineViews
Generalization (element - is a subtype of): «IDEAS:superSubtype»
interactionRoleStateMachineViewStateTypeOwners - stateMachineViewStateTypeOwners
Attributes:
-
A stateMachineViewStateTypeOwner that asserts a InteractionRoleStateMachineView is owned by a InteractionParticipationRole.

interactionRoleStateMachineViewTypesRegionInstances «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
interactionRoleStateMachineViewTypesRegionInstances - stateMachineViewTypesRegionInstances
Association (source - target): «place2Type»
interactionRoleStateMachineViewTypesRegionInstances - InteractionRoleStateMachineRegions
Association (source - target): «place1Type»
interactionRoleStateMachineViewTypesRegionInstances - InteractionRoleStateMachineViews
Attributes:
-
A stateMachineViewTypesRegionInstances that asserts a InteractionRoleStateMachineRegion is an instance of a InteractionRoleStateMachineView.

interactionViewTypesInstances «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
interactionViewTypesInstances - typeInstance
Association (source - target): «place1Type»
interactionViewTypesInstances - InteractionViews
Attributes:
-
A typeInstance that asserts something is an instance of an InteractionView.

interactionViewTypesInteractionRoleStateMachineViewsInstances «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
interactionViewTypesInteractionRoleStateMachineViewsInstances - interactionViewTypesInstances
Association (source - target): «place2Type»
interactionViewTypesInteractionRoleStateMachineViewsInstances - InteractionRoleStateMachineViews

Attributes:
-
A interactionViewTypesInstances that asserts a InteractionRoleStateMachineViews is an instance of an InteractionView.

interactionViewTypesInteractionRoleViewSetsInstances «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
interactionViewTypesInteractionRoleViewSetsInstances - interactionViewTypesInstances
Association (source - target): **«place2Type»**
interactionViewTypesInteractionRoleViewSetsInstances - InteractionRolesViewSets
Attributes:
-
A interactionViewTypesInstances that asserts an InteractionRolesViewSets is an instance of an InteractionView.

interactionViewTypesInteractionSingletonInstances «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
interactionViewTypesInteractionSingletonInstances - interactionViewTypesInstances
Association (source - target): **«place2Type»**
interactionViewTypesInteractionSingletonInstances - InteractionSingleton
Attributes:
-
A interactionViewTypesInstances that asserts a InteractionSingleton is an instance of an InteractionView.

interactionViewTypesInteractionWholeRoleViewPartSetsInstances «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
interactionViewTypesInteractionWholeRoleViewPartSetsInstances - interactionViewTypesInstances
Association (source - target): **«place2Type»**
interactionViewTypesInteractionWholeRoleViewPartSetsInstances - InteractionWholeRoleViewPartsSets
Attributes:
-
A interactionViewTypesInstances that asserts an InteractionWholeRoleViewPartsSets is an instance of an InteractionView.

interactionViewTypesWholeInteractionRoleViewSetsPartsInstances «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
interactionViewTypesWholeInteractionRoleViewSetsPartsInstances - interactionViewTypesInstances
Association (source - target): **«place2Type»**
interactionViewTypesWholeInteractionRoleViewSetsPartsInstances - WholeInteractionRoleViewSetsParts
Attributes:
-
A interactionViewTypesInstances that asserts an WholeInteractionRoleViewSetsPart is an instance of an InteractionView.

interactionViewtypesSendReceiveViewSetInstances «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
interactionViewtypesSendReceiveViewSetInstances - interactionViewTypesInstances
Association (source - target): **«place2Type»**
interactionViewtypesSendReceiveViewSetInstances - SendReceiveInteractingStateTypesViewSet
Attributes:
-
A interactionViewTypesInstances that asserts a SendReceiveInteractingStateTypesViewSet is an instance of an InteractionView.

interactionWholeRolePartTypes «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
interactionWholeRolePartTypes - WholePartType
Association (source - target): **«place2Type»**
interactionWholeRolePartTypes - InteractionParticipationRoles
Association (source - target): **«place1Type»**
interactionWholeRolePartTypes - Interactions
Attributes:
-
A WholePartType that asserts an InteractionParticipationRole is a type of part of an Interaction.

State interactions

stateInteractions «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
stateInteractions - beforeAfter
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
stateInteractions - stateInteractionsType
Attributes:
-
A beforeAfter that asserts that one state is before another.

stateInteractionsType «IDEAS:Powertype»
Connectors:
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
stateInteractionsType - stateInteractionsTypeType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
stateInteractionsType - BeforeAfterType
Attributes:
-
The powertype of stateInteractions.

stateInteractionsTypeType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
stateInteractionsTypeType - TupleTypeType
Attributes:
-
The powertype of stateInteractionsType.

LinearlySucceededDisjointStateTypesSets «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LinearlySucceededDisjointStateTypesSets - SetOfOwnedStateSets
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
LinearlySucceededDisjointStateTypesSets - InteractionRoleStateMachineRegions
Attributes:
-
A SetOfOwnedStateSets where each state type is succeeded by no more than one other state type.

SingletonDisjointStateTypesSets «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
SingletonDisjointStateTypesSets - SetOfOwnedStateSets
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
SingletonDisjointStateTypesSets - Singleton
Attributes:
-
A SetOfOwnedStateSets and a Singleton.

SingletonLinearlySucceededDisjointStateTypesSets «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
SingletonLinearlySucceededDisjointStateTypesSets - SingletonDisjointStateTypesSets
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
SingletonLinearlySucceededDisjointStateTypesSets - LinearlySucceededDisjointStateTypesSets
Attributes:
-
A SingletonDisjointStateTypesSets and a LinearlySucceededDisjointStateTypesSets. Note: 'Singleton Linearly Succeeded Disjoint State Types Sets' cannot have any succession, as any such successions would not be linear.

disjointStateTypesSetsSuperSubTypeHierarchy «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
disjointStateTypesSetsSuperSubTypeHierarchy - superSubtype
Association (source - target): **«place2Type»**
disjointStateTypesSetsSuperSubTypeHierarchy - SetOfOwnedStateSets
Association (source - target): **«place1Type»**
disjointStateTypesSetsSuperSubTypeHierarchy - SetOfOwnedStateSets
Attributes:
-
A superSubType that asserts one SetofOwnedStateSets is a subType of another.

improperInstanceWiseDisjointStateSets «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
improperInstanceWiseDisjointStateSets - Singleton
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
improperInstanceWiseDisjointStateSets - instanceWiseDisjointStateTypeSets
Attributes:
-
A Singleton and an InstanceWiseDisjointStateTypeSets that asserts a SetOfOwnedStateSets is an improper part of an IndividualTypeType. At the limit, each instance of an Element Powertype has itself as an improper temporal stage. The union of these is the instance of the Element Powertype.

instanceWiseCompletePartitionStateTypeSets «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
instanceWiseCompletePartitionStateTypeSets - instanceWiseDisjointStateTypeSets
Attributes:
-
A instanceWiseDisjointStateTypeSets where the state types completely partition the whole.

linearlySucceededDisjointStateSetsStateTypeSuccessionTypes «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
linearlySucceededDisjointStateSetsStateTypeSuccessionTypes - InteractionRoleStateMachineRegions
Association (source - target): «place1Type»
linearlySucceededDisjointStateSetsStateTypeSuccessionTypes - LinearlySucceededDisjointStateTypesSets
Association (source - target): «place2Type»
linearlySucceededDisjointStateSetsStateTypeSuccessionTypes - LinearlySucceededDisjointStateTypesSets
Generalization (element - is a subtype of): «IDEAS:superSubtype»
linearlySucceededDisjointStateSetsStateTypeSuccessionTypes - SetOfStateSuccessionTypes
Attributes:
-
A SetOfStateSuccessionTypes that asserts that a one LinearlySucceededDisjointStateTypesSets is succeed by only one other.

singletonDisjointStateSetsStateTypeSuccessionTypes «IDEAS:Type»
Connectors:
Association (source - target): «place2Type»
singletonDisjointStateSetsStateTypeSuccessionTypes - SingletonDisjointStateTypesSets
Association (source - target): «place1Type»
singletonDisjointStateSetsStateTypeSuccessionTypes - SingletonDisjointStateTypesSets
Generalization (element - is a subtype of): «IDEAS:superSubtype»
singletonDisjointStateSetsStateTypeSuccessionTypes - SetOfStateSuccessionTypes
Attributes:
-
A SetOfStateSuccessionTypes where the successions are between SingletonDisjointStateTypesSets.

State successions

SetOfOwnedStateSets «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SetOfOwnedStateSets - IndividualTypeType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SetOfOwnedStateSets - OwnedStateSetsType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SetOfOwnedStateSets - SetOfDisjointTypes
Attributes:
-
A SetOfDisjointTypes and IndividualTypeType where each instance is a disjoint set of state types, whose union is instance-wise disjoint relative to the related instance of Element Powertype.

SetOfStateSuccessionTypes «IDEAS:Type»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SetOfStateSuccessionTypes - StateSuccessionsTypeType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SetOfStateSuccessionTypes - stateSetTransitionsType
Association (source - target): «place2Type»
SetOfStateSuccessionTypes - SetOfOwnedStateSets
Association (source - target): «place1Type»
SetOfStateSuccessionTypes - SetOfOwnedStateSets
Attributes:
-

A StateSuccessionsTypeType that asserts a type of succession between instances of SetOfOwnedStateSets.
instanceWiseDisjointStateTypeSets «IDEAS:Type»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **instanceWiseDisjointStateTypeSets - stateSetOwnersType**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **instanceWiseDisjointStateTypeSets - TemporalWholePartTypeType**   *Association (source - target): «place2Type»*   **instanceWiseDisjointStateTypeSets - SetOfOwnedStateSets**   *Association (source - target): «place1Type»*   **instanceWiseDisjointStateTypeSets - SingletonIndividualTypeType**   *Attributes:*   -   **A TemporalWholePartTypeType that asserts a SetOfOwnedStateSets is a type of type of part of an IndividualTypeType.**
stateSuccessions «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **stateSuccessions - beforeAfter**   *Dependency (element - is instance of): «IDEAS:powertypeInstance»*   **stateSuccessions - stateSuccessionsType**   *Attributes:*   -   **A beforeAfter that asserts a succession between states.**
StateSuccessionsType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **stateSuccessionsType - BeforeAfterType**   *Dependency (element - is instance of): «IDEAS:powertypeInstance»*   **stateSuccessionsType - StateSuccessionsTypeType**   *Attributes:*   -   **A powertype of stateSuccessions.**
StateSuccessionsTypeType «IDEAS:Powertype»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **StateSuccessionsTypeType - TupleTypeType**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **StateSuccessionsTypeType - BeforeAfterTypeType**   *Attributes:*   -   **A powertype of stateSuccessionType.**

successionTypeInSet «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
successionTypeInSet - typeInstance
Association (source - target): «place2Type»
successionTypeInSet - stateSuccessionsType
Association (source - target): «place1Type»
successionTypeInSet - SetOfStateSuccessionTypes
Attributes:
-
A typeInstance that asserts a StateSuccessionType is a member of a SetOfStateSuccessionTypes.

3.4.7   Exchange diagrams
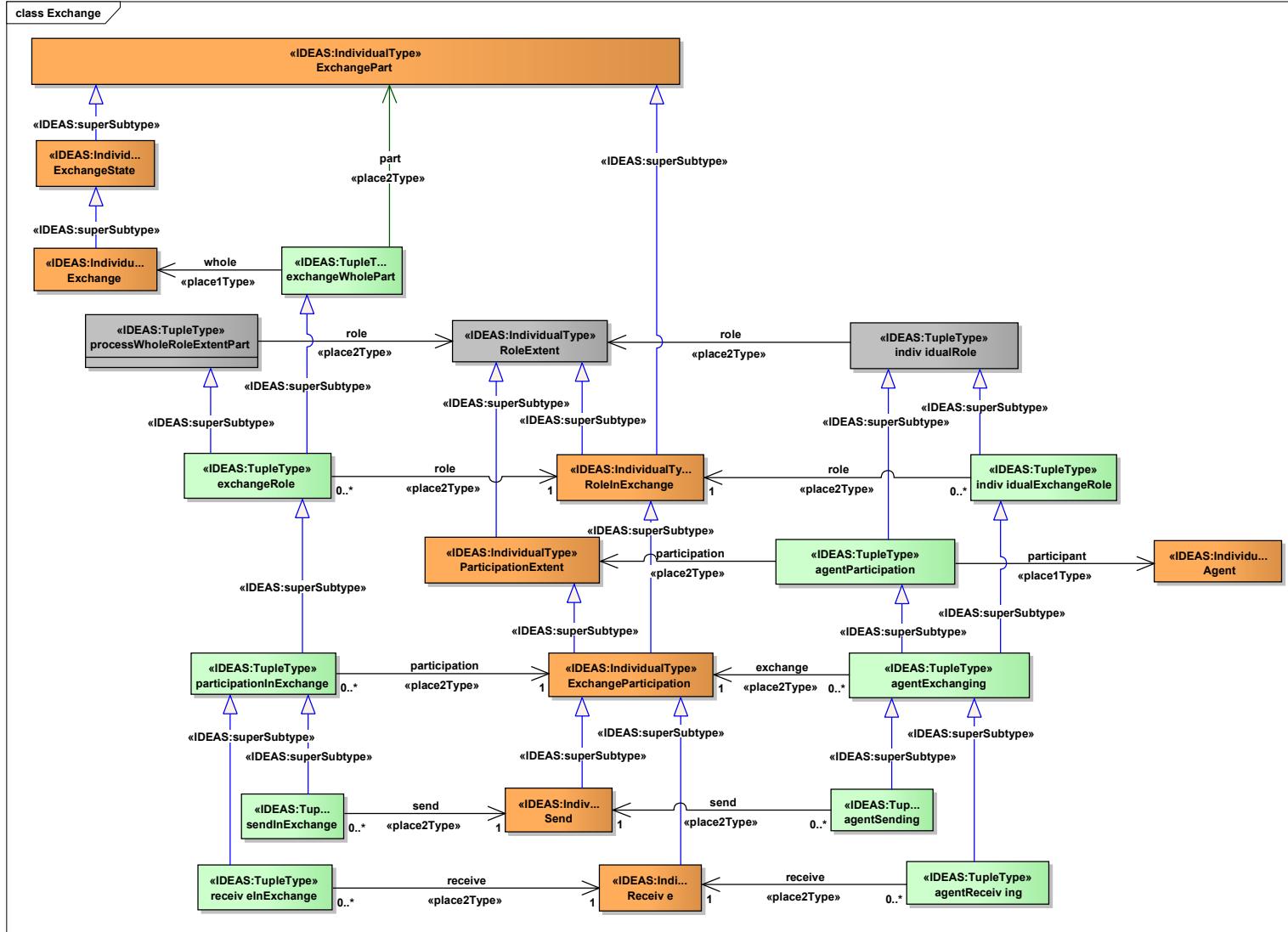
Figure 129 : Exchange
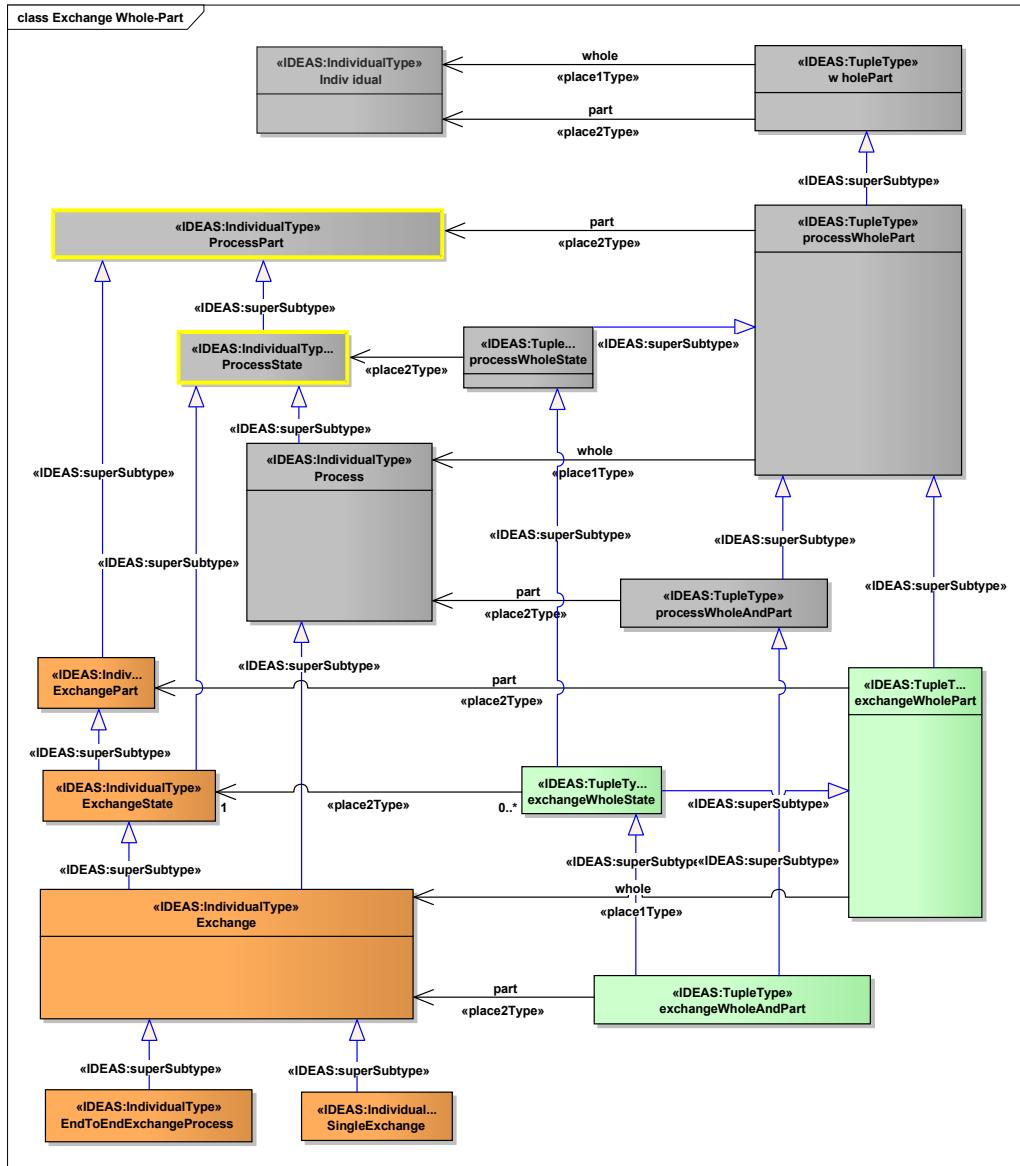
Figure 130 : Exchange Whole-Part

This document is no longer extant and has been withdrawn.
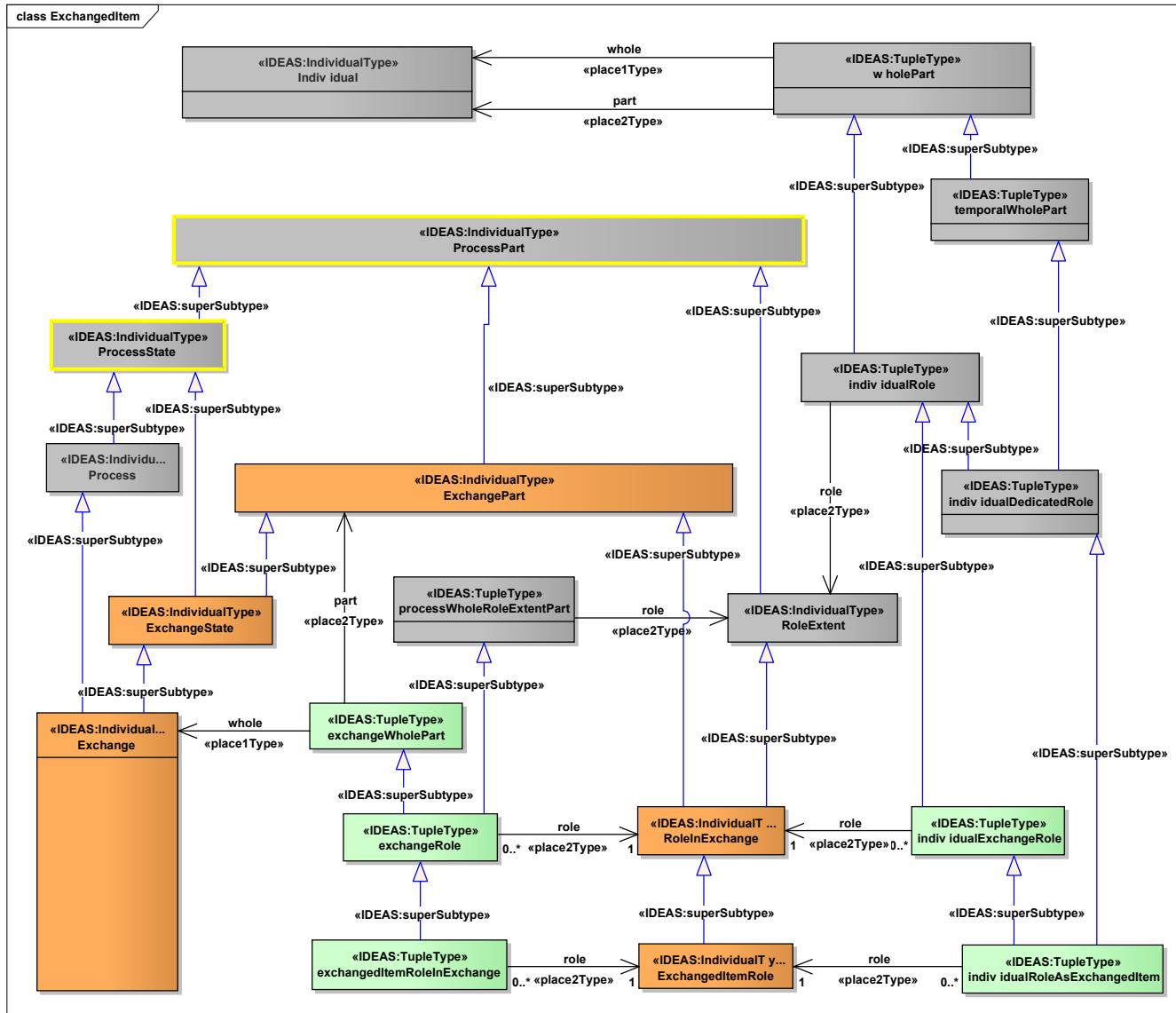
Figure 131 : ExchangedItem
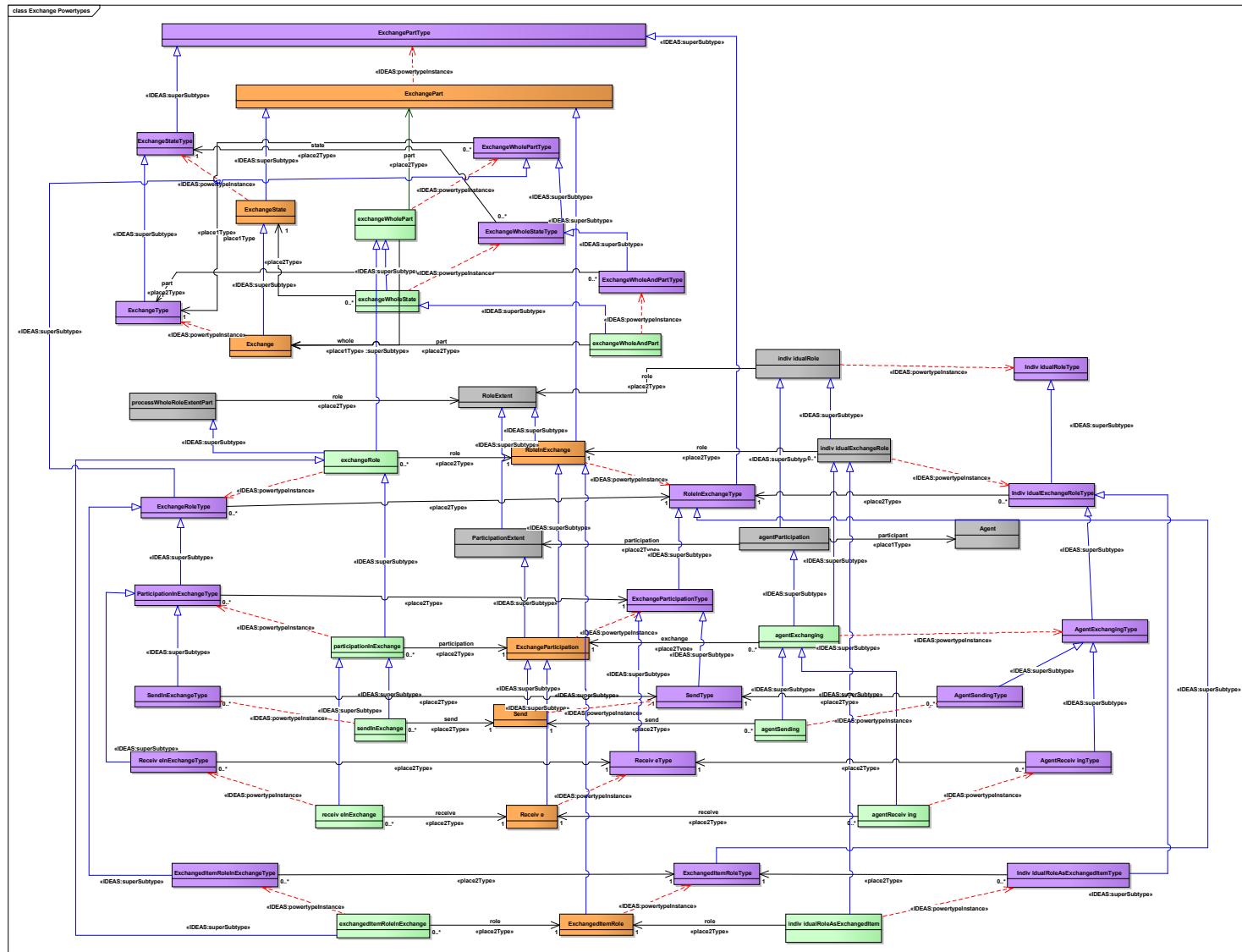
Figure 132 : Exchange Powertypes

3.4.8 Exchange elements list

Exchange
DirectedExchange «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **DirectedExchange - Exchange**   *Attributes:*   -   **An Exchange where the exchanged Individuals all flow in one direction.**
EndToEndExchangeProcess «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **EndToEndExchangeProcess - Exchange**   *Attributes:*   -   **An Exchange which consists of other Exchanges. Note: the Exchanges which are part of the EndToEndExchangeProcess need not be a sequence - some may run in parallel.**
Exchange «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **Exchange - Process**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **Exchange - ExchangeState**   *Dependency (element - is instance of): «IDEAS:powertypeInstance»*   **Exchange - ExchangeType**   *Attributes:*   -   **A Process where one Agent exchanges one or more Individuals with another Agent.**
ExchangePart «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **ExchangePart - ProcessPart**   *Dependency (element - is instance of): «IDEAS:powertypeInstance»*   **ExchangePart - ExchangePartType**   *Attributes:*   -   **A ProcessPart that is part of an Exchange.**
ExchangeParticipation «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **ExchangeParticipation - ParticipationExtent**   *Generalization (element - is a subtype of): «IDEAS:superSubtype»*   **ExchangeParticipation - RoleInExchange**   *Dependency (element - is instance of): «IDEAS:powertypeInstance»*   **ExchangeParticipation - ExchangeParticipationType**   *Attributes:*   -   **A RoleInExchange and a ParticipationExtent that is an Agent's participation in an Exchange.**

ExchangeState «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ExchangeState - ExchangePart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ExchangeState - ProcessState
Dependency (element - is instance of): «IDEAS:powertypeInstance»
ExchangeState - ExchangeStateType
Attributes:
-
An ExchangePart that is a temporal part of an Exchange.

ExchangedItemRole «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ExchangedItemRole - RoleInExchange
Dependency (element - is instance of): «IDEAS:powertypeInstance»
ExchangedItemRole - ExchangedItemRoleType
Attributes:
-
A RoleinExchange where the Process is an Exchange and the Individual's role is as the thing being exchanged.

Receive «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Receive - ExchangeParticipation
Dependency (element - is instance of): «IDEAS:powertypeInstance»
Receive - ReceiveType
Attributes:
-
An ExchangeParticipation that is the receiving Agent's participation in an Exchange.

RoleInExchange «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
RoleInExchange - ExchangePart
Generalization (element - is a subtype of): «IDEAS:superSubtype»
RoleInExchange - RoleExtent
Dependency (element - is instance of): «IDEAS:powertypeInstance»
RoleInExchange - RoleInExchangeType
Attributes:
-
An ExchangePart that is an Individual's role in the Exchange.

Send «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
Send - ExchangeParticipation
Dependency (element - is instance of): «IDEAS:powertypeInstance»
Send - SendType
Attributes:
-

This document is no longer extant and has been withdrawn.

An ExchangePart and a ParticipationExtent that is the sending Agent's participation in an Exchange.
SingleExchange «IDEAS:IndividualType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **SingleExchange - Exchange**   *Attributes:*   **-**   **An Exchange that has no parts that are also Exchanges. Example: One person handing another a document.**
agentExchanging «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **agentExchanging - agentParticipation**   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **agentExchanging - individualExchangeRole**   *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»**   **agentExchanging - AgentExchangingType**   *Association (source - target):* **«place2Type»**   **agentExchanging - ExchangeParticipation**   *Attributes:*   **-**   **An agentParticipation where the participation is in an Exchange.**
agentReceiving «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **agentReceiving - agentExchanging**   *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»**   **agentReceiving - AgentReceivingType**   *Association (source - target):* **«place2Type»**   **agentReceiving - Receive**   *Attributes:*   **-**   **An agentExchanging where the Agent's participation is as the receiver.**
agentSending «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **agentSending - agentExchanging**   *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»**   **agentSending - AgentSendingType**   *Association (source - target):* **«place2Type»**   **agentSending - Send**   *Attributes:*   **-**   **An agentExchanging where the Agent's participation is as the sender.**
exchangeRole «IDEAS:TupleType»   *Connectors:*   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**   **exchangeRole - exchangeWholePart**   *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»**

exchangeRole - processWholeRoleExtentPart
Dependency (element - is instance of): «IDEAS:powertypeInstance»
exchangeRole - ExchangeRoleType
Association (source - target): «place2Type»
exchangeRole - RoleInExchange
Attributes:
-
An exchangeWholePart where the part is a RoleInExchange.

exchangeWholeAndPart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
exchangeWholeAndPart - exchangeWholeState
Generalization (element - is a subtype of): «IDEAS:superSubtype»
exchangeWholeAndPart - processWholeAndPart
Dependency (element - is instance of): «IDEAS:powertypeInstance»
exchangeWholeAndPart - ExchangeWholeAndPartType
Association (source - target): «place2Type»
exchangeWholeAndPart - Exchange
Attributes:
-
An exchangeWholePart where the part is an exchange.

exchangeWholePart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
exchangeWholePart - processWholePart
Dependency (element - is instance of): «IDEAS:powertypeInstance»
exchangeWholePart - ExchangeWholePartType
Association (source - target): «place2Type»
exchangeWholePart - ExchangePart
Association (source - target): «place1Type»
exchangeWholePart - Exchange
Attributes:
-
A processWholePart where the whole is an Exchange and the part is an ExchangePart.

exchangeWholeState «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
exchangeWholeState - exchangeWholePart
Association (source - target): «place2Type»
exchangeWholeState - ExchangeState
Generalization (element - is a subtype of): «IDEAS:superSubtype»
exchangeWholeState - processWholeState
Dependency (element - is instance of): «IDEAS:powertypeInstance»
exchangeWholeState - ExchangeWholeStateType
Attributes:
-
An exchangeWholePart where the part is a temporal state of the whole.

exchangedItemRoleInExchange «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
exchangedItemRoleInExchange - exchangeRole
Dependency (element - is instance of): «IDEAS:powertypeInstance»
exchangedItemRoleInExchange - ExchangedItemRoleInExchangeType
Association (source - target): «place2Type»
exchangedItemRoleInExchange - ExchangedItemRole
Attributes:
-
An exchangeRole where the role is that of the Individual being exchanged.

individualExchangeRole «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
individualExchangeRole - individualRole
Dependency (element - is instance of): «IDEAS:powertypeInstance»
individualExchangeRole - IndividualExchangeRoleType
Association (source - target): «place2Type»
individualExchangeRole - RoleInExchange
Attributes:
-
An individualRole where the process is an Exchange.

individualRoleAsExchangedItem «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
individualRoleAsExchangedItem - individualExchangeRole
Generalization (element - is a subtype of): «IDEAS:superSubtype»
individualRoleAsExchangedItem - individualDedicatedRole
Dependency (element - is instance of): «IDEAS:powertypeInstance»
individualRoleAsExchangedItem - IndividualRoleAsExchangedItemType
Association (source - target): «place2Type»
individualRoleAsExchangedItem - ExchangedItemRole
Attributes:
-
An individualExchangeRole the Individual is the thing being exchanged.

participationInExchange «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
participationInExchange - exchangeRole
Dependency (element - is instance of): «IDEAS:powertypeInstance»
participationInExchange - ParticipationInExchangeType
Association (source - target): «place2Type»
participationInExchange - ExchangeParticipation
Attributes:
-
An exchangeWholePart where the part is an ExchangeParticipation.

receiveInExchange «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
receiveInExchange - participationInExchange
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
receiveInExchange - ReceiveInExchangeType
Association (source - target): **«place2Type»**
receiveInExchange - Receive
Attributes:
-
A participationInExchange where the participation is a Receive.

sendInExchange «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
sendInExchange - participationInExchange
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
sendInExchange - SendInExchangeType
Association (source - target): **«place2Type»**
sendInExchange - Send
Attributes:
-
A participationInExchange where participation is a Send.

Exchange Powertypes

AgentExchangingType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
AgentExchangingType - AgentParticipationType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
AgentExchangingType - IndividualExchangeRoleType
Attributes:
-
The powertype of agentExchanging.

AgentReceivingType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
AgentReceivingType - AgentExchangingType
Association (source - target): **«place2Type»**
AgentReceivingType - ReceiveType
Attributes:
-
The powertype of agentReceiving.

AgentSendingType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
AgentSendingType - AgentExchangingType
Association (source - target): **«place2Type»**
AgentSendingType - SendType
Attributes:

- The powertype of agentSending.
ExchangePartType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ExchangePartType - ProcessPartType** *Attributes:* - The powertype of ExchangePart.
ExchangeParticipationType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ExchangeParticipationType - RoleInExchangeType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ExchangeParticipationType - ParticipationExtentType** *Attributes:* - The powertype of ExchangeParticipation.
ExchangeRoleType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ExchangeRoleType - ProcessWholeRoleExtentPartType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ExchangeRoleType - ExchangeWholePartType** *Association (source - target):* **«place2Type»** **ExchangeRoleType - RoleInExchangeType** *Attributes:* - The powertype of exchangeRole.
ExchangeStateType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ExchangeStateType - ExchangePartType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ExchangeStateType - ProcessStateType** *Attributes:* - The powertype of ExchangeState.
ExchangeType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ExchangeType - ExchangeStateType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **ExchangeType - ProcessType** *Attributes:* - The powertype of Exchange.

ExchangeWholeAndPartType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ExchangeWholeAndPartType - ExchangeWholeStateType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ExchangeWholeAndPartType - ProcessWholeAndPartType
Association (source - target): «place2Type»
ExchangeWholeAndPartType - ExchangeType
Attributes:
-
The powertype of exchangeWholeAndPart.

ExchangeWholePartType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ExchangeWholePartType - ProcessWholePartType
Association (source - target): «place1Type»
ExchangeWholePartType - ExchangeType
Attributes:
-
The powertype of exchangeWholePart.

ExchangeWholeStateType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ExchangeWholeStateType - ExchangeWholePartType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ExchangeWholeStateType - ProcessWholeStateType
Association (source - target): «place2Type»
ExchangeWholeStateType - ExchangeStateType
Attributes:
-
The powertype of exchangeWholeState.

ExchangedItemRoleInExchangeType «IDEAS:Powertype»
Connectors:
Association (source - target): «place2Type»
ExchangedItemRoleInExchangeType - ExchangedItemRoleType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ExchangedItemRoleInExchangeType - ExchangeRoleType
Attributes:
-
The powertype of exchangedItemRoleInExchange.

ExchangedItemRoleType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ExchangedItemRoleType - RoleInExchangeType
Attributes:
-
The powertype of ExchangedItemRole.

IndividualExchangeRoleType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
IndividualExchangeRoleType - IndividualRoleType
Association (source - target): **«place2Type»**
IndividualExchangeRoleType - RoleInExchangeType
Attributes:
-
The powertype of individualExchangeRole.

IndividualRoleAsExchangedItemType «IDEAS:Powertype»
Connectors:
Association (source - target): **«place2Type»**
IndividualRoleAsExchangedItemType - ExchangedItemRoleType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
IndividualRoleAsExchangedItemType - IndividualExchangeRoleType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
IndividualRoleAsExchangedItemType - IndividualDedicatedRoleType
Attributes:
-
The powertype of individualRoleAsExchangedItem.

ParticipationInExchangeType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ParticipationInExchangeType - ExchangeRoleType
Association (source - target): **«place2Type»**
ParticipationInExchangeType - ExchangeParticipationType
Attributes:
-
The powertype of participationInExchange.

ReceiveInExchangeType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ReceiveInExchangeType - ParticipationInExchangeType
Association (source - target): **«place2Type»**
ReceiveInExchangeType - ReceiveType
Attributes:
-
The powertype of receiveInExchange.

ReceiveType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ReceiveType - ExchangeParticipationType
Attributes:
-
The powertype of Receive.

RoleInExchangeType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
RoleInExchangeType - RoleExtentType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
RoleInExchangeType - ExchangePartType
Attributes:
-
The powertype of RoleInExchange.

SendInExchangeType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SendInExchangeType - ParticipationInExchangeType
Association (source - target): «place2Type»
SendInExchangeType - SendType
Attributes:
-
The powertype of sendInExchange.

SendType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
SendType - ExchangeParticipationType
Attributes:
-
The powertype of Send.

3.4.9   Agent diagrams
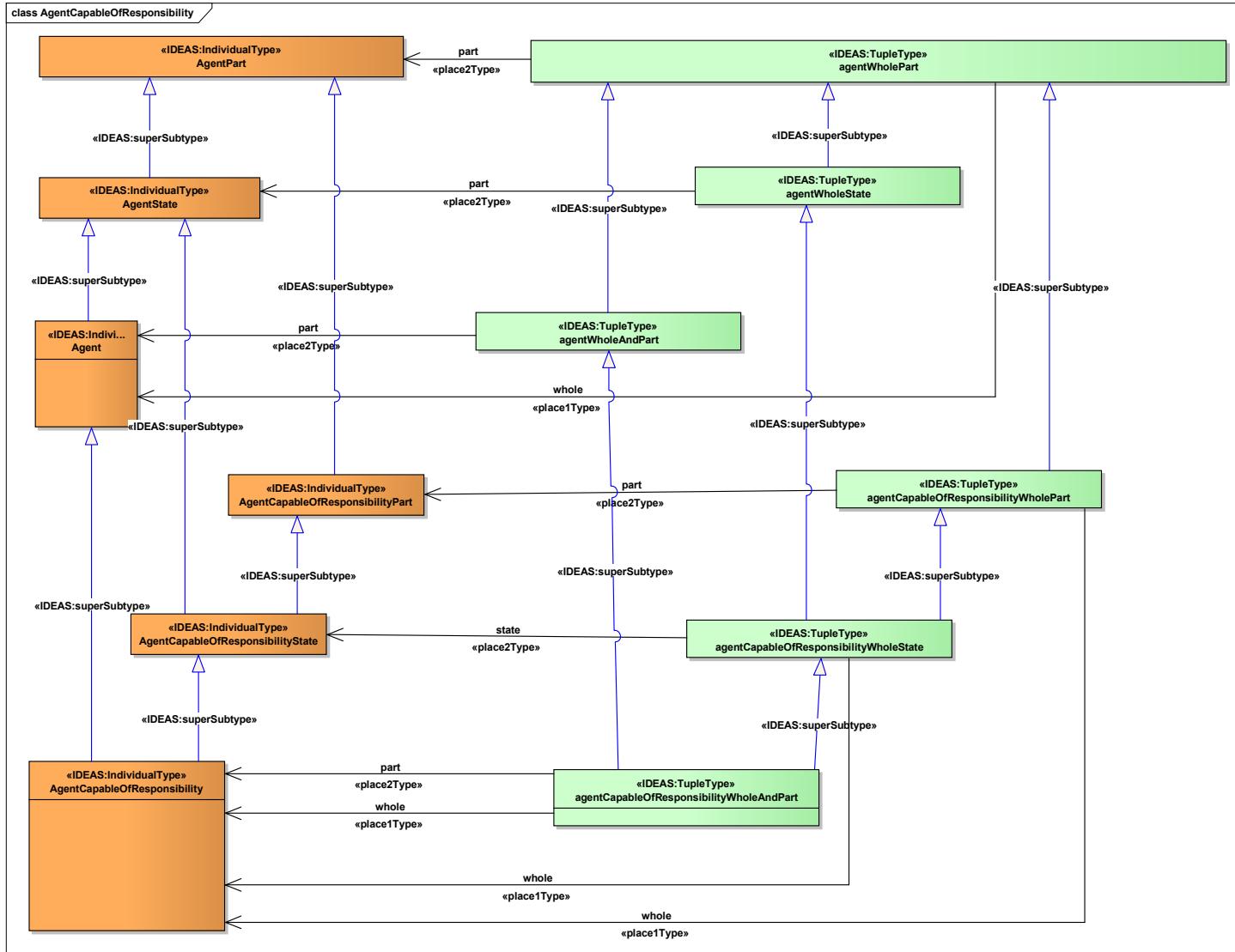
Figure 133 : AgentCapableOfResponsibility

This document is no longer extant and has been withdrawn.
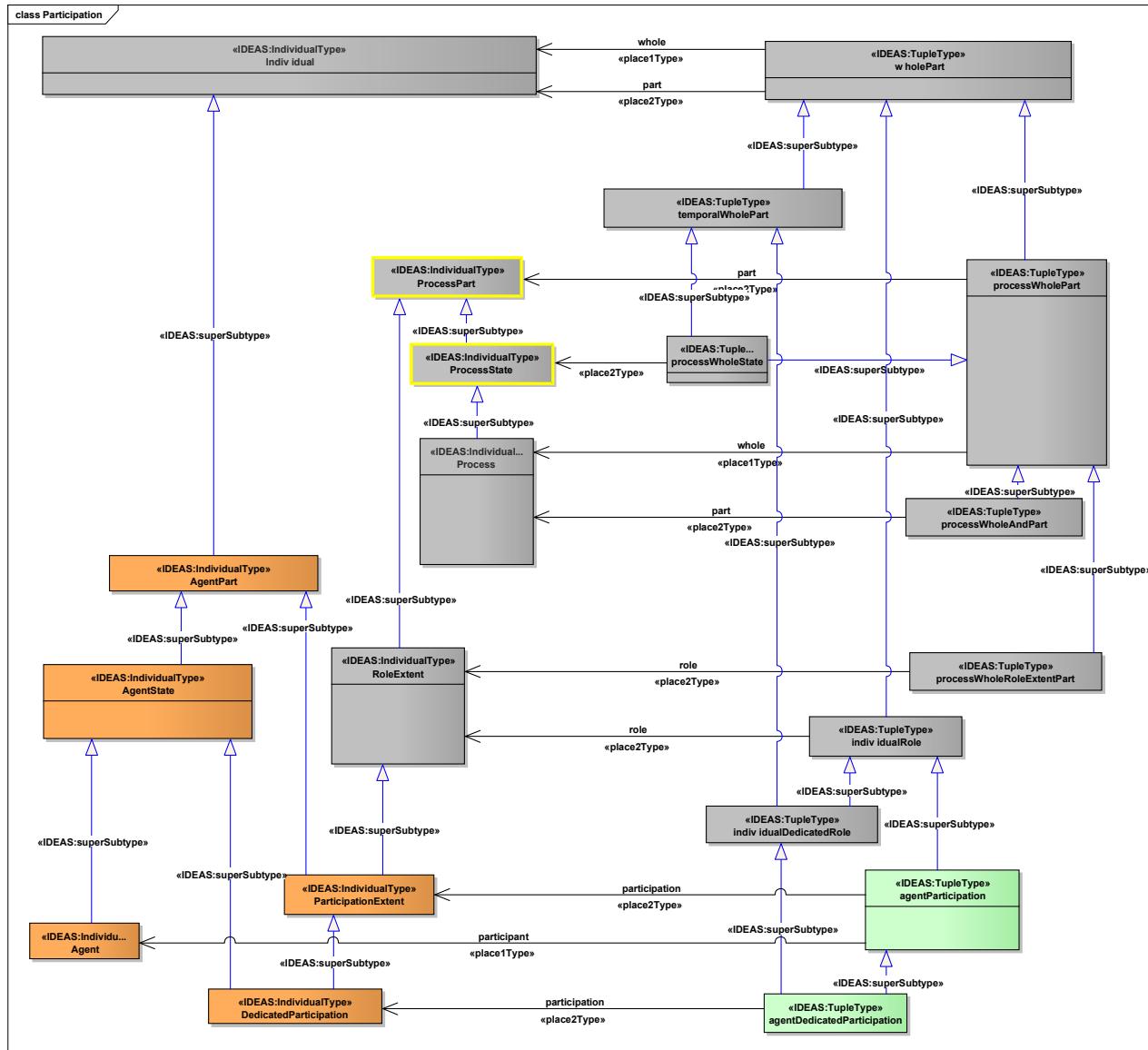
Figure 134 : Participation
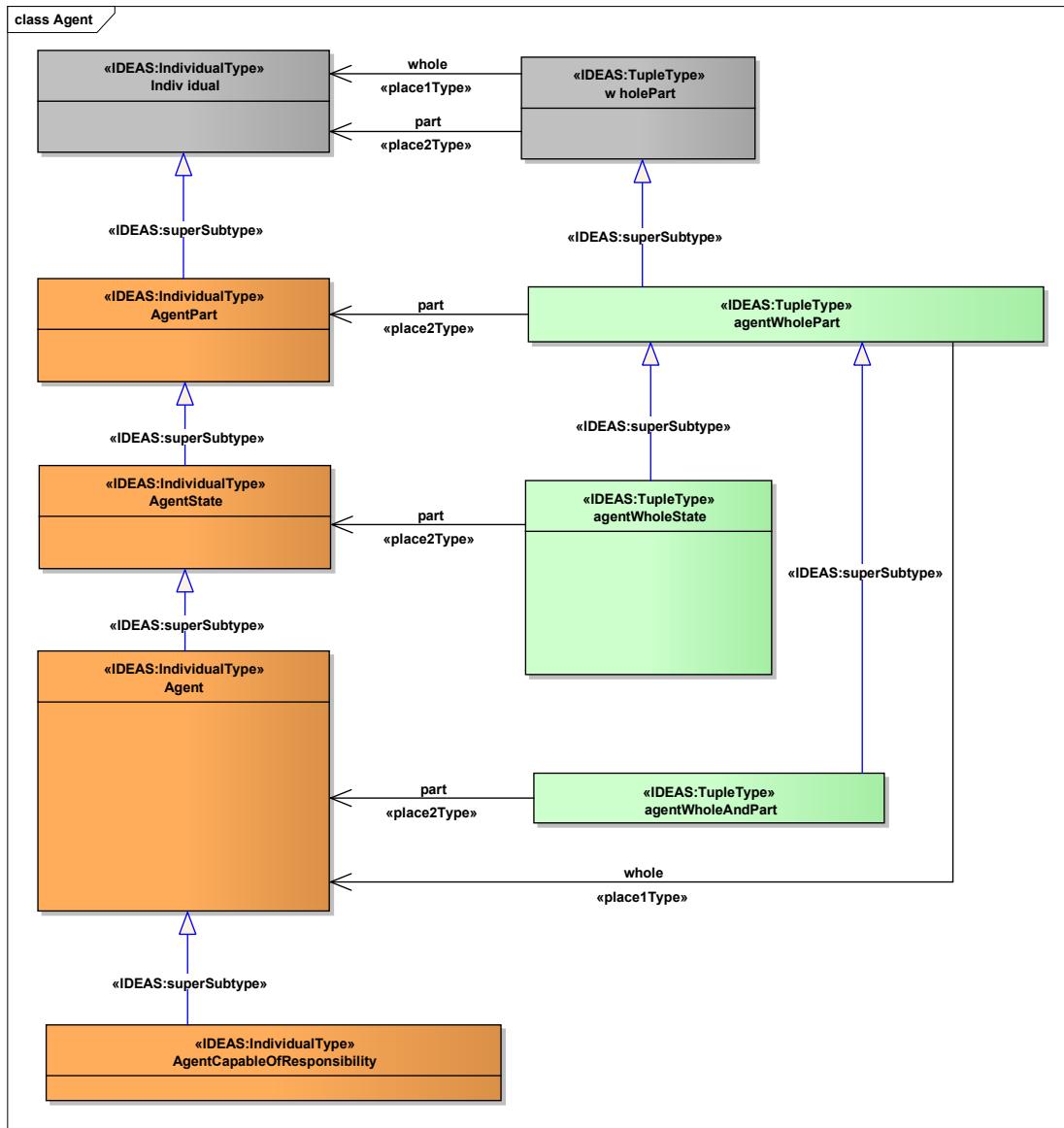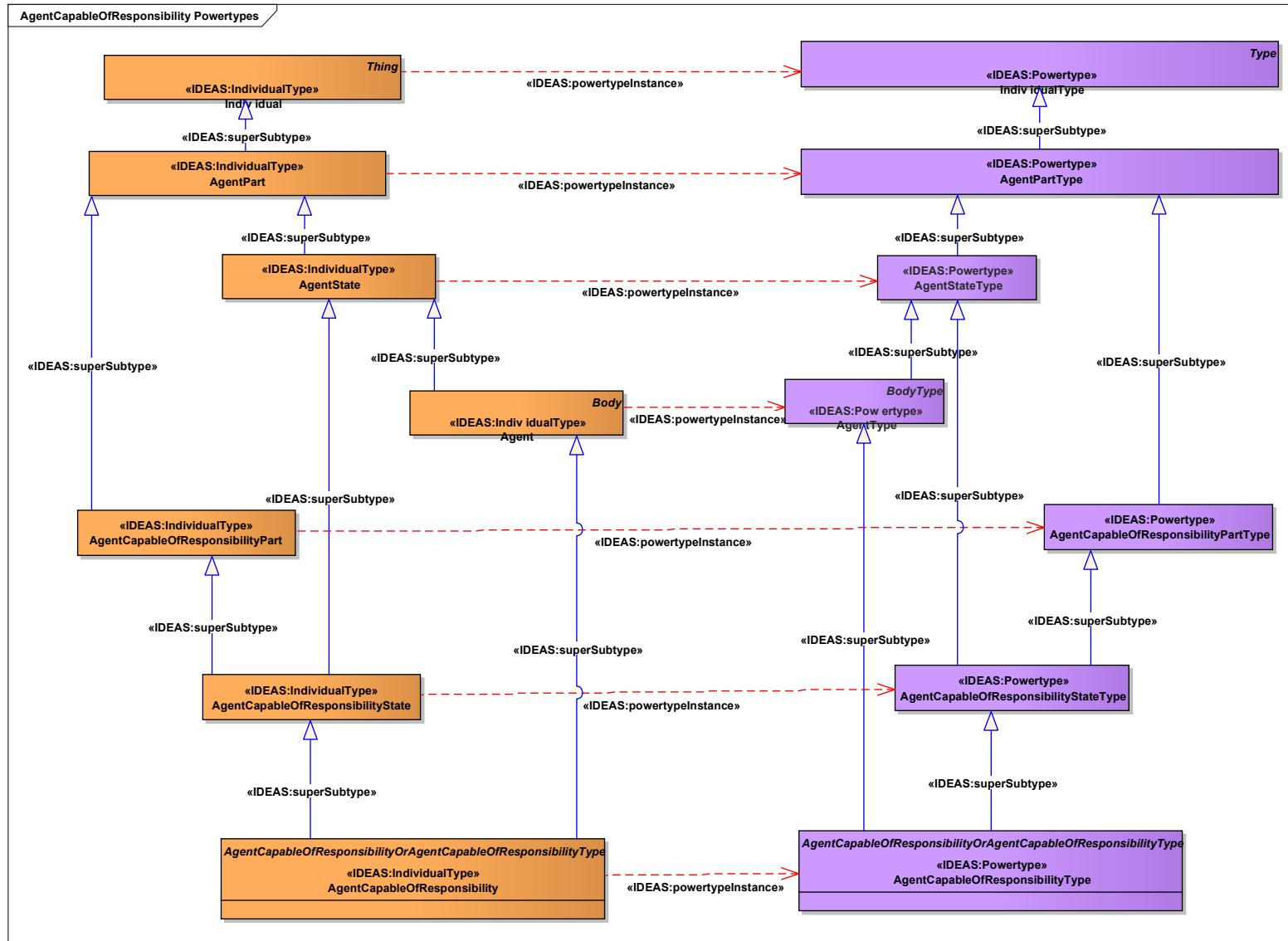
Figure 135 : Agent

Figure 136 : AgentCapableOfResponsibility Powertypes

This document is no longer extant and has been withdrawn.
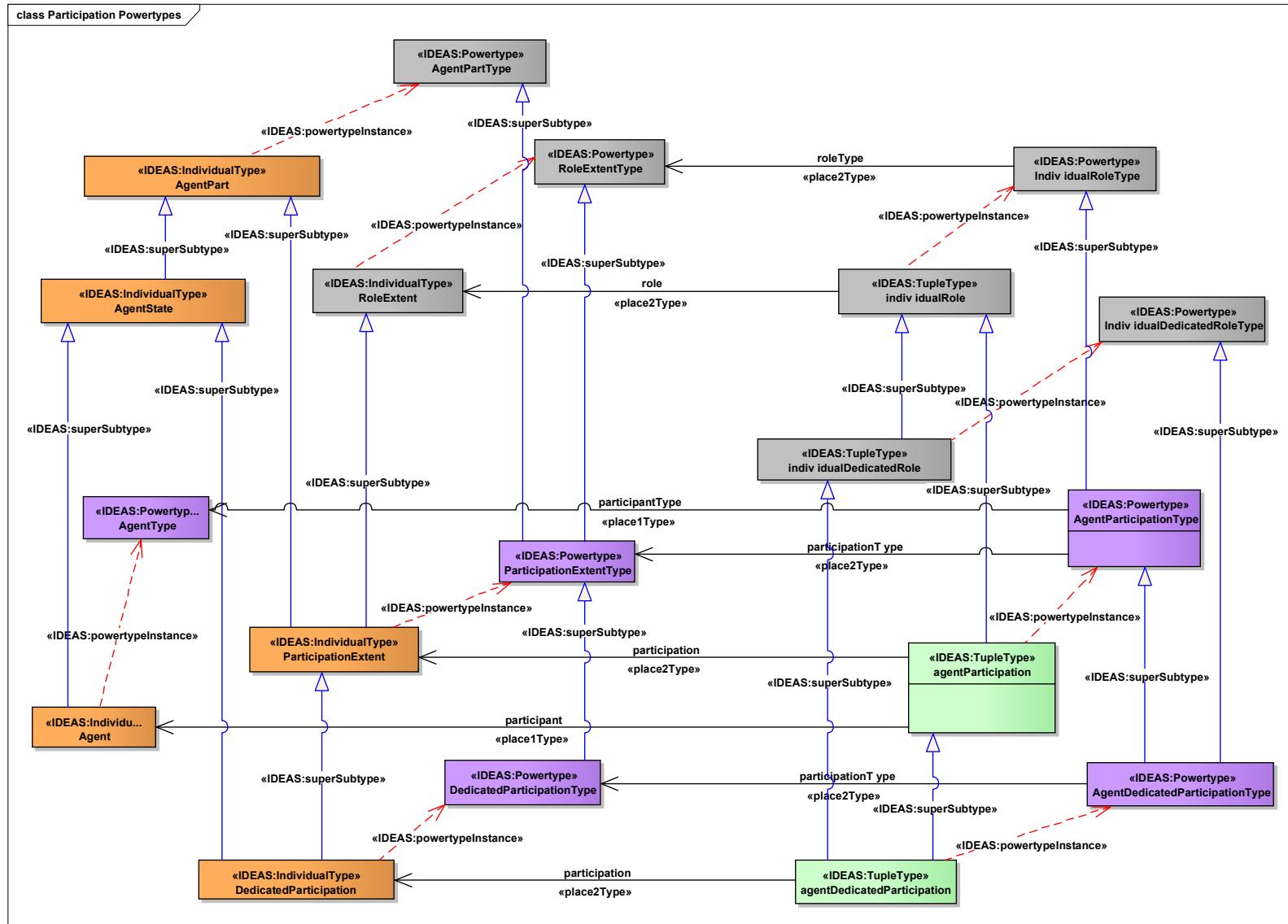
Figure 137 : Participation Powertypes
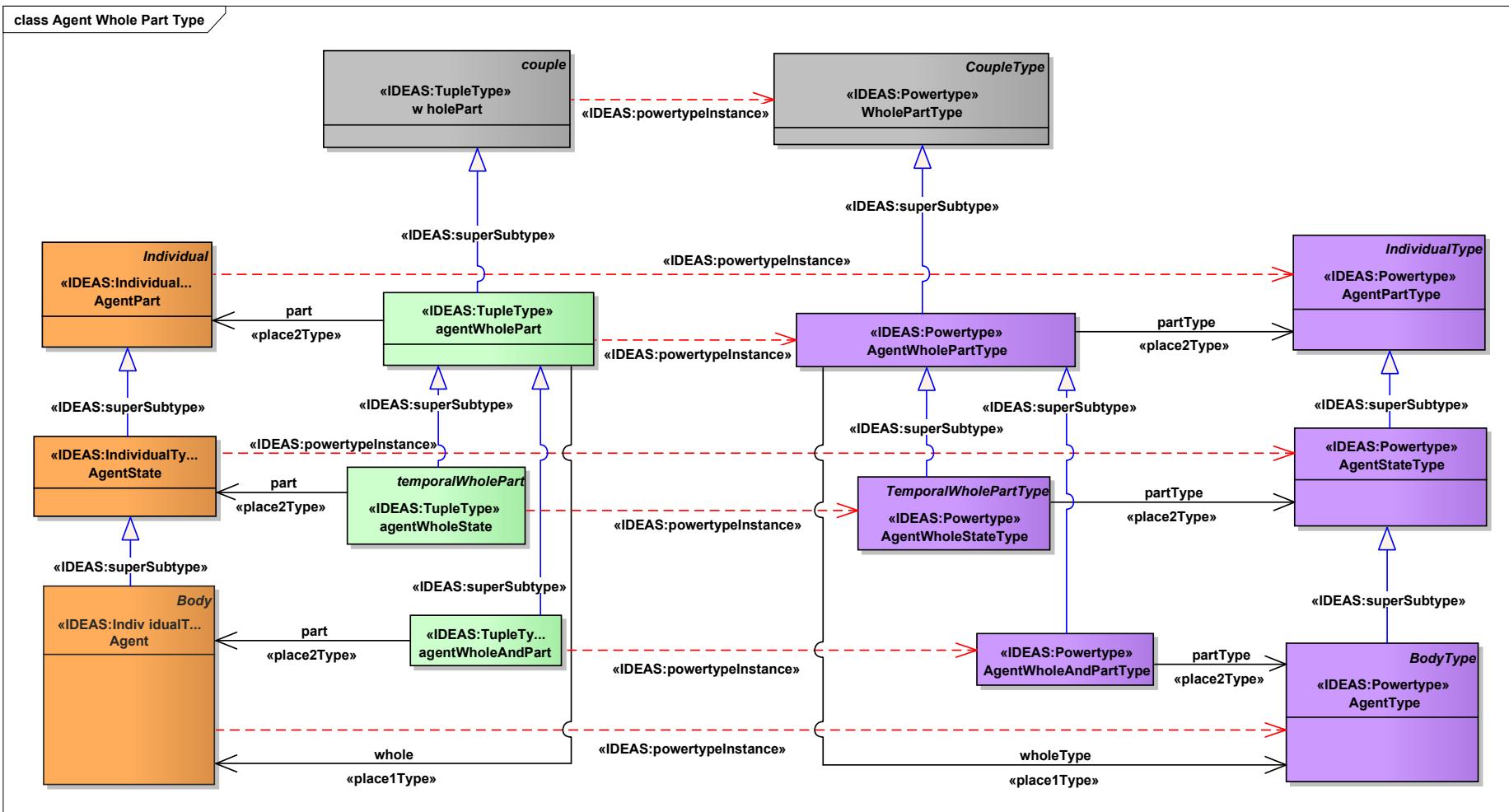
Figure 138 : Agent Whole Part Type
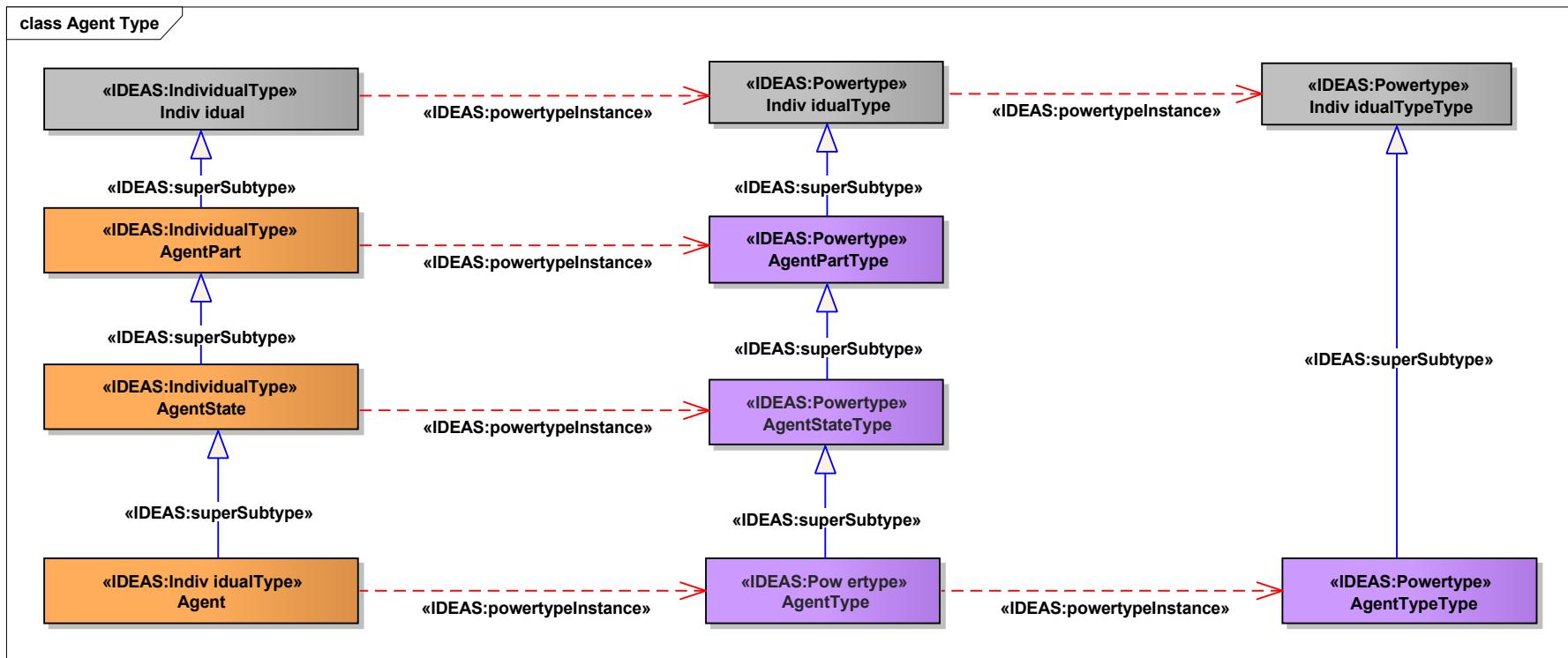
Figure 139 : Agent Type

3.4.10 Agent elements list

Agent
AgentCapableOfResponsibility «IDEAS:IndividualType» _**Connectors:**_ _Generalization (element - is a subtype of):_ **«IDEAS:superSubtype»** **AgentCapableOfResponsibility - AgentCapableOfResponsibilityOrAgentCapableOfResponsibilityType** _Generalization (element - is a subtype of):_ **«IDEAS:superSubtype»** **AgentCapableOfResponsibility - Agent** _Generalization (element - is a subtype of):_ **«IDEAS:superSubtype»** **AgentCapableOfResponsibility - AgentCapableOfResponsibilityState** _Dependency (element - is instance of):_ **«IDEAS:powertypeInstance»** **AgentCapableOfResponsibility - AgentCapableOfResponsibilityType** _**Attributes:**_ - **An Agent that, from a legal perspective, has responsibility for its actions.**
AgentCapableOfResponsibilityPart «IDEAS:IndividualType» _**Connectors:**_ _Generalization (element - is a subtype of):_ **«IDEAS:superSubtype»** **AgentCapableOfResponsibilityPart - AgentPart** _Dependency (element - is instance of):_ **«IDEAS:powertypeInstance»** **AgentCapableOfResponsibilityPart - AgentCapableOfResponsibilityPartType** _**Attributes:**_ - **An AgentPart that is part of an AgentCapableOfResponsibility.**
AgentCapableOfResponsibilityState «IDEAS:IndividualType» _**Connectors:**_ _Generalization (element - is a subtype of):_ **«IDEAS:superSubtype»** **AgentCapableOfResponsibilityState - AgentState** _Generalization (element - is a subtype of):_ **«IDEAS:superSubtype»** **AgentCapableOfResponsibilityState - AgentCapableOfResponsibilityPart** _Dependency (element - is instance of):_ **«IDEAS:powertypeInstance»** **AgentCapableOfResponsibilityState - AgentCapableOfResponsibilityStateType** _**Attributes:**_ - **An AgentState that is a temporal part of an AgentCapableOfResponsibility.**
AgentPart «IDEAS:IndividualType» _**Connectors:**_ _Generalization (element - is a subtype of):_ **«IDEAS:superSubtype»** **AgentPart - Individual** _Dependency (element - is instance of):_ **«IDEAS:powertypeInstance»** **AgentPart - AgentPartType** _**Attributes:**_ - **An Individual that is part of an Agent.**

AgentState «IDEAS:IndividualType»
Connectors:
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
AgentState - AgentStateType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
AgentState - AgentPart
Attributes:
-
An AgentPart that is a temporal part of an Agent.

DedicatedParticipation «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
DedicatedParticipation - AgentState
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
DedicatedParticipation - DedicatedParticipationType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
DedicatedParticipation - ParticipationExtent
Attributes:
-
A ParticipationExtent which is also an AgentState - i.e. a temporal part of an Agent. Note: A DedicatedParticipation may be temporally scattered - i.e. the fusion of the all the participations of an Agent.

ParticipationExtent «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ParticipationExtent - RoleExtent
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ParticipationExtent - AgentPart
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
ParticipationExtent - ParticipationExtentType
Attributes:
-
A RoleExtent where the involved Individual is an Agent that participates actively in the Process.

agentCapableOfResponsibilityWholeAndPart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
agentCapableOfResponsibilityWholeAndPart - agentWholeAndPart
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
agentCapableOfResponsibilityWholeAndPart - agentCapableOfResponsibilityWholeState
Association (source - target): **«place2Type»**
agentCapableOfResponsibilityWholeAndPart - AgentCapableOfResponsibility
Association (source - target): **«place1Type»**
agentCapableOfResponsibilityWholeAndPart - AgentCapableOfResponsibility
Attributes:
-
An AgentCapableOfResponsibility where both the whole and part are AgentsCapableOfResponsibility.

This document is no longer extant and has been withdrawn.

agentCapableOfResponsibilityWholePart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
agentCapableOfResponsibilityWholePart - agentWholePart
Association (source - target): «place2Type»
agentCapableOfResponsibilityWholePart - AgentCapableOfResponsibilityPart
Association (source - target): «place1Type»
agentCapableOfResponsibilityWholePart - AgentCapableOfResponsibility
Attributes:
-
An agentWholePart where the whole is an AgentCapableOfResponsibility.

agentCapableOfResponsibilityWholeState «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
agentCapableOfResponsibilityWholeState - agentWholeState
Generalization (element - is a subtype of): «IDEAS:superSubtype»
agentCapableOfResponsibilityWholeState - agentCapableOfResponsibilityWholePart
Association (source - target): «place2Type»
agentCapableOfResponsibilityWholeState - AgentCapableOfResponsibilityState
Association (source - target): «place1Type»
agentCapableOfResponsibilityWholeState - AgentCapableOfResponsibility
Attributes:
-
A temporalWholePart and an agentCapableOfResponsibilityWholePart where an AgentCapableOfResponsibilityState is a temporal part of an Agent.

agentDedicatedParticipation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
agentDedicatedParticipation - agentParticipation
Generalization (element - is a subtype of): «IDEAS:superSubtype»
agentDedicatedParticipation - individualDedicatedRole
Dependency (element - is instance of): «IDEAS:powertypeInstance»
agentDedicatedParticipation - AgentDedicatedParticipationType
Association (source - target): «place2Type»
agentDedicatedParticipation - DedicatedParticipation
Attributes:
-
An agentParticipation which is also an individualDedicatedRole and the participation is a DedicatedParticipation.

agentParticipation «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
agentParticipation - individualRole
Dependency (element - is instance of): «IDEAS:powertypeInstance»
agentParticipation - AgentParticipationType
Association (source - target): «place1Type»
agentParticipation - Agent
Association (source - target): «place2Type»
agentParticipation - ParticipationExtent
Attributes:
-

An individualRole where the role is a ParticipationExtent.
agentWholeAndPart «IDEAS:TupleType» _Connectors:_ _Generalization (element - is a subtype of):_ «IDEAS:superSubtype» **agentWholeAndPart - agentWholePart** _Dependency (element - is instance of):_ «IDEAS:powertypeInstance» **agentWholeAndPart - AgentWholeAndPartType** _Association (source - target):_ «place2Type» **agentWholeAndPart - Agent** _Attributes:_ **-** **An agentWholePart where both the whole and part are Agents.**
agentWholePart «IDEAS:TupleType» _Connectors:_ _Generalization (element - is a subtype of):_ «IDEAS:superSubtype» **agentWholePart - wholePart** _Dependency (element - is instance of):_ «IDEAS:powertypeInstance» **agentWholePart - AgentWholePartType** _Association (source - target):_ «place2Type» **agentWholePart - AgentPart** _Association (source - target):_ «place1Type» **agentWholePart - Agent** _Attributes:_ **-** **A wholePart where the whole is an Agent.**
agentWholeState «IDEAS:TupleType» _Connectors:_ _Generalization (element - is a subtype of):_ «IDEAS:superSubtype» **agentWholeState - temporalWholePart** _Dependency (element - is instance of):_ «IDEAS:powertypeInstance» **agentWholeState - AgentWholeStateType** _Generalization (element - is a subtype of):_ «IDEAS:superSubtype» **agentWholeState - agentWholePart** _Association (source - target):_ «place2Type» **agentWholeState - AgentState** _Attributes:_ **-** **A temporalWholePart and an agentWholePart where an AgentState is a temporal part of an Agent.**
overlapTypeIndividualInstance «IDEAS:TupleType» _Connectors:_ _Generalization (element - is a subtype of):_ «IDEAS:superSubtype» **overlapTypeIndividualInstance - typeInstance** _Association (source - target):_ «place1Type» **overlapTypeIndividualInstance - SetOfOverlappingIndividuals** _Association (source - target):_ «place2Type» **overlapTypeIndividualInstance - Individual** _Attributes:_ **-**

A typeInstance where an Individual is an instance of a SetOfOverlappingIndividuals.
Agent «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **Agent - AgentState** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **Agent - Body** *Dependency (element - is instance of):* **«IDEAS:powertypeInstance»** **Agent - AgentType** *Attributes:* **-** **An AgentState that is an Individual capable of actively participating in Processes.**
<center>**Agent Powertypes**</center>
AgentCapableOfResponsibilityPartType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **AgentCapableOfResponsibilityPartType - AgentPartType** *Attributes:* **-** **The powertype of AgentCapableOfResponsibilityPart.**
AgentCapableOfResponsibilityStateType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **AgentCapableOfResponsibilityStateType - AgentCapableOfResponsibilityPartType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **AgentCapableOfResponsibilityStateType - AgentStateType** *Attributes:* **-** **The powertype of AgentCapableOfResponsibilityState.**
AgentCapableOfResponsibilityType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **AgentCapableOfResponsibilityType - AgentCapableOfResponsibilityStateType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **AgentCapableOfResponsibilityType - AgentType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **AgentCapableOfResponsibilityType - AgentCapableOfResponsibilityOrAgentCapableOfResponsibilityType** *Attributes:* **-** **The powertype of AgentCapableOfResponsibility.**
AgentDedicatedParticipationType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **AgentDedicatedParticipationType - AgentParticipationType** *Generalization (element - is a subtype of):* **«IDEAS:superSubtype»** **AgentDedicatedParticipationType - IndividualDedicatedRoleType** *Association (source - target):* **«place2Type»** **AgentDedicatedParticipationType - DedicatedParticipationType**

Attributes:
-
The powertype of agentDedicatedParticipation.

AgentPartType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
AgentPartType - IndividualType
Attributes:
-
An IndividualType that is the Powertype of AgentPart.

AgentParticipationType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
AgentParticipationType - IndividualRoleType
Association (source - target): «place1Type»
AgentParticipationType - AgentType
Association (source - target): «place2Type»
AgentParticipationType - ParticipationExtentType
Attributes:
-
The powertype of agentParticipation.

AgentStateType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
AgentStateType - AgentPartType
Attributes:
-
The powertype of AgentState.

AgentType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
AgentType - AgentStateType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
AgentType - BodyType
Dependency (element - is instance of): «IDEAS:powertypeInstance»
AgentType - AgentTypeType
Attributes:
-
The powertype of Agent.

AgentTypeType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
AgentTypeType - IndividualTypeType
Attributes:
-
The powertype of AgentType.

This document is no longer extant and has been withdrawn.

AgentWholeAndPartType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
AgentWholeAndPartType - AgentWholePartType
Association (source - target): **«place2Type»**
AgentWholeAndPartType - AgentType
Attributes:
-
The powertype of agentWholeAndPart.

AgentWholePartType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
AgentWholePartType - WholePartType
Association (source - target): **«place2Type»**
AgentWholePartType - AgentPartType
Association (source - target): **«place1Type»**
AgentWholePartType - AgentType
Attributes:
-
The powertype of agentWholePart.

AgentWholeStateType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
AgentWholeStateType - TemporalWholePartType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
AgentWholeStateType - AgentWholePartType
Association (source - target): **«place2Type»**
AgentWholeStateType - AgentStateType
Attributes:
-
The powertype of agentWholeState.

DedicatedParticipationType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
DedicatedParticipationType - ParticipationExtentType
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
DedicatedParticipationType - AgentStateType
Attributes:
-
The powertype of DedicatedParticipation.

ParticipationExtentType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ParticipationExtentType - RoleExtentType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ParticipationExtentType - AgentPartType
Attributes:
-
The powertype of ParticipationExtent.

3.4.11 Process diagrams
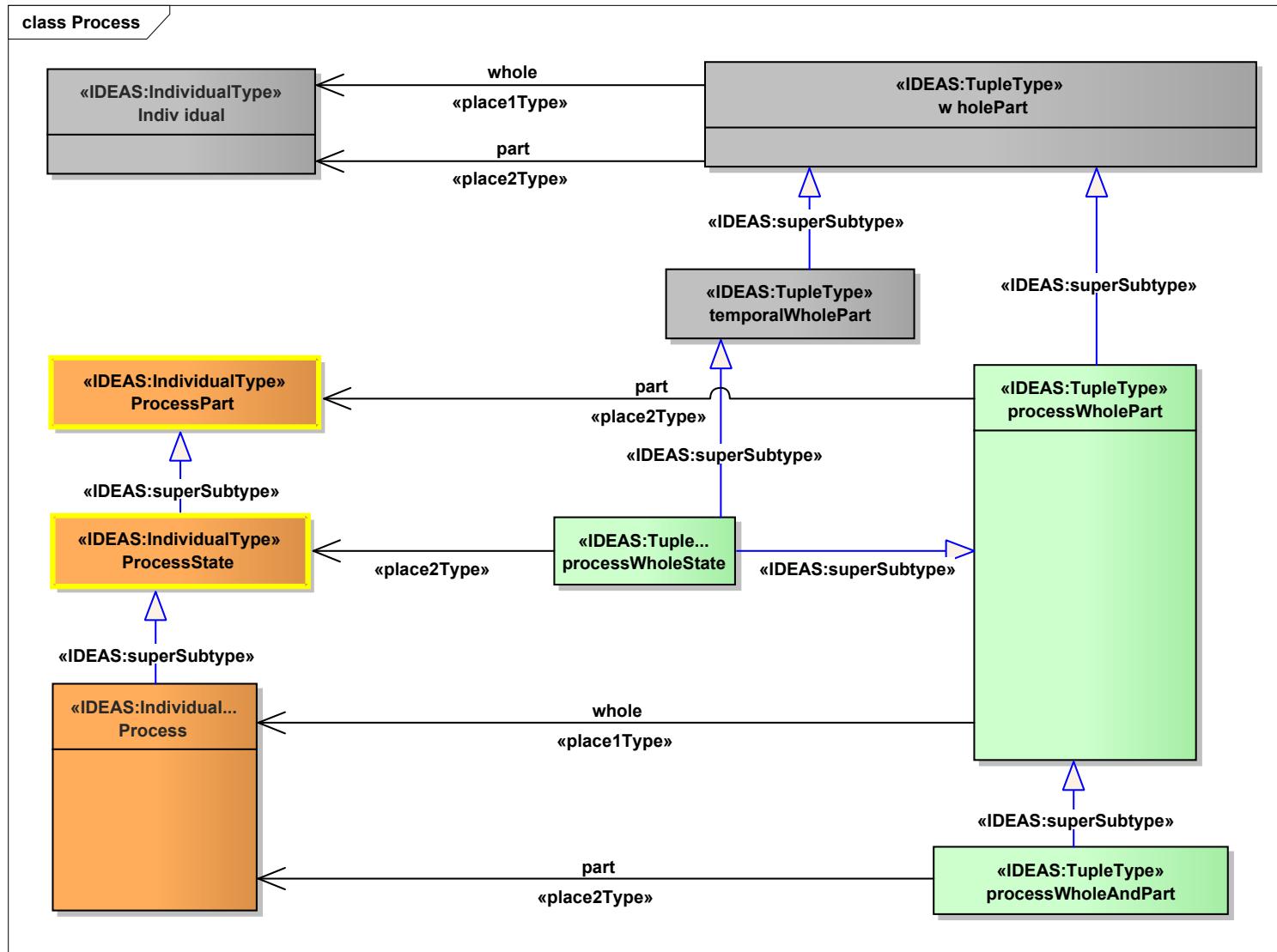
Figure 140 : Process
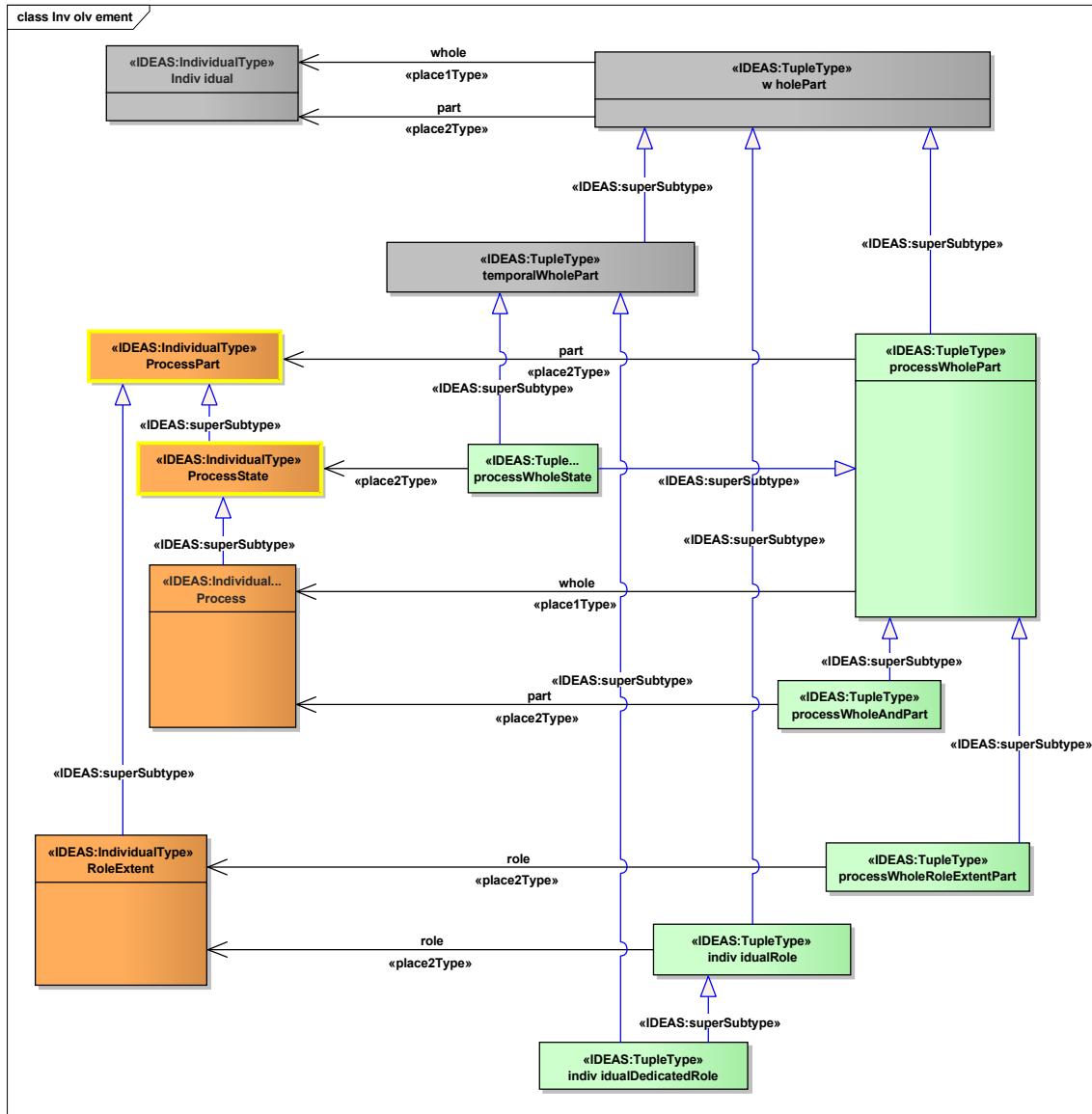
Figure 141 : Involvement

Figure 142 : ProcessType

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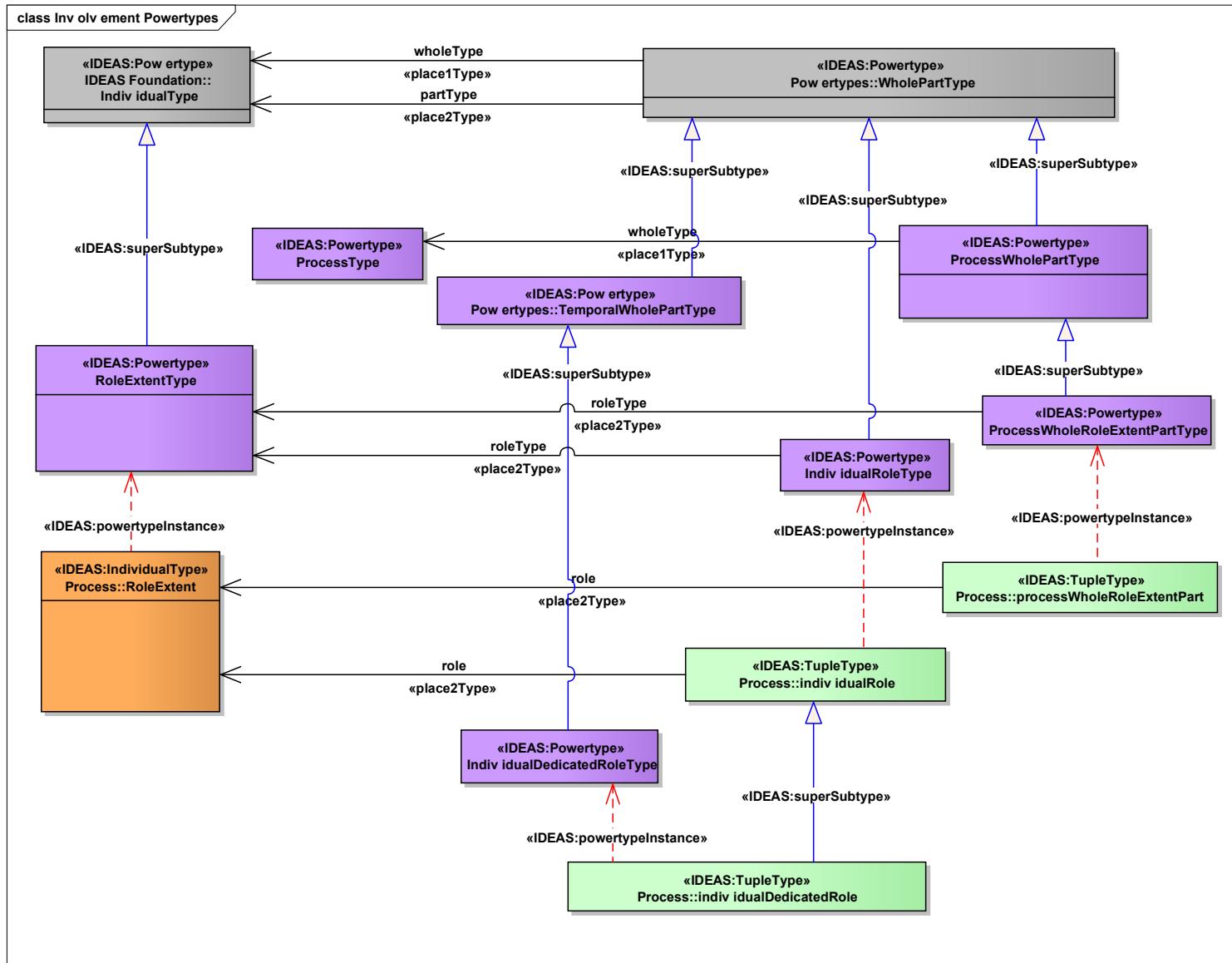
Figure 143 : Involvement Powertypes

3.4.12 Process elements list

Process
ProcessPart «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **ProcessPart - BodyPart** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **ProcessPart - ProcessPartType** *Attributes:* **-** **An Individual that is part of a Process.**
ProcessState «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **ProcessState - ProcessPart** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **ProcessState - ProcessStateType** *Attributes:* **-** **A ProcessPart that is a temporal part of a Process.**
RoleExtent «IDEAS:IndividualType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **RoleExtent - ProcessPart** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **RoleExtent - RoleExtentType** *Attributes:* **-** **A ProcessPart that is the extent of an Individual's involvement in a Process.**
individualDedicatedRole «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **individualDedicatedRole - temporalWholePart** *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **individualDedicatedRole - individualRole** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **individualDedicatedRole - IndividualDedicatedRoleType** *Attributes:* **-** **An individualRole where the RoleExtent is a temporal part of the Individual involved in the Process - i.e. all the Individual for a period of time. Note: The RoleExtent may be temporally scattered - i.e. the fusion of all occasions the Individual was involved.**
individualRole «IDEAS:TupleType» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **individualRole - wholePart** *Dependency (element - is instance of): «IDEAS:powertypeInstance»* **individualRole - IndividualRoleType** *Association (source - target): «place2Type»*

This document is no longer extant and has been withdrawn.

individualRole - RoleExtent
Attributes:
-
A wholePart where the part is the extent of the Role played by the Individual in a particular Process.

---

processWholeRoleExtentPart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
processWholeRoleExtentPart - processWholePart
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
processWholeRoleExtentPart - ProcessWholeRoleExtentPartType
Association (source - target): **«place2Type»**
processWholeRoleExtentPart - RoleExtent
Attributes:
-
A processWholePart where the part is a RoleExtent - i.e. the extent of an Individual's role in the Process.

---

processWholeState «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
processWholeState - processWholePart
Association (source - target): **«place2Type»**
processWholeState - ProcessState
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
processWholeState - temporalWholePart
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
processWholeState - ProcessWholeStateType
Attributes:
-
A processWholeState where the part is a ProcessState - i.e. all of the spatial extent of the process for a period of time.

Process «IDEAS:IndividualType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
Process - ProcessState
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
Process - ProcessType
Attributes:
-
A ProcessPart that is an Individual whose extent is defined by its involvements.

---

processWholeAndPart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
processWholeAndPart - processWholePart
Dependency (element - is instance of): **«IDEAS:powertypeInstance»**
processWholeAndPart - ProcessWholeAndPartType
Association (source - target): **«place2Type»**
processWholeAndPart - Process
Attributes:
-
A processWholePart that asserts a Process is part of a Process.

processWholePart «IDEAS:TupleType»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
processWholePart - wholePart
Dependency (element - is instance of): «IDEAS:powertypeInstance»
processWholePart - ProcessWholePartType
Association (source - target): «place2Type»
processWholePart - ProcessPart
Association (source - target): «place1Type»
processWholePart - Process
Attributes:
-
A wholePart that asserts an Individual is part of a Process.

Process Powertypes

IndividualDedicatedRoleType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
IndividualDedicatedRoleType - TemporalWholePartType
Attributes:
-
The powertype of individualDedicatedRole.

IndividualRoleType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
IndividualRoleType - WholePartType
Association (source - target): «place1Type»
IndividualRoleType - RoleExtentType
Attributes:
-
The powertype of individualRole.

ProcessPartType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProcessPartType - BodyPartType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProcessPartType - ModemIndividualElementType
Attributes:
-
The powertype of ProcessPart.

ProcessStateType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProcessStateType - ProcessPartType
Generalization (element - is a subtype of): «IDEAS:superSubtype»
ProcessStateType - TemporalWholePartType
Attributes:
-
The powertype of ProcessState.

ProcessWholeAndPartType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **ProcessWholeAndPartType - ProcessWholeStateType** *Association (source - target): «place2Type»* **ProcessWholeAndPartType - ProcessType** *Attributes:* **-** **The ProcessWholePartType that is the Powertype of processWholeAndPart.**
ProcessWholeRoleExtentPartType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **ProcessWholeRoleExtentPartType - ProcessWholePartType** *Association (source - target): «place2Type»* **ProcessWholeRoleExtentPartType - RoleExtentType** *Attributes:* **-** **The powertype of processWholeRoleExtentPart.**
ProcessWholeStateType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **ProcessWholeStateType - ProcessWholePartType** *Association (source - target): «place2Type»* **ProcessWholeStateType - ProcessStateType** *Attributes:* **-** **The powertype of processWholeState.**
RoleExtentType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **RoleExtentType - IndividualType** *Attributes:* **-** **The powertype of RoleExtent.**
ProcessType «IDEAS:Powertype» *Connectors:* *Generalization (element - is a subtype of): «IDEAS:superSubtype»* **ProcessType - ProcessStateType** *Attributes:* **-** **The powertype of Process.**

ProcessWholePartType «IDEAS:Powertype»
Connectors:
Generalization (element - is a subtype of): **«IDEAS:superSubtype»**
ProcessWholePartType - WholePartType
Association (source - target): **«place2Type»**
ProcessWholePartType - ProcessPartType
Association (source - target): **«place1Type»**
ProcessWholePartType - ProcessType
Attributes:
-
The powertype of processWholePart.

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List of figures:

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