



Biomedical Burden Ontology: Ontology Documentation

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Introduction

The Biomedical Burden Ontology (BBO) is an ontology of biomedical burdens. It includes support for burden-related entities, such as treatment burden, symptom burden, and burden appraisals.

The present report documents the entities included in the BBO (see Section 16). It also documents the entities included in ontologies that are imported by the BBO.¹

Throughout the report, graphical icons are used to document ontology elements. These are presented in Table 1.1. As is suggested by this table, the present documentation is based on the Web Ontology Language (OWL).

| Icon | Name | Description |
|---|---------------------------------|---|
|  | Primitive Class | Symbolizes an OWL primitive class. |
|  | Defined Class | Symbolizes an OWL defined class. |
|  | Universal Restriction | Symbolizes an OWL universal constraint. |
|  | Existential Constraint | Symbolizes an OWL existential constraint. |
|  | Intersection | Symbolizes the logical AND operator. |
|  | Union | Symbolizes the logical OR operator. |
|  | Complement | Symbolizes the logical NOT operator. |
|  | Enumeration | Symbolizes an OWL enumerated class. |
|  | Cardinality Restriction | Specifies the (exact value) cardinality of a restriction. |
|  | Minimum Cardinality Restriction | Specifies the minimum cardinality of a restriction. |
|  | Maximum Cardinality Restriction | Specifies the maximum cardinality of a restriction. |
|  | Has Value Restriction | Specifies the value of a restriction. |
|  | Datatype Property | Symbolizes an OWL datatype property. |
|  | Object Property | Symbolizes an OWL object property. |

¹ Note that not all entities in imported ontologies are documented.





| Icon | Name | Description |
|---|----------------------|---|
|  | Annotation Property | Symbolizes an OWL annotation property. |
|  | Property Chain Axiom | Symbolizes an OWL property chain axiom. |
|  | Inverse Property | Symbolizes an OWL inverse axiom. |
|  | Individual | Symbolizes an OWL individual. |

Table 1.1: Icon semantics.

Basic Formal Ontology

Basic Formal Ontology (BFO) is a top-level ontology that provides a framework for building more specific ontologies. It is designed to provide a common set of categories and relations that can be used to describe entities in any domain of interest.

2.1 Named Classes

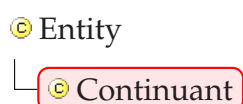
2.1.1 Continuant

A continuant is an entity that persists, endures, or continues to exist through time while maintaining its identity.

Annotations

- ▶ **Label:** continuant
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000002





Hierarchy



Direct Super Types

- ▶  Entity
- ▶  `continuantPartOf` Continuant






Direct Sub Types

- ▶  `GenericallyDependentContinuant`
- ▶  `Resource`
- ▶  `IndependentContinuant`
- ▶  `SpecificallyDependentContinuant`






Disjoint Classes

- ▶  Occurrent

Domain Of

- ▶  isInputOf
- ▶  isOutputOf
- ▶  isAffectedBy
- ▶  continuantPartOf
- ▶  hasContinuantPart

Range For

- ▶  hasInput
- ▶  hasOutput
- ▶  affects
- ▶  continuantPartOf
- ▶  hasContinuantPart

Figures

- ▶ Figure 2.1
- ▶ Figure 2.5
- ▶ Figure 2.6

2.1.2 ContinuantFiatBoundary

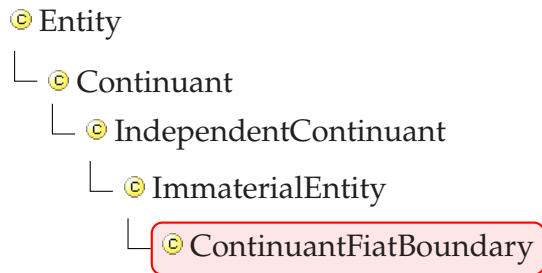
Definition

b is a continuant fiat boundary = Def. b is an immaterial entity that is of zero, one or two dimensions and does not include a spatial region as part.

Annotations

- ▶ **Label:** continuant fiat boundary
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000140

Hierarchy



Direct Super Types

- ▶ ☉ ImmaterialEntity
- ▶ ☹ locationOf ContinuantFiatBoundary
- ▶ ☹ hasContinuantPart ContinuantFiatBoundary

Direct Sub Types

- ▶ ☉ FiatPoint
- ▶ ☉ FiatSurface
- ▶ ☉ FiatLine

Disjoint Classes

- ▶ ☉ SpatialRegion

Figures

- ▶ Figure 2.2
- ▶ Figure 2.3

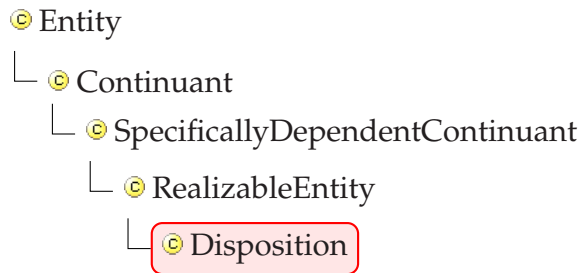
2.1.3 Disposition

b is a disposition means: b is a realizable entity & b's bearer is some material entity & b is such that if it ceases to exist, then its bearer is physically changed, & b's realization occurs when and because this bearer is in some special physical circumstances, & this realization occurs in virtue of the bearer's physical make-up.

Annotations

- ▶ **Label:** disposition
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000016

Hierarchy



Direct Super Types

- ▶ ☉ RealizableEntity

Direct Sub Types

- ▶ ☉ Homeostasis
- ▶ ☉ Disease
- ▶ ☉ DisruptingDisposition
- ▶ ☉ Disease
- ▶ ☉ PredispositionToDiseaseOfTypeX
- ▶ ☉ EmotionDisposition
- ▶ ☉ Function
- ▶ ☉ BodilyDisposition
- ▶ ☉ DispositionToBeAgentOfMentalProcess

Disjoint Classes

- ▶ ☉ Role

Domain Of

- ▶ ☐ dispositionOfAggregate
- ▶ ☐ hasMaterialBasis

Range For

- ▶ ☐ aggregateHasDisposition
- ▶ ☐ materialBasisOf

Figures

- ▶ Figure 2.5
- ▶ Figure 2.6

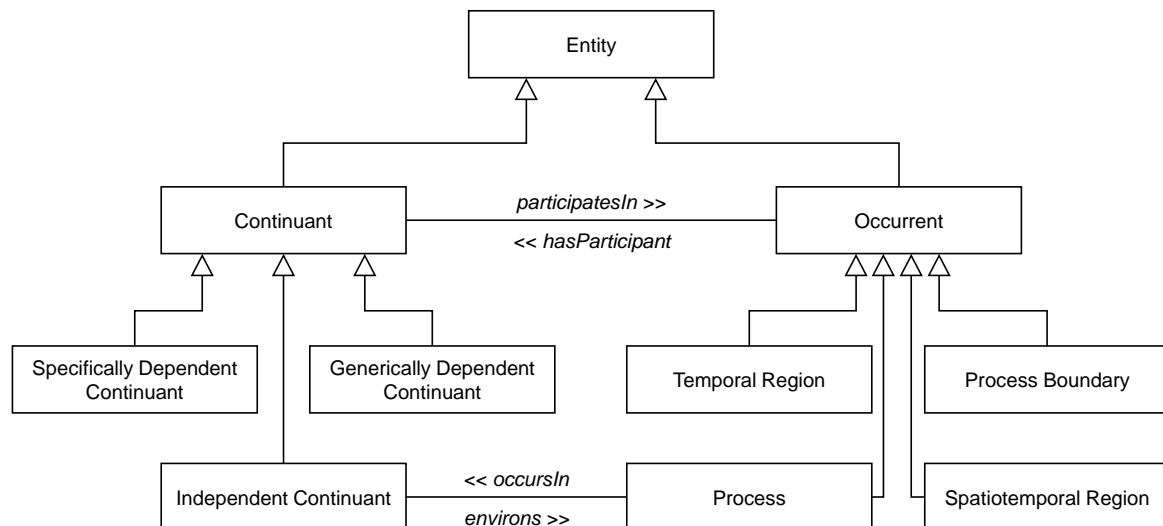


Figure 2.1: Top level terms of the Basic Formal Ontology.

2.1.4 Entity






An entity is anything that exists or has existed or will exist.

Annotations

- **Label:** entity
- **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- **ID:** http://purl.obolibrary.org/obo/BFO_0000001

Direct Super Types

Direct Sub Types

-  UndefinedPrimitiveTerm
-  Occurrent
-  Continuant
-  HealthCondition
-  PortionOfReality

Domain Of

-  existsAt

Range For

-  isAbout

Figures

- Figure 2.1

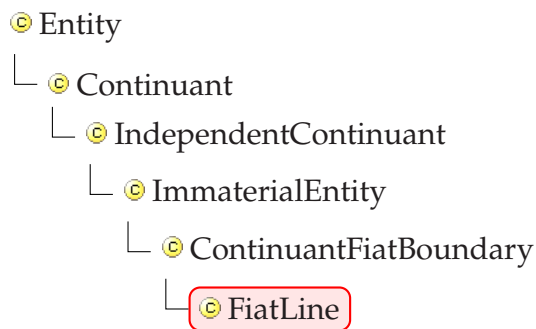
2.1.5 FiatLine

a one-dimensional continuant fiat boundary is a continuous fiat line whose location is defined in relation to some material entity.

Annotations

- **Label:** fiat line
- **Label:** one-dimensional continuant fiat boundary
- **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- **ID:** http://purl.obolibrary.org/obo/BFO_0000142

Hierarchy



Direct Super Types

- ContinuantFiatBoundary
- hasContinuantPart (FiatLine FiatPoint)

Disjoint Classes

- FiatPoint
- FiatSurface

Figures

- Figure 2.2

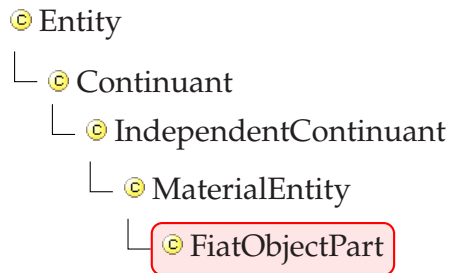
2.1.6 FiatObjectPart

b is a fiat object part = Def. b is a material entity which is such that for all times t, if b exists at t then there is some object c such that b proper continuant_part of c at t and c is demarcated from the remainder of c by a two-dimensional continuant fiat boundary.

Annotations

- ▶ **Label:** fiat object part
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000024

Hierarchy



Direct Super Types

- ▶ ☉ MaterialEntity

Direct Sub Types

- ▶ ☉ BodilyComponent
- ▶ ☉ MentalFunctioningRelatedAnatomicalStructure

Figures

- ▶ Figure 2.3

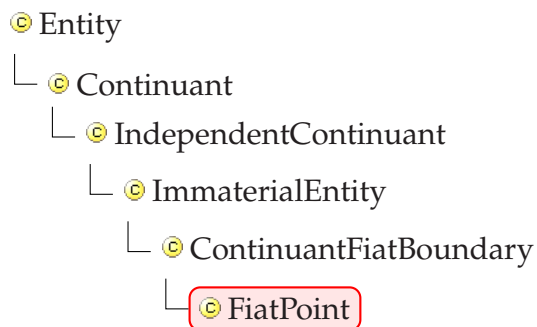
2.1.7 FiatPoint

a zero-dimensional continuant fiat boundary is a fiat point whose location is defined in relation to some material entity.

Annotations

- ▶ **Label:** fiat point
- ▶ **Label:** zero-dimensional continuant fiat boundary
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000147

Hierarchy



Direct Super Types

- ContinuantFiatBoundary
- hasContinuantPart FiatPoint

Disjoint Classes

- FiatLine

Figures

- Figure 2.2

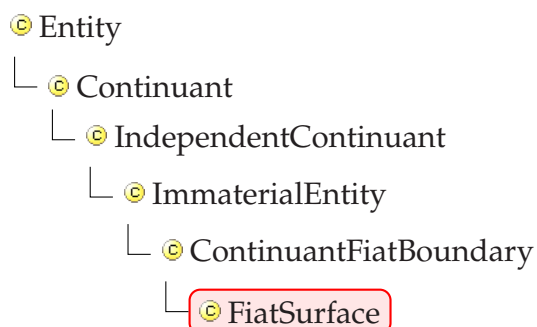
2.1.8 FiatSurface

a two-dimensional continuant fiat boundary (surface) is a self-connected fiat surface whose location is defined in relation to some material entity.

Annotations

- Label:** fiat surface
- Label:** two-dimensional continuant fiat boundary
- Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ID:** http://purl.obolibrary.org/obo/BFO_0000146

Hierarchy



Direct Super Types

- ▶  ContinuantFiatBoundary
- ▶  hasContinuantPart ContinuantFiatBoundary

Disjoint Classes

- ▶  FiatLine

Figures

- ▶ Figure 2.2

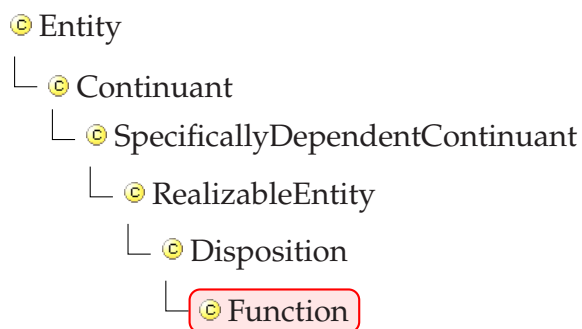
2.1.9 Function

A function is a disposition that exists in virtue of the bearer's physical make-up and this physical make-up is something the bearer possesses because it came into being, either through evolution (in the case of natural biological entities) or through intentional design (in the case of artifacts), in order to realize processes of a certain sort.

Annotations

- ▶ **Label:** function
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000034

Hierarchy



Direct Super Types

- ▶  Disposition

Figures

- ▶ Figure 2.6

2.1.10 GenericallyDependentContinuant

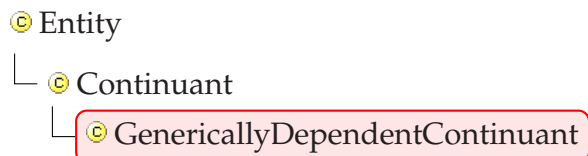
Definition

b is a generically dependent continuant = Def. b is a continuant that g-depends_on one or more other entities.

Annotations

- ▶ **Label:** generically dependent continuant
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000031




Hierarchy



Direct Super Types

- ▶  Continuant

Direct Sub Types

- ▶  InformationContentEntity
- ▶  NormalValue
- ▶  InformationContentEntity


Disjoint Classes

- ▶  SpecificallyDependentContinuant
- ▶  IndependentContinuant

Domain Of

- ▶  genericallyDependsOn
- ▶  isConcretizedBy

Range For

- ▶  isCarrierOf
- ▶  concretizes

Figures

- ▶ Figure 2.1

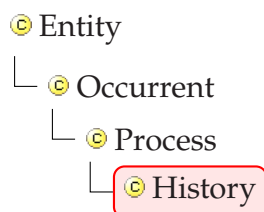
2.1.11 History

A history is a process that is the sum of the totality of processes taking place in the spatiotemporal region occupied by a material entity or site, including processes on the surface of the entity or within the cavities to which it serves as host.

Annotations

- ▶ **Label:** history
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000182

Hierarchy



Direct Super Types

- ▶ Process

Disjoint Classes

- ▶ ProcessProfile

Domain Of

- ▶ historyOf

Range For

- ▶ hasHistory

Figures

- ▶ Figure 2.4

2.1.12 ImmaterialEntity

Definition

b is an immaterial entity =Def b is an independent continuant which is such that there is no time t when it has a material entity as continuant part

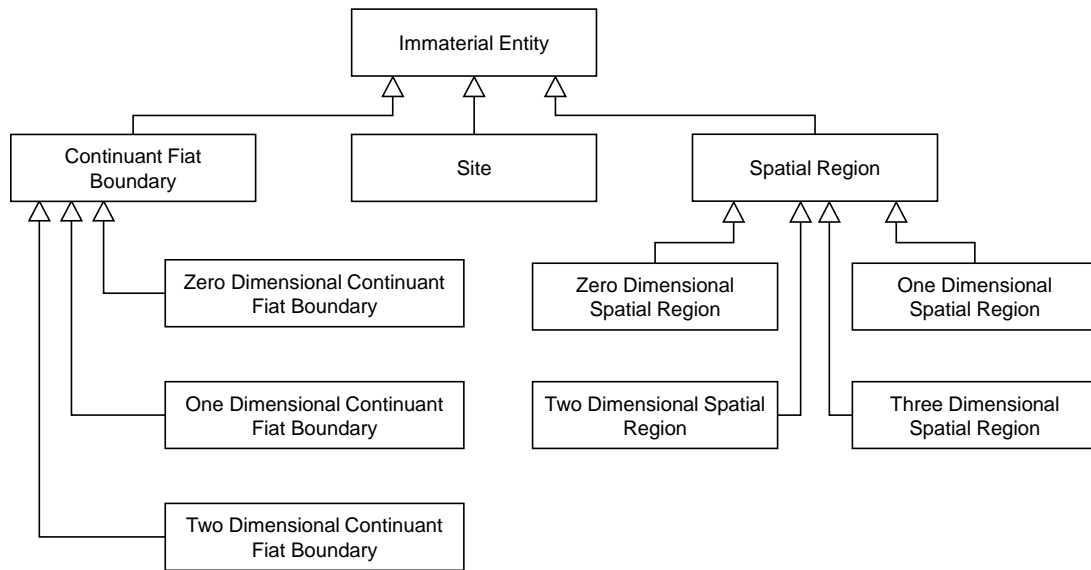
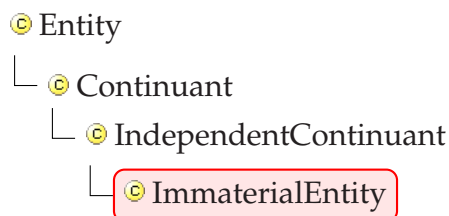


Figure 2.2: Immaterial entity hierarchy.

Annotations

- **Label:** immaterial entity
- **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- **ID:** http://purl.obolibrary.org/obo/BFO_0000141

Hierarchy



Direct Super Types

- IndependentContinuant

Direct Sub Types

- ContinuantFiatBoundary
- Site
- SpatialRegion

Disjoint Classes

- MaterialEntity

Domain Of

- ▶  nontangentialPartOf
- ▶  hasTangentialPart
- ▶  partiallyOverlapsWith
- ▶  tangentialPartOf
- ▶  spatialPartOf
- ▶  hasSpatialPart
- ▶  connectedWith
- ▶  coincidesWith
- ▶  disconnectedWith
- ▶  hasNontangentialPart
- ▶  externallyConnectsWith

Range For

- ▶  nontangentialPartOf
- ▶  hasTangentialPart
- ▶  partiallyOverlapsWith
- ▶  tangentialPartOf
- ▶  spatialPartOf
- ▶  hasSpatialPart
- ▶  connectedWith
- ▶  coincidesWith
- ▶  disconnectedWith
- ▶  hasNontangentialPart
- ▶  externallyConnectsWith

Figures

- ▶ Figure 2.2
- ▶ Figure 2.3

2.1.13 IndependentContinuant**Definition**

b is an independent continuant = Def. b is a continuant which is such that there is no c and no t such that b s-depends_on c at t.

Annotations

- ▶ **Label:** independent continuant
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000004

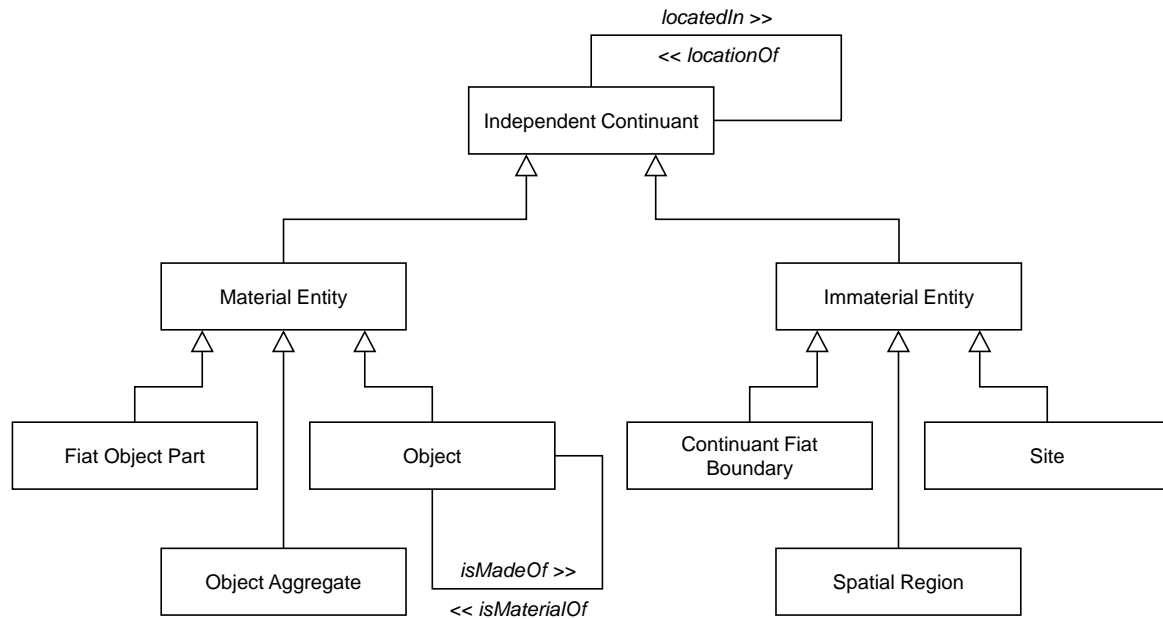
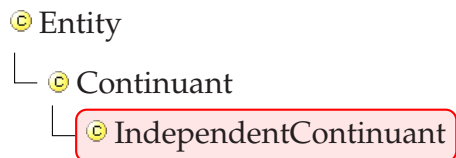


Figure 2.3: Independent continuant hierarchy.

Hierarchy



Direct Super Types

- ▶ Entity Continuant
- ▶ ContinuantPartOf IndependentContinuant

Direct Sub Types

- ▶ ImmaterialEntity
- ▶ MaterialEntity



Disjoint Classes

- ▶ GenericallyDependentContinuant
- ▶ SpecificallyDependentContinuant

Domain Of

- ▶ isSuccessorOf
- ▶ isPredecessorOf

Range For

- ▶  isSuccessorOf
- ▶  isPredecessorOf

Figures

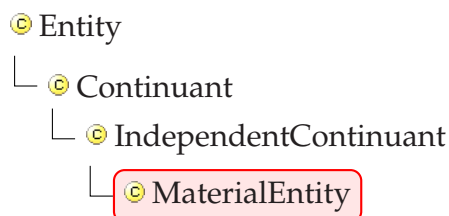
- ▶ Figure 2.1
- ▶ Figure 2.3
- ▶ Figure 2.5
- ▶ Figure 2.6



2.1.14 MaterialEntity

A material entity is an independent continuant that has some portion of matter as proper or improper continuant part.








Annotations







- ▶ **Label:** material entity
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000040

Hierarchy**Direct Super Types**

- ▶  IndependentContinuant
- ▶  continuantPartOf MaterialEntity
- ▶  hasContinuantPart (Site  MaterialEntity  ContinuantFiatBoundary)

Direct Sub Types







- ▶  ExtendedOrganism
- ▶  OrganismPopulation
- ▶  PortionOfPathologicalBodySubstance
- ▶  Agent
- ▶  PhysicalSign
- ▶  CongenitalDisorder
- ▶  PathologicalAnatomicalStructure

- ▶  Object
- ▶  ObjectAggregate
- ▶  FiatObjectPart
- ▶  PathologicalFormation
- ▶  Disorder
- ▶  Infection








Disjoint Classes

- ▶  ImmaterialEntity

Domain Of

- ▶  hasHistory
- ▶  accessoryIn
- ▶  accompliceIn
- ▶  hasMemberPart
- ▶  materialBasisOf
- ▶  memberPartOf

Range For

- ▶  hasAccessory
- ▶  hasAccomplice
- ▶  hasMemberOfLocatedIn
- ▶  hasMaterialBasis
- ▶  hasMemberPart
- ▶  memberPartOf
- ▶  historyOf

Figures

- ▶ Figure 2.3

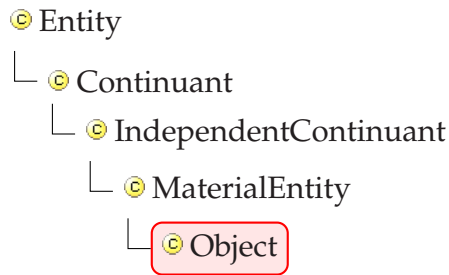
2.1.15 Object

b is an object means: b is a material entity which manifests causal unity of one or other of the types CUn listed above & is of a type (a material universal) instances of which are maximal relative to this criterion of causal unity.

Annotations

- ▶ **Label:** object
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000030

Hierarchy



Direct Super Types

- ▶ MaterialEntity

Direct Sub Types

- ▶ Organism
- ▶ InformationBearingEntity

Domain Of

- ▶ isMaterialOf
- ▶ isMadeOf

Range For

- ▶ isMaterialOf
- ▶ isMadeOf

Figures

- ▶ Figure 2.3

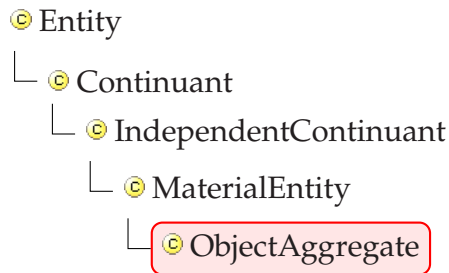
2.1.16 ObjectAggregate

b is an object aggregate means: b is a material entity consisting exactly of a plurality of objects as member_parts at all times at which b exists.

Annotations

- ▶ **Label:** object aggregate
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000027

Hierarchy



Direct Super Types

- ▶ ☉ MaterialEntity

Direct Sub Types

- ▶ ☉ GroupOfAgents

Domain Of

- ▶ ☐ aggregateHasRole
- ▶ ☐ hasMemberOfLocatedIn
- ▶ ☐ aggregateHasQuality
- ▶ ☐ aggregateBearerOf
- ▶ ☐ aggregateHasDisposition

Range For

- ▶ ☐ qualityOfAggregate
- ▶ ☐ roleOfAggregate
- ▶ ☐ dispositionOfAggregate
- ▶ ☐ inheresInAggregate

Figures

- ▶ Figure 2.3

2.1.17 Occurrent

An occurrent is an entity that unfolds itself in time or it is the instantaneous boundary of such an entity (for example a beginning or an ending) or it is a temporal or spatiotemporal region which such an entity occupies_temporal_region or occupies_spatiotemporal_region.

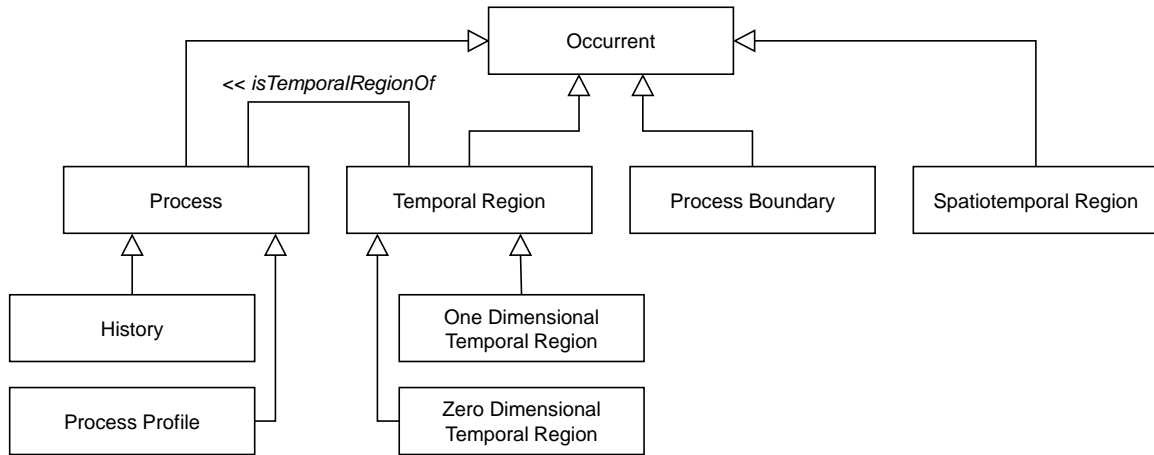
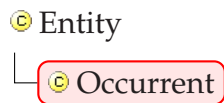


Figure 2.4: Occurrent hierarchy.

Annotations

- **Label:** occurrent
- **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- **ID:** http://purl.obolibrary.org/obo/BFO_0000003

Hierarchy



Direct Super Types

- Entity

Direct Sub Types






- ProcessBoundary
- ProcessProfile
- Process
- TemporalRegion
- SpatiotemporalRegion

Disjoint Classes









- Continuant

Domain Of

- temporalPartOf
- occurrentPartOf
- isCauseOf

- ▶  causedBy
- ▶  precedes
- ▶  precededBy
- ▶  hasTemporalPart
- ▶  hasOccurrentPart

Range For

- ▶  temporalPartOf
- ▶  occurrentPartOf
- ▶  isCauseOf
- ▶  causedBy
- ▶  precedes
- ▶  precededBy
- ▶  hasTemporalPart
- ▶  hasOccurrentPart

Figures

- ▶ Figure 2.1
- ▶ Figure 2.4
- ▶ Figure 2.6

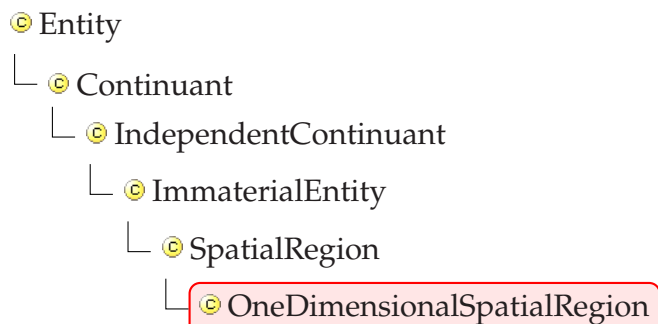
2.1.18 OneDimensionalSpatialRegion

A one-dimensional spatial region is a line or aggregate of lines stretching from one point in space to another.

Annotations

- ▶ **Label:** one-dimensional spatial region
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000026

Hierarchy



Direct Super Types

- ▶  SpatialRegion
- ▶  hasContinuantPart (ZeroDimensionalSpatialRegion  OneDimensionalSpatialRegion)

Disjoint Classes

- ▶  ThreeDimensionalSpatialRegion

Figures

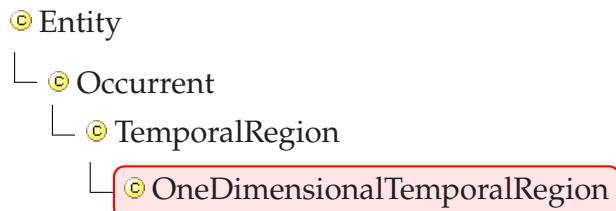
- ▶ Figure 2.2





2.1.19 OneDimensionalTemporalRegion

A one-dimensional temporal region is a temporal region that is extended.

Annotations

- ▶ **Label:** one-dimensional temporal region
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000038

Hierarchy**Direct Super Types**

- ▶  TemporalRegion
- ▶  hasTemporalPart (OneDimensionalTemporalRegion  ZeroDimensionalTemporalRegion)
- ▶  temporalPartOf OneDimensionalTemporalRegion

Direct Sub Types

- ▶  TemporalInterval

Disjoint Classes

- ▶  ZeroDimensionalTemporalRegion

Domain Of

- ▶  intervalMeets
- ▶  intervalMetBy
- ▶  intervalsAfter
- ▶  intervalsBefore
- ▶  intervalStartedBy
- ▶  intervalStarts
- ▶  intervalOverlappedBy
- ▶  intervalOverlaps
- ▶  intervalFinishes
- ▶  intervalContainedBy
- ▶  intervalContains
- ▶  hasInsideInstant
- ▶  hasInsideInterval
- ▶  intervalEquals
- ▶  intervalFinishedBy
- ▶  intervalDisjoint
- ▶  intervalDuring

Range For

- ▶  intervalMetBy
- ▶  intervalOverlappedBy
- ▶  intervalsBefore
- ▶  intervalMeets
- ▶  intervalStarts
- ▶  isInsideInstantOf
- ▶  intervalOverlaps
- ▶  intervalStartedBy
- ▶  intervalsAfter
- ▶  intervalContains
- ▶  intervalDisjoint
- ▶  hasInsideInterval
- ▶  intervalContainedBy
- ▶  intervalFinishedBy
- ▶  intervalFinishes
- ▶  intervalDuring
- ▶  intervalEquals

Figures

- ▶ Figure 2.4

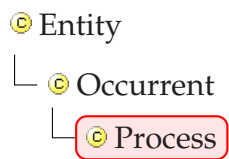
2.1.20 Process

Definition

p is a process = Def. p is an occurrent that has temporal proper parts and for some time t, p s-depends_on some material entity at t.

Annotations

- ▶ **Label:** process
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000015

Hierarchy**Direct Super Types**

- ▶ Occurrent
- ▶ hasOccurrentPart (Process ProcessBoundary)
- ▶ occurrentPartOf Process
- ▶ temporalPartOf Process

Direct Sub Types

- ▶ Act
- ▶ Cause
- ▶ LifeCourse
- ▶ ProcessualSign
- ▶ NaturalProcess
- ▶ Stasis
- ▶ Change
- ▶ Effect
- ▶ Convalescence
- ▶ PlannedProcess
- ▶ DiseaseStage
- ▶ ProcessProfile
- ▶ History
- ▶ Symptom
- ▶ BodilyProcess
- ▶ DiseaseCourse
- ▶ EtiologicalProcess
- ▶ SymptomProcess

Disjoint Classes

- ▶ ☉ TemporalRegion

Domain Of

- ▶ ☐ isInterestOf
- ▶ ☐ isPartOfProcess
- ▶ ☐ hasProcessPart
- ▶ ☐ isDisruptedBy
- ▶ ☐ isRequiredBy
- ▶ ☐ occursAt
- ▶ ☐ isPermittedBy
- ▶ ☐ isProhibitedBy
- ▶ ☐ affects
- ▶ ☐ disrupts
- ▶ ☐ realizes
- ▶ ☐ hasParticipant
- ▶ ☐ hasInput
- ▶ ☐ hasOutput
- ▶ ☐ hasAccessory
- ▶ ☐ hasAccomplice

Range For

- ▶ ☐ isOutputOf
- ▶ ☐ isPartOfProcess
- ▶ ☐ isDisruptedBy
- ▶ ☐ isInputOf
- ▶ ☐ prohibits
- ▶ ☐ requires
- ▶ ☐ isSiteOf
- ▶ ☐ permits
- ▶ ☐ accessoryIn
- ▶ ☐ accompliceIn
- ▶ ☐ hasRealization
- ▶ ☐ participatesIn
- ▶ ☐ hasProcessPart
- ▶ ☐ isAffectedBy
- ▶ ☐ disrupts
- ▶ ☐ hasInterestIn

Figures

- ▶ Figure 2.1
- ▶ Figure 2.4

- Figure 2.6

2.1.21 ProcessBoundary

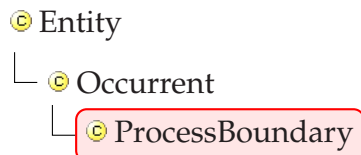
Definition

p is a process boundary =Def. p is a temporal part of a process & p has no proper temporal parts.

Annotations

- **Label:** process boundary
- **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- **ID:** http://purl.obolibrary.org/obo/BFO_0000035

Hierarchy



Direct Super Types

- Occurrent
- hasOccurrentPart ProcessBoundary
- hasTemporalPart ProcessBoundary
- occurrentPartOf (Process ProcessBoundary)
- temporalPartOf (Process ProcessBoundary)

Direct Sub Types

- ProcessEnding
- ProcessBeginning

Disjoint Classes

- TemporalRegion

Figures

- Figure 2.1
- Figure 2.4

2.1.22 ProcessProfile

b process_profile_of c holds when b proper_occurent_part_of c & there is some proper_occurent_part d of c which has no parts in common with b & is mutually dependent on b & is such that b , c and d occupy the same temporal region

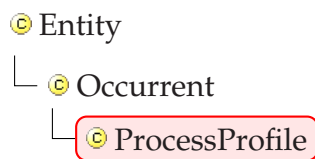
Definition

An occurrent that is an occurrent part of some process by virtue of the rate, or pattern, or amplitude of change in an attribute of one or more participants of said process.

Annotations

- ▶ **Label:** Process Profile
- ▶ **Label:** process profile
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000144

Hierarchy



Direct Super Types

- ▶ Process
- ▶ Occurrent

Direct Sub Types

- ▶ Consciousness
- ▶ Valence

Disjoint Classes

- ▶ History

Figures

- ▶ Figure 2.4

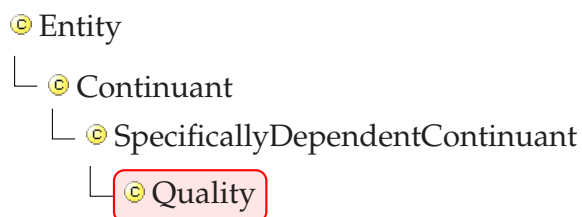
2.1.23 Quality

a quality is a specifically dependent continuant that, in contrast to roles and dispositions, does not require any further process in order to be realized.

Annotations

- ▶ **Label:** quality
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000019

Hierarchy



Direct Super Types

- ▶ SpecificallyDependentContinuant

Direct Sub Types

- ▶ Amount
- ▶ QualitativeSign
- ▶ RecoveredFromDisease
- ▶ InformationQualityEntity
- ▶ Disability
- ▶ BiologicalSex
- ▶ ManifestationOfADisease
- ▶ BodilyQuality
- ▶ RelationalQuality
- ▶ Phenotype
- ▶ Syndrome
- ▶ Configuration
- ▶ MorbidityStatus

Disjoint Classes

- ▶ RealizableEntity

Domain Of

- ▶ qualityOfAggregate

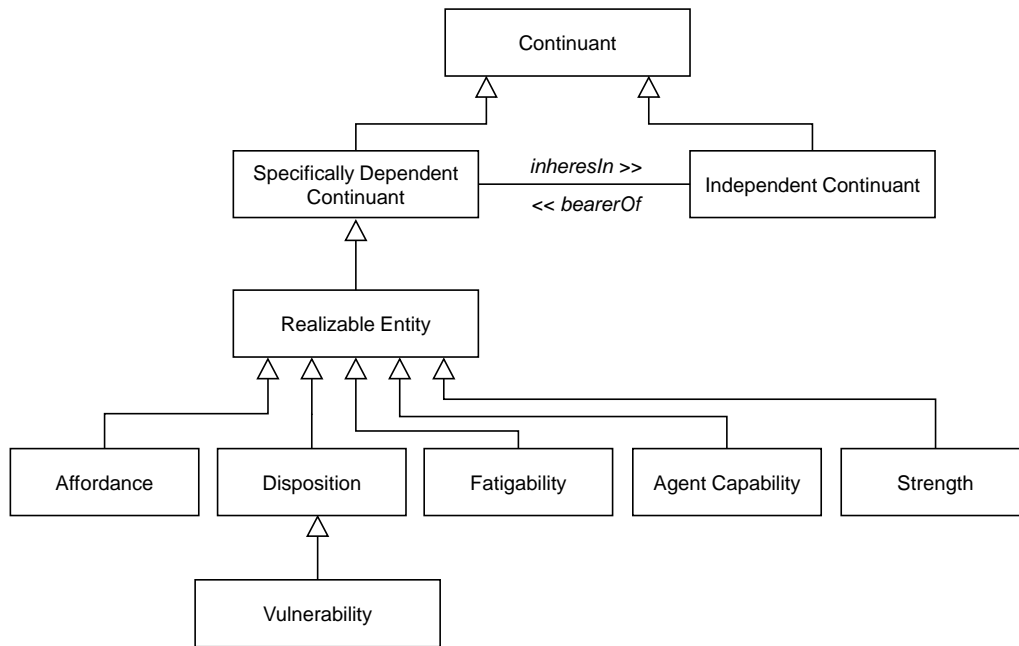


Figure 2.5: Realizable entity hierarchy.

Range For

-  aggregateHasQuality

Figures

- Figure 2.6

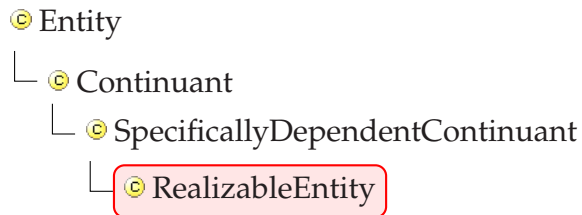
2.1.24 RealizableEntity

To say that *b* is a realizable entity is to say that *b* is a specifically dependent continuant that inheres in some independent continuant which is not a spatial region and is of a type instances of which are realized in processes of a correlated type.

Annotations

- **Label:** realizable entity
- **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- **ID:** http://purl.obolibrary.org/obo/BFO_0000017

Hierarchy



Direct Super Types

- ▶ SpecificallyDependentContinuant

Direct Sub Types

- ▶ AgentCapability
- ▶ Fatigability
- ▶ Strength
- ▶ Disposition
- ▶ Role
- ▶ Affordance

Disjoint Classes

- ▶ Quality

Domain Of

- ▶ hasRealization

Range For

- ▶ realizes

Figures

- ▶ Figure 2.5
- ▶ Figure 2.6

2.1.25 RelationalQuality

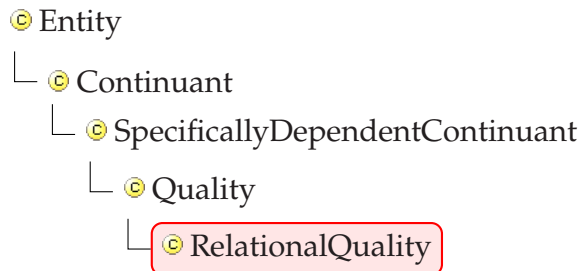
Definition

b is a relational quality = Def. for some independent continuants c, d and for some time t: b quality_of c at t & b quality_of d at t.

Annotations

- ▶ **Label:** relational quality
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000145

Hierarchy



Direct Super Types

- ▶ Quality

Figures

- ▶ Figure 2.6

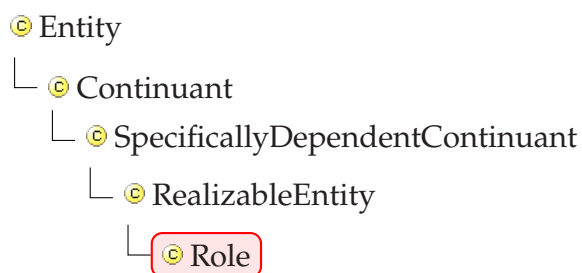
2.1.26 Role

b is a role means: b is a realizable entity & b exists because there is some single bearer that is in some special physical, social, or institutional set of circumstances in which this bearer does not have to be & b is not such that, if it ceases to exist, then the physical make-up of the bearer is thereby changed.

Annotations

- ▶ **Label:** role
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000023









Hierarchy



Direct Super Types

- ▶  RealizableEntity





Direct Sub Types

- ▶  OrganizationMemberRole
- ▶  OccupationRole
- ▶  SystemRole
- ▶  PartRole
- ▶  MedicationRole
- ▶  InterpersonalRelationshipRole
- ▶  CaregiverRole
- ▶  PatientRole





Disjoint Classes

- ▶  Disposition

Domain Of

- ▶  isSubordinateRoleTo
- ▶  roleOfAggregate
- ▶  hasOrganizationalContext
- ▶  hasSubordinateRole

Range For

- ▶  isOrganizationalContextOf
- ▶  isSubordinateRoleTo
- ▶  aggregateHasRole
- ▶  hasSubordinateRole

Figures

- ▶ Figure 2.6

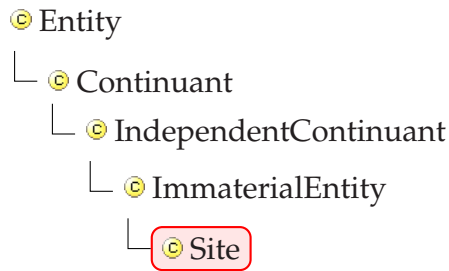
2.1.27 Site

b is a site means: b is a three-dimensional immaterial entity that is (partially or wholly) bounded by a material entity or it is a three-dimensional immaterial part thereof.

Annotations

- ▶ **Label:** site
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000029

Hierarchy



Direct Super Types

- ▶ ☉ ImmaterialEntity
- ▶ ☹ continuantPartOf (Site ☹ MaterialEntity)
- ▶ ☹ hasContinuantPart (Site ☹ ContinuantFiatBoundary)
- ▶ ☹ occupiesSpatialRegion ThreeDimensionalSpatialRegion

Disjoint Classes

- ▶ ☉ SpatialRegion

Domain Of

- ▶ ☐ isSiteOf

Range For

- ▶ ☐ occursAt

Figures

- ▶ Figure 2.2
- ▶ Figure 2.3

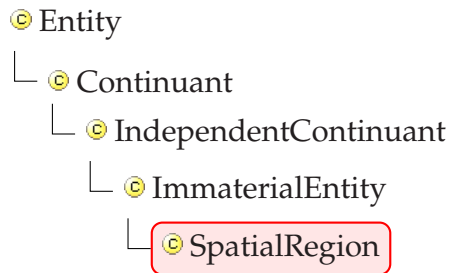
2.1.28 SpatialRegion

A spatial region is a continuant entity that is a `continuant_part_of` spaceR as defined relative to some frame R.

Annotations

- ▶ **Label:** spatial region
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000006

Hierarchy



Direct Super Types

- ▶ ☉ ImmaterialEntity
- ▶ ☑ continuantPartOf SpatialRegion

Direct Sub Types

- ▶ ☉ OneDimensionalSpatialRegion
- ▶ ☉ ThreeDimensionalSpatialRegion
- ▶ ☉ TwoDimensionalSpatialRegion
- ▶ ☉ ZeroDimensionalSpatialRegion

Disjoint Classes

- ▶ ☉ ContinuantFiatBoundary
- ▶ ☉ Site

Range For

- ▶ ☐ spatiallyProjectsOnto
- ▶ ☐ occupiesSpatialRegion

Figures

- ▶ Figure 2.2
- ▶ Figure 2.3

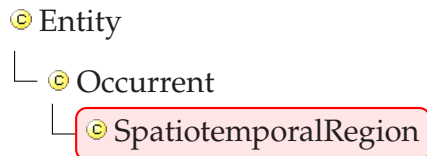
2.1.29 SpatiotemporalRegion

A spatiotemporal region is an occurrent entity that is part of spacetime.

Annotations

- ▶ **Label:** spatiotemporal region
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000011

Hierarchy



Direct Super Types

- ▶ Occurrent
- ▶ `occurentPartOf SpatiotemporalRegion`
- ▶ `temporalPartOf SpatiotemporalRegion`

Disjoint Classes

- ▶ TemporalRegion

Domain Of

- ▶ `spatiallyProjectsOnto`
- ▶ `temporallyProjectsOnto`

Range For

- ▶ `occupiesSpatiotemporalRegion`

Figures

- ▶ Figure 2.1
- ▶ Figure 2.4

2.1.30 SpecificallyDependentContinuant

Definition

b is a specifically dependent continuant = Def. b is a continuant & there is some independent continuant c which is not a spatial region and which is such that b s-depends_on c at every time t during the course of b's existence.

Annotations

- ▶ **Label:** specifically dependent continuant
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000020

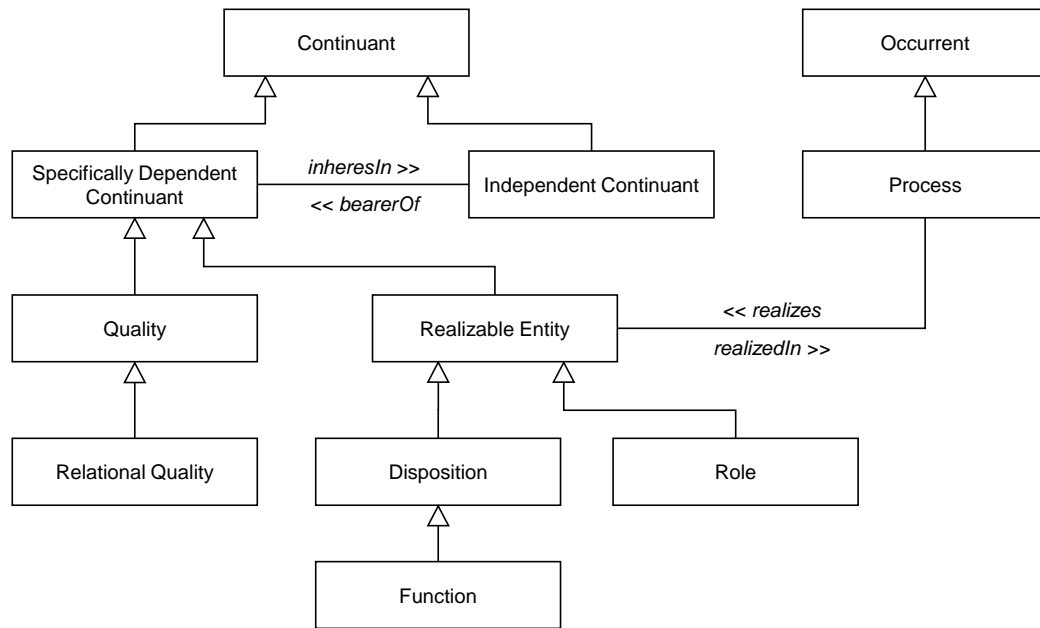
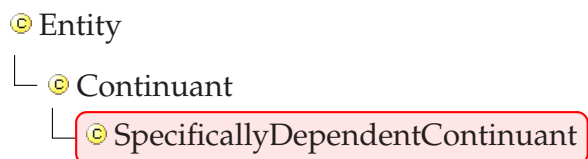


Figure 2.6: Specifically dependent continuant hierarchy.

Hierarchy



Direct Super Types

- ▶ ☉ Continuant

Direct Sub Types

- ▶ ☉ Representation
- ▶ ☉ Quality
- ▶ ☉ RealizableEntity

Disjoint Classes

- ▶ ☉ IndependentContinuant
- ▶ ☉ GenericallyDependentContinuant

Domain Of

- ▶ ☐ inheresIn
- ▶ ☐ specificallyDependsOn

Range For

- ▶  bearerOf
- ▶  specificallyDependedOnBy

Figures

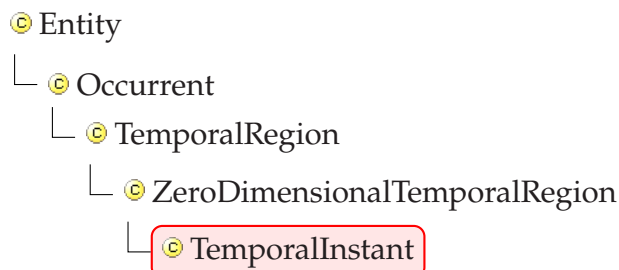
- ▶ Figure 2.1
- ▶ Figure 2.5
- ▶ Figure 2.6

2.1.31 TemporalInstant

A temporal instant is a zero-dimensional temporal region that has no proper temporal part


Annotations

- ▶ **Label:** temporal instant
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000203



Hierarchy**Direct Super Types**

- ▶  ZeroDimensionalTemporalRegion

Domain Of

- ▶  lastInstantOf
- ▶  firstInstantOf

Range For

- ▶  hasLastInstant
- ▶  hasFirstInstant

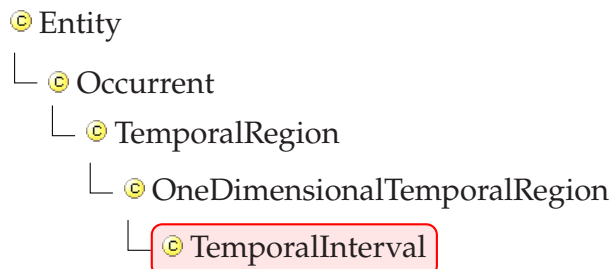
2.1.32 TemporalInterval

A temporal interval is a one-dimensional temporal region that is continuous, thus without gaps or breaks

Annotations

- ▶ **Label:** temporal interval
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000202

Hierarchy



Direct Super Types

- ▶ OneDimensionalTemporalRegion

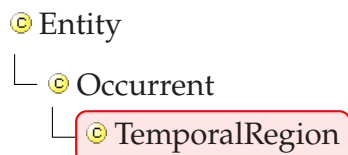
2.1.33 TemporalRegion

A temporal region is an occurrent entity that is part of time as defined relative to some reference frame.




Annotations

- ▶ **Label:** temporal region
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000008



Hierarchy






Direct Super Types

- ▶  Occurrent
- ▶  occurrentPartOf TemporalRegion
- ▶  temporalPartOf TemporalRegion




Direct Sub Types

- ▶  ZeroDimensionalTemporalRegion
- ▶  OneDimensionalTemporalRegion






Disjoint Classes

- ▶  ProcessBoundary
- ▶  Process
- ▶  SpatiotemporalRegion

Domain Of

- ▶  isTemporalRegionOf
- ▶  hasLastInstant
- ▶  hasFirstInstant

Range For

- ▶  firstInstantOf
- ▶  lastInstantOf
- ▶  occupiesTemporalRegion
- ▶  existsAt
- ▶  temporallyProjectsOnto

Figures

- ▶ Figure 2.1
- ▶ Figure 2.4

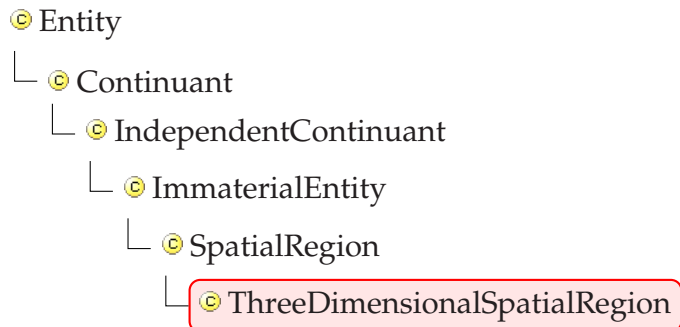
2.1.34 ThreeDimensionalSpatialRegion

A three-dimensional spatial region is a spatial region that is of three dimensions.

Annotations

- ▶ **Label:** three-dimensional spatial region
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000028

Hierarchy



Direct Super Types

- ▶ SpatialRegion
- ▶ hasContinuantPart SpatialRegion

Disjoint Classes

- ▶ OneDimensionalSpatialRegion
- ▶ ZeroDimensionalSpatialRegion
- ▶ TwoDimensionalSpatialRegion

Figures

- ▶ Figure 2.2

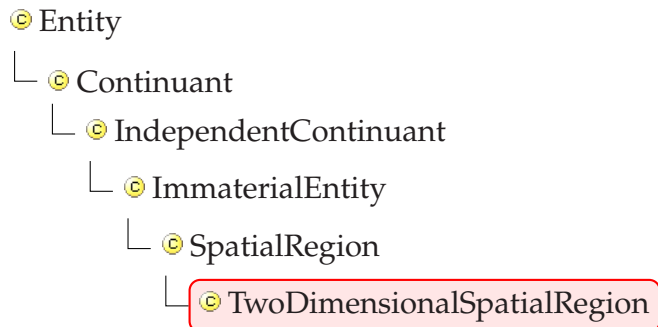
2.1.35 TwoDimensionalSpatialRegion

A two-dimensional spatial region is a spatial region that is of two dimensions.

Annotations

- ▶ **Label:** two-dimensional spatial region
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000009

Hierarchy



Direct Super Types

- ▶ SpatialRegion
- ▶ hasContinuantPart (TwoDimensionalSpatialRegion ZeroDimensionalSpatialRegion OneDimensionalSpatialRegion)

Disjoint Classes

- ▶ ThreeDimensionalSpatialRegion

Figures

- ▶ Figure 2.2

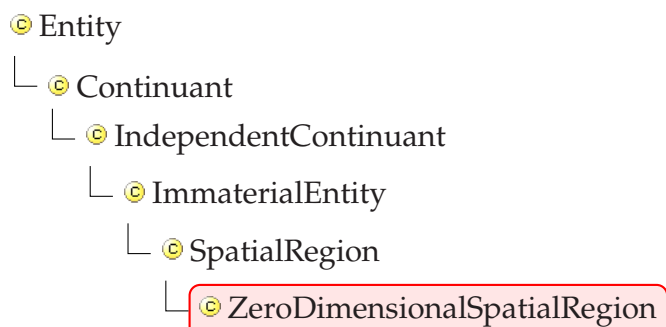
2.1.36 ZeroDimensionalSpatialRegion

A zero-dimensional spatial region is a point in space.

Annotations

- ▶ **Label:** zero-dimensional spatial region
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000018

Hierarchy



Direct Super Types

- ▶  SpatialRegion
- ▶  hasContinuantPart ZeroDimensionalSpatialRegion

Disjoint Classes

- ▶  ThreeDimensionalSpatialRegion

Figures

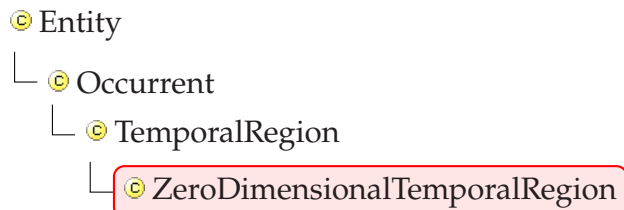
- ▶ Figure 2.2

2.1.37 ZeroDimensionalTemporalRegion

A zero-dimensional temporal region is a temporal region that is without extent.

Annotations

- ▶ **Label:** zero-dimensional temporal region
- ▶ **Is Defined By:** <http://purl.obolibrary.org/obo/bfo.owl>
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000148

Hierarchy**Direct Super Types**

- ▶  TemporalRegion
- ▶  hasTemporalPart ZeroDimensionalTemporalRegion




Direct Sub Types

- ▶  TemporalInstant




Disjoint Classes

- ▶  OneDimensionalTemporalRegion

Domain Of

- ▶  isInsideInstantOf
- ▶  instantIsBefore
- ▶  instantIsAfter

Range For

- ▶  instantIsBefore
- ▶  instantIsAfter
- ▶  hasInsideInstant

Figures

- ▶ Figure 2.4

2.2 Properties

2.2.1 bearerOf


Definition

b bearer of c =Def c inheres in b

Annotations

- ▶ **Label:** bearer of
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000196

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  inheresIn

Hierarchy

 specificallyDependedOnBy

└  bearerOf

Direct Super Types

- ▶  specificallyDependedOnBy

Direct Sub Types

- ▶  hasCapability

Domain

- ▶ (IndependentContinuant   SpatialRegion)

Range

- ▶  SpecificallyDependentContinuant

Figures

- ▶ Figure 2.5
- ▶ Figure 2.6


2.2.2 concretizes**Definition**

b concretizes c =Def b is a process or a specifically dependent continuant & c is a generically dependent continuant & there is some time t such that c is the pattern or content which b shares at t with actual or potential copies

Annotations

- ▶ **Label:** concretizes
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000059

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isConcretizedBy

Domain

- ▶ (Process  SpecificallyDependentContinuant)

Range

- ▶  GenericallyDependentContinuant


2.2.3 continuantPartOf**Definition**

b continuant part of c =Def b and c are continuants & there is some time t such that b and c exist at t & b continuant part of c at t

Annotations

- ▶ **Label:** continuant part of
- ▶ **Label:** part of continuant at some time
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000176

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  hasContinuantPart

Direct Sub Types

- ▶  memberPartOf

Domain

- ▶  Continuant

Range

- ▶  Continuant

2.2.4 dispositionOfAtAllTimes**Annotations**

- ▶ **Label:** disposition of at all times
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000107

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False


2.2.5 environs**Definition**

b environs c = Def c occurs in b

Annotations

- ▶ **Label:** environs
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000183

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  occursIn

Direct Sub Types

- ▶  isSiteOf

Domain

- ▶ (Site  MaterialEntity)

Range

- ▶ (Process  ProcessBoundary)

Figures

- ▶ Figure 2.1

2.2.6 existsAt

exists at is a relation between a particular and some temporal region at which the particular exists

Annotations

- ▶ **Label:** exists at
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000108

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

Domain

- ▶  Entity

Range

- ▶  TemporalRegion

2.2.7 genericallyDependsOn


Definition

b generically depends on c =Def b is a generically dependent continuant & c is an independent continuant that is not a spatial region & at some time t there inheres in c a specifically dependent continuant which concretizes b at t

Annotations

- ▶ **Label:** generically depends on
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000084

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isCarrierOf

Direct Sub Types

- ▶  isMeasurementUnitOf

Domain

- ▶  GenericallyDependentContinuant

Range

- ▶ (IndependentContinuant   SpatialRegion)


2.2.8 hasContinuantPart**Definition**

b has continuant part c =Def c continuant part of b

Annotations

- ▶ **Label:** has continuant part
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000178

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  continuantPartOf

Direct Sub Types

- ▶  hasMemberPart

Domain

- ▶  Continuant

Range

- ▶  Continuant

2.2.9 hasContinuantPartAtAllTimes**Annotations**

- ▶ **Label:** has continuant part at all times
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000110

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Transitive:** True

Direct Sub Types

- ▶  hasProperContinuantPartAtAllTimes

2.2.10 hasDispositionAtSomeTime**Annotations**

- ▶ **Label:** has disposition at some time
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000112

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False


2.2.11 hasHistory**Definition**

b has history c =Def c history of b

Annotations

- ▶ **Label:** has history
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000185

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  historyOf

Domain

- ▶  MaterialEntity

Range

- ▶  History


2.2.12 hasMaterialBasis**Definition**

b has material basis c =Def b is a disposition & c is a material entity & there is some d bearer of b & there is some time t such that c is a continuant part of d at t & d has disposition b because c is a continuant part of d at t

Annotations

- ▶ **Label:** has material basis
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000218

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  materialBasisOf

Domain

- ▶  Disposition

Range

- ▶  MaterialEntity


2.2.13 hasMemberPart**Definition**

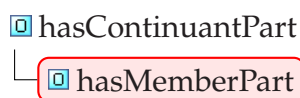
b has member part c =Def c member part of b

Annotations

- ▶ **Label:** has member part
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000115

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  memberPartOf

Hierarchy**Direct Super Types**

- ▶  hasContinuantPart

Domain

- ▶  MaterialEntity

Range

- ▶  MaterialEntity


2.2.14 hasOccurrentPart**Definition**

b has occurrent part c =Def c occurrent part of b




Annotations

- ▶ **Label:** has occurrent part
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000117

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Transitive:** True
- ▶ **Inverse Of:**  occurrentPartOf

Direct Sub Types

- ▶  hasProcessPart
- ▶  hasTemporalPart
- ▶  hasProperOccurrentPart

Domain

- ▶  Occurrent

Range

- ▶  Occurrent


2.2.15 hasParticipant**Definition**

p has participant c =Def c participates in p








Annotations

- ▶ **Label:** has participant
- ▶ **Label:** has participant at some time
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000057

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  participatesIn

Direct Sub Types

- ▶  hasOutput
- ▶  hasRecipient
- ▶  hasSender
- ▶  hasObject
- ▶  affects
- ▶  hasAgent
- ▶  hasInput

SuperProperty Of (Chain)

- ▶  realizes  inheresInAtAllTimes [SubPropertyOf: hasParticipant](#)

Domain

- ▶  Process

Range

- ▶ (SpecificallyDependentContinuant  GenericallyDependentContinuant  (IndependentContinuant   SpatialRegion))

Figures

- ▶ Figure 2.1

2.2.16 hasParticipantAtAllTimes**Annotations**

- ▶ **Label:** has participant at all times
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000167

Facets

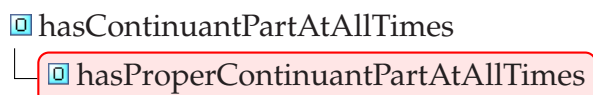
- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

2.2.17 hasProperContinuantPartAtAllTimes**Annotations**

- ▶ **Label:** has proper continuant part at all times
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000111

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Transitive:** True

Hierarchy**Direct Super Types**

- ▶  hasContinuantPartAtAllTimes

2.2.18 hasProperOccurrentPart

Annotations

- ▶ **Label:** has proper occurrent part
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000118

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Transitive:** True

Hierarchy



Direct Super Types

- ▶  hasOccurrentPart

2.2.19 hasRealization


Definition

b has realization c =Def c realizes b

Annotations

- ▶ **Label:** has realization
- ▶ **Label:** realized in
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000054

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  realizes

Domain

- ▶  RealizableEntity

Range

- ▶  Process

Figures

- Figure 2.6

2.2.20 hasTemporalPart


Definition

b has temporal part c = Def c temporal part of b

Annotations

- **Label:** has temporal part
- **ID:** http://purl.obolibrary.org/obo/BFO_0000121

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Transitive:** True
- **Inverse Of:**  temporalPartOf

Hierarchy



Direct Super Types

-  hasOccurrentPart

Domain

-  Occurrent

Range

-  Occurrent


2.2.21 historyOf

history of is a relation between history b and material entity c such that b is the unique history of c

Annotations

- ▶ **Label:** history of
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000184

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** True
- ▶ **Inverse Functional:** True
- ▶ **Inverse Of:**  hasHistory

Domain

- ▶  History

Range

- ▶  MaterialEntity


2.2.22 inheresIn**Definition**

b inheres in c =Def b is a specifically dependent continuant & c is an independent continuant that is not a spatial region & b specifically depends on c

Annotations

- ▶ **Label:** inheres in
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000197

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  bearerOf

Hierarchy

 specificallyDependsOn

└  inheresIn

Direct Super Types

- ▶  specificallyDependsOn


Direct Sub Types

- ▶  capabilityOf

Domain

- ▶  SpecificallyDependentContinuant

Range

- ▶ (IndependentContinuant   SpatialRegion)

Figures

- ▶ Figure 2.5
- ▶ Figure 2.6

2.2.23 inheresInAtAllTimes**Annotations**

- ▶ **Label:** inheres in at all times
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000052

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False


2.2.24 isCarrierOf**Definition**

b is carrier of c =Def there is some time t such that c generically depends on b at t

Annotations

- ▶ **Label:** is carrier of
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000101

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  genericallyDependsOn

Direct Sub Types

- ▶  usesMeasurementUnit

Domain

- (IndependentContinuant ☹️👉 SpatialRegion)

Range

- ☹️ GenericallyDependentContinuant

2.2.25 isConcretizedBy**Definition**

c is concretized by b =Def b concretizes c

Annotations

- **Label:** is concretized by
- **ID:** http://purl.obolibrary.org/obo/BFO_0000058

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:** ☹️ concretizes

Domain

- ☹️ GenericallyDependentContinuant

Range

- (Process ☹️ SpecificallyDependentContinuant)


2.2.26 locatedIn**Definition**

b located in c =Def b is an independent continuant & c is an independent & neither is a spatial region & there is some time t such that the spatial region which b occupies at t is continuant part of the spatial region which c occupies at t


Annotations

- **Label:** located in
- **ID:** http://purl.obolibrary.org/obo/BFO_0000171

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  locationOf

Domain

- ▶ (IndependentContinuant   SpatialRegion)

Range

- ▶ (IndependentContinuant   SpatialRegion)

Figures

- ▶ Figure 2.3


2.2.27 locationOf**Definition**

b location of c =Def c located in b

Annotations

- ▶ **Label:** location of
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000124

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  locatedIn

Domain

- ▶ (IndependentContinuant   SpatialRegion)

Range

- ▶ (IndependentContinuant   SpatialRegion)

Figures

- ▶ Figure 2.3

2.2.28 materialBasisOf


Definition

b material basis of c =Def c has material basis b

Annotations

- ▶ **Label:** material basis of
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000127

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  hasMaterialBasis

Domain

- ▶  MaterialEntity

Range

- ▶  Disposition

2.2.29 materialBasisOfAtAllTimes

Annotations

- ▶ **Label:** material basis of at all times
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000163

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

2.2.30 memberPartOf


Definition

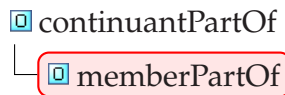
b member part of c =Def b is an object & c is a material entity & there is some time t such that b continuant part of c at t & there is a mutually exhaustive and pairwise disjoint partition of c into objects x_1, \dots, x_n (for some $n \neq 1$) with $b = x_i$ (for some $1 \leq i \leq n$)

Annotations

- ▶ **Label:** member part of
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000129

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  hasMemberPart

Hierarchy**Direct Super Types**

-  continuantPartOf

Domain

-  MaterialEntity

Range

-  MaterialEntity

2.2.31 occupiesSpatialRegion**Definition**

b occupies spatial region r =Def b is an independent continuant that is not a spatial region & r is a spatial region & there is some time t such that every continuant part of b occupies some continuant part of r at t and no continuant part of b occupies any spatial region that is not a continuant part of r at t

Annotations

- **Label:** occupies spatial region
- **ID:** http://purl.obolibrary.org/obo/BFO_0000210

Facets

- **Property Type:** ObjectProperty
- **Functional:** False

Domain

- (IndependentContinuant   SpatialRegion)

Range

- ▶  SpatialRegion

2.2.32 occupiesSpatiotemporalRegion

occupies spatiotemporal region is a relation between a process or process boundary *p* and the spatiotemporal region *s* which is its spatiotemporal extent

Annotations

- ▶ **Label:** occupies spatiotemporal region
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000200

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** True

Domain

- ▶ (Process  ProcessBoundary)

Range

- ▶  SpatiotemporalRegion


2.2.33 occupiesTemporalRegion**Definition**

p occupies temporal region *t* = Def *p* is a process or process boundary & the spatiotemporal region occupied by *p* temporally projects onto *t*

Annotations

- ▶ **Label:** occupies temporal region
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000199

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** True
- ▶ **Inverse Of:**  isTemporalRegionOf

Domain

- ▶ (Process  ProcessBoundary)

Range

-  TemporalRegion


2.2.34 occurrentPartOf

occurrent part of is a relation between occurrents b and c when b is part of c

Annotations

- **Label:** occurrent part of
- **Label:** part of occurrent
- **ID:** http://purl.obolibrary.org/obo/BFO_0000132

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Transitive:** True
- **Inverse Of:**  hasOccurrentPart

Direct Sub Types

-  isPartOfProcess
-  temporalPartOf

Domain

-  Occurrent

Range

-  Occurrent


2.2.35 occursIn**Definition**

b occurs in c =Def b is a process or a process boundary & c is a material entity or site & there exists a spatiotemporal region r & b occupies spatiotemporal region r & for all time t, if b exists at t then c exists at t & there exist spatial regions s and s' where b spatially projects onto s at t & c occupies spatial region s' at t & s is a continuant part of s' at t

Annotations

- **Label:** occurs in
- **ID:** http://purl.obolibrary.org/obo/BFO_0000066

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  environs

Direct Sub Types

- ▶  occursAt

Domain

- ▶ (Process  ProcessBoundary)

Range

- ▶ (Site  MaterialEntity)

Figures

- ▶ Figure 2.1


2.2.36 participatesIn

participates in holds between some b that is either a specifically dependent continuant or generically dependent continuant or independent continuant that is not a spatial region & some process p such that b participates in p some way







Annotations

- ▶ **Label:** participates in
- ▶ **Label:** participates in at some time
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000056

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  hasParticipant

Direct Sub Types

- ▶  isOutputOf
- ▶  receives
- ▶  sends
- ▶  isObjectOf
- ▶  agentIn
- ▶  isAffectedBy

- ▶  isInputOf

Domain

- ▶ (SpecificallyDependentContinuant  GenericallyDependentContinuant  (IndependentContinuant   SpatialRegion))

Range

- ▶  Process

Figures

- ▶ Figure 2.1

2.2.37 precededBy


Definition

b preceded by c =Def b precedes c

Annotations

- ▶ **Label:** preceded by
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000062

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Transitive:** True
- ▶ **Inverse Of:**  precedes

Domain

- ▶  Occurrent

Range

- ▶  Occurrent


2.2.38 precedes

precedes is a relation between occurrents o , o' such that if t is the temporal extent of o & t' is the temporal extent of o' then either the last instant of o is before the first instant of o' or the last instant of o is the first instant of o' & neither o nor o' are temporal instants

Annotations

- ▶ **Label:** precedes
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000063

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Transitive:** True
- ▶ **Inverse Of:**  precededBy

Domain

- ▶  Occurrent

Range

- ▶  Occurrent

2.2.39 processProfileOf**Note**

Added missing label.

Annotations

- ▶ **Label:** process profile of
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000133

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False


2.2.40 realizes

realizes is a relation between a process *b* and realizable entity *c* such that *c* inheres in some *d* & for all *t*, if *b* has participant *d* then *c* exists & the type instantiated by *b* is correlated with the type instantiated by *c*

Annotations

- ▶ **Label:** realizes
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000055

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  hasRealization

Domain

- ▶  Process

Range

- ▶  RealizableEntity

Figures

- ▶ Figure 2.6

2.2.41 spatiallyProjectsOnto

spatially projects onto is a relation between some spatiotemporal region *b* and spatial region *c* such that at some time *t*, *c* is the spatial extent of *b* at *t*

Annotations

- ▶ **Label:** spatially projects onto
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000216

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

Domain

- ▶  SpatiotemporalRegion

Range

- ▶  SpatialRegion


2.2.42 specificallyDependedOnBy**Definition**

b specifically depended on by *c* =Def *c* specifically depends on *b*

Annotations

- ▶ **Label:** specifically depended on by
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000194

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  specificallyDependsOn

Direct Sub Types

- ▶  bearerOf

Domain

- ▶ (SpecificallyDependentContinuant  (IndependentContinuant  SpatialRegion))

Range

- ▶  SpecificallyDependentContinuant


2.2.43 specificallyDependsOn

specifically depends on is a relation between a specifically dependent continuant *b* and specifically dependent continuant or independent continuant that is not a spatial region *c* such that *b* and *c* share no parts in common & *b* is of a nature such that at all times *t* it cannot exist unless *c* exists & *b* is not a boundary of *c*

Annotations

- ▶ **Label:** specifically depends on
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000195

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  specificallyDependedOnBy

Direct Sub Types

- ▶  inheresIn

Domain

- ▶  SpecificallyDependentContinuant

Range

- (SpecificallyDependentContinuant  (IndependentContinuant   SpatialRegion))


2.2.44 temporalPartOf**Definition**

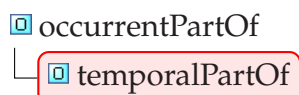
b temporal part of c =Def b occurrent part of c & (b and c are temporal regions) or (b and c are spatiotemporal regions & b temporally projects onto an occurrent part of the temporal region that c temporally projects onto) or (b and c are processes or process boundaries & b occupies a temporal region that is an occurrent part of the temporal region that c occupies)

Annotations

- **Label:** temporal part of
- **ID:** http://purl.obolibrary.org/obo/BFO_0000139

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Transitive:** True
- **Inverse Of:**  hasTemporalPart

Hierarchy**Direct Super Types**

-  occurentPartOf

Domain

-  Occurrent

Range

-  Occurrent

2.2.45 temporallyProjectsOnto

temporally projects onto is a relation between a spatiotemporal region s and some temporal region which is the temporal extent of s

Annotations

- ▶ **Label:** temporally projects onto
- ▶ **ID:** http://purl.obolibrary.org/obo/BFO_0000153

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** True

Domain

- ▶  SpatiotemporalRegion

Range

- ▶  TemporalRegion

Extended Relation Ontology

The Extended Relation Ontology is designed to represent many of the relations (i.e. object properties) that hold between entities at the level of the mid-level Common Core Ontologies (CCO).

3.1 Properties

3.1.1 affects


Definition

p affects c iff p is an instance of a Process and c is an instance of a Continuant, such that p influences c in some manner, most often by producing a change in c.

Annotations


- **Label:** affects
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/affects>

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  isAffectedBy

Hierarchy

 hasParticipant

└  affects

Direct Super Types

-  hasParticipant

Domain

-  Process

Range

-  Continuant


3.1.2 aggregateBearerOf**Definition**

x aggregate_bearer_of y iff x is an instance of Object Aggregate and y is an instance of Specifically Dependent Continuant and z is an instance of Object, such that z bearer of y , and all other members of x are bearers of a unique instance of the same type as y .





Annotations

- **Label:** aggregate bearer of
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/aggregate_bearer_of

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  inheresInAggregate

Direct Sub Types

-  aggregateHasQuality
-  aggregateHasRole
-  aggregateHasCapability
-  aggregateHasDisposition

Domain

-  ObjectAggregate

Range

- (SpecificallyDependentContinuant  GenericallyDependentContinuant)

3.1.3 aggregateHasDisposition


Definition

x aggregate_has_disposition y iff x is an instance of Object Aggregate and y is an instance of Disposition, such that x aggregate_bearer_of y .

Annotations

- ▶ **Label:** aggregate has disposition
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/aggregate_has_disposition

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  dispositionOfAggregate

Hierarchy**Direct Super Types**

- ▶  aggregateBearerOf

Domain

- ▶  ObjectAggregate

Range

- ▶  Disposition

3.1.4 aggregateHasQuality**Definition**

x aggregate_has_quality y iff x is an instance of Object Aggregate and y is an instance of Quality, such that x aggregate_bearer_of y .

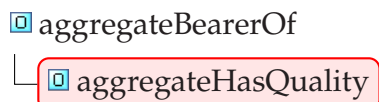
Annotations

- ▶ **Label:** aggregate has quality
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/aggregate_has_quality

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

Hierarchy



Direct Super Types

- ▶  aggregateBearerOf

Domain

- ▶  ObjectAggregate

Range

- ▶  Quality

3.1.5 aggregateHasRole

Definition

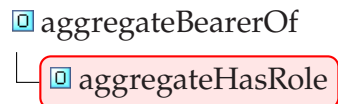
x aggregate_has_role y iff x is an instance of Object Aggregate and y is an instance of Role, such that x aggregate_bearer_of y .

Annotations

- ▶ **Label:** aggregate has role
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/aggregate_has_role

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

Hierarchy**Direct Super Types**

- ▶ aggregateBearerOf

Domain

- ▶ ObjectAggregate

Range

- ▶ Role

3.1.6 causedBy**Definition**

x caused_by y iff x and y are instances of *occurents*, and x is a consequence of y .

Annotations

- ▶ **Label:** caused by
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/caused_by

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:** isCauseOf

Direct Sub Types

- ▶ processStartedBy

Domain

- ▶ Occurrent

Range

-  Occurrent


3.1.7 dispositionOfAggregate**Definition**

x disposition_of_aggregate y iff y is an instance of Object Aggregate and x is an instance of Disposition, such that x disposition_of_aggregate y .

Annotations

- **Label:** disposition of aggregate
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/disposition_of_aggregate

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  aggregateHasDisposition

Hierarchy

 inheresInAggregate

└  dispositionOfAggregate

Direct Super Types

-  inheresInAggregate

Domain

-  Disposition

Range

-  ObjectAggregate

3.1.8 hasInput**Definition**


y has_input x iff x is an instance of Continuant and y is an instance of Process, such that

the presence of x at the beginning of y is a necessary condition for the start of y.

Annotations

- ▶ **Label:** has input
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_input

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isInputOf

Hierarchy

 hasParticipant

└  hasInput

Direct Super Types

- ▶  hasParticipant

Domain

- ▶  Process

Range

- ▶  Continuant

3.1.9 hasInterestIn

There are four conditions in which an entity has an interest in some process. 1) Biological Condition: If a part (including improper part) of an organism has a function, then that organism has an interest in the realization of that function. 2) Artifactual Condition: If a part (including improper part) of an artifact has a function, then some agent or group of agents, at some time, has an interest in the realization of that function. 3) Prescription Condition: If an agent or group of agents has a plan, then it has an interest in the realization of all the processes and process-combinations prescribed by that plan. 4) Facilitation Condition: If (a) x has an interest in the realization of a disposition y, and (b) the realization of a disposition z facilitates the realization of disposition y, then (c) x has an interest in the realization of disposition z, and by 'facilitates' we mean that the occurrence of a process w, which realizes realization of z is either (1) required for y, to realize or (2) would contribute positively to the grade of, y's realization.


Definition

A relation between an entity and some process where the entity has an interest in that process.

Annotations

- ▶ **Label:** has interest in
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_interest_in

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isInterestOf

Domain

- ▶  Agent

Range

- ▶  Process

3.1.10 hasMemberOfLocatedIn**Definition**

An instance of an Object Aggregate 'has member of located in' an instance of some material entity if and only if every member of that Aggregate is located in the same instance of that material entity.

Annotations

- ▶ **Label:** has member of located in
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_member_of_located_in

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

Domain

- ▶  ObjectAggregate

Range

- ▶  MaterialEntity


3.1.11 hasObject**Definition**

If p is a process and c is a continuant, then p has object c if and only if the c is part of the projected state that the agent intends to achieve by performing p .

Annotations

- ▶ **Label:** has object
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_object

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isObjectOf

Hierarchy

 hasParticipant

└  hasObject

Direct Super Types

- ▶  hasParticipant


3.1.12 hasOutput**Definition**

y has_output x iff x is an instance of Continuant and y is an instance of Process, such that the presence of x at the end of y is a necessary condition for the completion of y .

Annotations

- ▶ **Label:** has output
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_output

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isOutputOf

Hierarchy

 hasParticipant

└  hasOutput

Direct Super Types

- ▶  hasParticipant

Domain

- ▶  Process

Range

- ▶  Continuant


3.1.13 hasProcessPart**Definition**

x has_process_part y iff x and y are instances of Process, such that y occurs during the temporal interval of x , and y either provides an input to x or receives an output of x , or both.

Annotations

- ▶ **Label:** has process part
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_process_part

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  isPartOfProcess

Hierarchy

 hasOccurrentPart

└  hasProcessPart

Direct Super Types

-  hasOccurrentPart

Domain

-  Process

Range

-  Process


3.1.14 inheresInAggregate**Definition**

x inheres_in_aggregate y iff x is an instance of Specifically Dependent Continuant and y is an instance of Object Aggregate and z is an instance of Object, such that z bearer_of x , and all other members of y are bearers of a unique instance of the same type as x .





Annotations

- **Label:** inheres in aggregate
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/inheres_in_aggregate

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  aggregateBearerOf

Direct Sub Types

- ▶  qualityOfAggregate
- ▶  roleOfAggregate
- ▶  capabilityOfAggregate
- ▶  dispositionOfAggregate

Domain

- ▶ (SpecificallyDependentContinuant  GenericallyDependentContinuant)

Range

- ▶  ObjectAggregate


3.1.15 isAffectedBy**Definition**

c is_affected_by p iff p is an instance of a Process and c is an instance of a Continuant, such that p influences c in some manner, most often by producing a change in c.

Annotations

- ▶ **Label:** is affected by
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_affected_by

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  affects

Hierarchy

 participatesIn

└  isAffectedBy

Direct Super Types

- ▶  participatesIn

Domain

- ▶  Continuant

Range

- ▶  Process


3.1.16 isCauseOf**Definition**

x is_cause_of y iff x and y are instances of occurrents, and y is a consequence of x .

Annotations

- ▶ **Label:** is cause of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_cause_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  causedBy

Direct Sub Types

- ▶  processStarts

Domain

- ▶  Occurrent

Range

- ▶  Occurrent


3.1.17 isDisruptedBy**Definition**

Inverse of disrupts.

Annotations

- ▶ **Label:** is disrupted by
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_disrupted_by

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  disrupts

Domain

- ▶  Process

Range

- ▶  Process


3.1.18 isInputOf**Definition**

x is_input_of y iff x is an instance of Continuant and y is an instance of Process, such that the presence of x at the beginning of y is a necessary condition for the start of y .

Annotations

- ▶ **Label:** is input of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_input_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  hasInput

Hierarchy

 participatesIn

└  isInputOf

Direct Super Types

- ▶  participatesIn

Domain

- ▶  Continuant

Range

- ▶  Process


3.1.19 isInterestOf**Definition**

The inverse of has_interest_in.

Annotations

- ▶ **Label:** is interest of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_interest_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  hasInterestIn

Domain

- ▶  Process

Range

- ▶  Agent

3.1.20 isMadeOf**Definition**


An object o is made of an object m when m is the material that o consists of and that material does not undergo a change of kind during the creation of o

Annotations

- ▶ **Label:** is made of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_made_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

- **Inverse Of:**  isMaterialOf

Direct Super Types

Domain

-  Object

Range

-  Object

Figures

- Figure 2.3

3.1.21 isMaterialOf


Definition

An object *m* is material of an object *o* when *m* is the material of which *o* consists and that material does not undergo a change of kind during the creation of *o*

Annotations

- **Label:** is material of
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_material_of

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  isMadeOf

Domain

-  Object

Range

-  Object

Figures

- Figure 2.3

3.1.22 isObjectOf


Definition

If p is a process and c is a continuant, then c is object of p if and only if the c is part of the projected state that the agent intends to achieve by performing p .

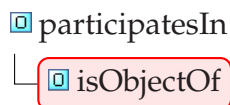
Annotations

- ▶ **Label:** is object of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_object_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  hasObject

Hierarchy



Direct Super Types

- ▶  participatesIn

3.1.23 isOutputOf

Definition

x is_output_of y iff x is an instance of Continuant and y is an instance of Process, such that the presence of x at the end of y is a necessary condition for the completion of y .

Annotations

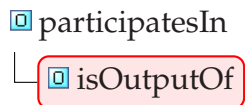
- ▶ **Label:** is output of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_output_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

- **Inverse Of:**  hasOutput

Hierarchy



Direct Super Types

-  participatesIn

Domain

-  Continuant

Range

-  Process

3.1.24 isPartOfProcess


Definition

x is_part_of_process y iff x and y are instances of Process, such that x occurs during the temporal interval of y , and x either provides an input to y or receives an output of y .

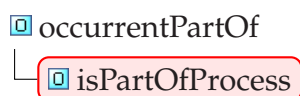
Annotations

- **Label:** is part of process
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_part_of_process

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  hasProcessPart

Hierarchy



Direct Super Types

- ▶  `occurrentPartOf`

Domain

- ▶  `Process`

Range

- ▶  `Process`

3.1.25 isPredecessorOf

More informally, *c1* is a predecessor of *c2* iff *c1* has been followed or replaced by *c2*.


Definition

A continuant *c1* is a predecessor of some continuant *c2* iff there is some process *p1* and *c1* is an input to *p1* and *c2* is an output of *p1*.

Annotations

- ▶ **Label:** is predecessor of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_predecessor_of

Facets

- ▶ **Property Type:** `ObjectProperty`
- ▶ **Functional:** `False`
- ▶ **Inverse Of:**  `isSuccessorOf`

Domain

- ▶  `IndependentContinuant`

Range

- ▶  `IndependentContinuant`

3.1.26 isSiteOf**Definition**


x `is_site_of` *y* iff *x* is an instance of `Site` and *y* is an instance of `Process`, such that *y* occurs

in x.

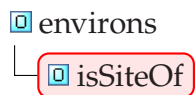
Annotations

- ▶ **Label:** is site of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_site_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  occursAt

Hierarchy



Direct Super Types

- ▶  environs

Domain

- ▶  Site

Range

- ▶  Process

3.1.27 isSuccessorOf


Definition

A continuant c2 is a successor of some continuant c1 iff there is some process p1 and c1 is an input to p1 and c2 is an output of p1. Inverse of is predecessor.

Annotations

- ▶ **Label:** is successor of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_successor_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isPredecessorOf

Domain

- ▶  IndependentContinuant

Range

- ▶  IndependentContinuant


3.1.28 isTemporalRegionOf**Definition**

x is_temporal_region_of y iff y is an instance of a process or process boundary and x is an instance of a temporal region, such that the duration of x temporally projects on y .

Annotations

- ▶ **Label:** is temporal region of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_temporal_region_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  occupiesTemporalRegion

Domain

- ▶  TemporalRegion

Range

- ▶ (Process  ProcessBoundary)

Figures

- ▶ Figure 2.4

3.1.29 occursAt


Definition

x occurs_at y iff x is an instance of Process and y is an instance of Site, such that x occurs in y .

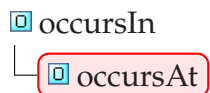
Annotations

- ▶ **Label:** occurs at
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/occurs_at

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isSiteOf

Hierarchy



Direct Super Types

- ▶  occursIn

Domain

- ▶  Process

Range

- ▶  Site

3.1.30 processStartedBy

A process x is started by another process y when y causes x while y is still occurring.


Definition

x process_started_by y iff x and y are instances of processes, and x is caused_by y , and i is an instance of a temporal instant, and r is an instant of a temporal interval, and x has starting instance i , and y occurs on r , and r interval contains i .

Annotations

- **Label:** process started by
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/process_started_by

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  processStarts

Hierarchy
 causedBy

 processStartedBy
Direct Super Types

-  causedBy

3.1.31 processStarts

A process *x* starts another process *y* when *x* causes *y* while *x* is still occurring.


Definition

x process_starts *y* iff *x* and *y* are instances of processes, and *x* is_cause_of *y*, and *i* is an instance of a temporal instant, and *r* is an instant of a temporal interval, and *y* has starting instance *i*, and *x* occurs on *r*, and *r* interval contains *i*.

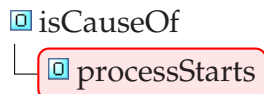
Annotations

- **Label:** process starts
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/process_starts

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  processStartedBy

Hierarchy



Direct Super Types

- isCauseOf

3.1.32 qualityOfAggregate

Definition

x quality_of_aggregate y iff y is an instance of Object Aggregate and x is an instance of Quality, such that x disposition_of_aggregate y .

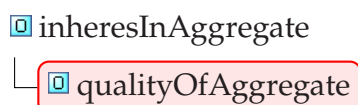
Annotations

- **Label:** quality of aggregate
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/quality_of_aggregate

Facets

- **Property Type:** ObjectProperty
- **Functional:** False

Hierarchy



Direct Super Types

- inheresInAggregate

Domain

- Quality

Range

- ObjectAggregate

3.1.33 roleOfAggregate

Definition

x role_of_aggregate y iff y is an instance of Object Aggregate and x is an instance of Role, such that x disposition_of_aggregate y .

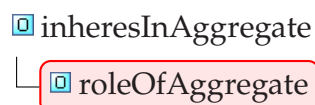
Annotations

- ▶ **Label:** role of aggregate
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ExtendedRelationOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/role_of_aggregate

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

Hierarchy



Direct Super Types

- ▶  inheresInAggregate

Domain

- ▶  Role

Range

- ▶  ObjectAggregate

Information Entity Ontology

The Information Entity Ontology is designed to represent generic types of information as well as the relationships between information and other entities.

4.1 Named Classes

4.1.1 ArbitraryIdentifier

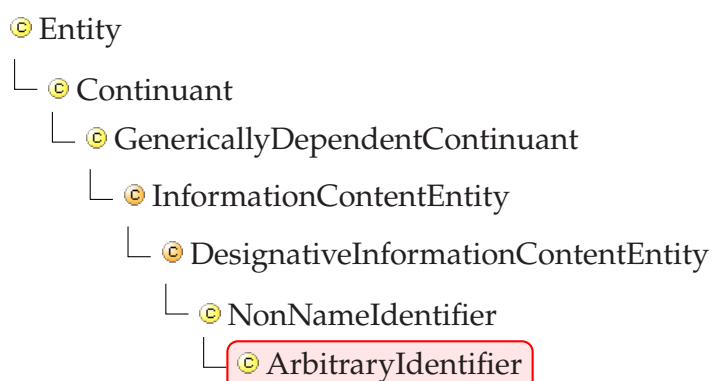
Definition

A Non-Name Identifier that consists of a string of characters that does not follow an encoding system.

Annotations

- **Label:** Arbitrary Identifier
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ArbitraryIdentifier>

Hierarchy



Direct Super Types

- NonNameIdentifier

Disjoint Classes

- ▶  CodeIdentifier

4.1.2 CodeIdentifier

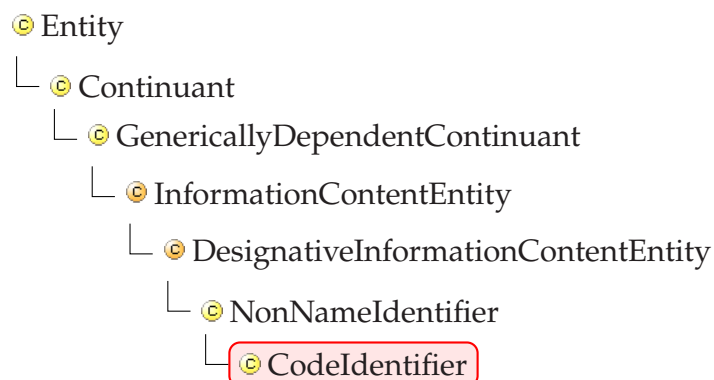
Definition

A Non-Name Identifier that consists of a string of characters that was created and assigned according to an encoding system such that metadata can be derived from the identifier.

Annotations

- ▶ **Label:** Code Identifier
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/CodeIdentifier>

Hierarchy



Direct Super Types

- ▶  NonNameIdentifier

Disjoint Classes

- ▶  ArbitraryIdentifier

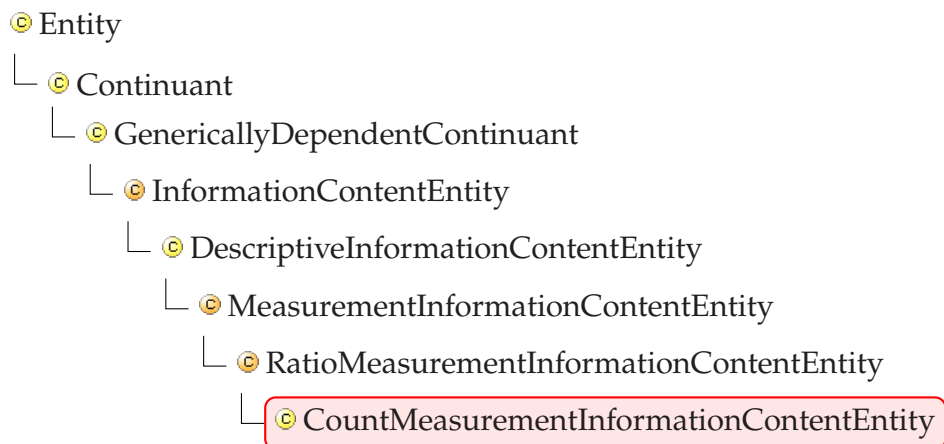
4.1.3 CountMeasurementInformationContentEntity

Definition

A Ratio Measurement Information Content Entity that is a measurement of the number of members of some aggregate.

Annotations

- ▶ **Label:** Count Measurement Information Content Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/CountMeasurementInformationContentEntity>

Hierarchy**Direct Super Types**

- ▶ RatioMeasurementInformationContentEntity

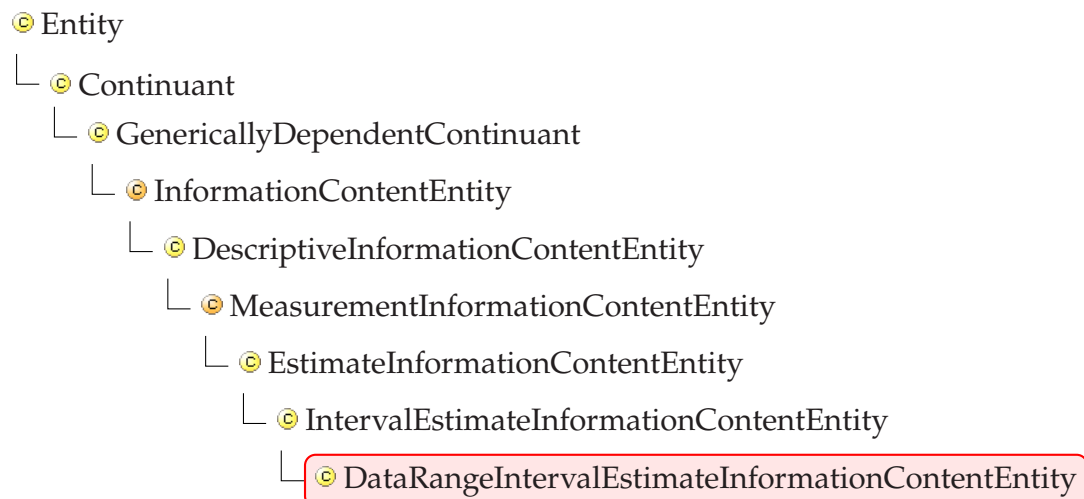
4.1.4 DataRangeIntervalEstimateInformationContentEntity**Definition**

A Ratio Measurement Information Content Entity that is a measurement of a set of values and is equal to the absolute difference between the largest value and the smallest value in the set.

Annotations

- ▶ **Label:** Data Range Interval Estimate Information Content Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DataRangeIntervalEstimateInformationContentEntity>

Hierarchy



Direct Super Types

- IntervalEstimateInformationContentEntity

4.1.5 DescriptiveInformationContentEntity

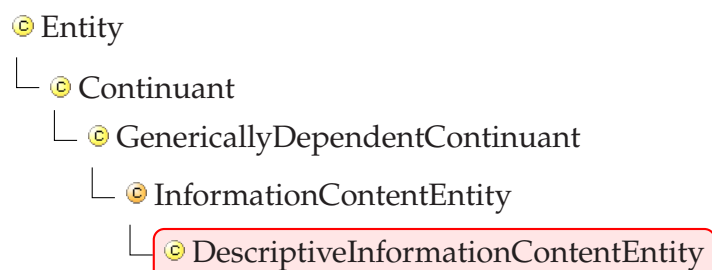
Definition

An Information Content Entity that consists of a set of propositions that describe some Entity.

Annotations

- **Label:** Descriptive Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DescriptiveInformationContentEntity>




Hierarchy





Direct Super Types

- ▶  InformationContentEntity

Direct Sub Types

- ▶  PredictiveInformationContentEntity
- ▶  MeasurementUnit
- ▶  MeasurementInformationContentEntity

Disjoint Classes

- ▶  DirectiveInformationContentEntity
- ▶  DesignativeInformationContentEntity

Domain Of

- ▶  describes

Range For

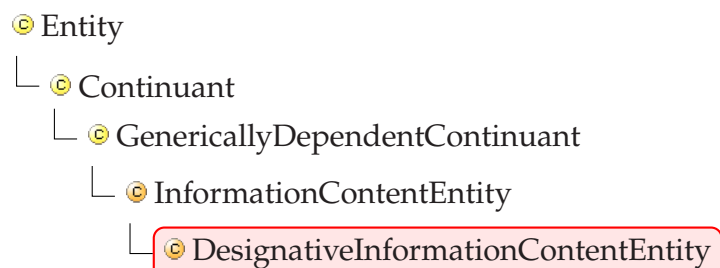
- ▶  describedBy

4.1.6 DesignativeInformationContentEntity**Definition**

An Information Content Entity that consists of a set of symbols that denote some Entity.

Annotations





- ▶ **Label:** Designative Information Content Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DesignativeInformationContentEntity>

Hierarchy

Direct Super Types

- ▶  InformationContentEntity



Direct Sub Types

- ▶  SpatialRegionIdentifier
- ▶  TemporalRegionIdentifier
- ▶  DesignativeName
- ▶  NonNameIdentifier

Equivalent Classes

- ▶ (InformationContentEntity   designates Entity)

Disjoint Classes

- ▶  DescriptiveInformationContentEntity
- ▶  DirectiveInformationContentEntity

Domain Of

- ▶  designates

Range For

- ▶  designatedBy

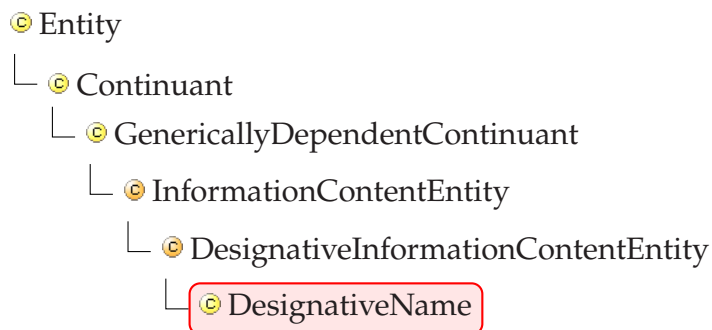
4.1.7 DesignativeName**Definition**

A Designative Information Content Entity that consists of a string of characters that designates an entity within a specified cultural or social namespace and which is typically a word or phrase in a natural language that has an accepted cultural or social significance.

Annotations

- ▶ **Label:** Designative Name
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DesignativeName>

Hierarchy



Direct Super Types

- ▶ DesignativeInformationContentEntity

Disjoint Classes

- ▶ NonNameIdentifier

4.1.8 DeviationMeasurementInformationContentEntity

In order for a Deviation to exist, an entity must first be expected, represented, prescribed, or predicted as being a certain way. Then, at a future time, this value can be compared to its actual, reported, or measured value to determine the Deviation between these values.

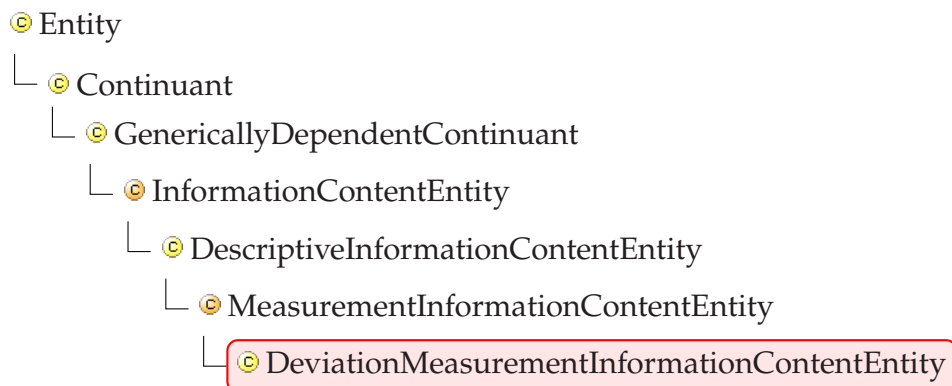
Definition

A Measurement Information Content Entity that is a measurement of the extent to which an entity conforms to how it is expected or supposed to be.

Annotations

- ▶ **Label:** Deviation Measurement Information Content Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DeviationMeasurementInformationContentEntity>

Hierarchy



Direct Super Types

- MeasurementInformationContentEntity

4.1.9 DirectiveInformationContentEntity

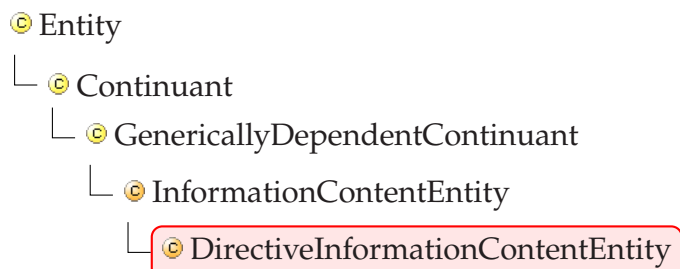
Definition

An Information Content Entity that consists of a set of propositions or images (as in the case of a blueprint) that prescribe some Entity.

Annotations

- **Label:** Directive Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DirectiveInformationContentEntity>






Hierarchy



Direct Super Types

- InformationContentEntity



Direct Sub Types

- ▶  Plan
- ▶  QualitySpecification
- ▶  PerformanceSpecification
- ▶  ActionRegulation
- ▶  Objective

Equivalent Classes

- ▶ (InformationContentEntity   prescribes Entity)

Disjoint Classes

- ▶  DesignativeInformationContentEntity
- ▶  DescriptiveInformationContentEntity

Domain Of

- ▶  prescribes

Range For

- ▶  prescribedBy

4.1.10 DistanceMeasurementInformationContentEntity

Displacement (vector) is the shortest possible distance (scalar) between two points. Further thought is needed to adequately handle measurements of distance traveled along a path, e.g., a circuitous path or an arc (such as the surface of a planet), versus the simple case of a direct, straight line between two points. Distance is a measure between two reference points, which are located on or in, or in some manner part of, the two objects for which the length of the extent between is sought. For example, the center point of the indentation of a ball in the sand and the edge of the foul line, the forwardmost point on a car's bumper and the closest point on the 2-dimensional plane that serves as the fiat boundary of a crosswalk, the center of an antenna array and closest point on ground.

Definition

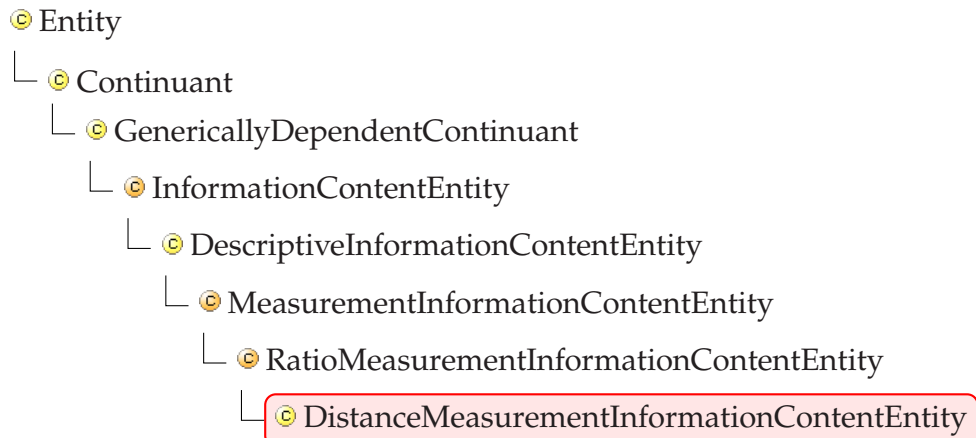
A Ratio Measurement Information Content Entity that is a measurement of a One-Dimensional Extent inhering in some Site that is externally connected to two Independent Continuants.

Annotations

- ▶ **Label:** Distance Measurement Information Content Entity

- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DistanceMeasurementInformationContentEntity>

Hierarchy



Direct Super Types

- ▶ RatioMeasurementInformationContentEntity

4.1.11 EstimateInformationContentEntity

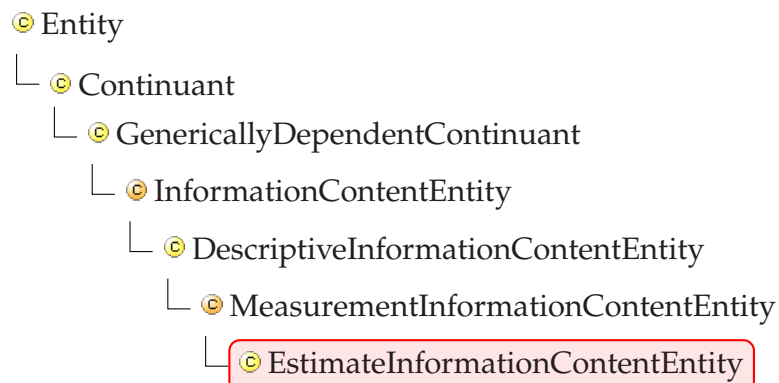
Definition

A Measurement Information Content Entity that is a measurement of an entity based on partial information about that entity or an appropriately similar entity.

Annotations

- ▶ **Label:** Estimate Information Content Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/EstimateInformationContentEntity>

Hierarchy



Direct Super Types

- MeasurementInformationContentEntity

Direct Sub Types

- PointEstimateInformationContentEntity
- IntervalEstimateInformationContentEntity

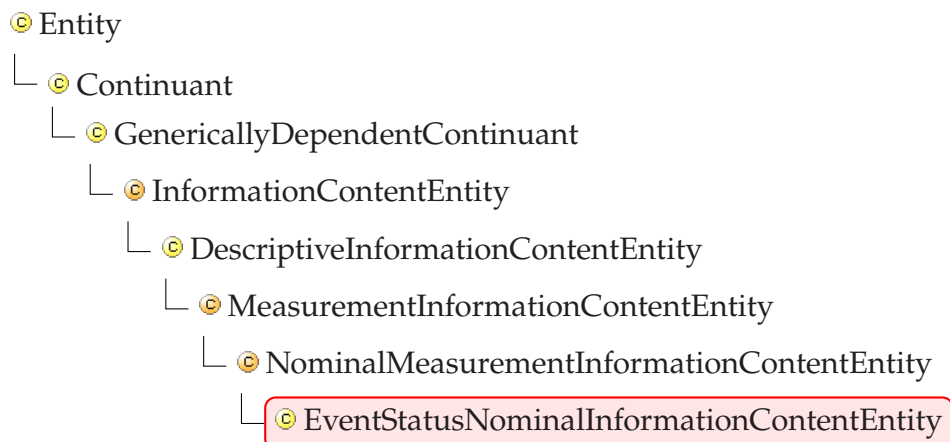
4.1.12 EventStatusNominalInformationContentEntity

Definition

A Nominal Measurement Information Content Entity that is a measurement of the current state of a process.

Annotations

- **Label:** Event Status Nominal Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/EventStatusNominalInformationContentEntity>

Hierarchy**Direct Super Types**

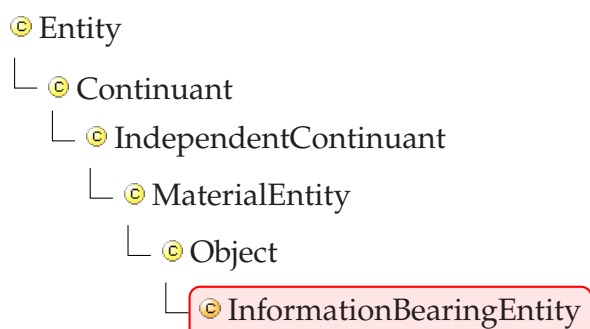
- NominalMeasurementInformationContentEntity

4.1.13 InformationBearingEntity**Definition**

An Object upon which an Information Content Entity generically depends.

Annotations

- **Label:** Information Bearing Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/InformationBearingEntity>

Hierarchy**Direct Super Types**

- Object















Direct Sub Types

- ▶  DocumentField







Equivalent Classes

- ▶ (Object   isCarrierOf InformationContentEntity)

Domain Of

- ▶  hasDatetimeValue
- ▶  hasDateValue
- ▶  hasBooleanValue
- ▶  hasDecimalValue
- ▶  hasTextValue
- ▶  hasIntegerValue
- ▶  hasDoubleValue
- ▶  usesLanguage
- ▶  usesGeospatialCoordinateReferenceSystem
- ▶  isExcerptedFrom
- ▶  usesMeasurementUnit
- ▶  hasURIValue
- ▶  usesTimeZoneIdentifier
- ▶  usesReferenceSystem

Range For

- ▶  isReferenceSystemOf
- ▶  languageUsedIn
- ▶  timeZoneIdentifierUsedBy
- ▶  isExcerptedFrom
- ▶  isGeospatialCoordinateReferenceSystemOf
- ▶  isMeasurementUnitOf

4.1.14 InformationContentEntity

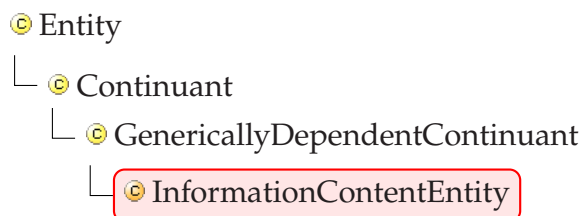
Information Content Entity is here intended to be a class of Entities whose instances are the informational content of Information Bearing Entities. For example, three instances of information bearers – such as a bar chart, color-coded map, and a written report – each of which lists the GDP of Countries for the year 2010 are each different carriers of the same information content. It is this content that is generically dependent upon its carrier. This treatment of Informational Content Entity (cf. the Information Artifact Ontology) leads to a principle of subtyping based upon the relationship that ICE's have with the Entity they are about rather than characteristics such as format, language, measurement scale, or media. The latter are treated here as being Qualities of bearers.

Definition

A Generically Dependent Continuant that generically depends on some Information Bearing Entity and stands in relation of aboutness to some Entity.

Annotations

- ▶ **Label:** Information Content Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/InformationContentEntity>

Hierarchy**Direct Super Types**

- ▶ GenericallyDependentContinuant

Direct Sub Types

- ▶ DirectiveInformationContentEntity
- ▶ RepresentationalInformationContentEntity
- ▶ DescriptiveInformationContentEntity
- ▶ DesignativeInformationContentEntity

Equivalent Classes

- ▶ InformationContentEntity
- ▶ (GenericallyDependentContinuant isAbout Entity)

Domain Of

- ▶ isAbout

Range For

- ▶ isSubjectOf

4.1.15 InformationQualityEntity

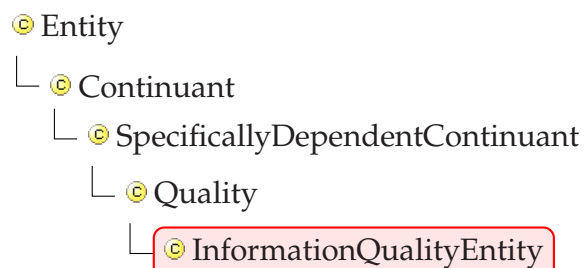
Definition

A Quality that concretizes some Information Content Entity.

Annotations

- ▶ **Label:** Information Quality Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/InformationQualityEntity>

Hierarchy



Direct Super Types

- ▶ Quality
- ▶ inheritsIn InformationBearingEntity

4.1.16 IntervalEstimateInformationContentEntity

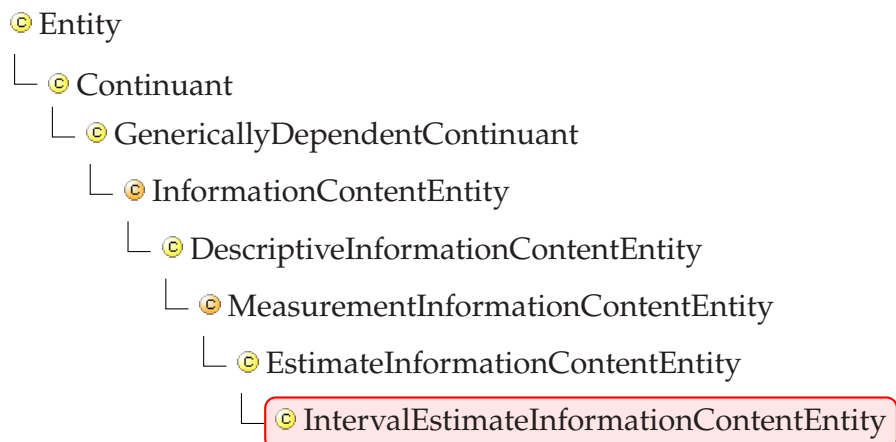
Definition

An Estimate Information Content Entity that consists of an interval of possible (or probable) values for the measured entity.

Annotations

- ▶ **Label:** Interval Estimate Information Content Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/IntervalEstimateInformationContentEntity>

Hierarchy



Direct Super Types

- EstimateInformationContentEntity

Direct Sub Types

- DataRangeIntervalEstimateInformationContentEntity

4.1.17 IntervalMeasurementInformationContentEntity

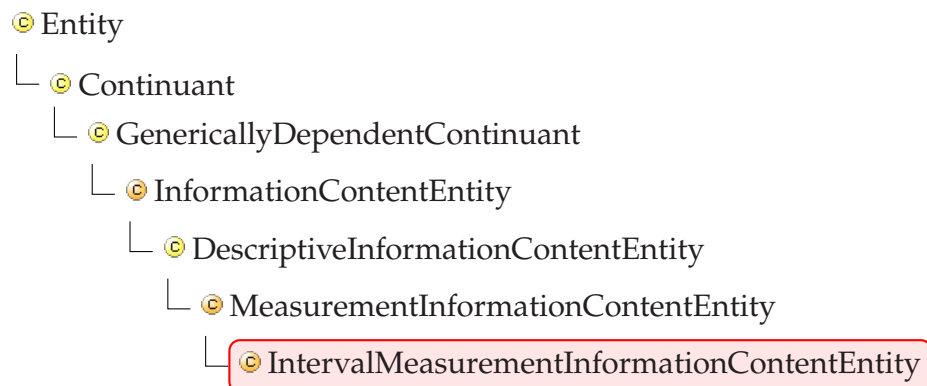
Definition

A Measurement Information Content Entity that places a Quality of an Entity onto some interval scale having no true zero value.

Annotations

- **Label:** Interval Measurement Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/IntervalMeasurementInformationContentEntity>

Hierarchy



Direct Super Types

- ▶ MeasurementInformationContentEntity

Equivalent Classes

- ▶ (MeasurementInformationContentEntity isAIntervalMeasurementOf Entity)

Disjoint Classes

- ▶ RatioMeasurementInformationContentEntity
- ▶ OrdinalMeasurementInformationContentEntity
- ▶ NominalMeasurementInformationContentEntity

Domain Of

- ▶ isAIntervalMeasurementOf

Range For

- ▶ isMeasuredByInterval

4.1.18 MaximumOrdinalMeasurementInformationContentEntity

Definition

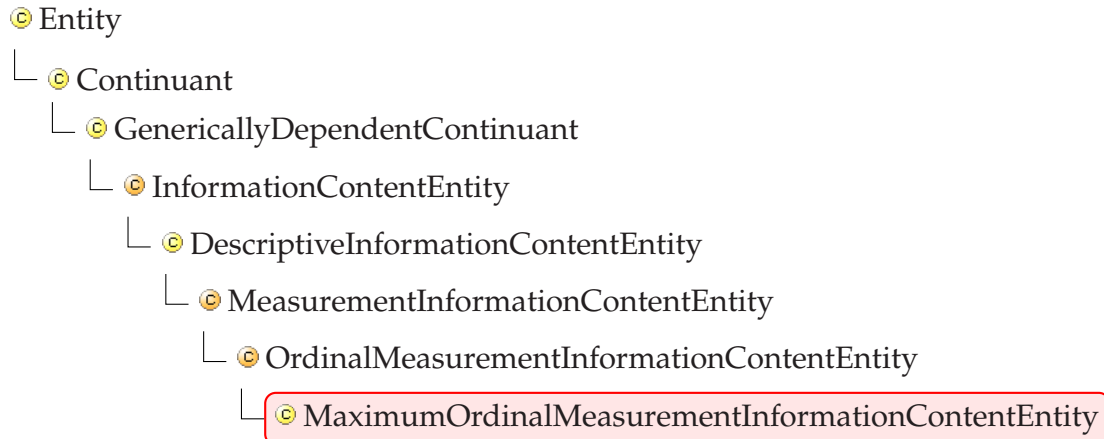
An Ordinal Measurement Information Content Entity that is a measurement of some entity in virtue of it being the largest or having the greatest amount relative to a nominally described set of like entities.

Annotations

- ▶ **Label:** Maximum Ordinal Measurement Information Content Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>

- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/MaximumOrdinalMeasurementInformationContentEntity>

Hierarchy



Direct Super Types

- OrdinalMeasurementInformationContentEntity

4.1.19 MeanPointEstimateInformationContentEntity

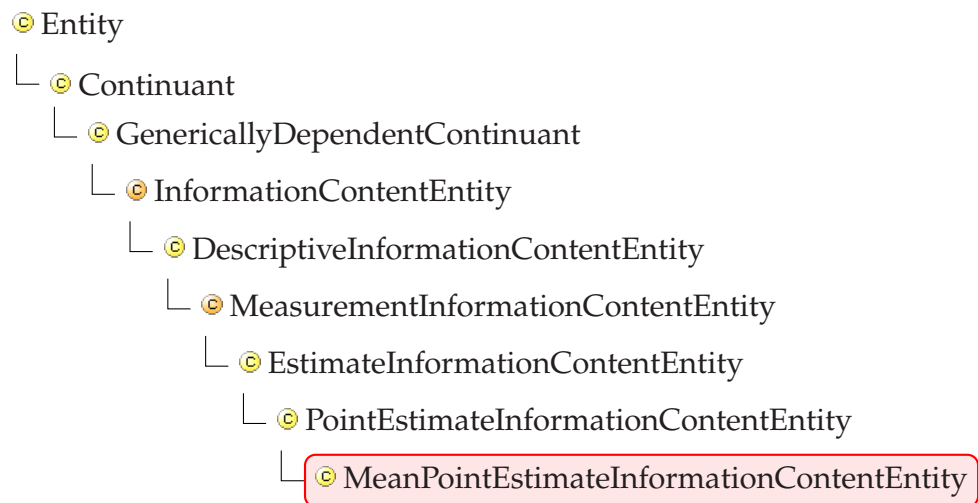
Definition

A Point Estimate Information Content Entity that is a measurement of a set of values and is equal to the sum of all the values in the set divided by the total number of values in the set.

Annotations

- **Label:** Mean Point Estimate Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/MeanPointEstimateInformationContentEntity>

Hierarchy



Direct Super Types

- PointEstimateInformationContentEntity

4.1.20 MeasurementInformationContentEntity

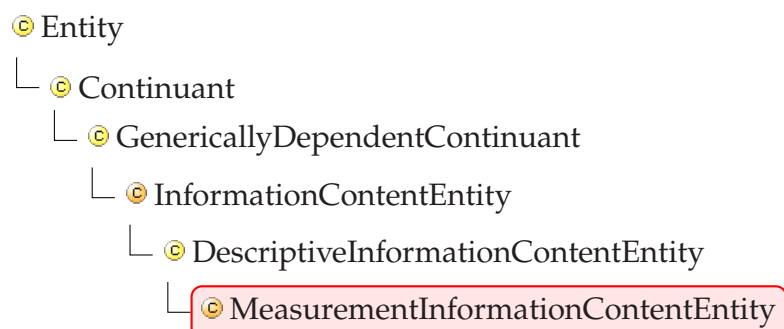
Definition

A Descriptive Information Content Entity that describes the extent, dimensions, quantity, or quality of an Entity relative to some standard.

Annotations

- **Label:** Measurement Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/MeasurementInformationContentEntity>









Hierarchy



Direct Super Types

- ▶  DescriptiveInformationContentEntity

Direct Sub Types

- ▶  RatioMeasurementInformationContentEntity
- ▶  ProbabilityMeasurementInformationContentEntity
- ▶  VeracityMeasurementInformationContentEntity
- ▶  ReliabilityMeasurementInformationContentEntity
- ▶  OrdinalMeasurementInformationContentEntity
- ▶  EstimateInformationContentEntity
- ▶  DeviationMeasurementInformationContentEntity
- ▶  NominalMeasurementInformationContentEntity
- ▶  IntervalMeasurementInformationContentEntity

Equivalent Classes

- ▶ (DescriptiveInformationContentEntity   isAMeasurementOf Entity)

Disjoint Classes

- ▶  RepresentationalInformationContentEntity

Domain Of

- ▶  isAMeasurementOf

Range For

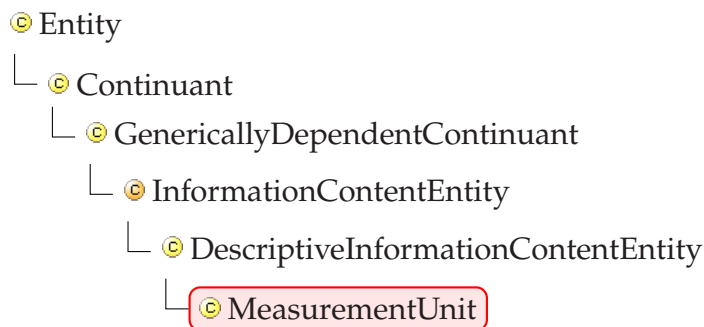
- ▶  isMeasuredBy

4.1.21 MeasurementUnit**Definition**

A Descriptive Information Content Entity that describes a definite magnitude of a physical quantity, defined and adopted by convention and/or by law, that is used as a standard for measurement of the same physical quantity.

Annotations

- ▶ **Label:** Measurement Unit
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/MeasurementUnit>

Hierarchy**Direct Super Types**

- DescriptiveInformationContentEntity

Domain Of

- isMeasurementUnitOf

Range For

- usesMeasurementUnit

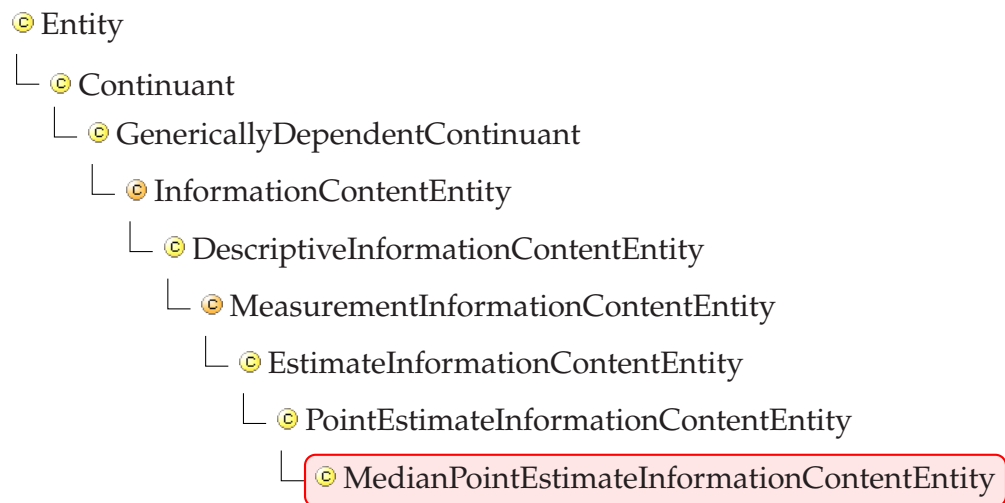
4.1.22 MedianPointEstimateInformationContentEntity**Definition**

A Point Estimate Information Content Entity that is a measurement of a set of values and is equal to either the middle value or the average of the two values which separate the set into two equally populated upper and lower sets.

Annotations

- **Label:** Median Point Estimate Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/MedianPointEstimateInformationContentEntity>

Hierarchy



Direct Super Types

- PointEstimateInformationContentEntity

4.1.23 MinimumOrdinalMeasurementInformationContentEntity

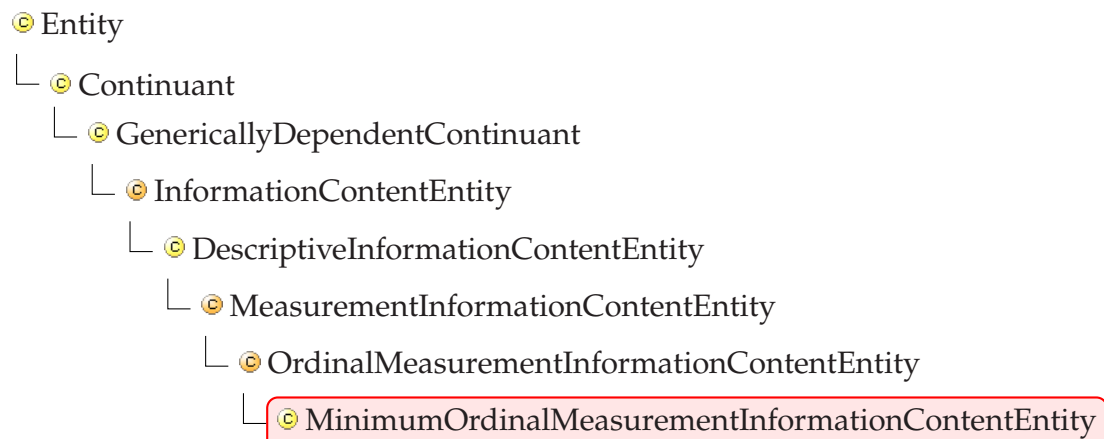
Definition

An Ordinal Measurement Information Content Entity that is a measurement of some entity in virtue of it being the smallest or having the least amount relative to a nominally described set of like entities.

Annotations

- **Label:** Minimum Ordinal Measurement Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/MinimumOrdinalMeasurementInformationContentEntity>

Hierarchy



Direct Super Types

- OrdinalMeasurementInformationContentEntity

4.1.24 ModePointEstimateInformationContentEntity

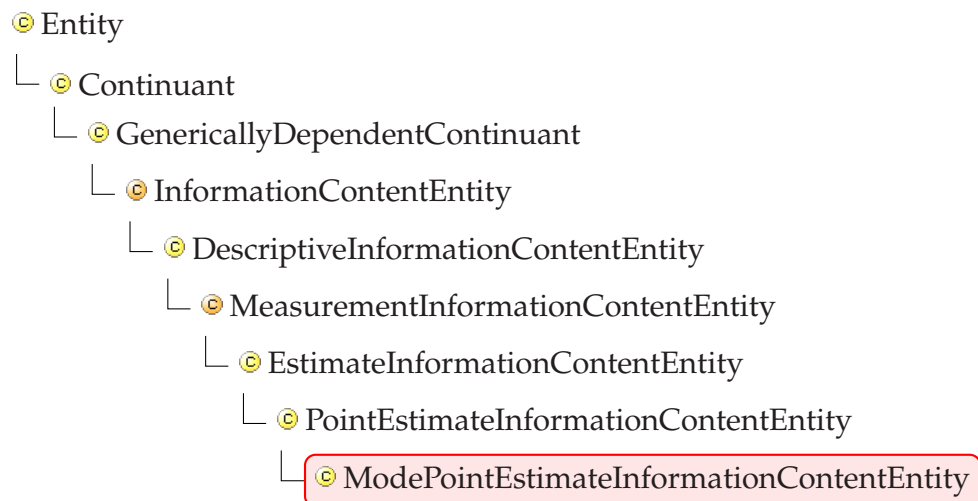
Definition

A Point Estimate Information Content Entity that is a measurement of a set of values and is equal to the value or value(s) that occur most often in the set.

Annotations

- **Label:** Mode Point Estimate Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ModePointEstimateInformationContentEntity>

Hierarchy



Direct Super Types

- PointEstimateInformationContentEntity

4.1.25 NominalMeasurementInformationContentEntity

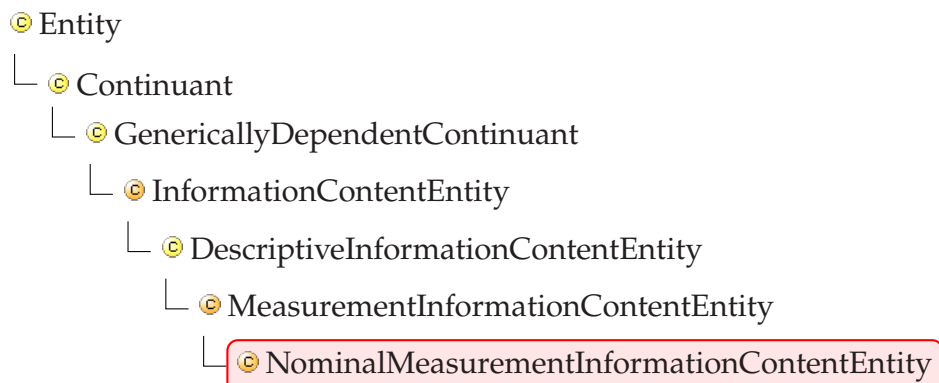
Definition

A Measurement Information Content Entity that consists of a symbol that classifies Entities according to some shared, possibly arbitrary, characteristic.

Annotations

- **Label:** Nominal Measurement Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/NominalMeasurementInformationContentEntity>

Hierarchy



Direct Super Types

- ▶ MeasurementInformationContentEntity

Direct Sub Types

- ▶ EventStatusNominalInformationContentEntity

Equivalent Classes

- ▶ (MeasurementInformationContentEntity isANominalMeasurementOf Entity)

Disjoint Classes

- ▶ IntervalMeasurementInformationContentEntity
- ▶ RatioMeasurementInformationContentEntity
- ▶ OrdinalMeasurementInformationContentEntity

Domain Of

- ▶ isANominalMeasurementOf

Range For

- ▶ isMeasuredByNominal

4.1.26 NonNameIdentifier

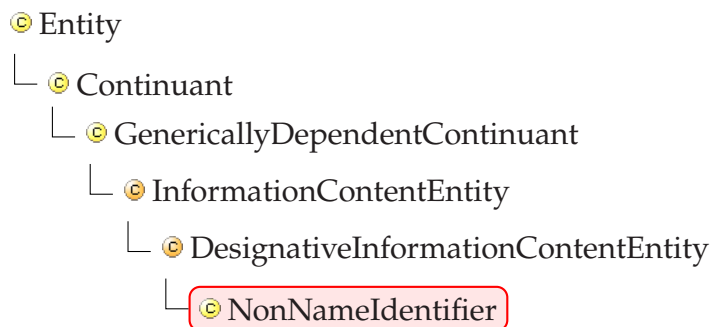
Definition

A Designative Information Content Entity that consists of a string of characters that designates an entity within a specified namespace or context, is not a Designative Name, may be automatically or randomly generated, and typically has no preexisting cultural or social significance.

Annotations

- ▶ **Label:** Non-Name Identifier
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/NonNameIdentifier>

Hierarchy



Direct Super Types

- ▶ DesignativeInformationContentEntity

Direct Sub Types

- ▶ CodeIdentifier
- ▶ ArbitraryIdentifier

Disjoint Classes

- ▶ DesignativeName

4.1.27 OrdinalMeasurementInformationContentEntity

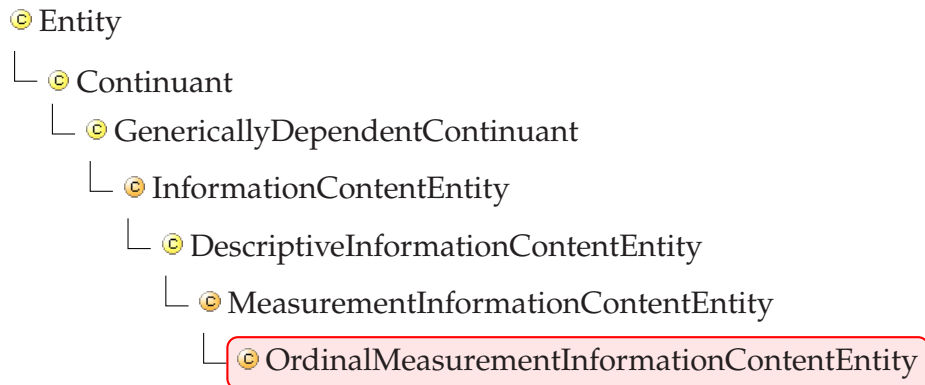
Definition

A Measurement Information Content Entity that consists of a symbol that places an Entity into some rank order.

Annotations

- ▶ **Label:** Ordinal Measurement Information Content Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/OrdinalMeasurementInformationContentEntity>

Hierarchy



Direct Super Types

- ▶ MeasurementInformationContentEntity

Direct Sub Types

- ▶ PriorityMeasurementInformationContentEntity
- ▶ SequencePositionOrdinality
- ▶ MaximumOrdinalMeasurementInformationContentEntity
- ▶ MinimumOrdinalMeasurementInformationContentEntity

Equivalent Classes

- ▶ (MeasurementInformationContentEntity isAOrdinalMeasurementOf Entity)

Disjoint Classes

- ▶ NominalMeasurementInformationContentEntity
- ▶ IntervalMeasurementInformationContentEntity
- ▶ RatioMeasurementInformationContentEntity

Domain Of

- ▶ isAOrdinalMeasurementOf

Range For

- ▶ isMeasuredByOrdinal

4.1.28 PerformanceSpecification

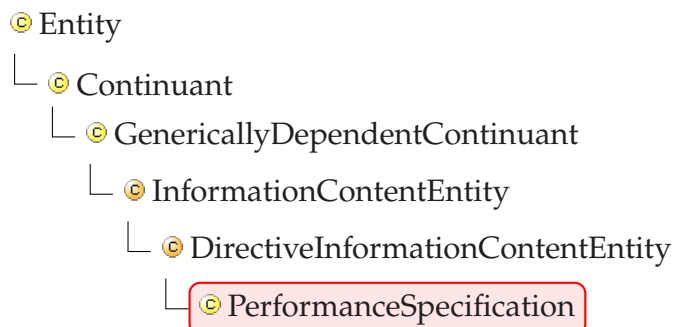
Definition

A Directive Information Content Entity that prescribes some aspect of the behavior of a participant in a Process given one or more operating conditions.

Annotations

- ▶ **Label:** Performance Specification
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/PerformanceSpecification>

Hierarchy



Direct Super Types

- ▶ DirectiveInformationContentEntity
- ▶ describesCondition Entity

4.1.29 PointEstimateInformationContentEntity

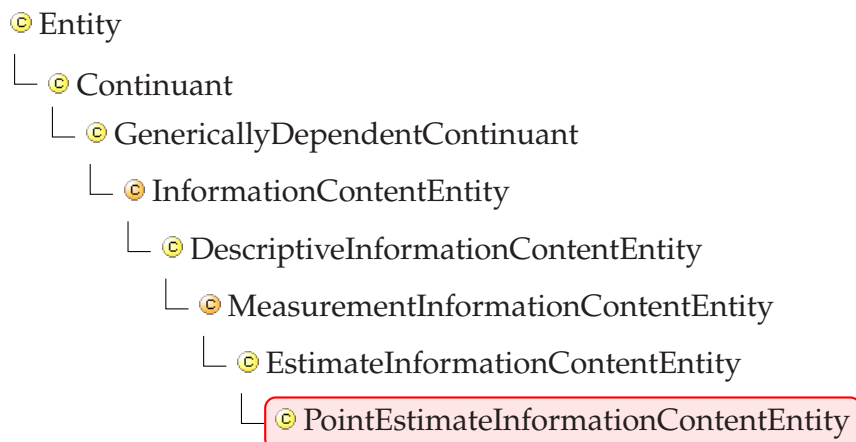
Definition

An Estimate Information Content Entity that consists of a single value for the measured entity.

Annotations

- ▶ **Label:** Point Estimate Information Content Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/PointEstimateInformationContentEntity>

Hierarchy



Direct Super Types

- ▶ EstimateInformationContentEntity

Direct Sub Types

- ▶ ModePointEstimateInformationContentEntity
- ▶ MedianPointEstimateInformationContentEntity
- ▶ MeanPointEstimateInformationContentEntity

4.1.30 PredictiveInformationContentEntity

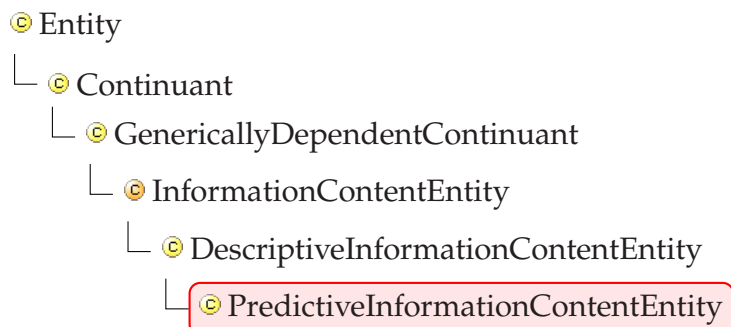
Definition

A Descriptive Information Content Entity that describes an uncertain future event.

Annotations

- ▶ **Label:** Predictive Information Content Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/PredictiveInformationContentEntity>

Hierarchy



Direct Super Types

- DescriptiveInformationContentEntity

4.1.31 PriorityMeasurementInformationContentEntity

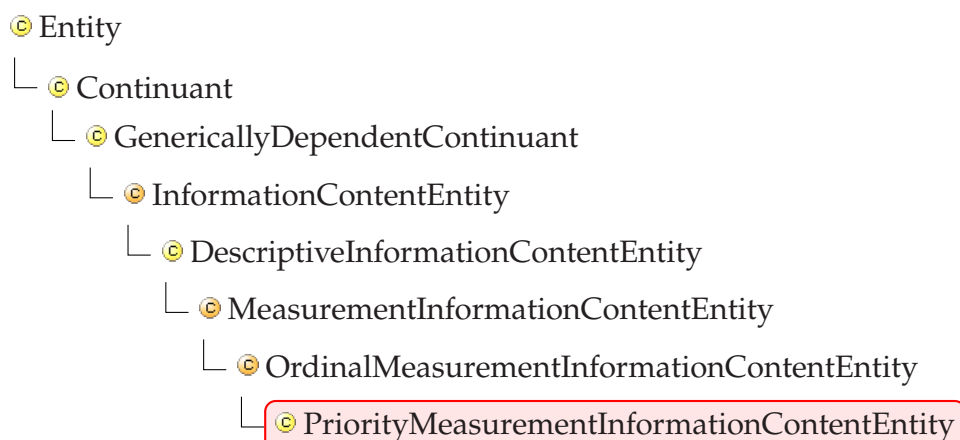
Definition

An Ordinal Measurement Information Content Entity that is a measurement of the relative importance of an entity.

Annotations

- **Label:** Priority Measurement Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/PriorityMeasurementInformationContentEntity>

Hierarchy



Direct Super Types

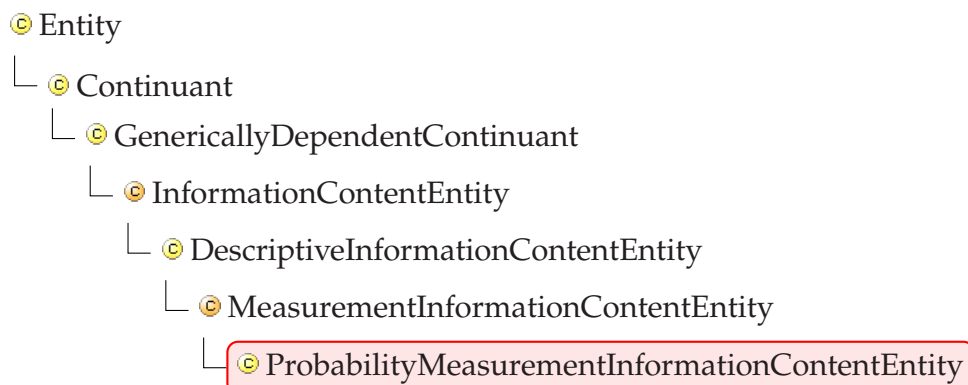
-  OrdinalMeasurementInformationContentEntity

4.1.32 ProbabilityMeasurementInformationContentEntity**Definition**

A Measurement Information Content Entity that is a measurement of the likelihood that a Process or Process Aggregate occurs.

Annotations

- **Label:** Probability Measurement Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ProbabilityMeasurementInformationContentEntity>

Hierarchy**Direct Super Types**

-  MeasurementInformationContentEntity

4.1.33 ProportionalRatioMeasurementInformationContentEntity**Definition**

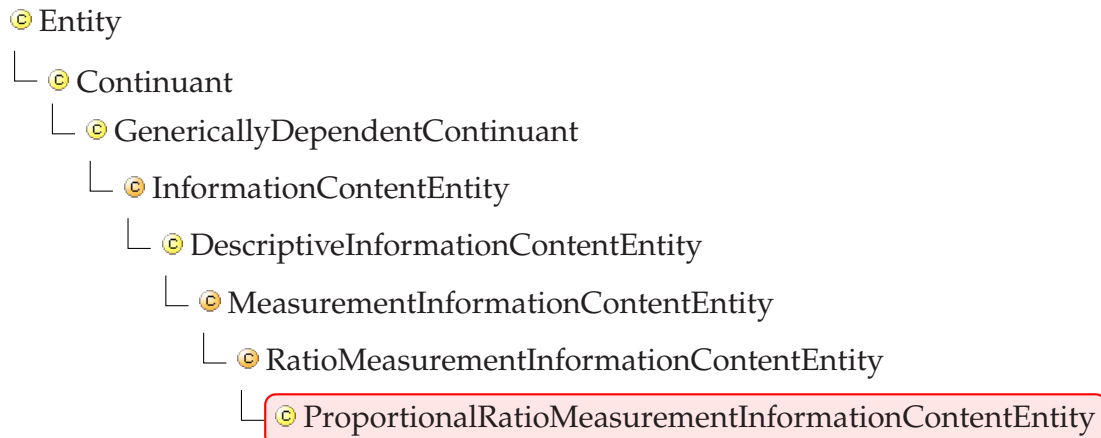
A Ratio Measurement Information Content Entity that is a measurement of a portion of a whole (described by the numerator) compared against that whole (described by the denominator) where the whole is a nominally described set of like entities.

Annotations

- **Label:** Proportional Ratio Measurement Information Content Entity

- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ProportionalRatioMeasurementInformationContentEntity>

Hierarchy



Direct Super Types

- RatioMeasurementInformationContentEntity

4.1.34 RatioMeasurementInformationContentEntity

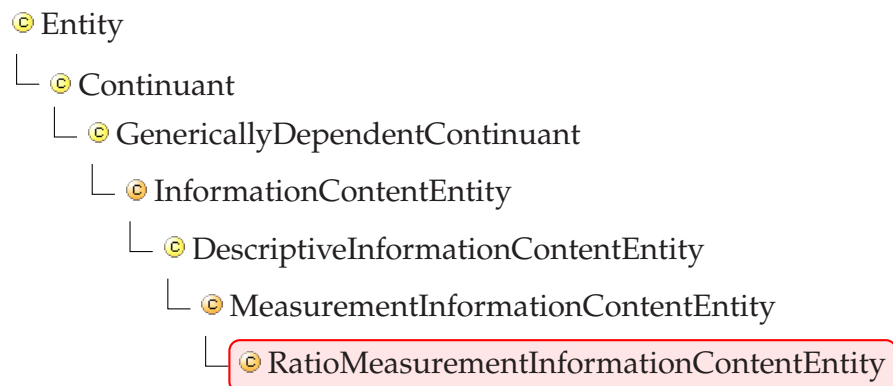
Definition

A Measurement Information Content Entity that consists of a symbol that places a Quality of an Entity onto an interval scale having a true zero value.

Annotations

- **Label:** Ratio Measurement Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/RatioMeasurementInformationContentEntity>

Hierarchy



Direct Super Types

- ▶ MeasurementInformationContentEntity

Direct Sub Types

- ▶ ProportionalRatioMeasurementInformationContentEntity
- ▶ DistanceMeasurementInformationContentEntity
- ▶ CountMeasurementInformationContentEntity

Equivalent Classes

- ▶ (MeasurementInformationContentEntity isARatioMeasurementOf Entity)

Disjoint Classes

- ▶ OrdinalMeasurementInformationContentEntity
- ▶ NominalMeasurementInformationContentEntity
- ▶ IntervalMeasurementInformationContentEntity

Domain Of

- ▶ isARatioMeasurementOf

Range For

- ▶ isMeasuredByRatio

4.1.35 ReliabilityMeasurementInformationContentEntity

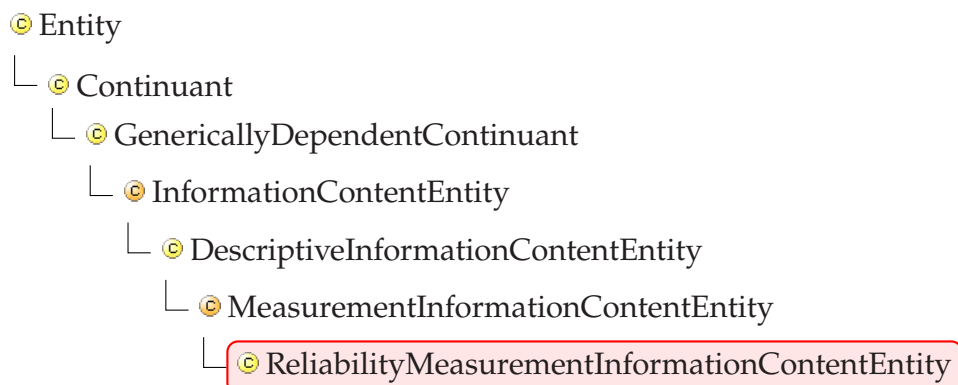
Reliability concerns both a measure of past performance and the expectation that future performance will conform to the range of past performances.

Definition

A Measurement Information Content Entity that is a measurement of the extent to which an entity can consistently produce an outcome.

Annotations

- ▶ **Label:** Reliability Measurement Information Content Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ReliabilityMeasurementInformationContentEntity>

Hierarchy**Direct Super Types**

- ▶ MeasurementInformationContentEntity

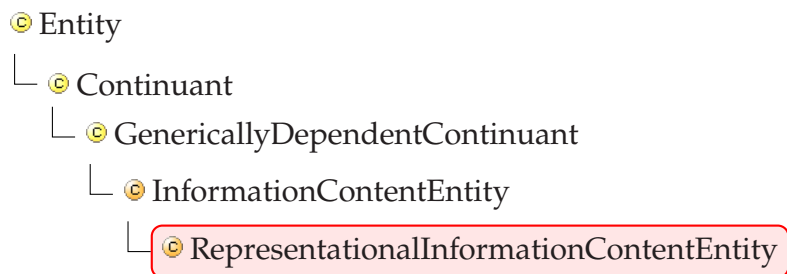
4.1.36 RepresentationalInformationContentEntity**Definition**

An Information Content Entity that represents some Entity.

Annotations

- ▶ **Label:** Representational Information Content Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/RepresentationalInformationContentEntity>

Hierarchy



Direct Super Types

- InformationContentEntity

Equivalent Classes

- (InformationContentEntity represents Entity)

Disjoint Classes

- MeasurementInformationContentEntity

Domain Of

- represents

Range For

- representedBy

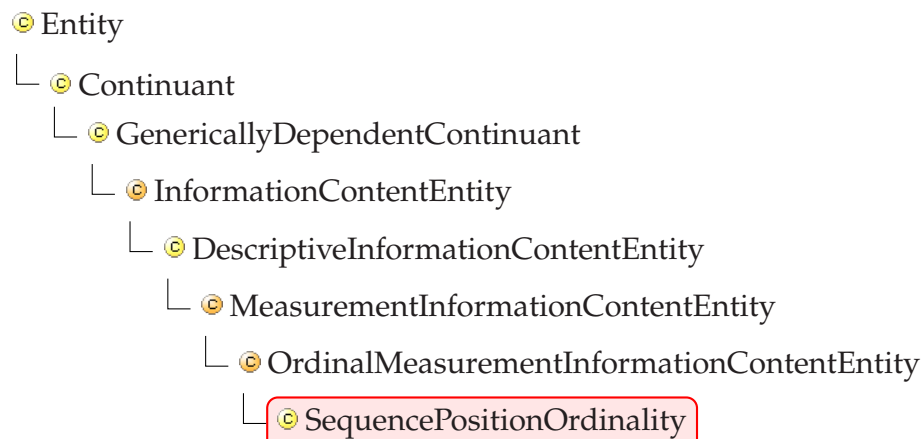
4.1.37 SequencePositionOrdinality

Definition

An Ordinal Measurement Information Content Entity that is about the position of some entity in some ordered sequence.

Annotations

- **Label:** Sequence Position Ordinality
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/SequencePositionOrdinality>

Hierarchy**Direct Super Types**

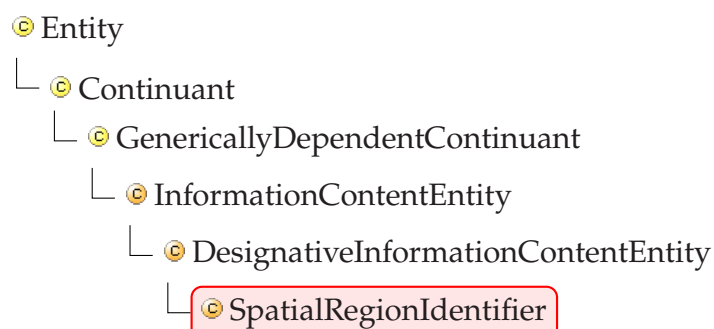
- OrdinalMeasurementInformationContentEntity

4.1.38 SpatialRegionIdentifier**Definition**

A Designative Information Content Entity that designates some Spatial Region.

Annotations

- **Label:** Spatial Region Identifier
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/SpatialRegionIdentifier>

Hierarchy**Direct Super Types**

- DesignativeInformationContentEntity

Equivalent Classes

- (DesignativeInformationContentEntity   designates SpatialRegion)

4.1.39 TemporalInstantIdentifier

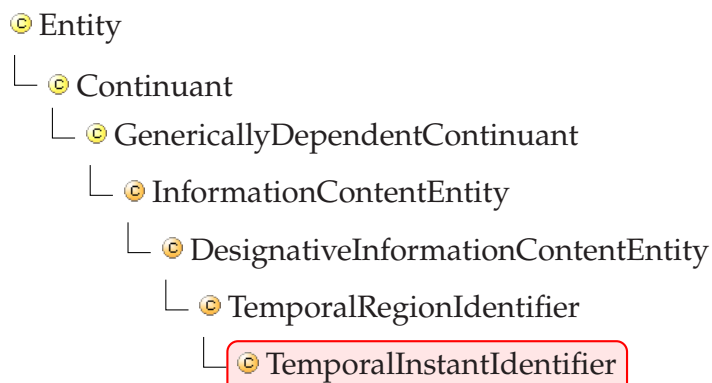
Definition

A Temporal Region Identifier that designates some Zero-Dimensional Temporal Region.

Annotations

- **Label:** Temporal Instant Identifier
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/TemporalInstantIdentifier>

Hierarchy



Direct Super Types

-  TemporalRegionIdentifier

Equivalent Classes

- (TemporalRegionIdentifier   designates ZeroDimensionalTemporalRegion)

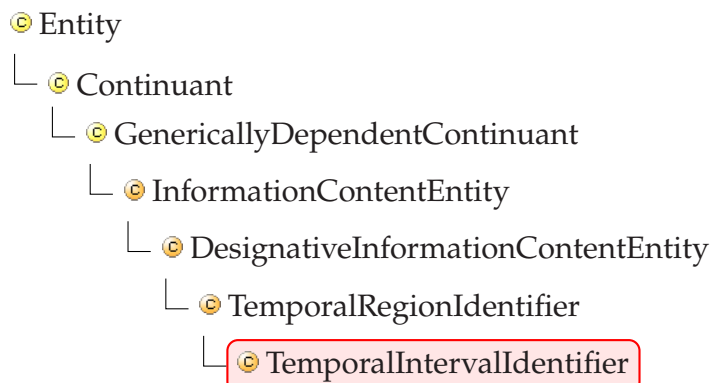
4.1.40 TemporalIntervalIdentifier

Definition

A Temporal Region Identifier that designates some One-Dimensional Temporal Region.

Annotations

- ▶ **Label:** Temporal Interval Identifier
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/TemporalIntervalIdentifier>

Hierarchy**Direct Super Types**

- ▶ TemporalRegionIdentifier

Equivalent Classes

- ▶ (TemporalRegionIdentifier designates OneDimensionalTemporalRegion)

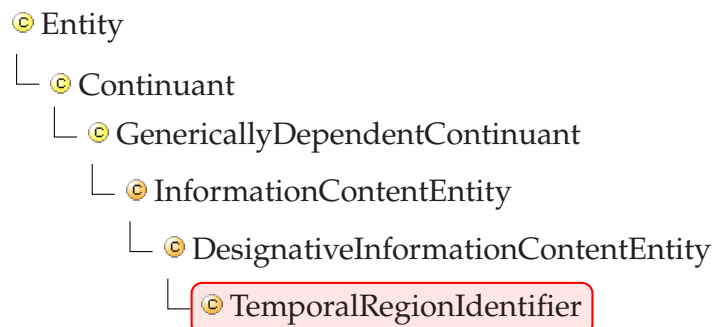
4.1.41 TemporalRegionIdentifier**Definition**

A Designative Information Content Entity that designates some Temporal Region.

Annotations

- ▶ **Label:** Temporal Region Identifier
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/TemporalRegionIdentifier>

Hierarchy



Direct Super Types

- DesignativeInformationContentEntity

Direct Sub Types

- TemporalIntervalIdentifier
- TemporalInstantIdentifier

Equivalent Classes

- (DesignativeInformationContentEntity designates TemporalRegion)

4.1.42 VeracityMeasurementInformationContentEntity

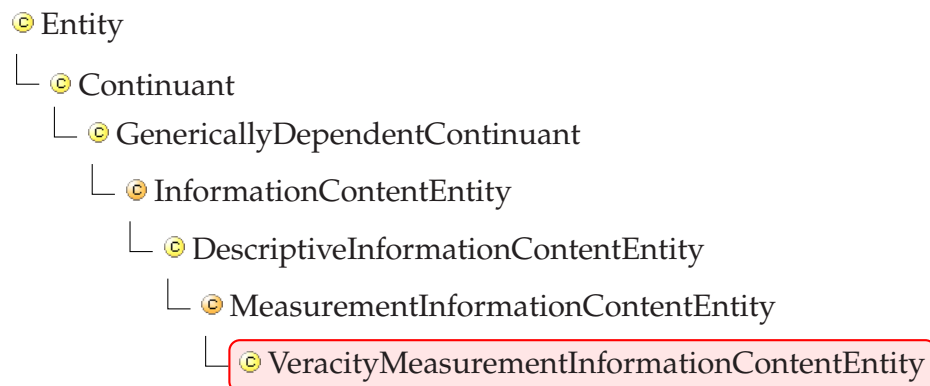
Definition

A Measurement Information Content Entity that is a measurement of the extent to which a description conforms to the reality it describes.

Annotations

- **Label:** Veracity Measurement Information Content Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/VeracityMeasurementInformationContentEntity>

Hierarchy



Direct Super Types

- MeasurementInformationContentEntity

4.2 Properties

4.2.1 conditionDescribedBy

Definition

c condition_described_by p iff p is an instance of a Performance Specification, and p has part d , and d is an instance of a Descriptive Information Content Entity, and p prescribes an entity s , and d describes c , and c is an entity that is causally relevant to s existing as prescribed by p .

Annotations

- **Label:** condition described by
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/condition_described_by

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:** describesCondition

SuperProperty Of (Chain)

- describedBy continuantPartOf **SubPropertyOf:** conditionDescribedBy

4.2.2 describedBy


Definition

x described_by y iff y is an instance of Information Content Entity, and x is an instance of Entity, such that y is about the characteristics by which y can be recognized or visualized.

Annotations

- ▶ **Label:** described by
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/described_by

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  describes

Hierarchy

 isSubjectOf

└  describedBy

Direct Super Types

- ▶  isSubjectOf

Direct Sub Types

- ▶  isMeasuredBy

Range

- ▶  DescriptiveInformationContentEntity

4.2.3 describes


Definition

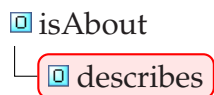
x describes y iff x is an instance of Information Content Entity, and y is an instance of Entity, such that x is about the characteristics by which y can be recognized or visualized.

Annotations

- ▶ **Label:** describes
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/describes>

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  describedBy

Hierarchy**Direct Super Types**

- ▶  isAbout

Direct Sub Types

- ▶  isAMeasurementOf

Domain

- ▶  DescriptiveInformationContentEntity


4.2.4 describesCondition**Definition**

p describes_condition c iff p is an instance of a Performance Specification, and p has part d , and d is an instance of a Descriptive Information Content Entity, and p prescribes an entity s , and d describes c , and c is an entity that is causally relevant to s existing as prescribed by p .

Annotations

- ▶ **Label:** describes condition
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/describes_condition

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  conditionDescribedBy

SuperProperty Of (Chain)

- ▶  hasContinuantPart  describes **SubPropertyOf:** describesCondition


4.2.5 designatedBy**Definition**

x designated_by y iff y is an instance of Information Content Entity and x is an instance of Entity, such that given some context, y uniquely distinguishes x from other entities.


Annotations

- ▶ **Label:** designated by
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/designated_by

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  designates

Hierarchy

 isSubjectOf

└  designatedBy

Direct Super Types

- ▶  isSubjectOf

Range

- ▶  DesignativeInformationContentEntity

4.2.6 designates


Definition

x designates y iff x is an instance of an Information Content Entity, and y is an instance of an Entity, such that given some context, x uniquely distinguishes y from other entities.

Annotations

- ▶ **Label:** designates
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/designates>

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  designatedBy

Hierarchy**Direct Super Types**

- ▶  isAbout

Domain

- ▶  DesignativeInformationContentEntity

4.2.7 hasBooleanValue**Annotations**

- ▶ **Label:** has boolean value
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_boolean_value

Facets

- ▶ **Property Type:** DatatypeProperty
- ▶ **Functional:** False

Domain

- ▶  InformationBearingEntity

Range

- ▶ <http://www.w3.org/2001/XMLSchema#boolean>

4.2.8 hasDateValue**Annotations**

- ▶ **Label:** has date value
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_date_value

Facets

- ▶ **Property Type:** DatatypeProperty
- ▶ **Functional:** False

Domain

- ▶  InformationBearingEntity

4.2.9 hasDatetimeValue**Annotations**

- ▶ **Label:** has datetime value
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_datetime_value

Facets

- ▶ **Property Type:** DatatypeProperty
- ▶ **Functional:** False

Domain

- ▶  InformationBearingEntity

Range

- ▶ <http://www.w3.org/2001/XMLSchema#dateTime>

4.2.10 hasDecimalValue

Annotations

- ▶ **Label:** has decimal value
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_decimal_value

Facets

- ▶ **Property Type:** DatatypeProperty
- ▶ **Functional:** False

Domain

- ▶  InformationBearingEntity

Range

- ▶ <http://www.w3.org/2001/XMLSchema#decimal>

4.2.11 hasDoubleValue

Annotations

- ▶ **Label:** has double value
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_double_value

Facets

- ▶ **Property Type:** DatatypeProperty
- ▶ **Functional:** False

Domain

- ▶  InformationBearingEntity

Range

- ▶ <http://www.w3.org/2001/XMLSchema#double>

4.2.12 hasIntegerValue

Annotations

- ▶ **Label:** has integer value
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_integer_value

Facets

- ▶ **Property Type:** DatatypeProperty
- ▶ **Functional:** False

Domain

- ▶  InformationBearingEntity

Range

- ▶ <http://www.w3.org/2001/XMLSchema#integer>

4.2.13 hasTextValue

Definition

A relationship between an Information Bearing Entity and a string representation.

Annotations

- ▶ **Label:** has text value
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_text_value

Facets

- ▶ **Property Type:** DatatypeProperty
- ▶ **Functional:** False

Domain

- ▶  InformationBearingEntity

Range

- ▶ <http://www.w3.org/2001/XMLSchema#string>

4.2.14 hasURIValue

Annotations

- ▶ **Label:** has URI value
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_URI_value

Facets

- ▶ **Property Type:** DatatypeProperty
- ▶ **Functional:** False

Domain

- ▶  InformationBearingEntity

Range

- ▶ <http://www.w3.org/2001/XMLSchema#anyURI>

4.2.15 isAIntervalMeasurementOf


Definition

x is_a_interval_measurement_of y iff x is an instance of Information Content Entity and y is an instance of Entity, such that x describes some attribute of y relative to a scale which has uniform intervals but has a zero value that does not correspond to an absence of the attribute being measured.

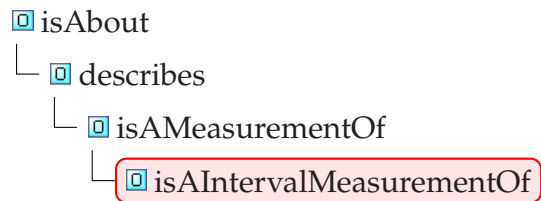
Annotations

- ▶ **Label:** is a interval measurement of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_a_interval_measurement_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isMeasuredByInterval

Hierarchy



Direct Super Types

- isAMeasurementOf

Domain

- IntervalMeasurementInformationContentEntity

4.2.16 isAMeasurementOf

Definition

x is_a_measurement_of y iff x is an instance of Information Content Entity and y is an instance of Entity, such that x describes some attribute of y relative to some scale or classification scheme.

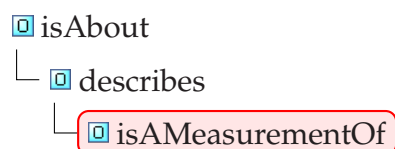
Annotations

- **Label:** is a measurement of
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_a_measurement_of

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:** isMeasuredBy





Hierarchy



Direct Super Types

-  describes

Direct Sub Types

-  isAOrdinalMeasurementOf
-  isARatioMeasurementOf
-  isAnIntervalMeasurementOf
-  isANominalMeasurementOf

Domain

-  MeasurementInformationContentEntity


4.2.17 isANominalMeasurementOf**Definition**

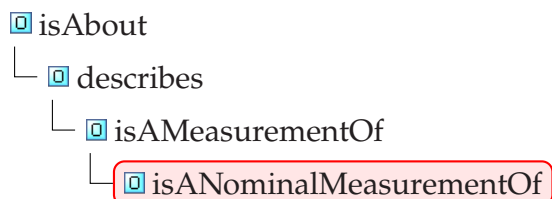
x is_a_nominal_measurement_of y iff x is an instance of Information Content Entity and y is an instance of Entity, such that x classifies y relative to some set of shared, possibly arbitrary, characteristics.

Annotations

- **Label:** is a nominal measurement of
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_a_nominal_measurement_of

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  isMeasuredByNominal

Hierarchy**Direct Super Types**

-  isAMeasurementOf

Domain

- ▶  NominalMeasurementInformationContentEntity


4.2.18 isAOrdinalMeasurementOf**Definition**

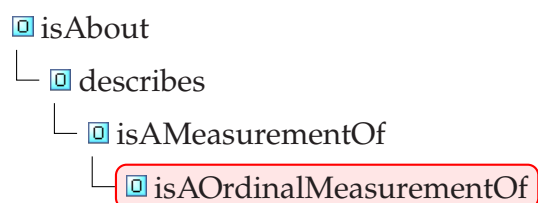
x is_a_ordinal_measurement_of y iff x is an instance of Information Content Entity and y is an instance of Entity, such that x describes some attribute of y relative to a scale ordered by rank.

Annotations

- ▶ **Label:** is a ordinal measurement of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_a_ordinal_measurement_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isMeasuredByOrdinal

Hierarchy**Direct Super Types**

- ▶  isAMeasurementOf

Domain

- ▶  OrdinalMeasurementInformationContentEntity

4.2.19 isARatioMeasurementOf**Definition**


x is_a_ratio_measurement_of y iff x is an instance of Information Content Entity and y is

an instance of Entity, such that x describes some attribute of y relative to a scale having equal unit values and a zero value that corresponds to the absence of the attribute being measured.

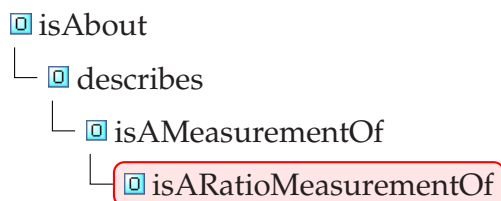
Annotations

- ▶ **Label:** is a ratio measurement of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_a_ratio_measurement_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isMeasuredByRatio

Hierarchy



Direct Super Types

- ▶  isAMeasurementOf

Domain

- ▶  RatioMeasurementInformationContentEntity

4.2.20 isAbout


Definition

A primitive relationship between an Information Content Entity and some Entity.





Annotations

- ▶ **Label:** is about
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_about

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isSubjectOf

Direct Sub Types

- ▶  prescribes
- ▶  represents
- ▶  describes
- ▶  designates

Domain

- ▶  InformationContentEntity

Range

- ▶  Entity

4.2.21 isExcerptedFrom**Definition**

An Information Bearing Entity b1 is excerpted from another Information Bearing Entity B2 iff b1 is part of some Information Bearing Entity B1 that is carrier of some Information Content Entity C1, B2 is carrier of some Information Content Entity C2, C1 is not identical with C2, b1 is carrier of some Information Content Entity c1, b2 is an Information Bearing Entity that is part of B2 and b2 is carrier of c1 (i.e. the same Information Content Entity as borne by b1).

Annotations

- ▶ **Label:** is excerpted from
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_excerpted_from

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

Domain

- ▶  InformationBearingEntity

Range

- ▶  InformationBearingEntity


4.2.22 isMeasuredBy**Definition**

y is *is_measured_by* x iff x is an instance of Information Content Entity and y is an instance of Entity, such that x describes some attribute of y relative to some scale or classification scheme.


Annotations

- ▶ **Label:** is measured by
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_measured_by

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isAMeasurementOf

Hierarchy

 isSubjectOf





└  describedBy

└  isMeasuredBy

Direct Super Types

- ▶  describedBy

Direct Sub Types

- ▶  isMeasuredByOrdinal
- ▶  isMeasuredByRatio
- ▶  isMeasuredByInterval
- ▶  isMeasuredByNominal

Range

- ▶  MeasurementInformationContentEntity

4.2.23 isMeasuredByInterval


Definition

y is_measured_by_interval x iff x is an instance of Information Content Entity and y is an instance of Entity, such that x describes some attribute of y relative to a scale which has uniform intervals but has a zero value that does not correspond to an absence of the attribute being measured.

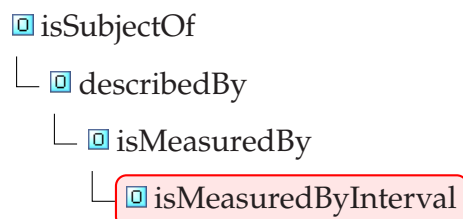
Annotations

- ▶ **Label:** is measured by interval
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_measured_by_interval

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isAIntervalMeasurementOf

Hierarchy



Direct Super Types

- ▶  isMeasuredBy

Range

- ▶  IntervalMeasurementInformationContentEntity

4.2.24 isMeasuredByNominal


Definition

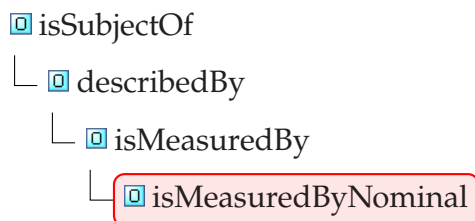
y is_measured_by_nominal x iff x is an instance of Information Content Entity and y is an instance of Entity, such that x classifies y relative to some set of shared, possibly arbitrary, characteristics.

Annotations

- ▶ **Label:** is measured by nominal
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_measured_by_nominal

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isANominalMeasurementOf

Hierarchy**Direct Super Types**

- ▶  isMeasuredBy

Range

- ▶  NominalMeasurementInformationContentEntity


4.2.25 isMeasuredByOrdinal**Definition**

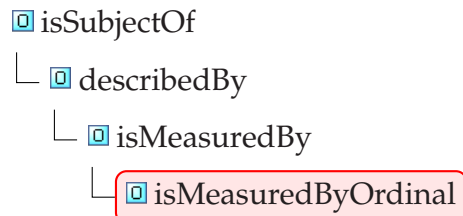
y is_measured_by_ordinal x iff x is an instance of Information Content Entity and y is an instance of Entity, such that x describes some attribute of y relative to a scale ordered by rank.

Annotations

- ▶ **Label:** is measured by ordinal
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_measured_by_ordinal

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isAOrdinalMeasurementOf

Hierarchy**Direct Super Types**

- ▶  isMeasuredBy

Range

- ▶  OrdinalMeasurementInformationContentEntity


4.2.26 isMeasuredByRatio**Definition**

y is_measured_by_ratio x iff x is an instance of Information Content Entity and y is an instance of Entity, such that x describes some attribute of y relative to a scale having equal unit values and a zero value that corresponds to the absence of the attribute being measured.

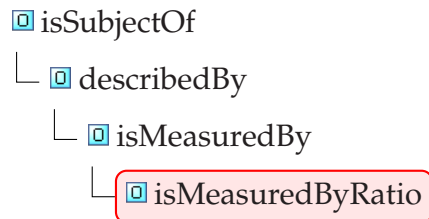
Annotations

- ▶ **Label:** is measured by ratio
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_measured_by_ratio

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isARatioMeasurementOf

Hierarchy



Direct Super Types

- isMeasuredBy

Range

- RatioMeasurementInformationContentEntity

4.2.27 isMeasurementUnitOf

Definition

x is_measurement_unit_of y iff y is an instance of Information Bearing Entity and x is an instance of Measurement Unit, such that x describes the magnitude of measured physical quantity mentioned in y.

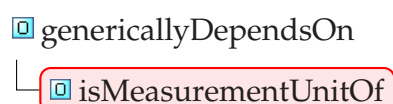
Annotations

- **Label:** is measurement unit of
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_measurement_unit_of

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:** usesMeasurementUnit

Hierarchy



Direct Super Types

- genericallyDependsOn

Domain

- ▶  MeasurementUnit

Range

- ▶  InformationBearingEntity


4.2.28 isMentionOf**Definition**

x is_mention_of y iff x is an instance Information Bearing Entity and y is an instance Entity, such that x is used as a reference to y .

Annotations

- ▶ **Label:** is mention of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_mention_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isMentionedBy


4.2.29 isMentionedBy**Definition**

y is_mention_by x iff x is an instance Information Bearing Entity and y is an instance Entity, such that x is used as a reference to y .

Annotations

- ▶ **Label:** is mentioned by
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_mentioned_by

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isMentionOf

4.2.30 isSubjectOf


Definition

A primitive relationship between an instance of an Entity and an instance of an Information Content Entity.





Annotations

- ▶ **Label:** is subject of
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_subject_of

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isAbout

Direct Sub Types

- ▶  prescribedBy
- ▶  representedBy
- ▶  describedBy
- ▶  designatedBy

Range

- ▶  InformationContentEntity

4.2.31 prescribedBy


Definition

x prescribed_by y iff y is an instance of Information Content Entity and x is an instance of Entity, such that y serves as a rule or guide for x if x is an Occurrent, or y serves as a model for x if x is a Continuant.

Annotations

- ▶ **Label:** prescribed by
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/prescribed_by

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  prescribes

Hierarchy




 isSubjectOf

└  prescribedBy

Direct Super Types

- ▶  isSubjectOf

Direct Sub Types

- ▶  isRequiredBy
- ▶  isProhibitedBy
- ▶  isPermittedBy

Range

- ▶  DirectiveInformationContentEntity


4.2.32 prescribes**Definition**

x prescribes y iff x is an instance of Information Content Entity and y is an instance of Entity, such that x serves as a rule or guide for y if y an Occurrent, or x serves as a model for y if y is a Continuant.

Annotations

- ▶ **Label:** prescribes
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/prescribes>

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  prescribedBy

Hierarchy

isAbout

└─ prescribes

Direct Super Types

- isAbout

Direct Sub Types

- requires
- prohibits
- permits

Domain

- DirectiveInformationContentEntity

4.2.33 representedBy

Definition

y represented_by x iff x is an instance of Information Content Entity, and y is an instance of Entity, and z is carrier of x, such that x is about y in virtue of there existing an isomorphism between characteristics of z and y.

Annotations

- **Label:** represented by
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/represented_by

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:** represents

Hierarchy

isSubjectOf

└─ representedBy

Direct Super Types

- ▶  isSubjectOf

Range

- ▶  RepresentationalInformationContentEntity

4.2.34 represents

The relationship that is being defined here is that between the content of a photographic image and its object, between the content of a video and its objects and events, between the content of an audio recording and the sounds or events generating those sounds, or between the content of a written transcript and the verbal event that it transcribes.


Definition

x represents y iff x is an instance of Information Content Entity, y is an instance of Entity, and z is carrier of x, such that x is about y in virtue of there existing an isomorphism between characteristics of z and y.

Annotations

- ▶ **Label:** represents
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/represents>

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  representedBy

Hierarchy**Direct Super Types**

- ▶  isAbout

Domain

- ▶  RepresentationalInformationContentEntity

4.2.35 usesMeasurementUnit


Definition

y uses_measurement_unit x iff y is an instance of Information Bearing Entity and x is an instance of Measurement Unit, such that x describes the magnitude of measured physical quantity mentioned in y.

Annotations


- ▶ **Label:** uses measurement unit
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/InformationEntityOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/uses_measurement_unit

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isMeasurementUnitOf

Hierarchy

 isCarrierOf

└  usesMeasurementUnit

Direct Super Types

- ▶  isCarrierOf

Domain

- ▶  InformationBearingEntity

Range

- ▶  MeasurementUnit

Agent Ontology

The Agent Ontology is designed to represent agents, especially persons and organizations, and their roles.

5.1 Named Classes

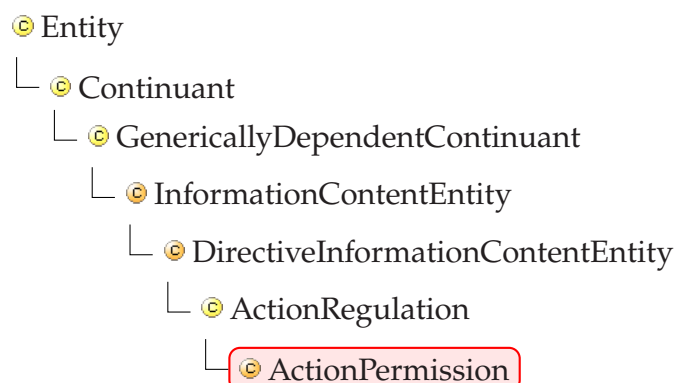
5.1.1 ActionPermission

| Definition |
|---|
| An Action Regulation that permits some Act. |

Annotations

- **Label:** Action Permission
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActionPermission>

Hierarchy



Direct Super Types

- ActionRegulation

Equivalent Classes

- (ActionRegulation   permits Process)

5.1.2 ActionProhibition

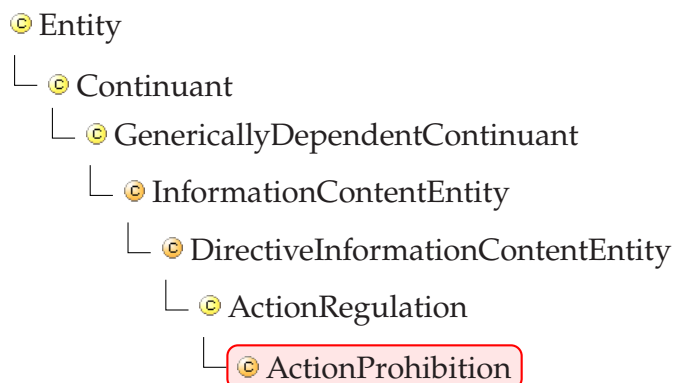
Definition

An Action Regulation that prohibits some Act.

Annotations

- **Label:** Action Prohibition
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActionProhibition>

Hierarchy



Direct Super Types

-  ActionRegulation

Equivalent Classes

- (ActionRegulation   prohibits Process)

5.1.3 ActionRegulation

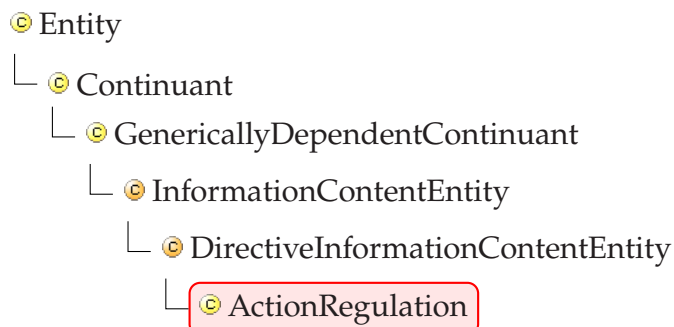
Definition

A Directive Information Content Entity that prescribes an Act as required, prohibited, or permitted, and is the output of an Act which realizes some Authority Role.

Annotations

- ▶ **Label:** Action Regulation
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActionRegulation>

Hierarchy






Direct Super Types

- ▶  DirectiveInformationContentEntity




Direct Sub Types

- ▶  ActionRequirement
- ▶  ActionProhibition
- ▶  ActionPermission

Domain Of

- ▶  requires
- ▶  prohibits
- ▶  permits

Range For

- ▶  isRequiredBy
- ▶  isProhibitedBy
- ▶  isPermittedBy

5.1.4 ActionRequirement

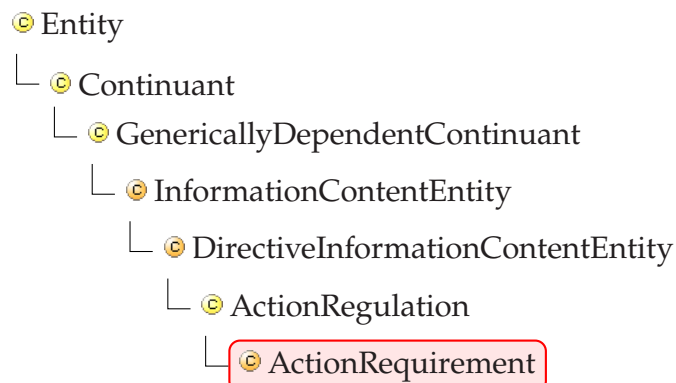
Definition

An Action Regulation that requires some Act.

Annotations

- ▶ **Label:** Action Requirement
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActionRequirement>

Hierarchy



Direct Super Types

- ▶ ActionRegulation

Equivalent Classes

- ▶ (ActionRegulation requires Process)

5.1.5 Affordance

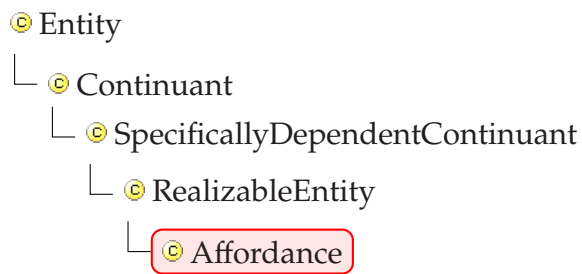
Definition

A Realizable Entity of an Independent Continuant that creates an opportunity for an Agent to realize some Capability or Disposition in some Act.

Annotations

- ▶ **Label:** Affordance
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Affordance>

Hierarchy



Direct Super Types

- RealizableEntity

Figures

- Figure 2.5

5.1.6 Agent

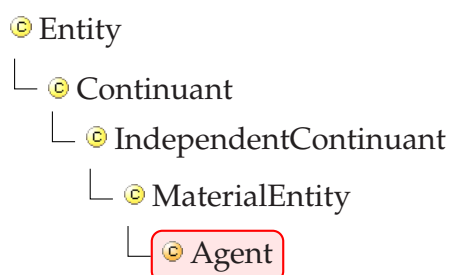
Definition

A Material Entity that is capable of performing Planned Acts

Annotations

- **Label:** Agent
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Agent>

Hierarchy







Direct Super Types

- MaterialEntity





Equivalent Classes

- ▶ (MaterialEntity  agentIn Process)

Domain Of

- ▶  receives
- ▶  sends
- ▶  hasCapability
- ▶  hasInterestIn

Range For

- ▶  hasSender
- ▶  isInterestOf
- ▶  capabilityOf
- ▶  hasRecipient

5.1.7 AgentCapability

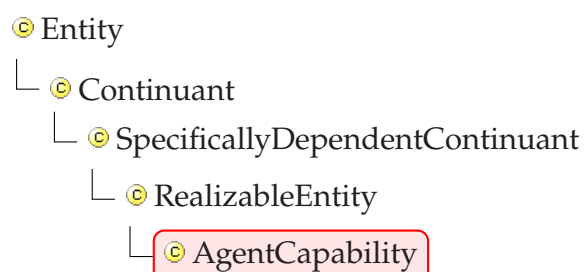
Definition

A Realizable Entity that inheres in an Agent to the extent of that Agent's capacity to realize it in Intentional Acts of a certain type.

Annotations

- ▶ **Label:** Agent Capability
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/AgentCapability>



Hierarchy





Direct Super Types

- ▶  RealizableEntity

Direct Sub Types

- ▶  Skill
- ▶  OrganizationCapability

Domain Of

- ▶  capabilityOfAggregate
- ▶  capabilityOf

Range For

- ▶  hasCapability
- ▶  aggregateHasCapability

Figures

- ▶ Figure 2.5

5.1.8 Animal

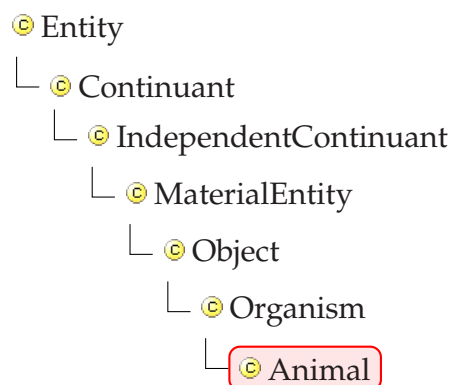
Definition

An Organism that is multicellular, eukaryotic, heterotrophic, and capable of motility for part of its life.

Annotations

- ▶ **Label:** Animal
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Animal>

Hierarchy



Direct Super Types

-  Organism

Direct Sub Types

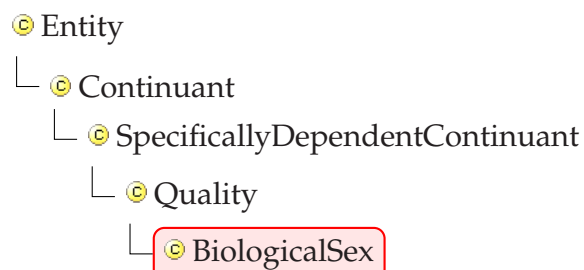
-  Person

5.1.9 BiologicalSex**Definition**

A Quality inhering in a bearer by virtue of the bearer's ability to undergo sexual reproduction in order to differentiate the individuals or types involved.

Annotations

- **Label:** Biological Sex
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/BiologicalSex>

Hierarchy**Direct Super Types**

-  Quality

Direct Sub Types

-  MaleSex
-  FemaleSex

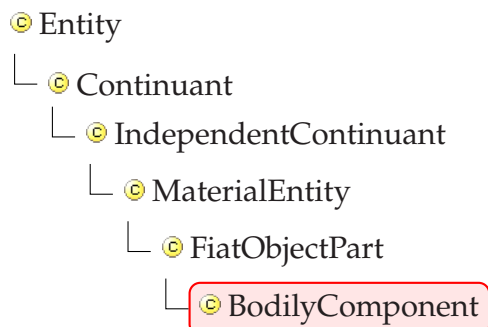
5.1.10 BodilyComponent**Definition**

A Fiat Object Part located within or on the surface of an Agent.

Annotations

- ▶ **Label:** Bodily Component
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/BodilyComponent>

Hierarchy



Direct Super Types

- ▶ FiatObjectPart

5.1.11 Disability

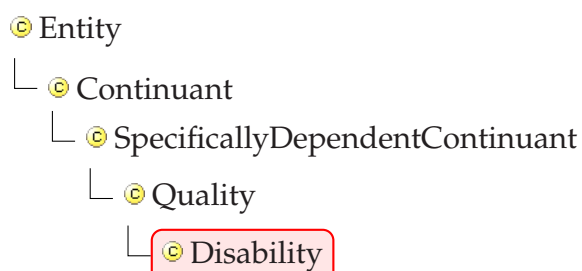
Definition

A Quality inhering in an Agent by virtue a physical or mental condition that limits the Agent's movements, senses, or activities.

Annotations

- ▶ **Label:** Disability
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Disability>

Hierarchy



Direct Super Types

-  Quality

5.1.12 Disease

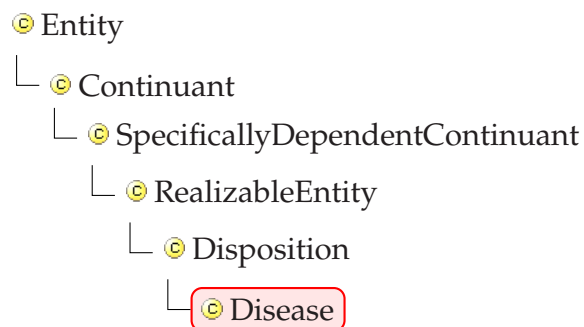
Definition

A Disposition to undergo pathological processes that exists in an organism because of one or more disorders in that organism.

Annotations

- **Label:** Disease
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Disease>

Hierarchy



Direct Super Types

-  Disposition

Equivalent Classes

-  Disease

5.1.13 FemaleSex

Definition

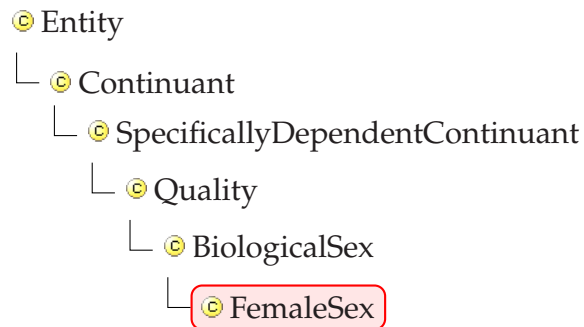
A Biological Sex inhering in an individual that only produces gametes that can be fertilized by male gametes.

Annotations

- **Label:** Female Sex

- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/FemaleSex>

Hierarchy



Direct Super Types

- BiologicalSex

5.1.14 GroupOfAgents

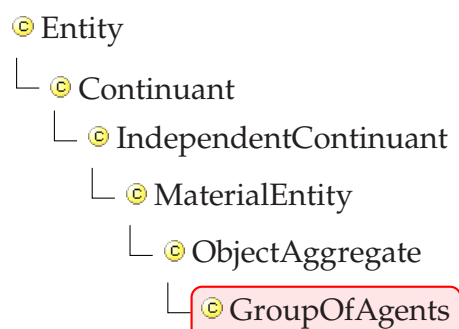
Definition

An Object Aggregate that has only Agents as parts.

Annotations

- **Label:** Group of Agents
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/GroupOfAgents>





Hierarchy



Direct Super Types

- ▶  ObjectAggregate
- ▶ ( hasMemberPart Agent   hasMemberPart Agent)

Direct Sub Types

- ▶  Organization
- ▶  SocialNetwork
- ▶  GroupOfOrganizations
- ▶  GroupOfPersons

Domain Of

- ▶  aggregateHasCapability

Range For

- ▶  capabilityOfAggregate

5.1.15 GroupOfOrganizations

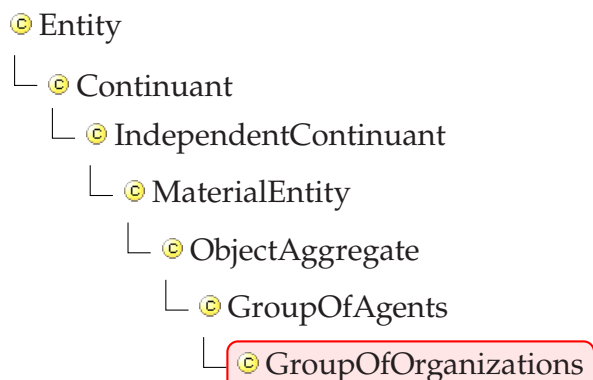
Definition

A Group of Agents that has only Organizations as parts.

Annotations

- ▶ **Label:** Group of Organizations
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/GroupOfOrganizations>

Hierarchy



Direct Super Types

- ▶ ☉ GroupOfAgents
- ▶ ☹ hasContinuantPart Organization
- ▶ ☹ hasContinuantPart Organization

5.1.16 GroupOfPersons

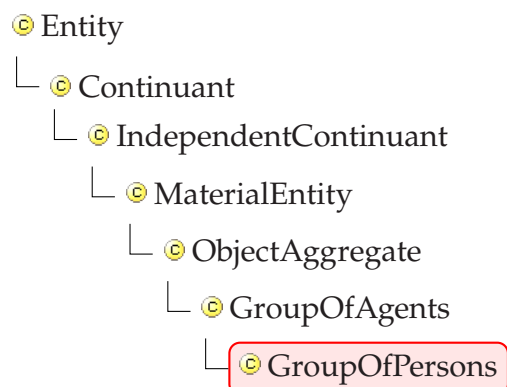
Definition

A Group of Agents that has only Persons as parts.

Annotations

- ▶ **Label:** Group of Persons
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/GroupOfPersons>

Hierarchy



Direct Super Types

- ▶ ☉ GroupOfAgents
- ▶ ☹ hasContinuantPart Person
- ▶ ☹ hasContinuantPart Person

5.1.17 InterpersonalRelationshipRole

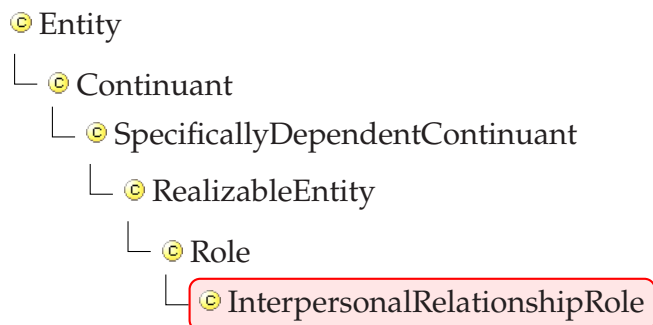
Definition

A Role that inheres in a Person in virtue of the obligations, expectations, or social norms that govern that Person's Intentional Acts within the context of a relationship with another Person.

Annotations

- ▶ **Label:** Interpersonal Relationship Role
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/InterpersonalRelationshipRole>

Hierarchy



Direct Super Types

- ▶ Role

5.1.18 LanguageSkill

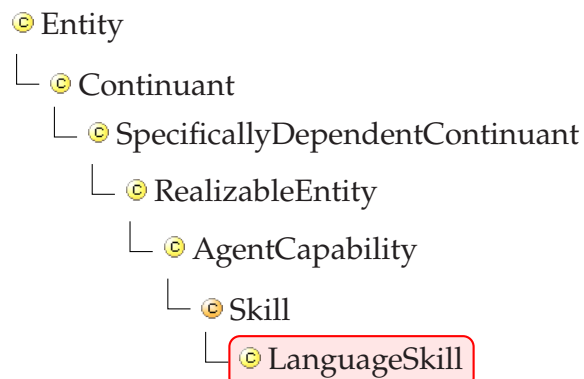
Definition

A Skill that is realized by an Act which is prescribed by a Language.

Annotations

- ▶ **Label:** Language Skill
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/LanguageSkill>

Hierarchy



Direct Super Types

- Skill

5.1.19 MaleSex

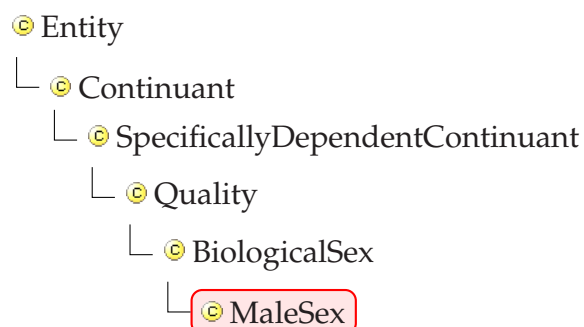
Definition

A Biological Sex inhering in an individual whose sex organs contain only male gametes.

Annotations

- **Label:** Male Sex
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/MaleSex>

Hierarchy



Direct Super Types

- BiologicalSex

5.1.20 Objective

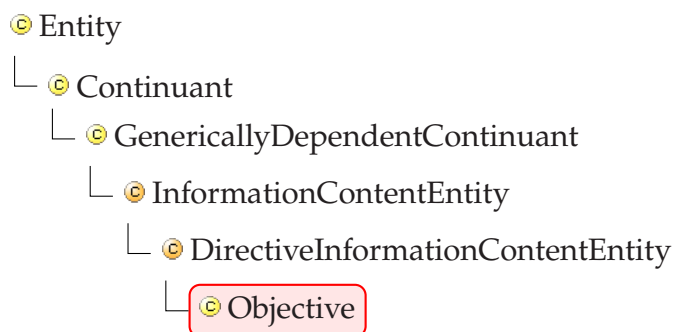
Definition

A Directive Information Content Entity that prescribes some projected state that some Agent intends to achieve.

Annotations

- ▶ **Label:** Objective
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Objective>

Hierarchy



Direct Super Types

- ▶ DirectiveInformationContentEntity

5.1.21 OccupationRole

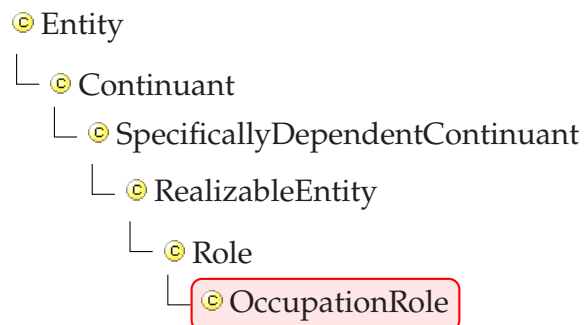
Definition

A Role that inheres in an Agent in virtue of the responsibilities that Agent is expected to fulfill within the context of some Act of Employment.

Annotations

- ▶ **Label:** Occupation Role
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/OccupationRole>

Hierarchy



Direct Super Types

- Role

5.1.22 Organism

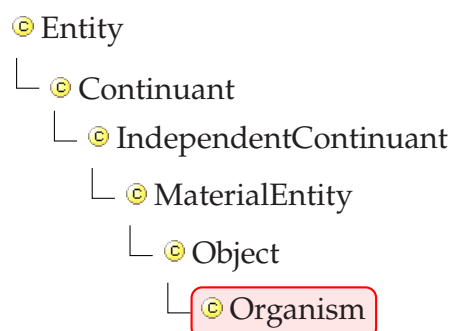
Definition

An Object that is an Animal or Plant.

Annotations

- **Label:** Organism
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Organism>

Hierarchy



Direct Super Types

- Object

Direct Sub Types

- Animal

5.1.23 Organization

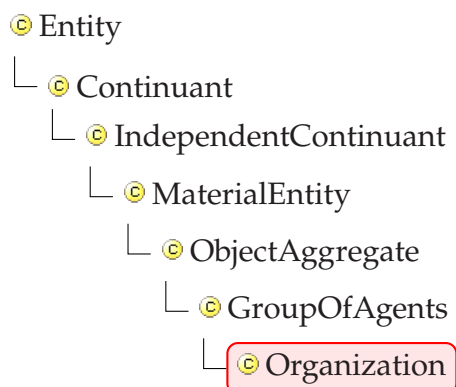
Definition

A Group of Agents which can be the bearer of roles, has members, and has a set of organization rules.

Annotations

- ▶ **Label:** Organization
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Organization>

Hierarchy



Direct Super Types

- ▶ GroupOfAgents

Domain Of

- ▶ isOrganizationalContextOf
- ▶ isSubsidiaryOf
- ▶ hasSubsidiary
- ▶ isDelimitedBy

Range For

- ▶ hasSubsidiary
- ▶ isSubsidiaryOf
- ▶ delimits
- ▶ hasOrganizationalContext

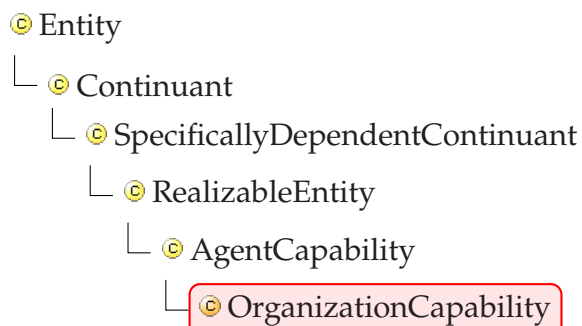
5.1.24 OrganizationCapability

Definition

An Agent Capability that inheres in an Organization to the extent of that Organization's capacity to realize it in Intentional Acts of a certain type.

Annotations

- ▶ **Label:** Organization Capability
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/OrganizationCapability>

Hierarchy**Direct Super Types**

- ▶ AgentCapability

Equivalent Classes

- ▶ (AgentCapability capabilityOf Organization)

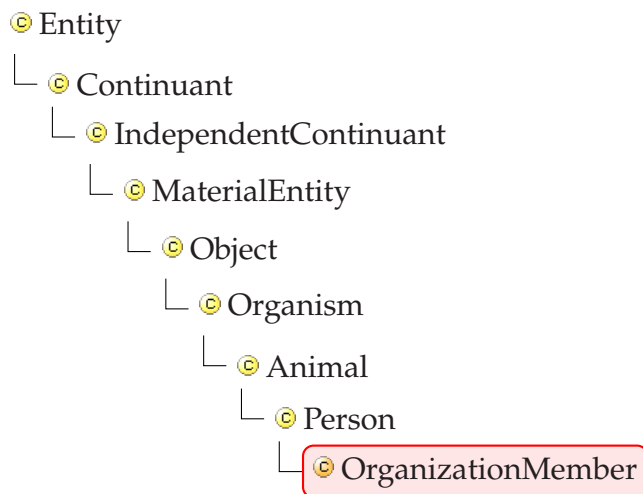
5.1.25 OrganizationMember**Definition**

A Person who is affiliated with some Organization by being a member of that Organization.

Annotations

- ▶ **Label:** Organization Member
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/OrganizationMember>

Hierarchy



Direct Super Types

- ▶ Person
- ▶ isAffiliatedWith Organization

Equivalent Classes

- ▶ (Person bearerOf OrganizationMemberRole)

5.1.26 OrganizationMemberRole

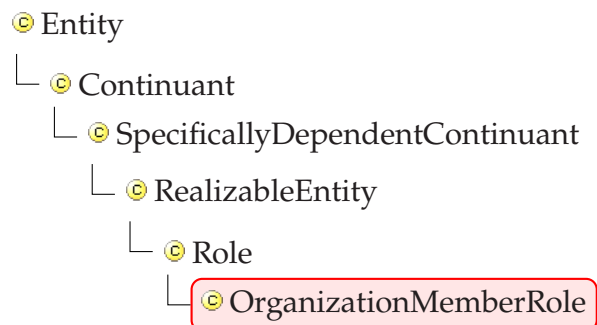
Definition

A Role that inheres in an Agent in virtue of the responsibilities that Agent is expected to fulfill as a member of some Organization.

Annotations

- ▶ **Label:** Organization Member Role
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/OrganizationMemberRole>

Hierarchy



Direct Super Types

- Role

5.1.27 Person

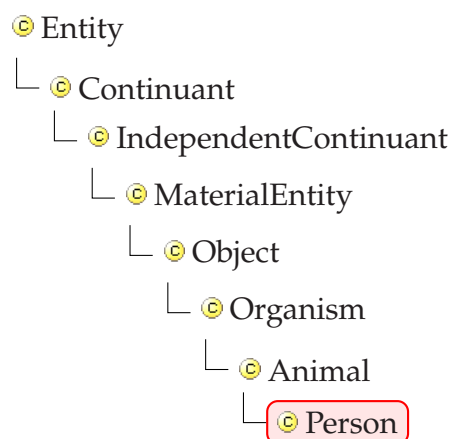
Definition

An Animal that is a member of the species Homo sapiens.

Annotations

- **Label:** Person
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Person>

Hierarchy







Direct Super Types

- Animal





Direct Sub Types

-  OrganizationMember

Domain Of

-  isSupervisedBy
-  supervises
-  hasFamilialRelationshipTo
-  isParentOf

Range For

-  isSupervisedBy
-  supervises
-  hasFamilialRelationshipTo
-  isParentOf

5.1.28 Plan

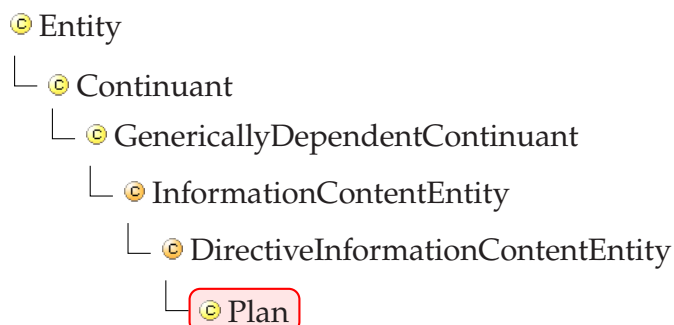
Definition

A Directive Information Content Entity that prescribes some set of intended Intentional Acts through which some Agent expects to achieve some Objective.

Annotations

- **Label:** Plan
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/PlanSpecification>

Hierarchy



Direct Super Types

-  DirectiveInformationContentEntity

-  hasContinuantPart Objective

5.1.29 Skill

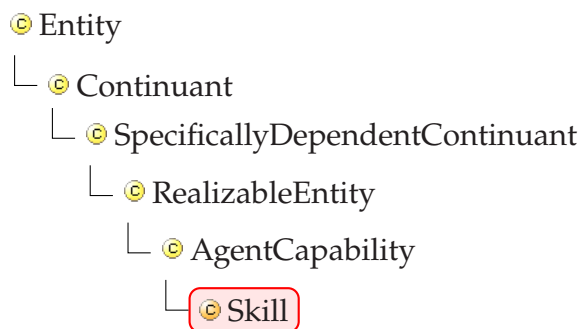
Definition

An Agent Capability that inheres in a Person to the extent of that Person's capacity to realize it in Intentional Acts of a certain type.

Annotations

- **Label:** Skill
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Skill>

Hierarchy



Direct Super Types

-  AgentCapability

Direct Sub Types

-  LanguageSkill

Equivalent Classes

- (AgentCapability   capabilityOf Person)

5.1.30 SocialNetwork

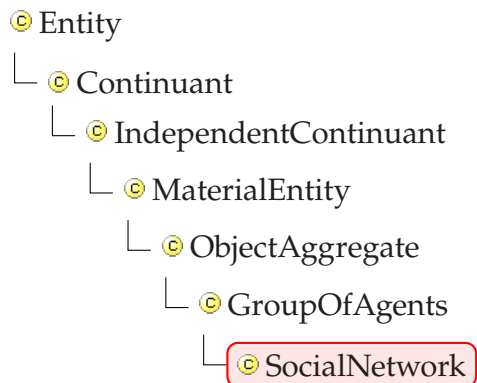
Definition

A Group of Agents that are connected in dyadic relations by similar personal or career interests, activities, backgrounds, or real-life connections.

Annotations

- ▶ **Label:** Social Network
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/SocialNetwork>

Hierarchy



Direct Super Types

- ▶ GroupOfAgents

5.2 Properties

5.2.1 agentIn

Definition

x agent_in y iff y is an instance of Process and x is an instance of Agent, such that x is causally active in y .

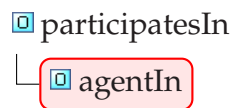
Annotations

- ▶ **Label:** agent in
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/agent_in

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:** hasAgent

Hierarchy



Direct Super Types

- ▶ participatesIn

5.2.2 aggregateHasCapability

Definition

x aggregate_has_capability y iff x is an instance of Object Aggregate and y is an instance of Agent Capability, such that x is aggregate bearer of y .

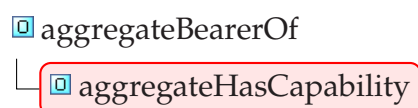
Annotations

- ▶ **Label:** aggregate has capability
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/aggregate_has_capability

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:** capabilityOfAggregate

Hierarchy



Direct Super Types

- ▶ aggregateBearerOf

Domain

- ▶ GroupOfAgents

Range

- ▶ AgentCapability

5.2.3 capabilityOf


Definition

x capability_of y iff y is an instance of Agent and x is an instance of Agent Capability, such that x inheres in y .

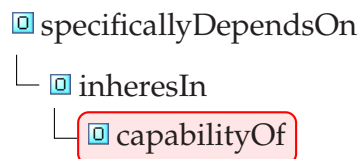
Annotations

- **Label:** capability of
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/capability_of

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  hasCapability

Hierarchy



Direct Super Types

-  inheresIn

Domain

-  AgentCapability

Range

-  Agent

5.2.4 capabilityOfAggregate


Definition

x capability_of_aggregate y iff y is an instance of Object Aggregate and x is an instance of Agent Capability, such that x inheres in aggregate y .

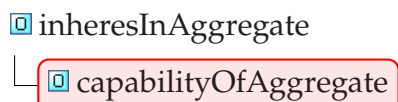
Annotations

- ▶ **Label:** capability of aggregate
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/capability_of_aggregate

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  aggregateHasCapability

Hierarchy



Direct Super Types

- ▶  inheresInAggregate

Domain

- ▶  AgentCapability

Range

- ▶  GroupOfAgents

5.2.5 delimits


Definition

An instance of Delimiting Domain dd1 delimits some Organization o1 iff dd1 is the area within which o1 can legally operate.


Annotations

- ▶ **Label:** delimits
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/delimits>

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isDelimitedBy

Domain

- ▶  DelimitingDomain

Range

- ▶  Organization

5.2.6 disrupts

A process can disrupt another process from occurring as it would have by 1) preventing a disposition or role from being realized by that process, 2) lowering the grade of the process, or 3) stopping the process from continuing to occur.


Definition

A relation where one process disrupts another process from occurring as it would have.

Annotations

- ▶ **Label:** disrupts
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/disrupts>

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isDisruptedBy

Domain

- ▶  Process

Range

- ▶  Process

5.2.7 hasAgent


Definition

x has_agent y iff x is an instance of Process and y is an instance of Agent, such that y is causally active in x .

Annotations

- ▶ **Label:** has agent
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_agent

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  agentIn

Hierarchy

 hasParticipant

└  hasAgent

Direct Super Types

- ▶  hasParticipant

5.2.8 hasCapability

Definition

x has_capability y iff x is an instance of Agent and y is an instance of Agent Capability, such that x bearer of y .

Annotations

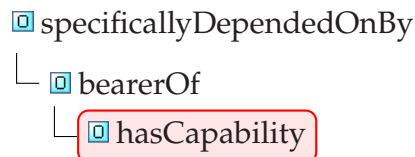
- ▶ **Label:** has capability
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_capability

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

- **Inverse Of:**  capabilityOf

Hierarchy



Direct Super Types

-  bearerOf

Domain

-  Agent

Range

-  AgentCapability

5.2.9 hasOrganizationalContext


Definition

x has_organizational_context y iff y is an instance of an Organization and x is an instance of a Role and z is an instance of a Person, such that z 's affiliation with y is a prerequisite for z bearing x or y ascribes x to the bearer of x .

Annotations

- **Label:** has organizational context
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_organizational_context

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  isOrganizationalContextOf

Domain

-  Role

Range

- 🏢 Organization

5.2.10 hasRecipient**Definition**

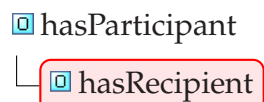
x has_recipient y iff y is an instance of Agent and x is an instance of Act Of Communication, such that y is the recipient and decoder of the InformationContentEntity intended for communication in x .

Annotations

- **Label:** has recipient
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_recipient

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:** 🏠 receives

Hierarchy**Direct Super Types**

- 🏠 hasParticipant

Range

- 🏢 Agent


5.2.11 hasSender**Definition**

y has_sender x iff x is an instance of Agent and y is an instance of Act Of Communication, such that x is the initiator and encoder of the InformationContentEntity intended for communication in y .

Annotations


- ▶ **Label:** has sender
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/has_sender

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  sends

Hierarchy

 hasParticipant

└  hasSender

Direct Super Types

- ▶  hasParticipant

Range

- ▶  Agent

5.2.12 isDelimitedBy


Definition

An instance of Organization o1 is_delimited_by some Delimiting Domain dd1 iff dd1 is the area within which o1 can legally operate.

Annotations

- ▶ **Label:** is delimited by
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_delimited_by


Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  delimits

Domain

-  Organization

Range

-  DelimitingDomain


5.2.13 isOrganizationalContextOf**Definition**

x is_organizational_context_of y iff x is an instance of an Organization and y is an instance of a Role and z is an instance of a Person, such that z 's affiliation with x is a prerequisite for z bearing y , or x ascribes y to the bearer of y .

Annotations

- **Label:** is organizational context of
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_organizational_context_of

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  hasOrganizationalContext

Domain

-  Organization

Range

-  Role

5.2.14 isPermittedBy**Definition**


y is_permitted_by x at t iff: x is an instance of Action Regulation at time t , and y is an instance of Act at time t , and x prescribes that some agent may be agent in y .

Annotations

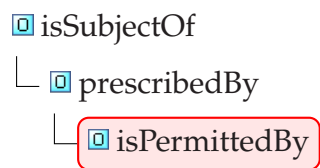
- **Label:** is permitted by

- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_permitted_by

Facets

- **Property Type:** ObjectProperty
- **Functional:** False
- **Inverse Of:**  permits

Hierarchy



Direct Super Types

-  prescribedBy

Domain

-  Process

Range

-  ActionRegulation

5.2.15 isProhibitedBy


Definition

y is_prohibited_by y at t iff: x is an instance of Action Regulation at time t , and y is an instance of Act at time t , and x prescribes that some agent must not be agent in y .

Annotations

- **Label:** is prohibited by
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_prohibited_by

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  prohibits

Hierarchy

 isSubjectOf

└  prescribedBy

└  isProhibitedBy

Direct Super Types

- ▶  prescribedBy

Domain

- ▶  Process

Range

- ▶  ActionRegulation


5.2.16 isRequiredBy**Definition**

y is_required_by x at t iff: x is an instance of Action Regulation at time t, and y is an instance of Act at time t, and x prescribes that some agent must be agent in y.

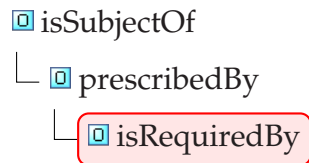
Annotations

- ▶ **Label:** is required by
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_required_by

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  requires

Hierarchy



Direct Super Types

- ▶ prescribedBy

Domain

- ▶ Process

Range

- ▶ ActionRegulation

5.2.17 isUsedBy

Definition

x is_used_by y iff y is an instance of an Agent and x is an instance of a Material Entity, such that both x and y participate in some instance of a Process wherein y attempts to accomplish a goal by manipulating, deploying, leveraging some attribute of y .

Annotations

- ▶ **Label:** is used by
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** http://www.ontologyrepository.com/CommonCoreOntologies/is_used_by

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:** uses

5.2.18 permits


Definition

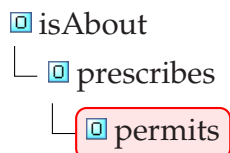
x permits y at t iff: x is an instance of Action Regulation at time t , and y is an instance of Act at time t , and x prescribes that some agent may be agent in y .

Annotations

- ▶ **Label:** permits
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/permits>

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isPermittedBy

Hierarchy**Direct Super Types**

- ▶  prescribes

Domain

- ▶  ActionRegulation

Range

- ▶  Process


5.2.19 prohibits**Definition**

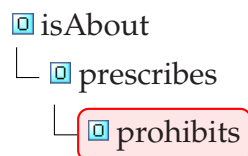
x prohibits y at t iff: x is an instance of Action Regulation at time t , and y is an instance of Act at time t , and x prescribes that some agent must not be agent in y .

Annotations

- ▶ **Label:** prohibits
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/prohibits>

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isProhibitedBy

Hierarchy**Direct Super Types**

- ▶  prescribes

Domain

- ▶  ActionRegulation

Range

- ▶  Process


5.2.20 receives**Definition**

x receives y iff x is an instance of Agent and y is an instance of Act Of Communication, such that x is the recipient and decoder of the InformationContentEntity intended for communication in y.

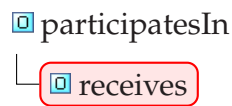
Annotations

- ▶ **Label:** receives
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/receives>

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  hasRecipient

Hierarchy



Direct Super Types

- ▶ participatesIn

Domain

- ▶ Agent

5.2.21 requires

Definition

x requires y at t iff: x is an instance of Action Regulation at time t , and y is an instance of Act at time t , and x prescribes that some agent must be agent in y .

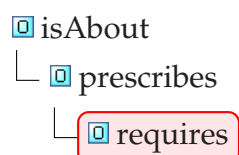
Annotations

- ▶ **Label:** requires
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/requires>

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:** isRequiredBy

Hierarchy



Direct Super Types

- ▶ prescribes

Domain

- ▶ ActionRegulation

Range

- ▶  Process


5.2.22 sends**Definition**

x sends y iff x is an instance of Agent and y is an instance of Act Of Communication, such that x is the initiator and encoder of the InformationContentEntity intended for communication in y.

Annotations

- ▶ **Label:** sends
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/sends>

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  hasSender

Hierarchy

 participatesIn

└  sends

Direct Super Types

- ▶  participatesIn

Domain

- ▶  Agent


5.2.23 uses**Definition**

x uses y iff x is an instance of an Agent and y is an instance of a Material Entity, such that both x and y participate in some instance of a Process wherein x attempts to accomplish a goal by manipulating, deploying, or leveraging some attribute of y.

Annotations

- ▶ **Label:** uses
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/AgentOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/uses>

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False
- ▶ **Inverse Of:**  isUsedBy

Event Ontology

The Event Ontology is designed to represent processual entities, especially those performed by agents, that occur within multiple domains.

6.1 Named Classes

6.1.1 Act

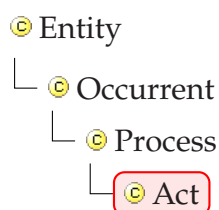
| Definition |
|------------|
|------------|

| |
|---|
| A Process in which at least one Agent plays a causative role. |
|---|

Annotations

- ▶ **Label:** Act
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Act>

Hierarchy



Direct Super Types

- ▶ Process

Direct Sub Types

- ▶ PlannedAct
- ▶ UnplannedAct
- ▶ Behavior
- ▶ BiographicalLife

6.1.2 ActOfAppraisal

In the context of an Act of Appraisal, the terms 'value', 'condition', and 'quality' do not have the same meanings as their counterparts that are defined in the Common Core Ontologies. For example, a knife may be appraised to be of high quality if it is sharp and sturdy or to be of inferior quality if it is dull or fragile.

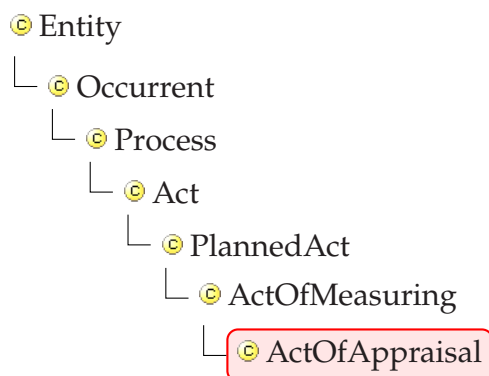
Definition

An Act of Measuring that involves evaluating, assessing, estimating, or judging the nature, value, importance, condition, or quality of something or someone.

Annotations

- ▶ **Label:** Act of Appraisal
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActOfAppraisal>

Hierarchy



Direct Super Types

- ▶ ActOfMeasuring

6.1.3 ActOfArtifactEmployment

Definition

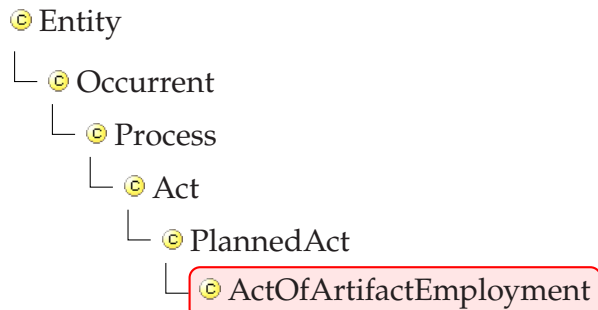
A Planned Act of using an Artifact.

Annotations

- ▶ **Label:** Act of Artifact Employment
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>

- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActOfArtifactEmployment>

Hierarchy



Direct Super Types

- ((PlannedAct))

Direct Sub Types

- ((ActOfFinancialInstrumentUse))

6.1.4 ActOfBuying

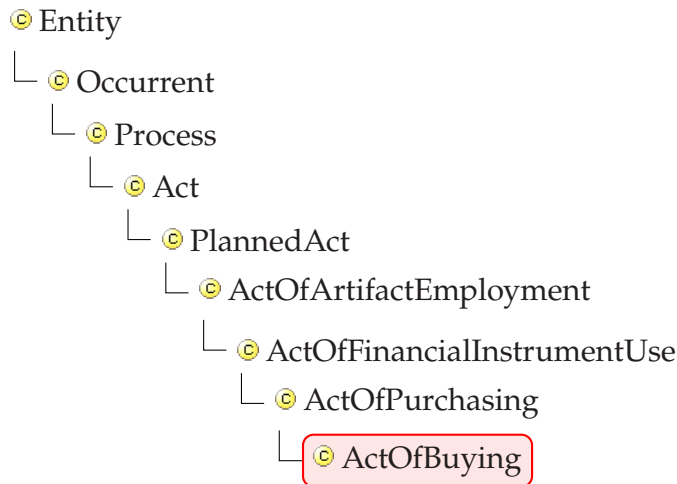
Definition

An Act of Purchasing wherein a Financial Instrument is used by an Agent (the Buyer) to acquire ownership of a good from another Agent (the Seller).

Annotations

- **Label:** Act of Buying
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActOfBuying>

Hierarchy



Direct Super Types

- ActOfPurchasing

6.1.5 ActOfEstimation

In all cases, the Agent in an Act of Estimation either lacks complete information, lacks access to the relevant information, or chooses not to use the complete information (perhaps to save money or time) about the thing being estimated; instead, the Agent uses some or all of the relevant information that the Agent does have as a basis for arriving at the estimate.

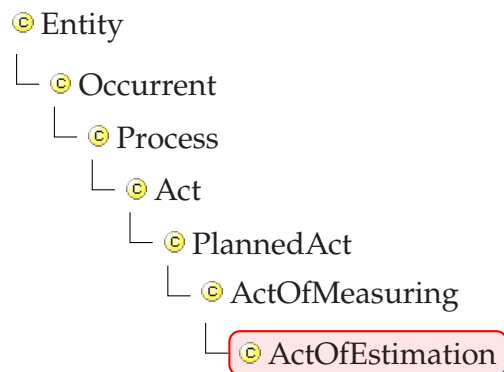
Definition

An Act of Measuring that involves the comparison of a measurement of a similar Entity or of a portion of the Entity being estimated to produce an approximated measurement of the target Entity.

Annotations

- **Label:** Act of Estimation
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActOfEstimation>

Hierarchy



Direct Super Types

- ActOfMeasuring

6.1.6 ActOfFinancialInstrumentUse

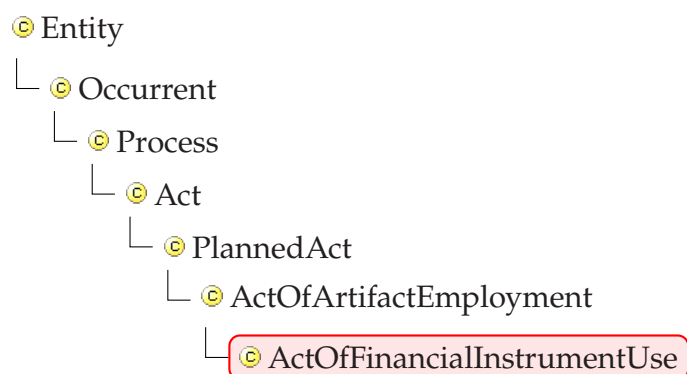
Definition

An Act of Artifact Employment in which some Agent uses some Financial Instrument.

Annotations

- **Label:** Act of Financial Instrument Use
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActOfFinancialInstrumentUse>

Hierarchy



Direct Super Types

- ActOfArtifactEmployment

Direct Sub Types

-  ActOfPurchasing

6.1.7 ActOfMeasuring

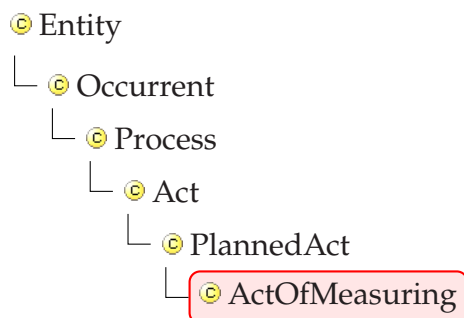
Definition

A Planned Act that involves determining the extent, dimensions, quantity, or quality of an Entity relative to some standard.

Annotations

- **Label:** Act of Measuring
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActOfMeasuring>

Hierarchy



Direct Super Types

-  PlannedAct

Direct Sub Types

-  ActOfEstimation
-  ActOfAppraisal

6.1.8 ActOfPlanning

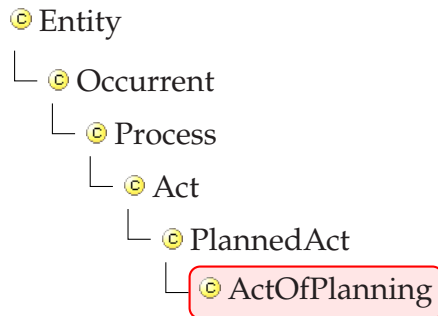
Definition

A Planned Act that involves making a Plan to achieve some specified Objective.

Annotations

- ▶ **Label:** Act of Planning
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActOfPlanning>

Hierarchy



Direct Super Types

- ▶ PlannedAct

6.1.9 ActOfPrediction

Predictions can only be made about things that are not yet the case (i.e. future things) and are further restricted to being about things that do not have a probability of either 1 (necessary) or 0 (impossible). For example, assuming that no organism is immortal, one cannot predict of a given organism that it will eventually die; however, one may predict uncertain things about the organism's eventual death, such as its precise cause or time.

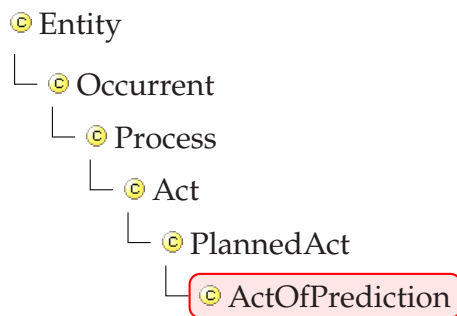
Definition

A Planned Act that involves the generation of a Predictive Information Content entity that is intended to describe an uncertain possible future event, value, entity, or attribute of an entity.

Annotations

- ▶ **Label:** Act of Prediction
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActOfPrediction>

Hierarchy



Direct Super Types

- PlannedAct

6.1.10 ActOfPurchasing

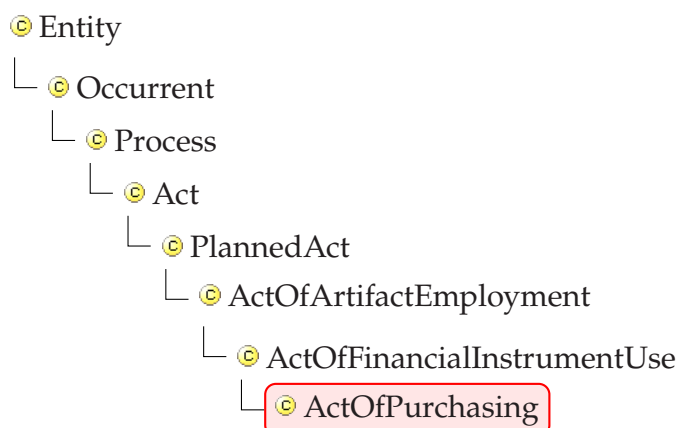
Definition

An Act of Financial Instrument Use wherein a Financial Instrument is used by an Agent (the Purchaser) to acquire a good or service from another Agent (the Provider).

Annotations

- **Label:** Act of Purchasing
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActOfPurchasing>




Hierarchy



Direct Super Types

- ▶  ActOfFinancialInstrumentUse

Direct Sub Types

- ▶  ActOfRenting
- ▶  ActOfRemuneration
- ▶  ActOfBuying

6.1.11 ActOfRemuneration

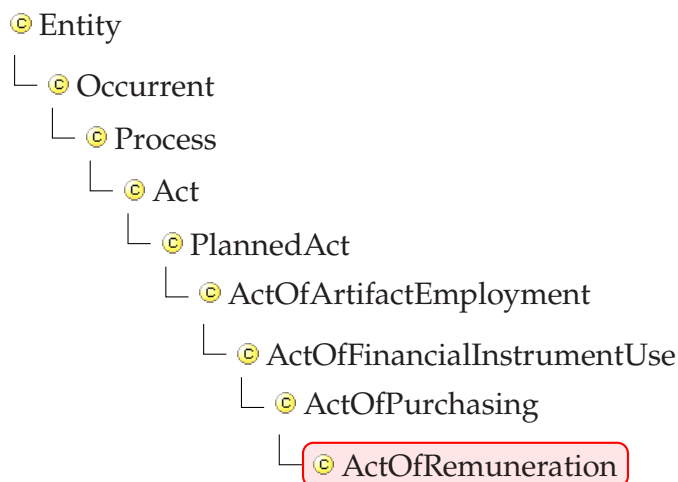
Definition

An Act of Purchasing wherein a Financial Instrument is used by an Agent (the Employer) to compensate another Agent (the Employee) for the services they perform for the Employer.

Annotations

- ▶ **Label:** Act of Remuneration
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActOfRemuneration>

Hierarchy



Direct Super Types

- ▶  ActOfPurchasing

6.1.12 ActOfRenting

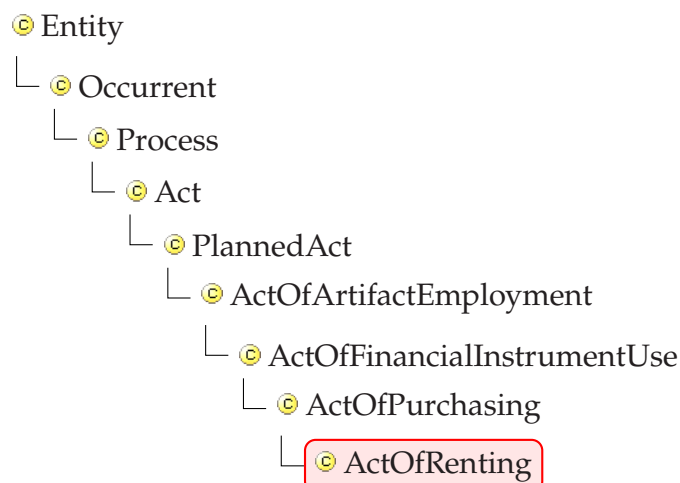
Definition

An Act of Purchasing wherein a Financial Instrument is used by an Agent (the Renter) as a payment to acquire temporary possession or use of a good or property that is owned or controlled by another Agent (the Seller).

Annotations

- ▶ **Label:** Act of Renting
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActOfRenting>

Hierarchy



Direct Super Types

- ▶ ActOfPurchasing

6.1.13 ActOfTraining

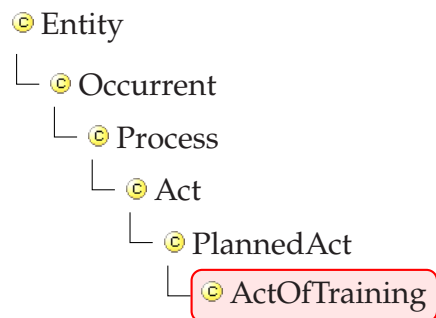
Definition

A Planned Act in which knowledge, skills or values are imparted from one or more Agents to at least one other Agent.

Annotations

- ▶ **Label:** Act of Training
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ActOfTraining>

Hierarchy



Direct Super Types

- PlannedAct

6.1.14 Behavior

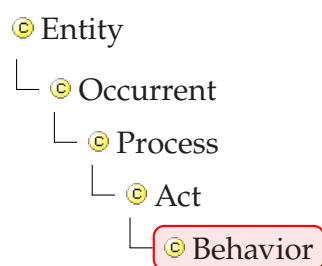
Definition

An Act in which an Independent Continuant participates as an Agent in response to external or internal stimuli and following some pattern which is dependent upon some combination of that Independent Continuant's internal state and external conditions.

Annotations

- **Label:** Behavior
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Behavior>

Hierarchy



Direct Super Types

- Act

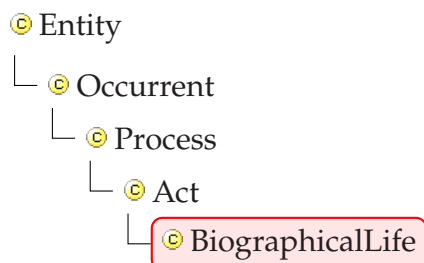
6.1.15 BiographicalLife

Definition

An Act composed of the Life Events that occur during the course of existence of an Agent (i.e. Person or Organization).

Annotations

- ▶ **Label:** Biographical Life
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/BiographicalLife>

Hierarchy**Direct Super Types**

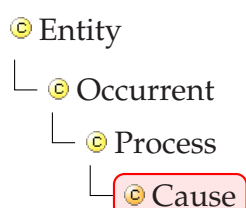
- ▶ Act

6.1.16 Cause**Definition**

A Process that is the cause of or one of the causes of some other Process.

Annotations

- ▶ **Label:** Cause
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Cause>

Hierarchy

Direct Super Types

-  Process

Equivalent Classes

- (Process   isCauseOf Occurrent)

6.1.17 Change

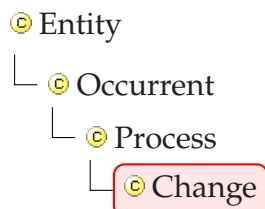
Definition

A Process in which some independent continuant endures and 1) one or more of the dependent entities it bears increase or decrease in intensity, 2) the entity begins to bear some dependent entity or 3) the entity ceases to bear some dependent entity.

Annotations

- **Label:** Change
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Change>





Hierarchy



Direct Super Types

-  Process

Direct Sub Types

-  IncreaseOfDependentContinuant
-  LossOfDependentContinuant
-  DecreaseOfDependentContinuant
-  GainOfDependentContinuant

6.1.18 DecreaseOfDependentContinuant

Definition

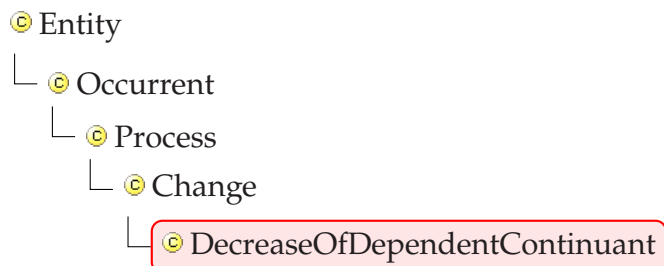
A Change in which some Independent Continuant has a decrease in the level of some

Dependent Continuant that it bears.

Annotations

- ▶ **Label:** Decrease of Dependent Continuant
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DecreaseOfDependentContinuant>

Hierarchy



Direct Super Types

- ▶ Change

Direct Sub Types

- ▶ DecreaseOfSpecificallyDependentContinuant
- ▶ DecreaseOfGenericallyDependentContinuant

6.1.19 DecreaseOfDisposition

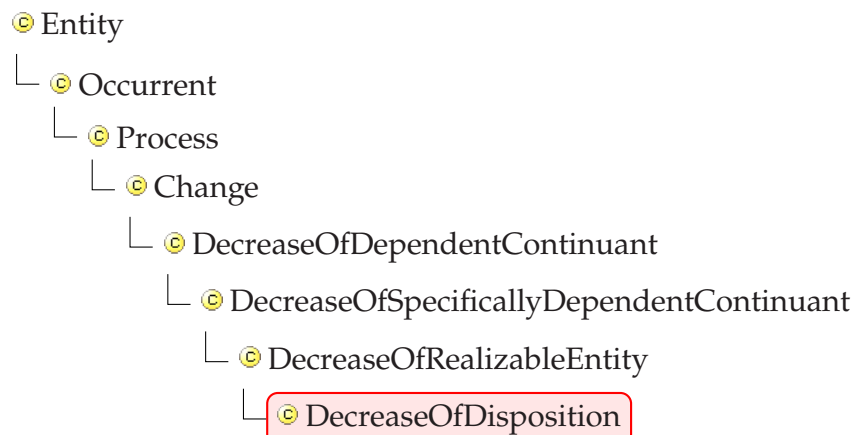
Definition

A Decrease of Realizable Entity in which some Independent Continuant has a decrease of some Disposition it bears.

Annotations

- ▶ **Label:** Decrease of Disposition
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DecreaseOfDisposition>

Hierarchy



Direct Super Types

- DecreaseOfRealizableEntity

6.1.20 DecreaseOfFunction

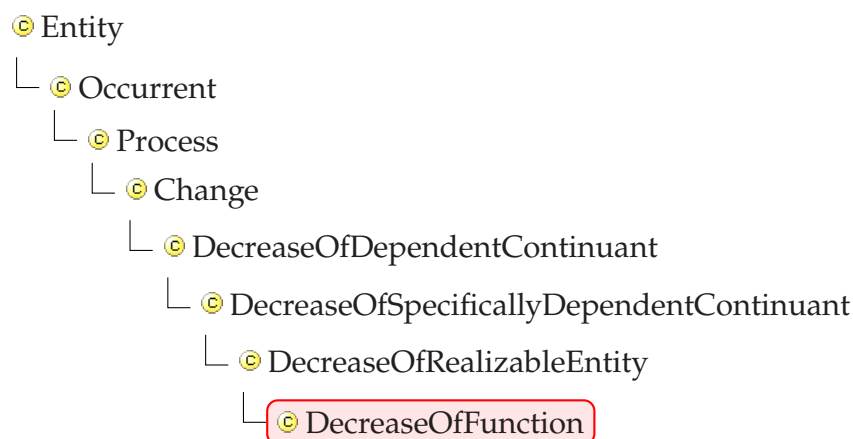
Definition

A Decrease of Realizable Entity in which some Independent Continuant has a decrease of some Function that it bears.

Annotations

- **Label:** Decrease of Function
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DecreaseOfFunction>

Hierarchy



Direct Super Types

-  DecreaseOfRealizableEntity

6.1.21 DecreaseOfGenericallyDependentContinuant

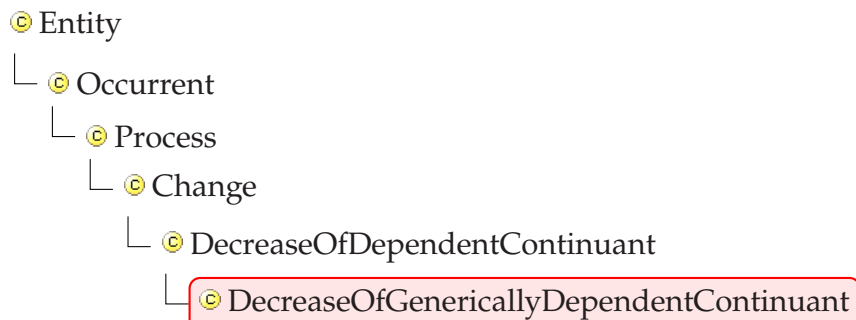
Definition

A Decrease of Dependent Continuant in which some Independent Continuant has a decrease in the level of a Generically Dependent Continuant that it bears.

Annotations

- **Label:** Decrease of Generically Dependent Continuant
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DecreaseOfGenericallyDependentContinuant>

Hierarchy



Direct Super Types

-  DecreaseOfDependentContinuant

6.1.22 DecreaseOfQuality

Definition

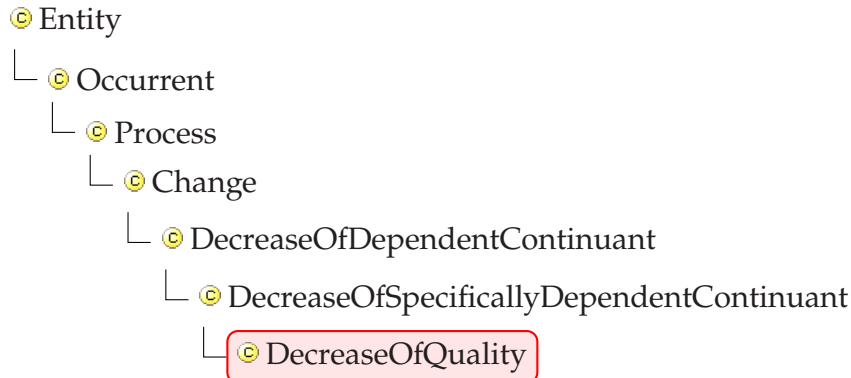
A Decrease of Specifically Dependent Continuant in which some Independent Continuant has a decrease of some Quality that it bears.

Annotations

- **Label:** Decrease of Quality
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>

- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DecreaseOfQuality>

Hierarchy



Direct Super Types

- DecreaseOfSpecificallyDependentContinuant

6.1.23 DecreaseOfRealizableEntity

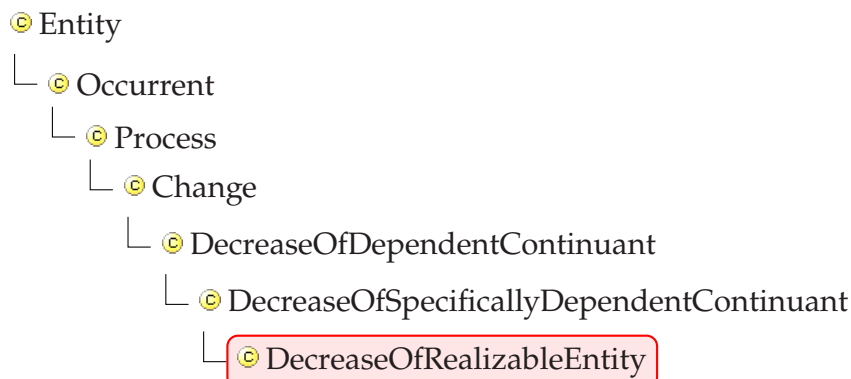
Definition

A Decrease of Specifically Dependent Continuant in which some Independent Continuant has a decrease of some Realizable Entity that it bears.

Annotations

- **Label:** Decrease of Realizable Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DecreaseOfRealizableEntity>

Hierarchy



Direct Super Types

- ▶ DecreaseOfSpecificallyDependentContinuant

Direct Sub Types

- ▶ DecreaseOfRole
- ▶ DecreaseOfFunction
- ▶ DecreaseOfDisposition

6.1.24 DecreaseOfRole

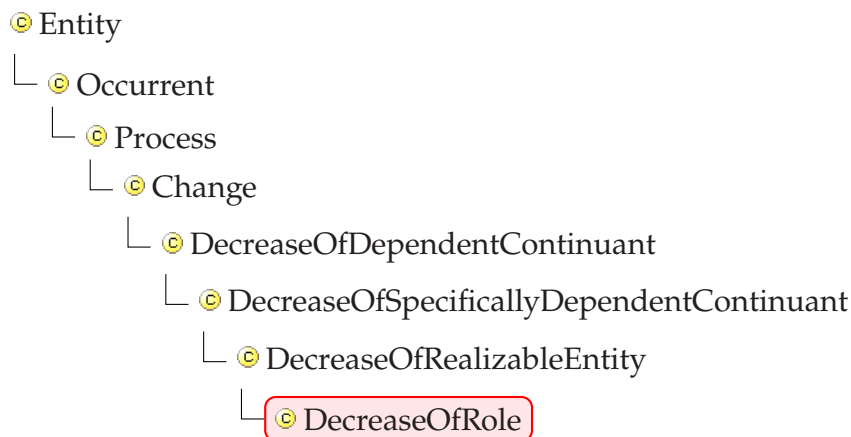
Definition

A Decrease of Realizable Entity in which some Independent Continuant has a decrease of some Role that it bears.

Annotations

- ▶ **Label:** Decrease of Role
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DecreaseOfRole>

Hierarchy



Direct Super Types

- DecreaseOfRealizableEntity

6.1.25 DecreaseOfSpecificallyDependentContinuant

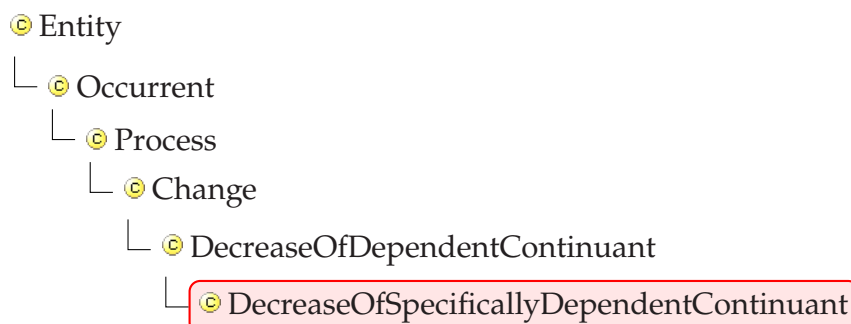
Definition

A Decrease of Dependent Continuant in which some Independent Continuant has a decrease in some Specifically Dependent Continuant that it bears.

Annotations

- **Label:** Decrease of Specifically Dependent Continuant
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DecreaseOfSpecificallyDependentContinuant>

Hierarchy



Direct Super Types

-  DecreaseOfDependentContinuant

Direct Sub Types

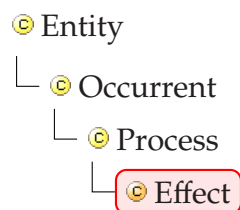
-  DecreaseOfRealizableEntity
-  DecreaseOfQuality

6.1.26 Effect**Definition**

A Process that follows and is caused by some previous Process.




Annotations

- **Label:** Effect
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Effect>

Hierarchy**Direct Super Types**

-  Process

Direct Sub Types

-  NegativeEffect
-  PositiveEffect
-  SideEffect

Equivalent Classes

- (Process   causedBy Occurrent)

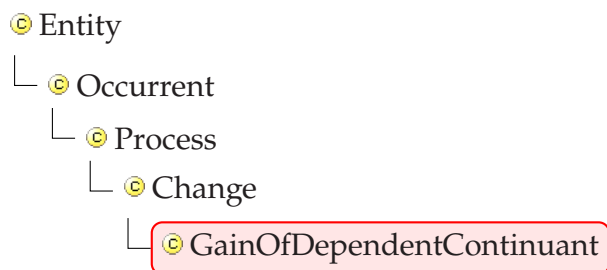
6.1.27 GainOfDependentContinuant

Definition

A Change in which an Independent Continuant becomes the bearer or carrier of some Dependent Continuant.

Annotations

- ▶ **Label:** Gain of Dependent Continuant
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/GainOfDependentContinuant>

Hierarchy**Direct Super Types**

- ▶ Change

Direct Sub Types

- ▶ GainOfSpecificallyDependentContinuant
- ▶ GainOfGenericallyDependentContinuant

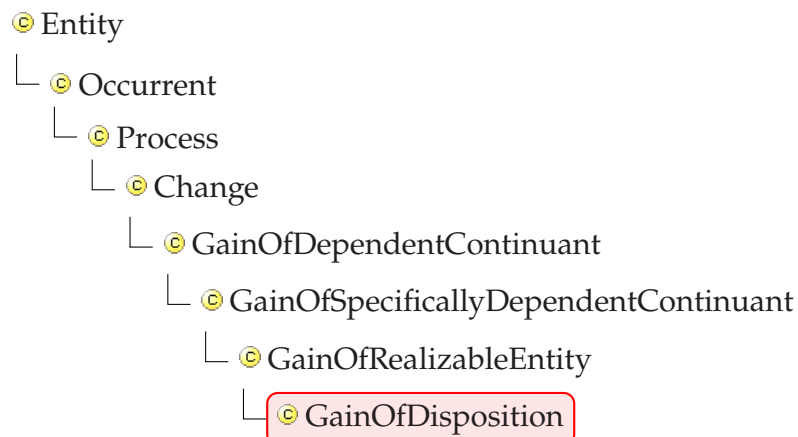
6.1.28 GainOfDisposition**Definition**

A Gain of Realizable Entity in which some Independent Continuant becomes the bearer of some Disposition.

Annotations

- ▶ **Label:** Gain of Disposition
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/GainOfDisposition>

Hierarchy



Direct Super Types

- ▶ GainOfRealizableEntity
- ▶ hasParticipant (IndependentContinuant bearerOf Disposition)

6.1.29 GainOfFunction

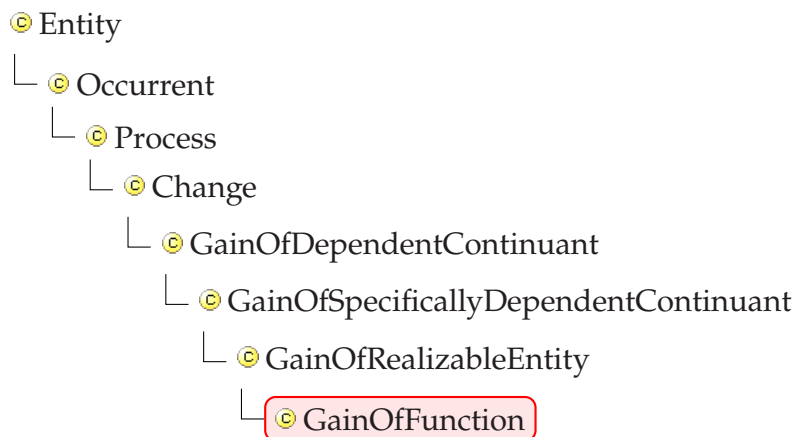
Definition

A Gain of Realizable Entity in which some Independent Continuant becomes the bearer of some Function.

Annotations

- ▶ **Label:** Gain of Function
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/GainOfFunction>

Hierarchy



Direct Super Types

- ▶ GainOfRealizableEntity
- ▶ hasParticipant (IndependentContinuant bearerOf Function)

6.1.30 GainOfGenericallyDependentContinuant

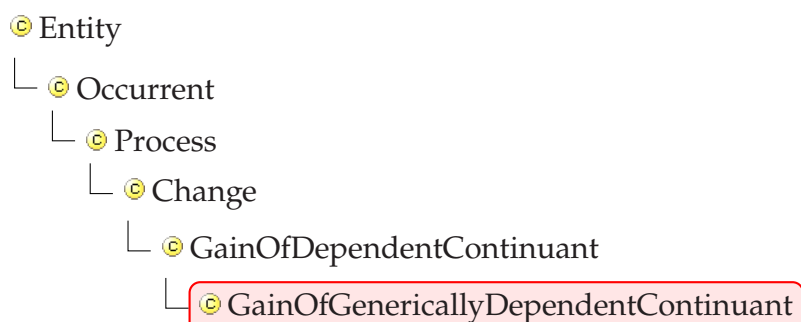
Definition

A Gain of Dependent Continuant wherein some Independent Continuant becomes the carrier of some Generically Dependent Continuant.

Annotations

- ▶ **Label:** Gain of Generically Dependent Continuant
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/GainOfGenericallyDependentContinuant>

Hierarchy



Direct Super Types

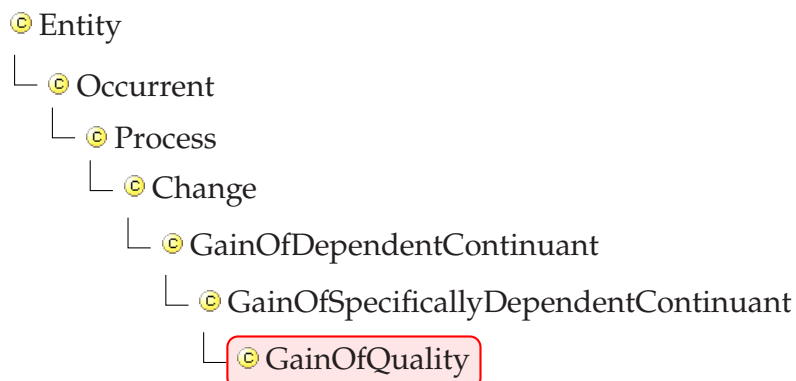
-  GainOfDependentContinuant
-  hasParticipant (IndependentContinuant   isCarrierOf GenericallyDependentContinuant)

6.1.31 GainOfQuality**Definition**

A Gain of Specifically Dependent Continuant in which an Independent Continuant becomes the bearer of some Quality.

Annotations

- **Label:** Gain of Quality
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/GainOfQuality>

Hierarchy**Direct Super Types**

-  GainOfSpecificallyDependentContinuant
-  hasParticipant (IndependentContinuant   bearerOf Quality)

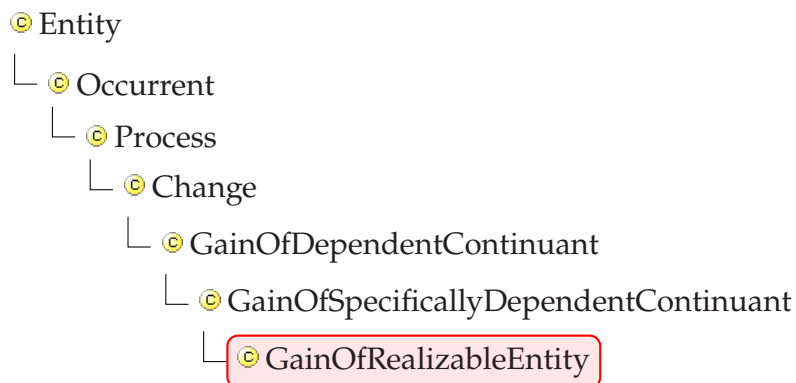
6.1.32 GainOfRealizableEntity**Definition**

A Gain of Specifically Dependent Continuant in which some Independent Continuant becomes the bearer of some Realizable Entity.

Annotations

- ▶ **Label:** Gain of Realizable Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/GainOfRealizableEntity>

Hierarchy



Direct Super Types

- ▶ GainOfSpecificallyDependentContinuant
- ▶ hasParticipant (IndependentContinuant bearerOf RealizableEntity)

Direct Sub Types

- ▶ GainOfRole
- ▶ GainOfFunction
- ▶ GainOfDisposition

6.1.33 GainOfRole

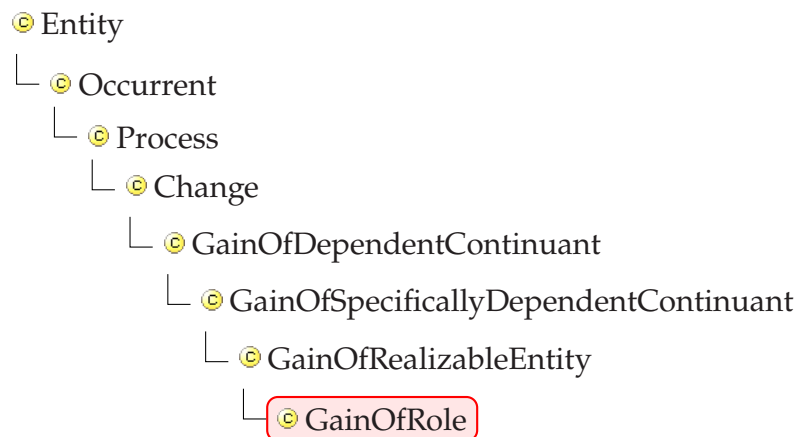
Definition

A Gain of Realizable Entity in which some Independent Continuant becomes bearer of some Role.

Annotations

- ▶ **Label:** Gain of Role
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/GainOfRole>

Hierarchy



Direct Super Types

- ▶ GainOfRealizableEntity
- ▶ hasParticipant (IndependentContinuant bearerOf Role)

6.1.34 GainOfSpecificallyDependentContinuant

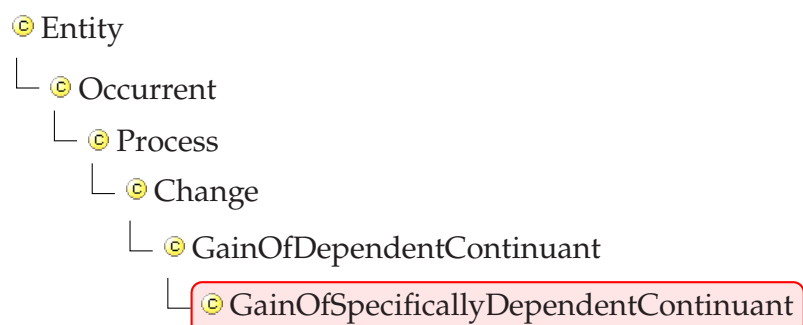
Definition

A Gain of Dependent Continuant in which some Independent Continuant becomes the bearer of some Specifically Dependent Continuant.





Annotations

- ▶ **Label:** Gain of Specifically Dependent Continuant
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/GainOfSpecificallyDependentContinuant>



Hierarchy



Direct Super Types

- ▶  GainOfDependentContinuant
- ▶  hasParticipant (IndependentContinuant   bearerOf SpecificallyDependentContinuant)

Direct Sub Types

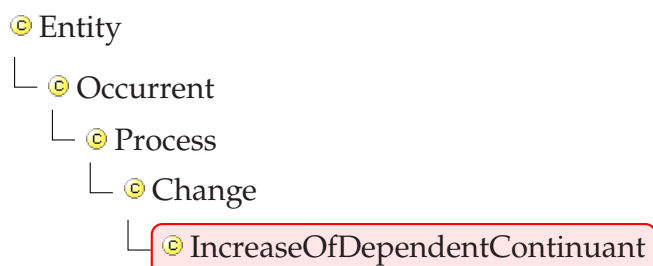
- ▶  GainOfRealizableEntity
- ▶  GainOfQuality

6.1.35 IncreaseOfDependentContinuant**Definition**

A Change in which some Independent Continuant has an increase in the level of some Dependent Continuant that it bears.

Annotations

- ▶ **Label:** Increase of Dependent Continuant
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/IncreaseOfDependentContinuant>

Hierarchy**Direct Super Types**

- ▶  Change

Direct Sub Types

- ▶  IncreaseOfSpecificallyDependentContinuant
- ▶  IncreaseOfGenericallyDependentContinuant

6.1.36 IncreaseOfDisposition

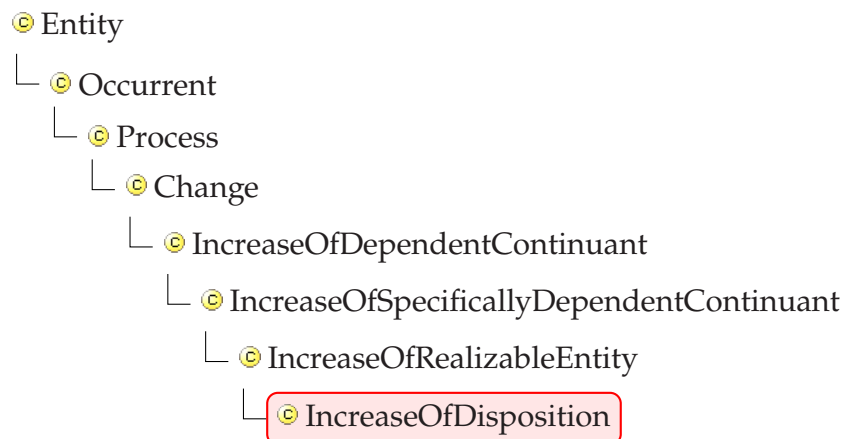
Definition

An Increase of Realizable Entity in which some Independent Continuant has an increase of some Disposition that it bears.

Annotations

- **Label:** Increase of Disposition
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/IncreaseOfDisposition>

Hierarchy



Direct Super Types

- [IncreaseOfRealizableEntity](#)

6.1.37 IncreaseOfFunction

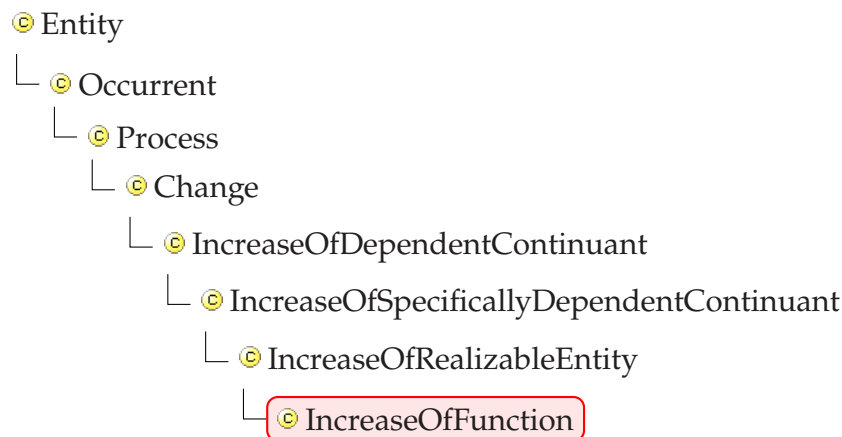
Definition

An Increase of Realizable Entity in which some Independent Continuant has an increase of some Function that it bears.

Annotations

- **Label:** Increase of Function
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/IncreaseOfFunction>

Hierarchy



Direct Super Types

- IncreaseOfRealizableEntity

6.1.38 IncreaseOfGenericallyDependentContinuant

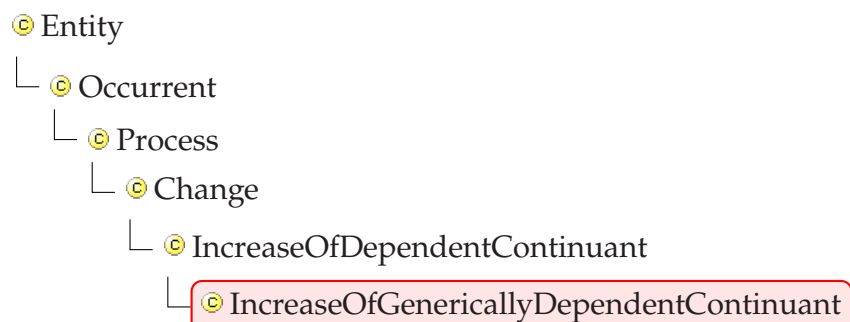
Definition

An Increase of Dependent Continuant in which some Independent Continuant has an increase of some Generically Dependent Continuant that it bears.

Annotations

- **Label:** Increase of Generically Dependent Continuant
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/IncreaseOfGenericallyDependentContinuant>

Hierarchy



Direct Super Types

- ☉ IncreaseOfDependentContinuant

6.1.39 IncreaseOfQuality

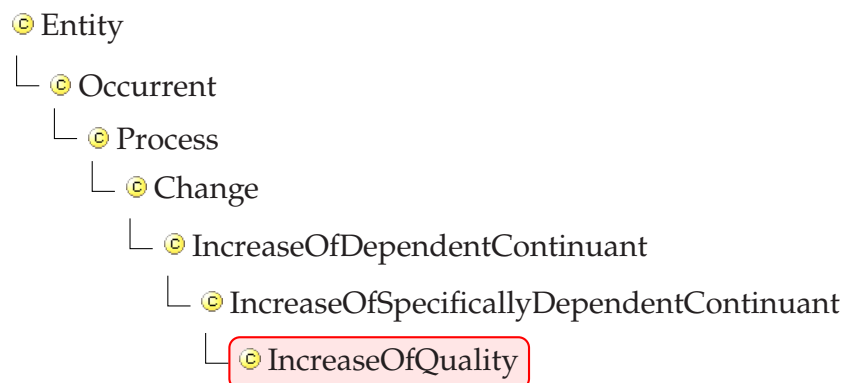
Definition

An Increase of Specifically Dependent Continuant in which some Independent Continuant has an increase of some Quality that it bears.

Annotations

- **Label:** Increase of Quality
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/IncreaseOfQuality>

Hierarchy



Direct Super Types

- ☉ IncreaseOfSpecificallyDependentContinuant

6.1.40 IncreaseOfRealizableEntity

Definition

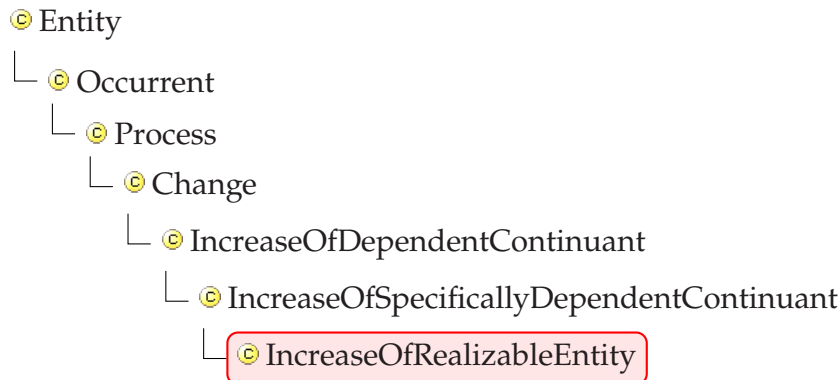
An Increase of Specifically Dependent Continuant in which some Independent Continuant has an increase of some Realizable Entity that it bears.

Annotations

- **Label:** Increase of Realizable Entity

- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/IncreaseOfRealizableEntity>

Hierarchy



Direct Super Types

- ▶ IncreaseOfSpecificallyDependentContinuant

Direct Sub Types

- ▶ IncreaseOfRole
- ▶ IncreaseOfFunction
- ▶ IncreaseOfDisposition

6.1.41 IncreaseOfRole

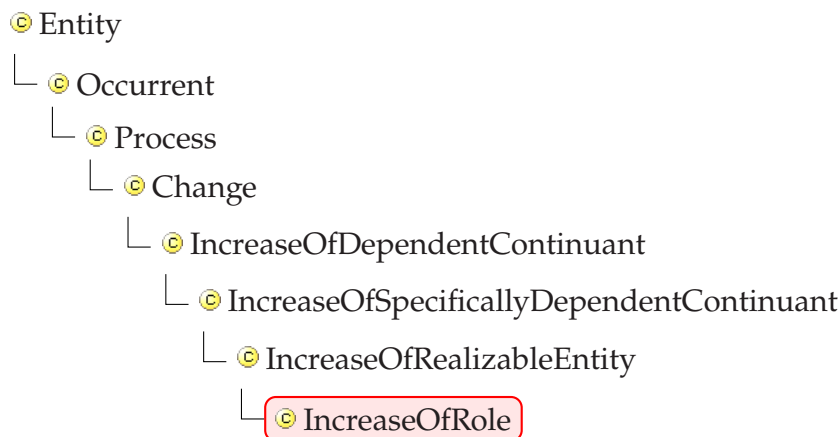
Definition

An Increase of Realizable Entity in which some Independent Continuant has an increase of some Role that it bears.

Annotations

- ▶ **Label:** Increase of Role
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/IncreaseOfRole>

Hierarchy



Direct Super Types

- IncreaseOfRealizableEntity

6.1.42 IncreaseOfSpecificallyDependentContinuant

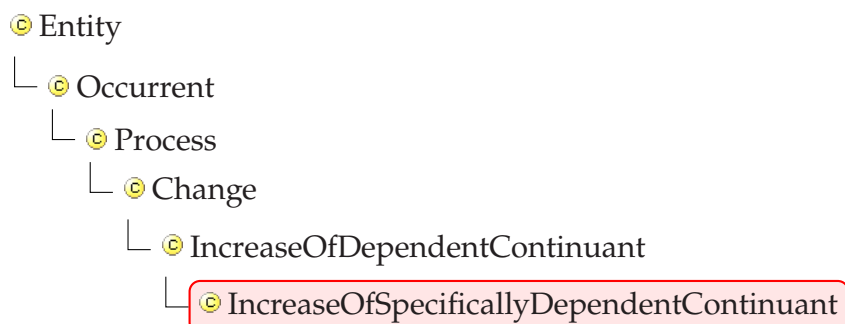
Definition

An Increase of Dependent Continuant in which some Independent Continuant has an increase of some Specifically Dependent Continuant that it bears.

Annotations

- **Label:** Increase of Specifically Dependent Continuant
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/IncreaseOfSpecificallyDependentContinuant>

Hierarchy



Direct Super Types

- ☉ IncreaseOfDependentContinuant

Direct Sub Types

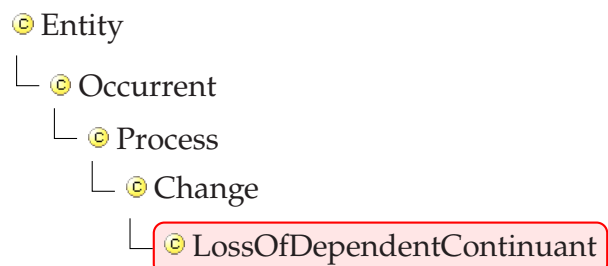
- ☉ IncreaseOfRealizableEntity
- ☉ IncreaseOfQuality

6.1.43 LossOfDependentContinuant**Definition**

A Change in which some Independent Continuant ceases to be the bearer or carrier of some Dependent Continuant.

Annotations

- **Label:** Loss of Dependent Continuant
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/LossOfDependentContinuant>

Hierarchy**Direct Super Types**

- ☉ Change

Direct Sub Types

- ☉ LossOfSpecificallyDependentContinuant
- ☉ LossOfGenericallyDependentContinuant

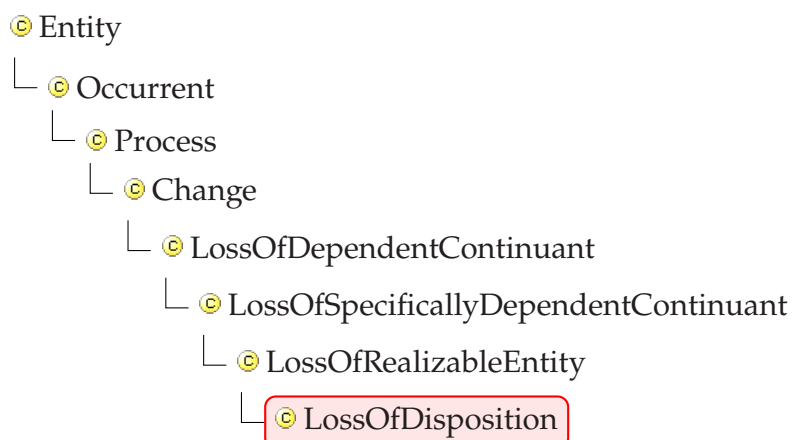
6.1.44 LossOfDisposition**Definition**

A Loss of Realizable Entity in which some Independent Continuant ceases to be the bearer of some Disposition.

Annotations

- **Label:** Loss of Disposition
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/LossOfDisposition>

Hierarchy



Direct Super Types

- LossOfRealizableEntity

6.1.45 LossOfFunction

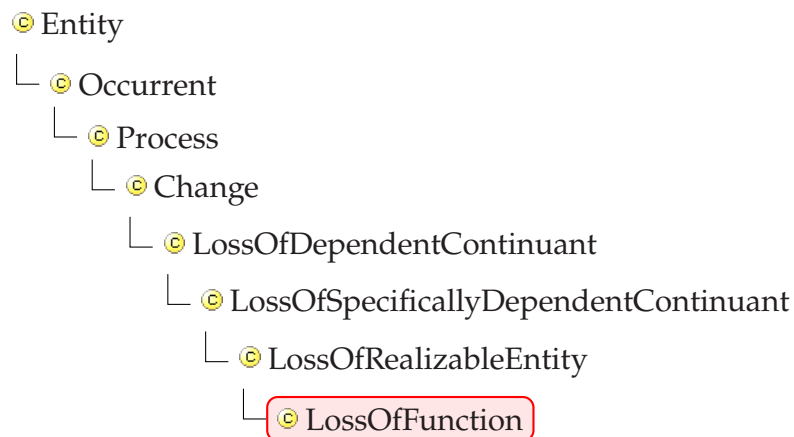
Definition

A Loss of Realizable Entity in which some Independent Continuant ceases to be the bearer of some Function.

Annotations

- **Label:** Loss of Function
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/LossOfFunction>

Hierarchy



Direct Super Types

- LossOfRealizableEntity

6.1.46 LossOfGenericallyDependentContinuant

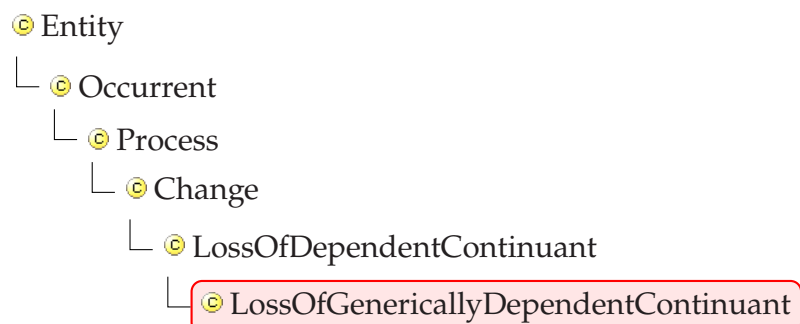
Definition

A Loss of Dependent Continuant in which some Independent Continuant ceases to be the carrier of some Generically Dependent Continuant.

Annotations

- **Label:** Loss of Generically Dependent Continuant
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/LossOfGenericallyDependentContinuant>

Hierarchy



Direct Super Types

- ☉ LossOfDependentContinuant

6.1.47 LossOfQuality

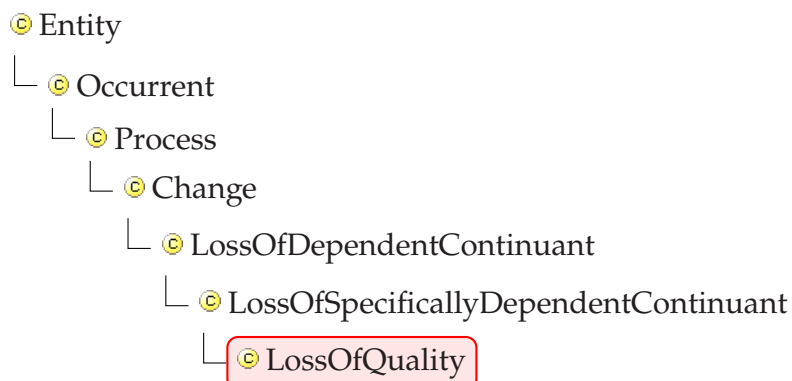
Definition

A Loss of Specifically Dependent Continuant in which some Independent Continuant ceases to be the bearer of some Quality.

Annotations

- **Label:** Loss of Quality
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/LossOfQuality>

Hierarchy



Direct Super Types

- ☉ LossOfSpecificallyDependentContinuant

6.1.48 LossOfRealizableEntity

Definition

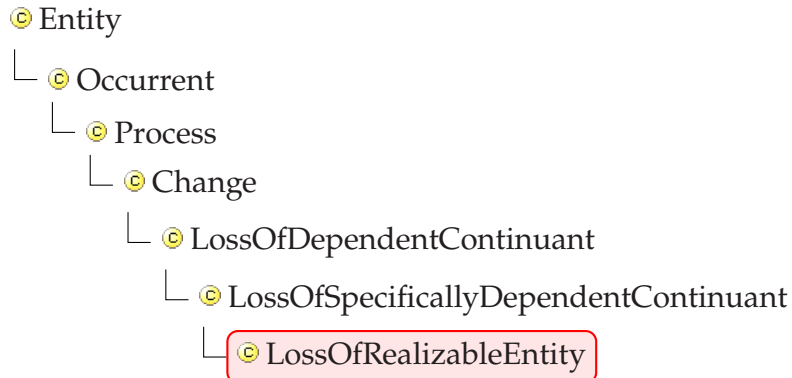
A Loss of Specifically Dependent Continuant in which some Independent Continuant ceases to be the bearer of some Realizable Entity.

Annotations

- **Label:** Loss of Realizable Entity
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>

- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/LossOfRealizableEntity>

Hierarchy



Direct Super Types

- ☉ LossOfSpecificallyDependentContinuant

Direct Sub Types

- ☉ LossOfRole
- ☉ LossOfFunction
- ☉ LossOfDisposition

6.1.49 LossOfRole

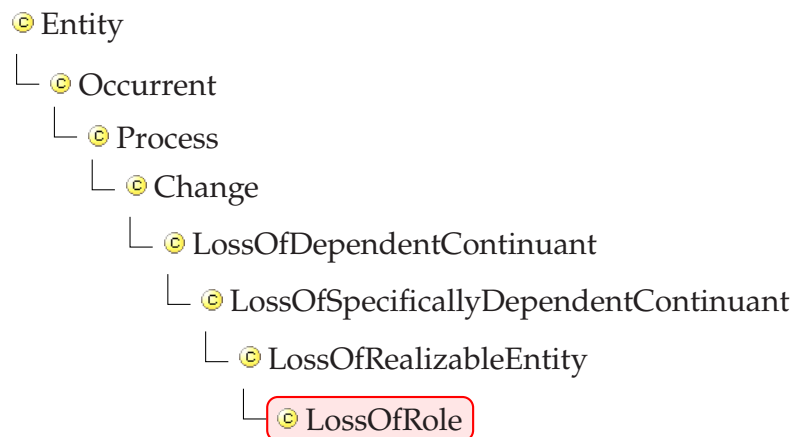
Definition

A Loss of Realizable Entity in which some Independent Continuant ceases to be the bearer of some Role.

Annotations

- **Label:** Loss of Role
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/LossOfRole>

Hierarchy



Direct Super Types

- LossOfRealizableEntity

6.1.50 LossOfSpecificallyDependentContinuant

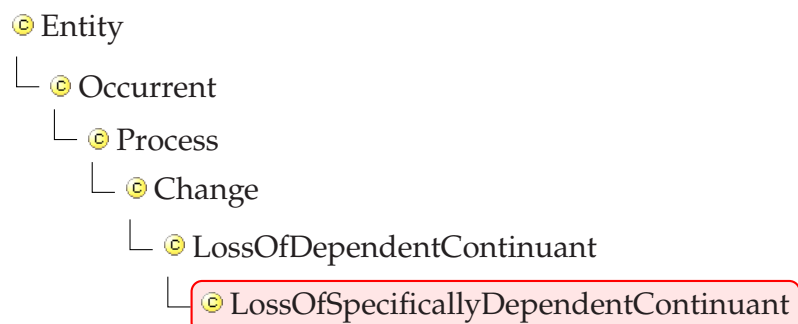
Definition

A Loss of Dependent Continuant in which some Independent Continuant ceases to be the bearer of some Specifically Dependent Continuant.

Annotations

- **Label:** Loss of Specifically Dependent Continuant
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/LossOfSpecificallyDependentContinuant>

Hierarchy



Direct Super Types

- ☉ LossOfDependentContinuant

Direct Sub Types

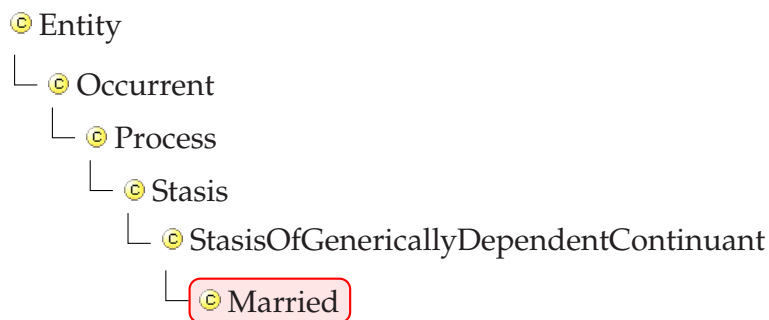
- ☉ LossOfRealizableEntity
- ☉ LossOfQuality

6.1.51 Married**Definition**

A Stasis of Generically Dependent Continuant that consists of a socially, culturally, or ritually recognized union or legal contract between spouses that establishes rights and obligations between them, between them and their children, and between them and their in-laws.

Annotations

- **Label:** Married
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Married>

Hierarchy**Direct Super Types**

- ☉ StasisOfGenericallyDependentContinuant

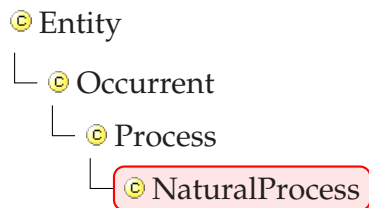
6.1.52 NaturalProcess**Definition**

A Process existing in or produced by nature; rather than by the intent of human beings.

Annotations

- ▶ **Label:** Natural Process
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/NaturalProcess>

Hierarchy



Direct Super Types

- ▶ Process

6.1.53 PlannedAct

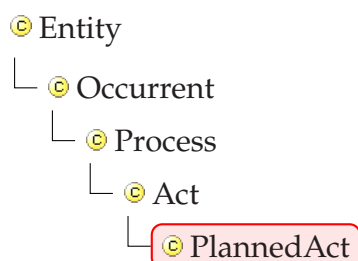
Definition

An Act in which at least one Agent plays a causative role and which is prescribed by some Directive Information Content Entity held by at least one of the Agents.

Annotations

- ▶ **Label:** Planned Act
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/IntentionalAct>






Hierarchy



Direct Super Types

- ▶ Act

Direct Sub Types

- ▶  ActOfPrediction
- ▶  ActOfTraining
- ▶  ActOfPlanning
- ▶  ActOfArtifactEmployment
- ▶  ActOfMeasuring

6.1.54 ProcessBeginning

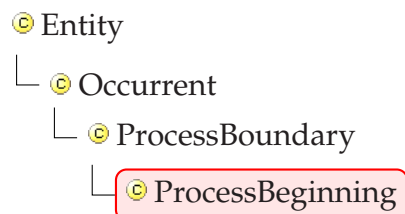
Definition

A Process Boundary that occurs on a Zero-Dimensional Temporal Region that is the starting instant of the One-Dimensional Temporal Region on which the Process, of which the Process Boundary is a part, occurs.

Annotations

- ▶ **Label:** Process Beginning
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ProcessBeginning>

Hierarchy



Direct Super Types

- ▶  ProcessBoundary

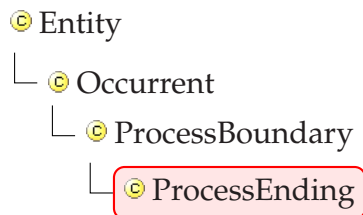
6.1.55 ProcessEnding

Definition

A Process Boundary that occurs on a Zero-Dimensional Temporal Region that is the ending instant of the One-Dimensional Temporal Region on which the Process, of which the Process Boundary is a part, occurs.

Annotations

- ▶ **Label:** Process Ending
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/ProcessEnding>

Hierarchy**Direct Super Types**

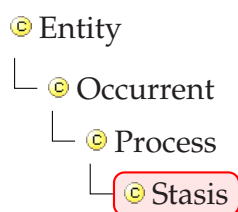
- ▶ ProcessBoundary

6.1.56 Stasis**Definition**

A Process in which one or more Independent Continuants endure in an unchanging condition.

Annotations

- ▶ **Label:** Stasis
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Stasis>

Hierarchy**Direct Super Types**

- ▶ Process

Direct Sub Types

- ▶  StasisOfSpecificallyDependentContinuant
- ▶  StasisOfGenericallyDependentContinuant

6.1.57 StasisOfDisposition

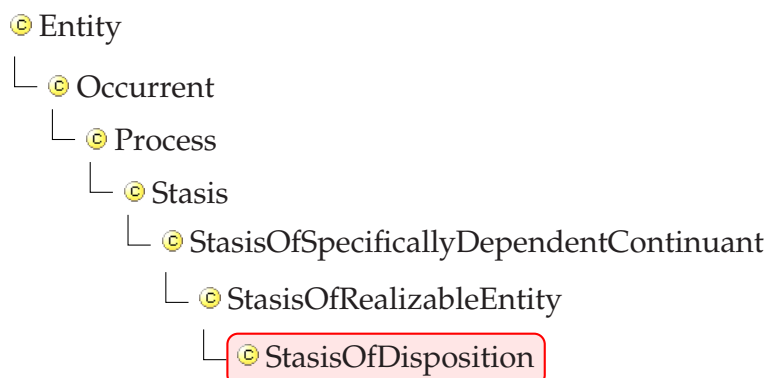
Definition

A Stasis of Realizable Entity in which some Independent Continuant bears some Disposition that remains unchanged during a Temporal Interval.

Annotations

- ▶ **Label:** Stasis of Disposition
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/StasisOfDisposition>

Hierarchy



Direct Super Types

- ▶  StasisOfRealizableEntity

6.1.58 StasisOfFunction

Definition

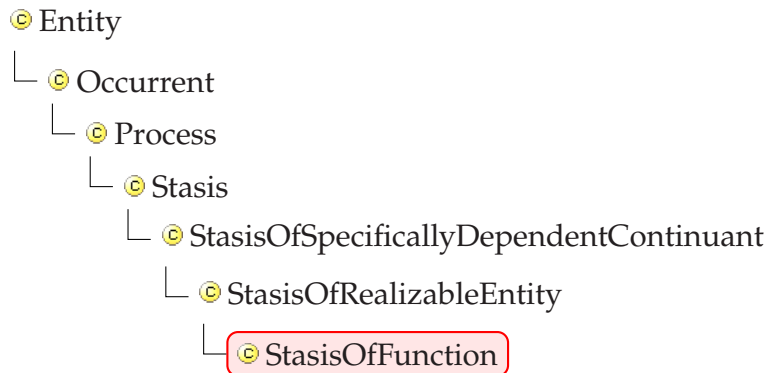
A Stasis of Realizable Entity in which some Independent Continuant bears some Function that remains unchanged during a Temporal Interval.

Annotations

- ▶ **Label:** Stasis of Function

- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/StasisOfFunction>

Hierarchy



Direct Super Types

- StasisOfRealizableEntity

6.1.59 StasisOfGenericallyDependentContinuant

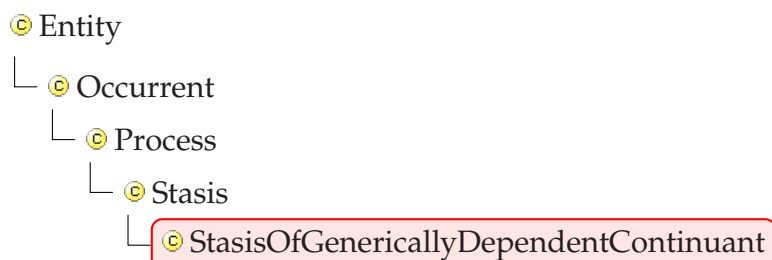
Definition

A Stasis in which some Independent Continuant bears some Generically Dependent Continuant that remains unchanged during a Temporal Interval.

Annotations

- **Label:** Stasis of Generically Dependent Continuant
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/StasisOfGenericallyDependentContinuant>

Hierarchy



Direct Super Types

-  Stasis

Direct Sub Types

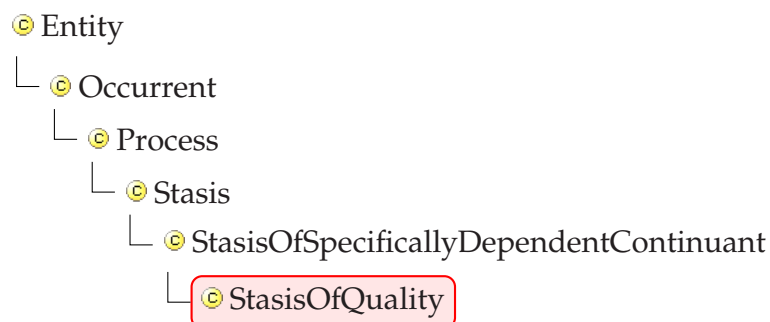
-  Married

6.1.60 StasisOfQuality**Definition**

A Stasis of Specifically Dependent Continuant in which some Independent Continuant bears some Quality that remains unchanged during a Temporal Interval.

Annotations

- **Label:** Stasis of Quality
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/StasisOfQuality>

Hierarchy**Direct Super Types**

-  StasisOfSpecificallyDependentContinuant

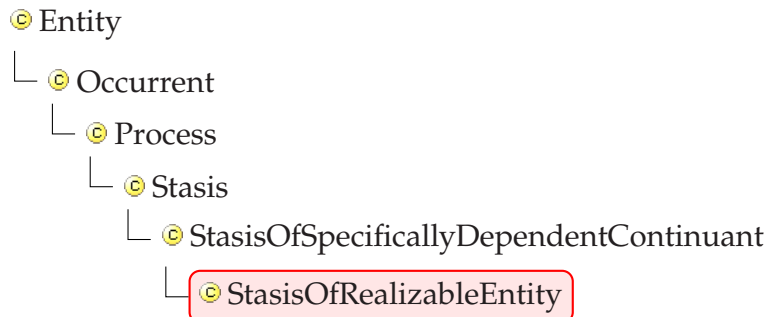
6.1.61 StasisOfRealizableEntity**Definition**

A Stasis of Specifically Dependent Continuant in which some Independent Continuant bears some Realizable Entity that remains unchanged during a Temporal Interval.

Annotations

- ▶ **Label:** Stasis of Realizable Entity
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/StasisOfRealizableEntity>

Hierarchy



Direct Super Types

- ▶ StasisOfSpecificallyDependentContinuant

Direct Sub Types

- ▶ StasisOfRole
- ▶ StasisOfFunction
- ▶ StasisOfDisposition

6.1.62 StasisOfRole

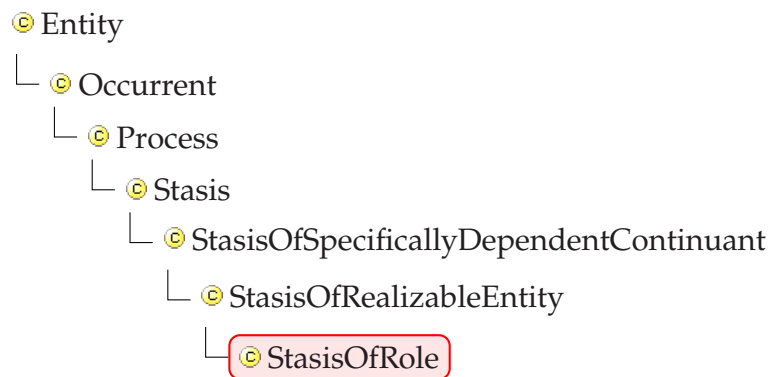
Definition

A Stasis of Realizable Entity in which some Independent Continuant bears some Role that remains unchanged during a Temporal Interval.

Annotations

- ▶ **Label:** Stasis of Role
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/StasisOfRole>

Hierarchy



Direct Super Types

- StasisOfRealizableEntity

6.1.63 StasisOfSpecificallyDependentContinuant

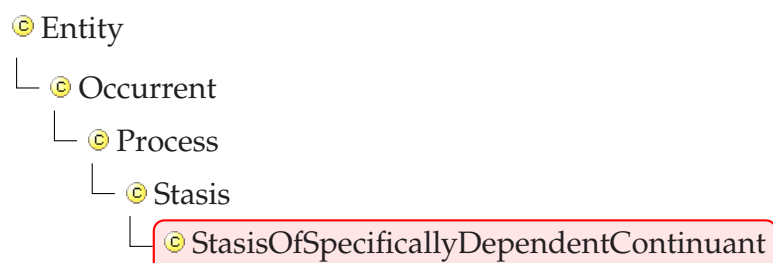
Definition

A Stasis in which some Independent Continuant bears some Specifically Dependent Continuant that remains unchanged during a Temporal Interval.

Annotations

- **Label:** Stasis of Specifically Dependent Continuant
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/StasisOfSpecificallyDependentContinuant>



Hierarchy



Direct Super Types

- Stasis

Direct Sub Types

- ▶  StasisOfRealizableEntity
- ▶  StasisOfQuality

6.1.64 UnplannedAct

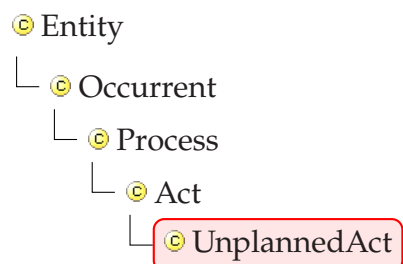
Definition

An Act in which at least one Agent plays a causative role and which is not prescribed by some Objective held by any of the Agents.

Annotations

- ▶ **Label:** Unplanned Act
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/EventOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/UnintentionalAct>

Hierarchy



Direct Super Types

- ▶  Act

Artifact Ontology

The Artifact Ontology is designed to represent artifacts that are common to multiple domains along with their models, specifications, and functions.

7.1 Named Classes

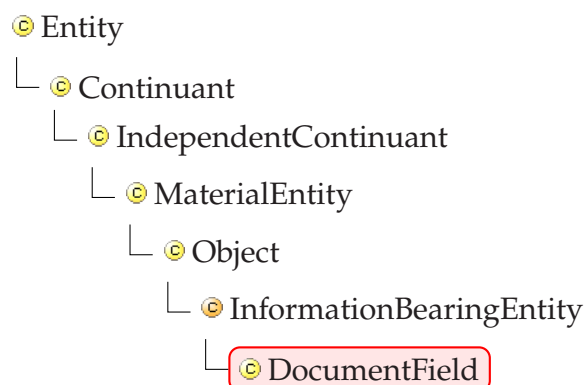
7.1.1 DocumentField

| Definition |
|--|
| An Information Bearing Entity that is a part of some document into which bearers of prescribed information can be written or selected. |

Annotations

- **Label:** Document Field
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ArtifactOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DocumentField>

Hierarchy



Direct Super Types

- InformationBearingEntity

7.1.2 PartRole

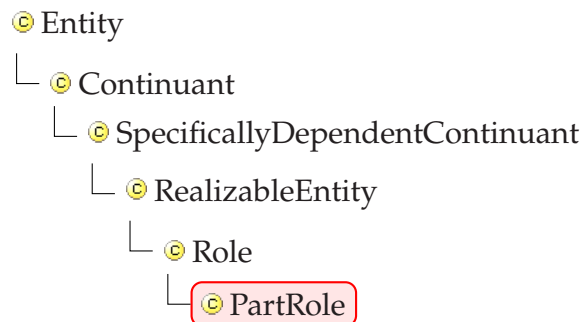
Definition

A Role that inheres in an entity in virtue of it being part of some other entity without being subject to further subdivision or disassembly without destruction of its designated use.

Annotations

- ▶ **Label:** Part Role
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ArtifactOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/PartRole>

Hierarchy



Direct Super Types

- ▶ Role

7.1.3 QualitySpecification

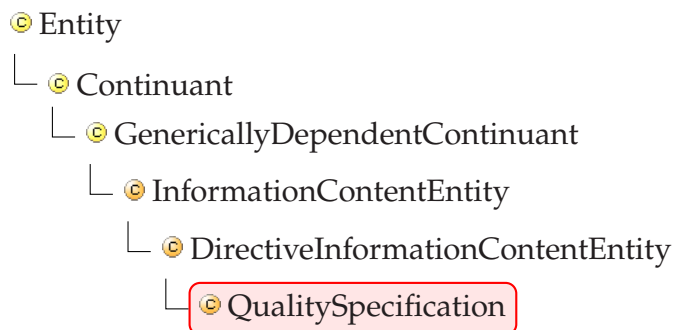
Definition

A Directive Information Content Entity that prescribes some Quality.

Annotations

- ▶ **Label:** Quality Specification
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ArtifactOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/QualitySpecification>

Hierarchy



Direct Super Types

- DirectiveInformationContentEntity

Equivalent Classes

- (DirectiveInformationContentEntity prescribes Quality)

7.1.4 Resource

Resources are Resources for some Agent. If no instance of Agent existed, no instance of Resource would exist either. It is not a requirement that something be valuable in order for it to be a Resource. Thus the value of something can drastically change without altering whether that thing is a Resource.

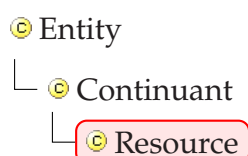
Definition

A Continuant that is owned by, in the possession of, or is otherwise controlled by an Agent such that it could be used by that Agent.

Annotations

- **Label:** Resource
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ArtifactOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Resource>

Hierarchy



Direct Super Types

- ☉ Continuant

7.1.5 SystemRole

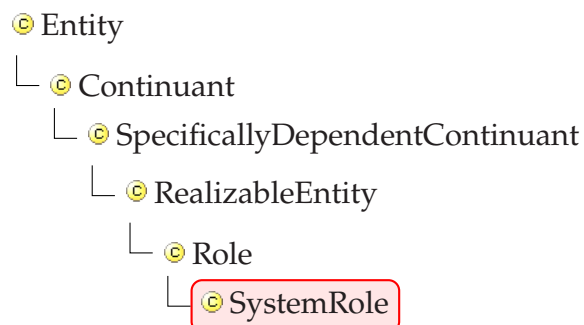
Definition

A Role that inheres in an entity in virtue of it being an arrangement of parts or elements that together exhibit behavior or meaning that the individual constituents do not.

Annotations

- **Label:** System Role
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/ArtifactOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/SystemRole>

Hierarchy



Direct Super Types

- ☉ Role

Quality Ontology

The Quality Ontology is designed to represent a range of attributes of entities especially qualities, realizable entities, and process profiles.

8.1 Named Classes

8.1.1 Amount

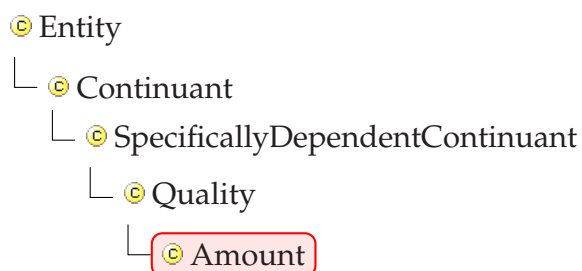
Definition

A Quality that inheres in a bearer in virtue of the total, aggregate or sum of a number of discrete items or material the entity contains as parts.

Annotations

- ▶ **Label:** Amount
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/QualityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Amount>

Hierarchy



Direct Super Types

- ▶ Quality

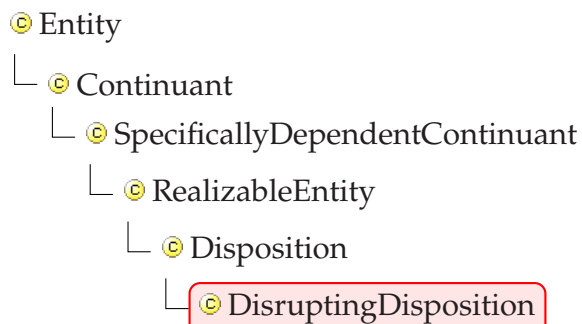
8.1.2 DisruptingDisposition

Definition

A disposition the realization of which would disrupt a process some entity has an interest in.

Annotations

- ▶ **Label:** Disrupting Disposition
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/QualityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/DisruptingDisposition>

Hierarchy**Direct Super Types**

- ▶ Disposition

Direct Sub Types

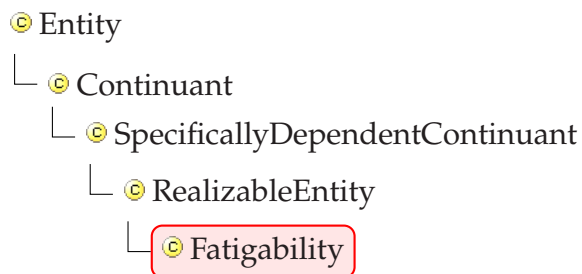
- ▶ Vulnerability

8.1.3 Fatigability**Definition**

A Realizable Entity that is realized when its bearer loses strength and tires quickly.

Annotations

- ▶ **Label:** Fatigability
- ▶ **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/QualityOntology>
- ▶ **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Fatigability>

Hierarchy**Direct Super Types**

- RealizableEntity

Figures

- Figure 2.5

8.1.4 Strength

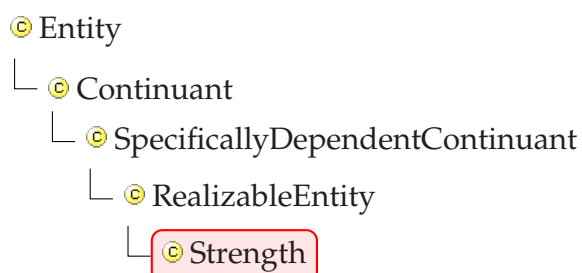
Strength is intended to be understood broadly here. Physical strength is only one type of Strength. Other subtypes of Strength may include military strength, psychological strength, emotional strength, political strength, technological strength, and so on.

Definition

A Realizable Entity that is realized when its bearer exerts or resists some power, influence, or force.

Annotations

- **Label:** Strength
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/QualityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Strength>

Hierarchy

Direct Super Types

-  RealizableEntity

Figures

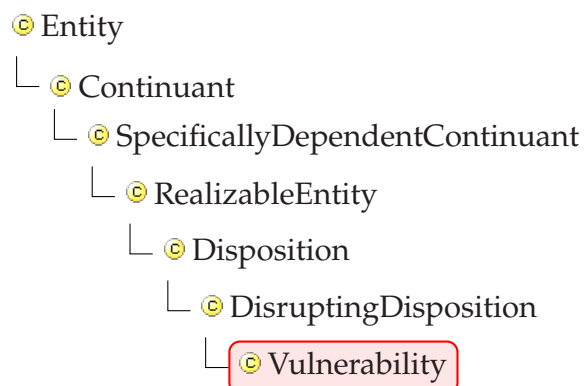
- Figure 2.5

8.1.5 Vulnerability**Definition**

A Disrupting Disposition the realization of which would disrupt a process that the bearer of the Disrupting Disposition has an interest in.

Annotations

- **Label:** Vulnerability
- **Is Curated In:** <http://www.ontologyrepository.com/CommonCoreOntologies/Mid/QualityOntology>
- **ID:** <http://www.ontologyrepository.com/CommonCoreOntologies/Vulnerability>

Hierarchy**Direct Super Types**

-  DisruptingDisposition

Figures

- Figure 2.5

Information Artifact Ontology

The Information Artifact Ontology (IAO) is an ontology of information entities, originally driven by work by the Ontology for Biomedical Investigations (OBI) consortium.

9.1 Named Classes

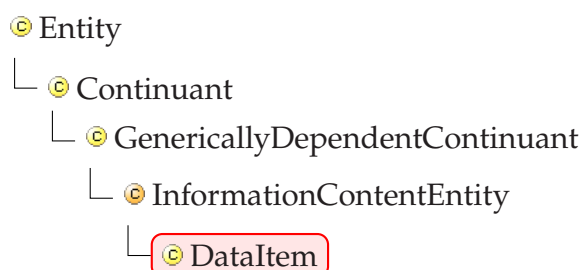
9.1.1 DataItem

| Definition |
|---|
| An information content entity that is intended to be a truthful statement about something (modulo, e.g., measurement precision or other systematic errors) and is constructed/acquired by a method which reliably tends to produce (approximately) truthful statements. |

Annotations

- ▶ **Label:** data item
- ▶ **ID:** http://purl.obolibrary.org/obo/IAO_0000027

Hierarchy



Direct Super Types

- ▶ InformationContentEntity

Direct Sub Types

- ▶ ClinicalDataItem
- ▶ Prognosis
- ▶ PreclinicalFinding

9.1.2 DirectiveInformationEntity

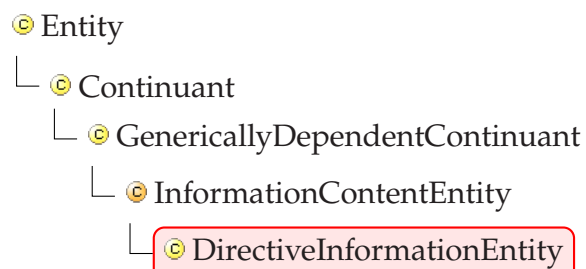
Definition

An information content entity whose concretizations indicate to their bearer how to realize them in a process.

Annotations

- ▶ **Label:** directive information entity
- ▶ **ID:** http://purl.obolibrary.org/obo/IAO_0000033

Hierarchy



Direct Super Types

- ▶ InformationContentEntity

9.1.3 InformationContentEntity

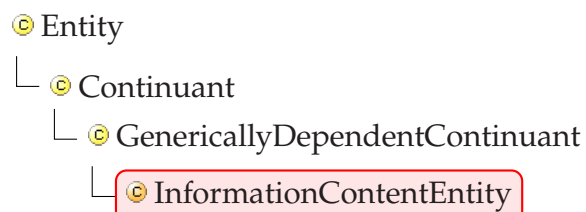
Definition

A generically dependent continuant that is about some thing.

Annotations

- ▶ **Label:** information content entity
- ▶ **ID:** http://purl.obolibrary.org/obo/IAO_0000030




Hierarchy



Direct Super Types

- ▶  GenericallyDependentContinuant

Direct Sub Types

- ▶  PatientSymptomReport
- ▶  DirectiveInformationEntity
- ▶  DataItem

Equivalent Classes

- ▶  InformationContentEntity

Gene Ontology

The Gene Ontology (GO) provides structured controlled vocabularies for the annotation of gene products with respect to their molecular function, cellular component, and biological role.

10.1 Named Classes

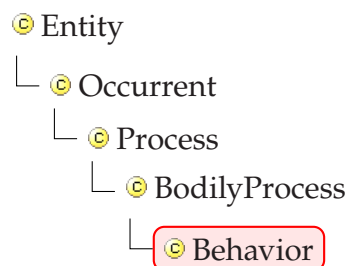
10.1.1 Behavior

| Definition |
|--|
| The internally coordinated responses (actions or inactions) of animals (individuals or groups) to internal or external stimuli, via a mechanism that involves nervous system activity. |

Annotations

- **Label:** behavior
- **ID:** http://purl.obolibrary.org/obo/GO_0007610

Hierarchy



Direct Super Types

- BodilyProcess

Direct Sub Types

- EmotionalBehaviouralProcess

Ontology for General Medical Science

The Ontology for General Medical Science (OGMS) is an ontology of entities involved in a clinical encounter. OGMS includes very general terms that are used across medical disciplines, including: ‘disease’, ‘disorder’, ‘disease course’, ‘diagnosis’, ‘patient’, and ‘healthcare provider’.

11.1 Named Classes

11.1.1 AbnormalHomeostasis

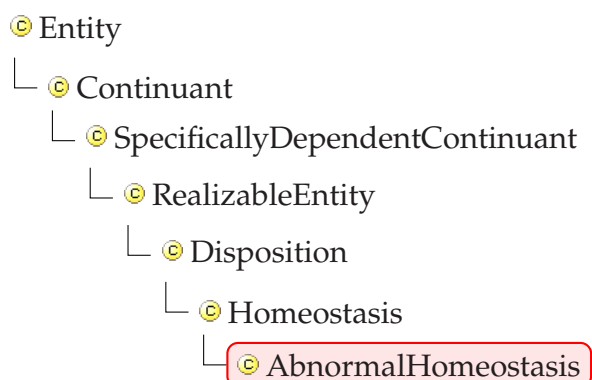
| Definition |
|------------|
|------------|

| |
|---|
| Homeostasis that is clinically abnormal for an organism of a given type and age in a given environment. |
|---|

Annotations

- **Label:** abnormal homeostasis
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000037

Hierarchy



Direct Super Types

- Homeostasis

11.1.2 AcquiredGeneticDisease

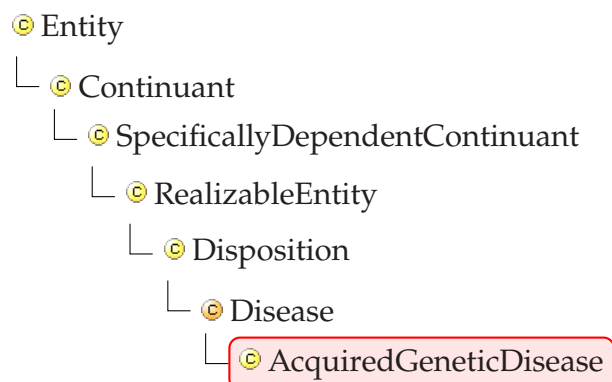
Definition

A disease whose physical basis is an acquired genetic disorder.

Annotations

- ▶ **Label:** acquired genetic disease
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000034

Hierarchy



Direct Super Types

- ▶ Disease

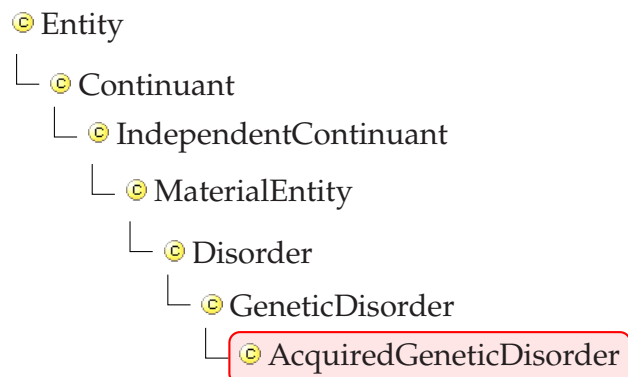
11.1.3 AcquiredGeneticDisorder

Definition

A genetic disorder acquired by a single cell in an organism that leads to a population of cells within the organism bearing the disorder.

Annotations

- ▶ **Label:** acquired genetic disorder
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000050

Hierarchy**Direct Super Types**

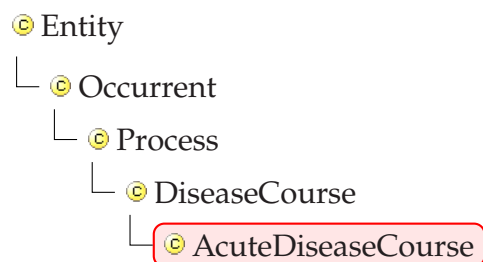
- **GeneticDisorder**

11.1.4 AcuteDiseaseCourse**Definition**

A disease course with an acute onset

Annotations

- **Label:** acute disease course
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000094

Hierarchy**Direct Super Types**

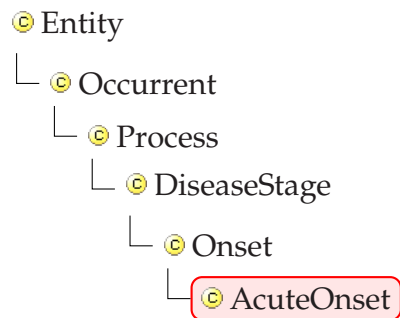
- **DiseaseCourse**

11.1.5 AcuteOnset**Definition**

A disease stage with a rapid unfolding of signs and symptoms

Annotations

- ▶ **Label:** acute onset
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000119

Hierarchy**Direct Super Types**

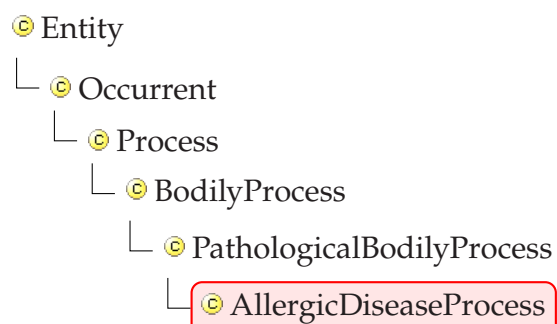
- ▶ ((Onset))

11.1.6 AllergicDiseaseProcess**Definition**

The process in which an allergic disease unfolds.

Annotations

- ▶ **Label:** allergic disease process
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000130

Hierarchy**Direct Super Types**

- ▶ ((PathologicalBodilyProcess))

11.1.7 AncillaryHealthCareProcess

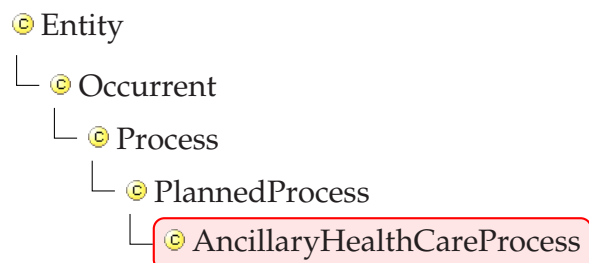
Definition

A planned process that has the objective to support the objective of a health care process without directly involving the treatment, diagnosis, or prevention of disease or injury of a patient.

Annotations

- ▶ **Label:** ancillary health care process
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000107

Hierarchy



Direct Super Types

- ▶ ((PlannedProcess))

11.1.8 Asymptomatic

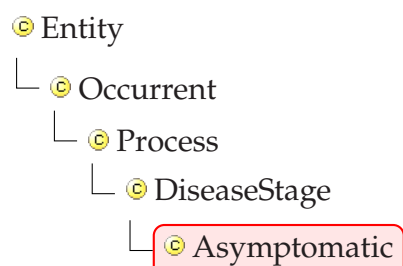
Definition

A disease stage characterized by the lack of symptoms associated with a given disease

Annotations

- ▶ **Label:** asymptomatic
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000117

Hierarchy



Direct Super Types

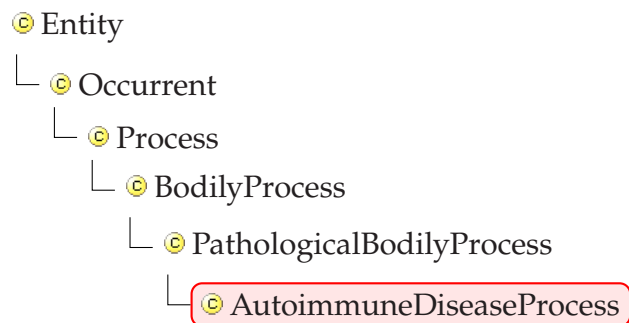
-  DiseaseStage

11.1.9 AutoimmuneDiseaseProcess**Definition**

The process in which an autoimmune disease unfolds.

Annotations

- **Label:** autoimmune disease process
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000132

Hierarchy**Direct Super Types**

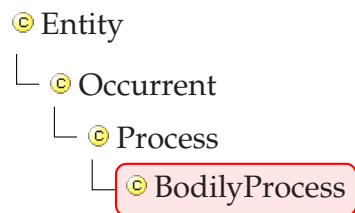
-  PathologicalBodilyProcess

11.1.10 BodilyProcess**Definition**

A process in which at least one bodily component of an organism participates.

Annotations

- **Label:** bodily process
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000060

Hierarchy**Direct Super Types**

- ▶ ☉ Process
- ▶ ☒ hasParticipantAtAllTimes ExtendedOrganism

Direct Sub Types

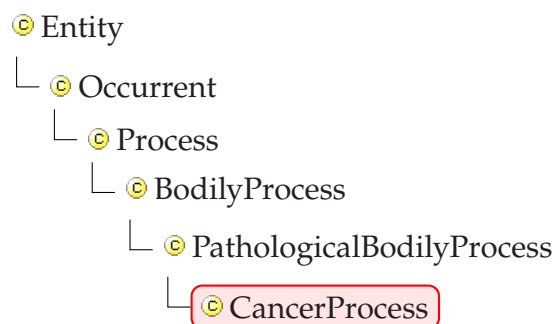
- ▶ ☉ SubliminalProcess
- ▶ ☉ PathologicalBodilyProcess
- ▶ ☉ InflammatoryProcess
- ▶ ☉ Behavior
- ▶ ☉ PhysiologicalProcessInvolvedInAnEmotion
- ▶ ☉ MentalProcess

11.1.11 CancerProcess**Definition**

The process in which cancer unfolds

Annotations

- ▶ **Label:** cancer process
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000131

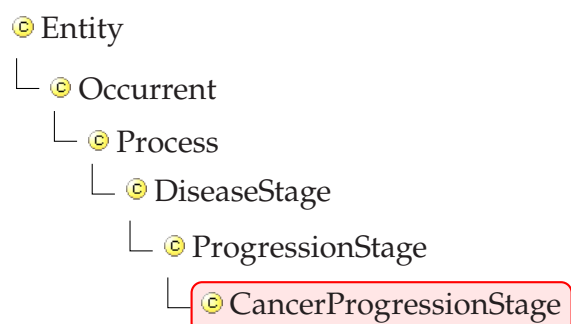
Hierarchy

Direct Super Types

- ▶  PathologicalBodilyProcess






11.1.12 CancerProgressionStage**Annotations**

- ▶ **Label:** cancer progression stage
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000134

Hierarchy**Direct Super Types**

- ▶  ProgressionStage

Direct Sub Types

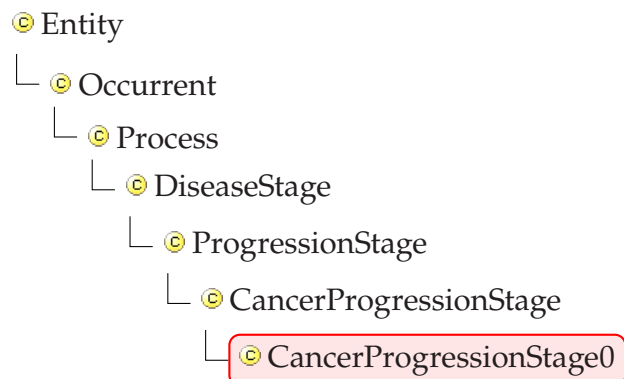
- ▶  CancerProgressionStageIII
- ▶  CancerProgressionStageIV
- ▶  CancerProgressionStageII
- ▶  CancerProgressionStage0
- ▶  CancerProgressionStageI

11.1.13 CancerProgressionStage0**Definition**

A cancer progression stage characterized by abnormal cellular growth contained within normal tissue boundaries (e.g. carcinoma in situ).

Annotations

- ▶ **Label:** cancer progression stage 0
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000135

Hierarchy**Direct Super Types**

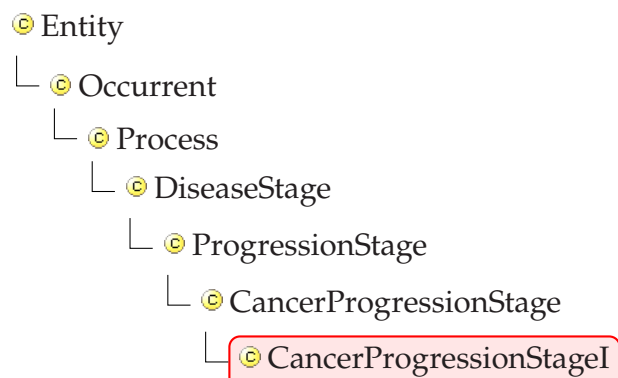
- CancerProgressionStage

11.1.14 CancerProgressionStageI**Definition**

A cancer progression stage characterized by abnormal cellular growth that extends through normal local tissue boundaries as a contiguous mass.

Annotations

- **Label:** cancer progression stage I
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000136

Hierarchy**Direct Super Types**

- CancerProgressionStage

11.1.15 CancerProgressionStageII

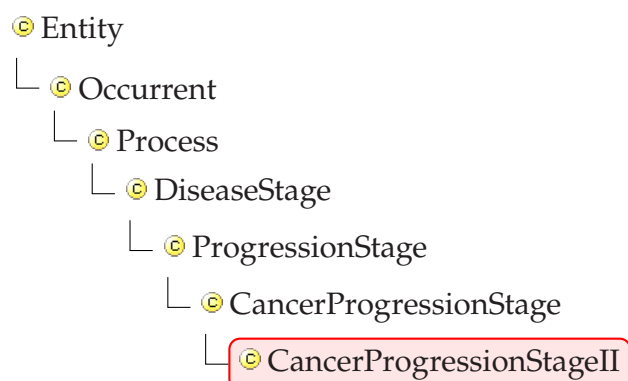
Definition

A cancer progression stage characterized by abnormal cellular growth that extends well beyond normal local tissue boundaries as a contiguous mass.

Annotations

- ▶ **Label:** cancer progression stage II
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000137

Hierarchy



Direct Super Types

- ▶ CancerProgressionStage

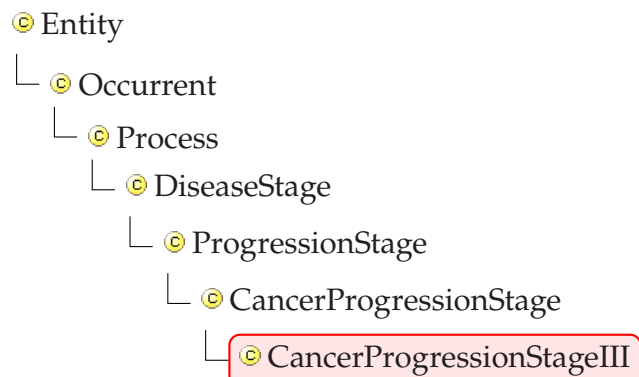
11.1.16 CancerProgressionStageIII

Definition

A cancer progression stage characterized by abnormal cellular growth that extends through normal local tissue boundaries as a contiguous mass and includes metastasis to one or more regional draining lymph nodes.

Annotations

- ▶ **Label:** cancer progression stage III
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000138

Hierarchy**Direct Super Types**

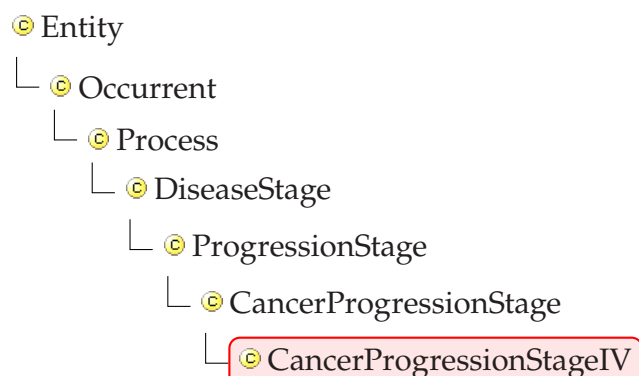
- **CancerProgressionStage**

11.1.17 CancerProgressionStageIV**Definition**

A cancer progression stage characterized by abnormal cellular growth that extends through normal local tissue boundaries as a contiguous mass and includes metastasis to other distant tissues besides lymph nodes.

Annotations

- **Label:** cancer progression stage IV
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000139

Hierarchy**Direct Super Types**

- **CancerProgressionStage**

11.1.18 ChemotherapyProcedure

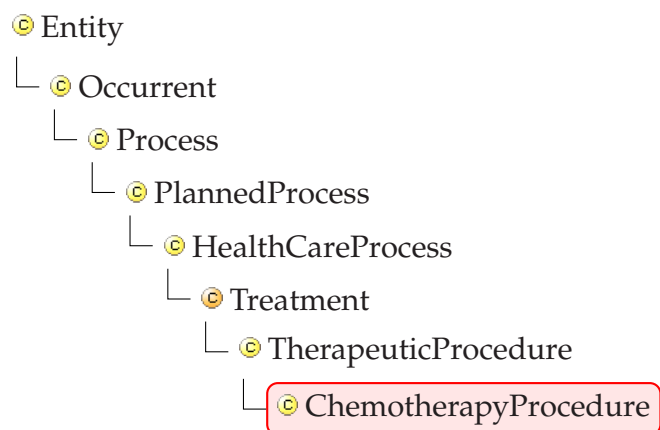
Definition

A therapeutic procedure that uses synthetic or naturally-occurring chemicals

Annotations

- ▶ **Label:** chemotherapy procedure
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000113

Hierarchy



Direct Super Types

- ▶ TherapeuticProcedure

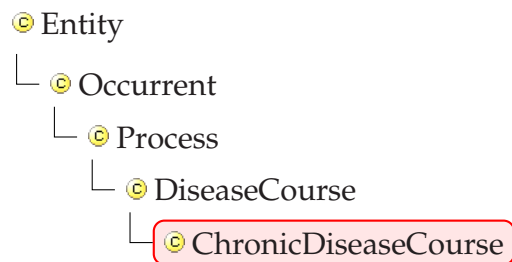
11.1.19 ChronicDiseaseCourse

Definition

A disease course that (a) does not terminate in a return to normal homeostasis and (b) would, absent intervention, fall within abnormal homeostatic range.

Annotations

- ▶ **Label:** chronic disease course
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000064

Hierarchy**Direct Super Types**

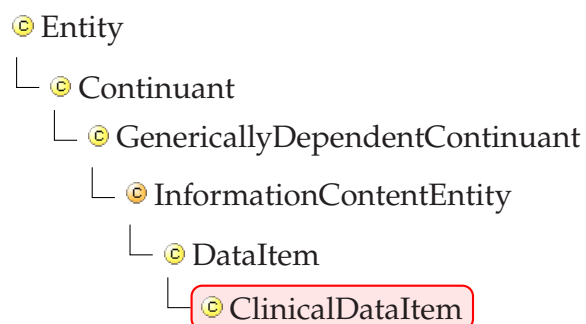
- DiseaseCourse

11.1.20 ClinicalDataItem**Definition**

A data item that is about a patient and is the specified output of a health care process assay or diagnostic process

Annotations

- **Label:** clinical data item
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000123

Hierarchy**Direct Super Types**

- DataItem

Direct Sub Types

- ClinicalPicture
- Diagnosis
- ClinicalFinding
- ClinicalHistory

11.1.21 ClinicalFinding

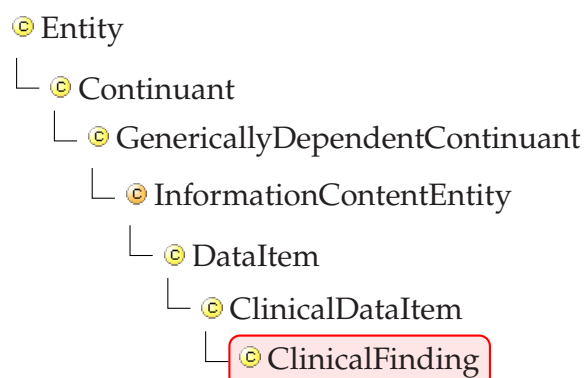
Definition

A representation that is either the output of a clinical history taking or a physical examination or an image finding, or some combination thereof.

Annotations

- ▶ **Label:** clinical finding
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000014

Hierarchy



Direct Super Types

- ▶ ClinicalDataItem

Direct Sub Types

- ▶ PhysicalExaminationFinding
- ▶ LaboratoryFinding
- ▶ ImageFinding

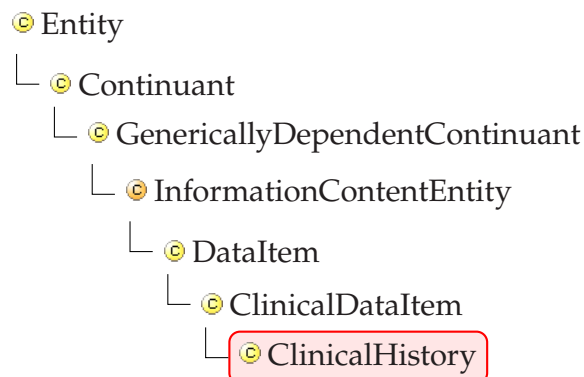
11.1.22 ClinicalHistory

Definition

A series of statements representing health-relevant qualities of a patient and of a patient's family.

Annotations

- ▶ **Label:** clinical history
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000015

Hierarchy**Direct Super Types**

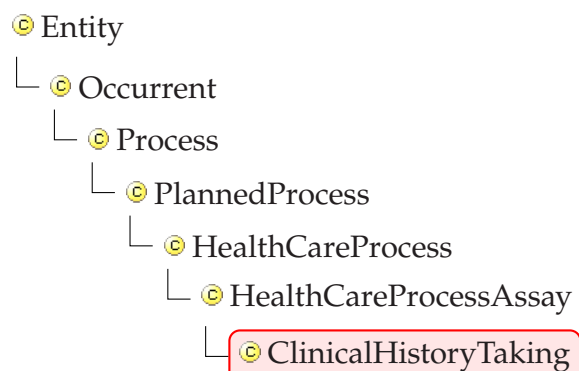
- ClinicalDataItem

11.1.23 ClinicalHistoryTaking**Definition**

A health care process in which a clinician elicits a description of previous sign and symptoms of disease from a patient or from a third party who is reporting on behalf of the patient.

Annotations

- **Label:** clinical history taking
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000055

Hierarchy**Direct Super Types**

- HealthCareProcessAssay

11.1.24 ClinicalLaboratoryTest

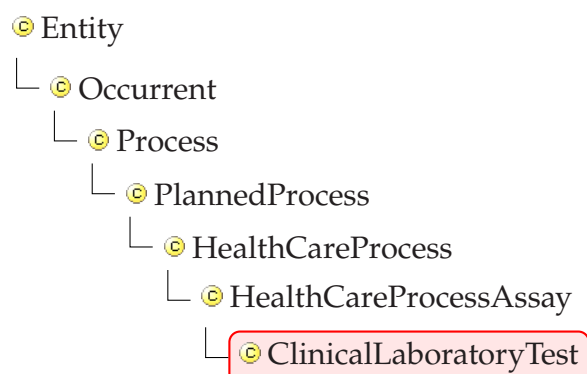
Definition

A measurement assay that has as input a patient-derived specimen and as output a data item that is about a quality of the specimen.

Annotations

- ▶ **Label:** clinical laboratory test
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000056

Hierarchy



Direct Super Types

- ▶ HealthCareProcessAssay

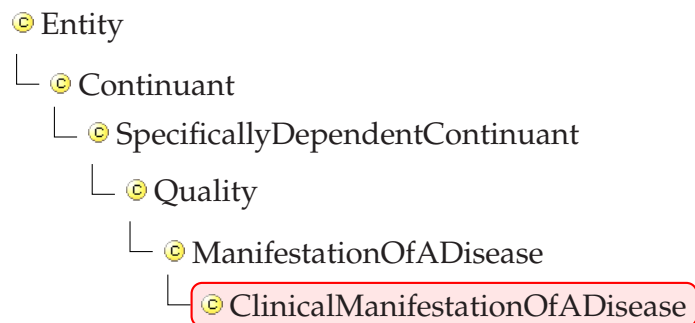
11.1.25 ClinicalManifestationOfADisease

Definition

A manifestation of a disease that is detectable in a clinical history taking or physical examination.

Annotations

- ▶ **Label:** clinical manifestation of a disease
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000025

Hierarchy**Direct Super Types**

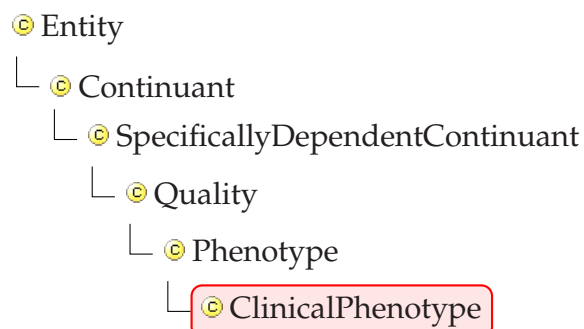
- ManifestationOfADisease

11.1.26 ClinicalPhenotype**Definition**

A clinically abnormal phenotype.

Annotations

- **Label:** clinical phenotype
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000027

Hierarchy**Direct Super Types**

- Phenotype

11.1.27 ClinicalPicture**Definition**

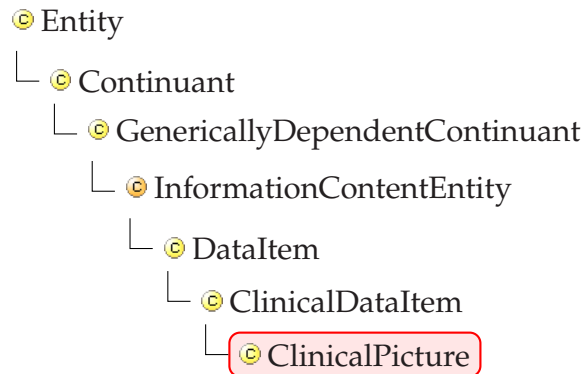
A representation of clinically significant bodily components, dispositions, and/or bodily

processes of a human being that is inferred from relevant clinical findings.

Annotations

- ▶ **Label:** clinical picture
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000016

Hierarchy



Direct Super Types

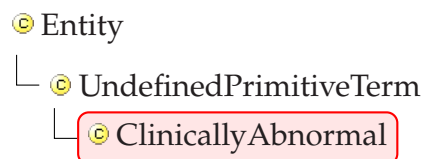
- ▶ ClinicalDataItem

11.1.28 ClinicallyAbnormal

Annotations

- ▶ **Label:** clinically abnormal
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000069

Hierarchy



Direct Super Types

- ▶ UndefinedPrimitiveTerm

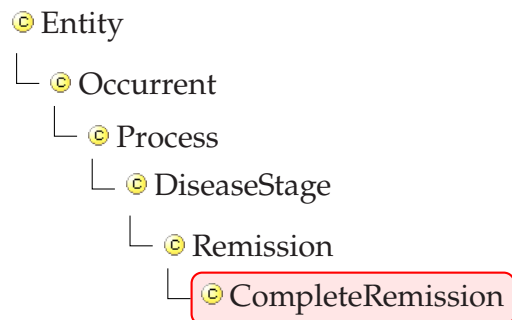
11.1.29 CompleteRemission

Definition

A remission which is characterized by a prolonged lack of all manifestations of a disease

Annotations

- ▶ **Label:** complete remission
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000120

Hierarchy**Direct Super Types**

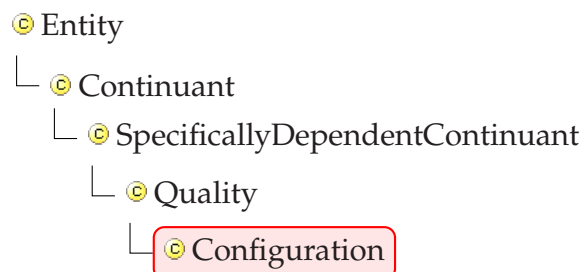
- ▶ Remission

11.1.30 Configuration**Definition**

A quality which is an spatial arrangement or distribution of a(n) independent continuant(s) across a Three Dimensional Region.

Annotations

- ▶ **Label:** configuration
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000039

Hierarchy**Direct Super Types**

- ▶ Quality

Direct Sub Types

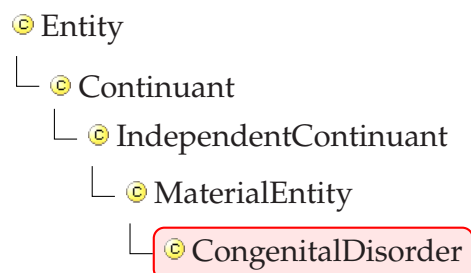
- ▶  PathologicalPhysicalConfiguration

11.1.31 CongenitalDisorder**Definition**

A structurally anomalous part of an organism acquired during fetal development and present at birth (but not necessarily hereditary) which is hypothesized to be harmful for the organism.

Annotations

- ▶ **Label:** congenital disorder
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000089

Hierarchy**Direct Super Types**

- ▶  MaterialEntity

Direct Sub Types

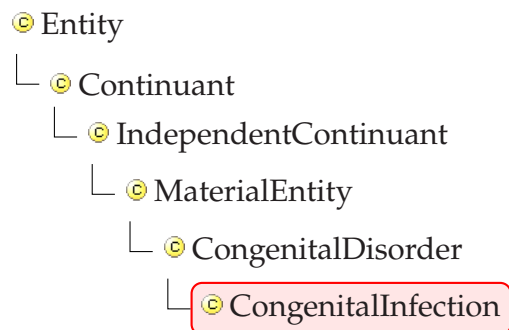
- ▶  DrugInducedCongenitalMalformation
- ▶  CongenitalInfection

11.1.32 CongenitalInfection**Definition**

A congenital disorder arising as a result of an infectious process

Annotations

- ▶ **Label:** congenital infection
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000126

Hierarchy**Direct Super Types**

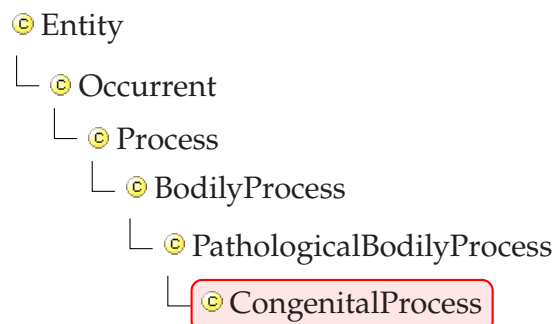
- CongenitalDisorder

11.1.33 CongenitalProcess**Definition**

A pathological bodily process that occurs in the fetus during fetal development

Annotations

- **Label:** congenital process
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000128

Hierarchy**Direct Super Types**

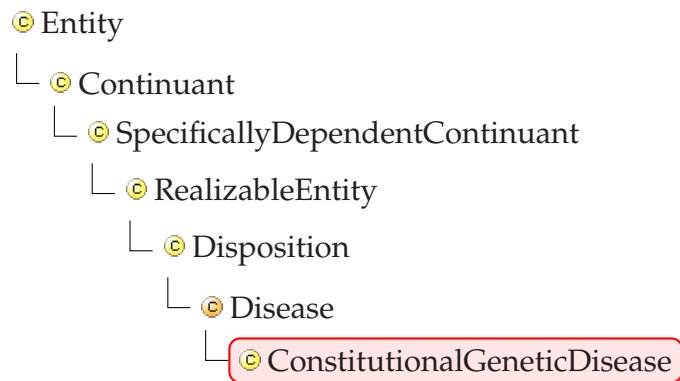
- PathologicalBodilyProcess

11.1.34 ConstitutionalGeneticDisease**Definition**

A disease whose physical basis is a constitutional genetic disorder.

Annotations

- ▶ **Label:** constitutional genetic disease
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000035

Hierarchy**Direct Super Types**

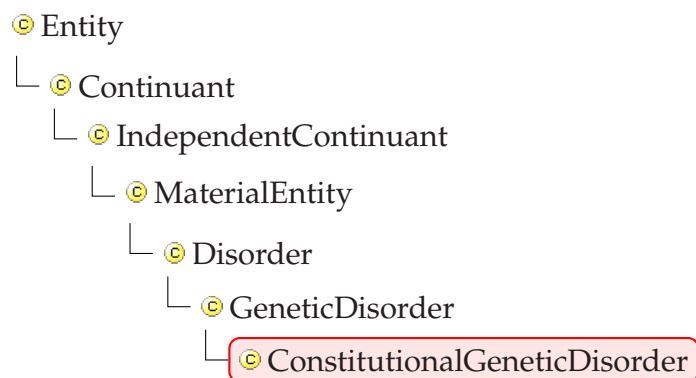
- ▶ **Disease**

11.1.35 ConstitutionalGeneticDisorder**Definition**

A genetic disorder inherited during conception that is part of all cells in the organism.

Annotations

- ▶ **Label:** constitutional genetic disorder
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000051

Hierarchy

Direct Super Types

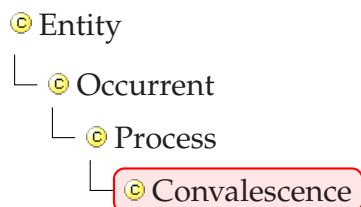
- ▶  GeneticDisorder

11.1.36 Convalescence**Definition**

A processual entity during which a patient participating in a disease course gradually returns to participating in a canonical life course.

Annotations

- ▶ **Label:** convalescence
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000091

Hierarchy**Direct Super Types**

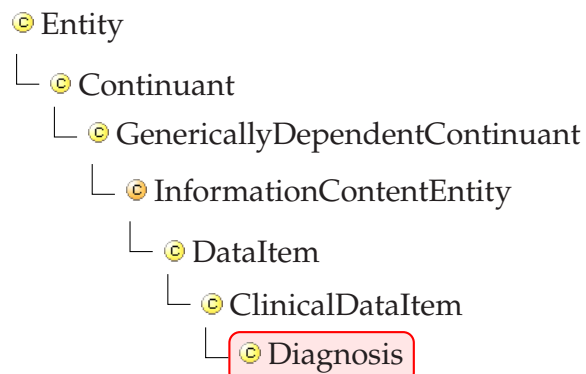
- ▶  Process

11.1.37 Diagnosis**Definition**

The representation of a conclusion of a diagnostic process.

Annotations

- ▶ **Label:** diagnosis
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000073

Hierarchy**Direct Super Types**

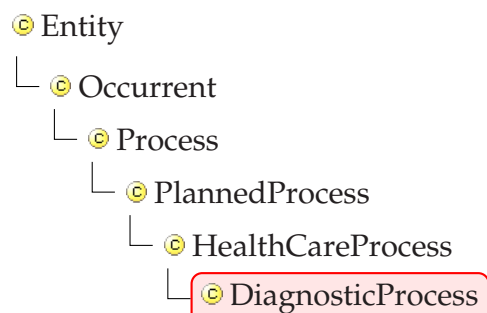
- ClinicalDataItem

11.1.38 DiagnosticProcess**Definition**

A health care process that involves the interpretation of a clinical picture from a given patient (input) and the assertion to the effect that the patient has a disease, disorder, or syndrome of a certain type, or none of these (output).

Annotations

- **Label:** diagnostic process
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000104

Hierarchy**Direct Super Types**

- HealthCareProcess

11.1.39 Disease

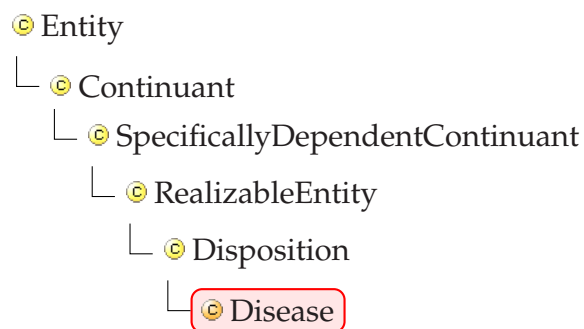
Definition

A disposition (i) to undergo pathological processes that (ii) exists in an organism because of one or more disorders in that organism.

Annotations

- ▶ **Label:** disease
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000031

Hierarchy



Direct Super Types

- ▶ Disposition

Direct Sub Types

- ▶ ConstitutionalGeneticDisease
- ▶ AcquiredGeneticDisease
- ▶ ChronicDisease

Equivalent Classes

- ▶ Disease

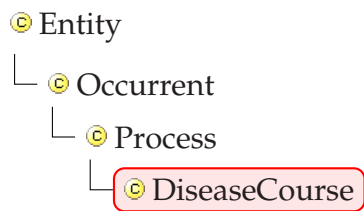
11.1.40 DiseaseCourse

Definition

The totality of all processes through which a given disease instance is realized.

Annotations

- ▶ **Label:** disease course
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000063

Hierarchy**Direct Super Types**

- Process

Direct Sub Types

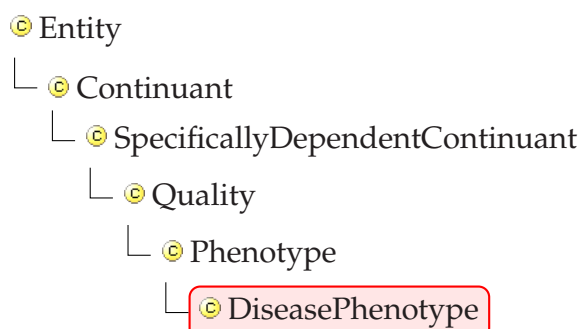
- TransientDiseaseCourse
- AcuteDiseaseCourse
- ChronicDiseaseCourse
- ProgressiveDiseaseCourse

11.1.41 DiseasePhenotype**Definition**

A clinically abnormal phenotype that is characteristic of a single disease.

Annotations

- **Label:** disease phenotype
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000028

Hierarchy**Direct Super Types**

- Phenotype

11.1.42 DiseaseProphylaxis

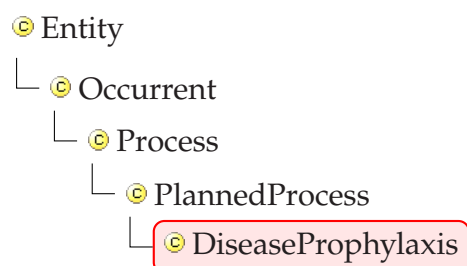
Definition

A planned process whose completion is hypothesized by a health care provider to reduce the risk of developing a disorder or the signs and symptoms of a disorder.

Annotations

- ▶ **Label:** disease prophylaxis
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000103

Hierarchy



Direct Super Types

- ▶ PlannedProcess

11.1.43 Disorder

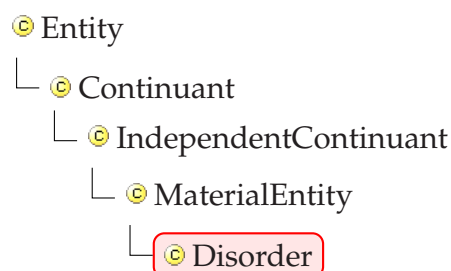
Definition

A material entity which is clinically abnormal and part of an extended organism. Disorders are the physical basis of disease.

Annotations

- ▶ **Label:** disorder
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000045







Hierarchy



Direct Super Types

- ▶  MaterialEntity

Direct Sub Types

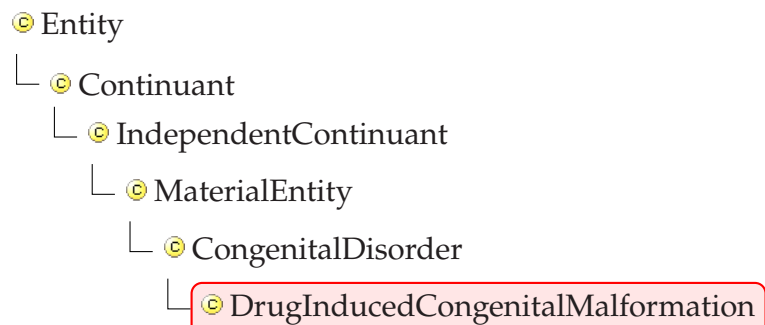
- ▶  Injury
- ▶  TissueDisorder
- ▶  GeneticDisorder
- ▶  InfectiousDisorder
- ▶  EpigeneticDisorder
- ▶  ChronicDisorder

11.1.44 DrugInducedCongenitalMalformation**Definition**

A congenital disorder arising as a result of a drug exposure causing an anatomical abnormality

Annotations

- ▶ **Label:** drug induced congenital malformation
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000127

Hierarchy**Direct Super Types**

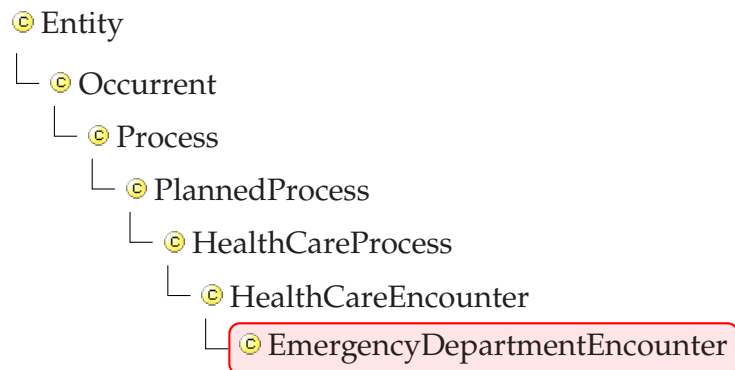
- ▶  CongenitalDisorder

11.1.45 EmergencyDepartmentEncounter**Definition**

A health care encounter in which care is provided for undifferentiated and unscheduled patients with illnesses or injuries requiring immediate medical attention.

Annotations

- ▶ **Label:** emergency department encounter
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000101

Hierarchy**Direct Super Types**

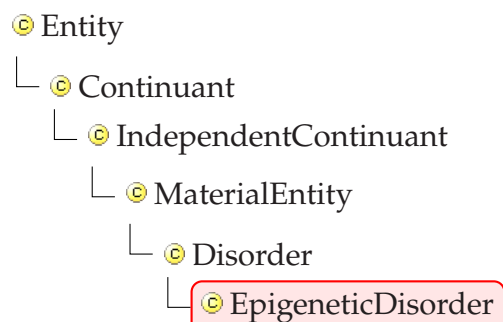
- ▶ ((HealthCareEncounter))

11.1.46 EpigeneticDisorder**Definition**

A disorder whose etiology involves (1) a modification to the patient's genomic DNA which leads to alterations in the normal expression pattern of the genome, but is (2) not a change in the nucleotide sequence.

Annotations

- ▶ **Label:** epigenetic disorder
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000046

Hierarchy

Direct Super Types

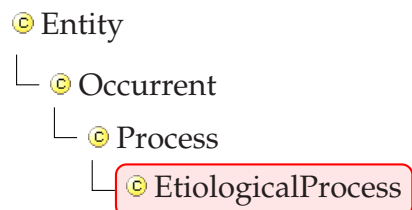
- ▶  Disorder

11.1.47 EtiologicalProcess**Definition**

A process in an organism that leads to a subsequent disorder.

Annotations

- ▶ **Label:** etiological process
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000059

Hierarchy**Direct Super Types**

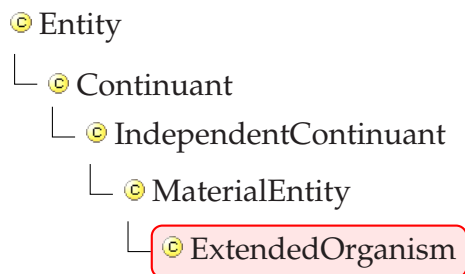
- ▶  Process

11.1.48 ExtendedOrganism**Definition**

An object aggregate consisting of an organism and all material entities located within the organism, overlapping the organism, or occupying sites formed in part by the organism.

Annotations

- ▶ **Label:** extended organism
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000087

Hierarchy**Direct Super Types**

- MaterialEntity

Direct Sub Types

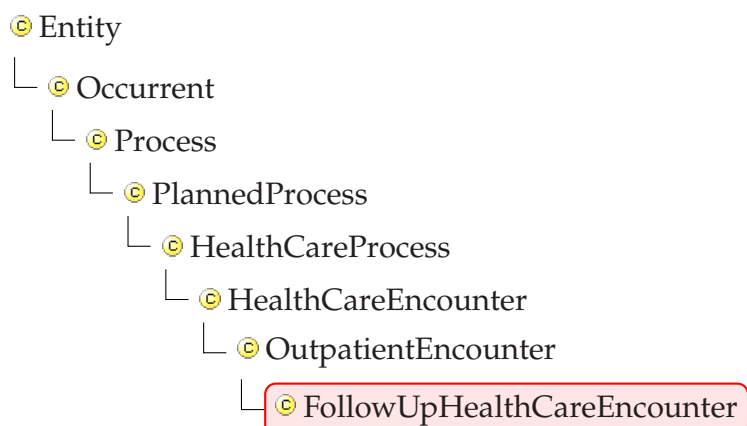
- HumanBeing

11.1.49 FollowUpHealthCareEncounter**Definition**

A health care encounter that is scheduled for the purpose of assessing a known set of specific issues

Annotations

- **Label:** follow-up health care encounter
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000125

Hierarchy**Direct Super Types**

- OutpatientEncounter

11.1.50 GeneticDisorder

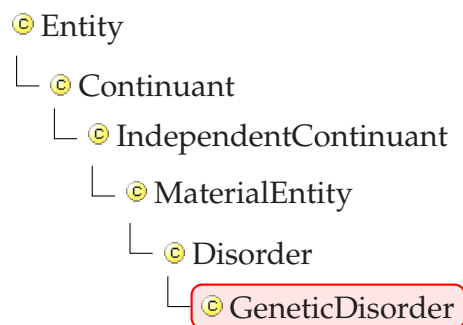
Definition

A disorder whose etiology involves an abnormality in the nucleotide sequence of an organism's genome.

Annotations

- ▶ **Label:** genetic disorder
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000047

Hierarchy



Direct Super Types

- ▶ ((Disorder))

Direct Sub Types

- ▶ ((ConstitutionalGeneticDisorder))
- ▶ ((AcquiredGeneticDisorder))

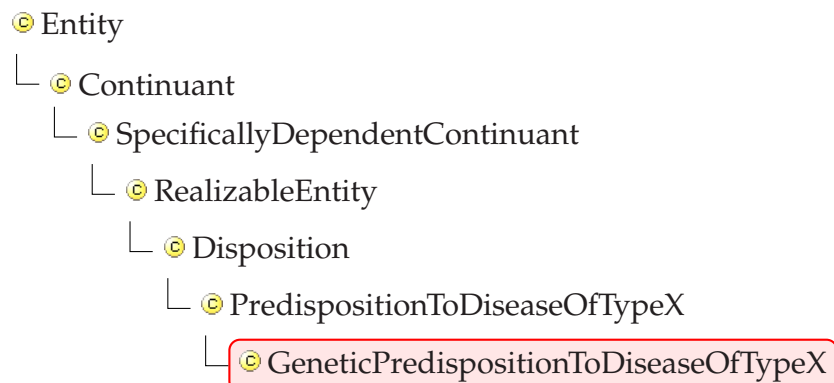
11.1.51 GeneticPredispositionToDiseaseOfTypeX

Definition

A predisposition to disease of type X whose physical basis is a constitutional abnormality in an organism's genome. This abnormality is the physical basis for the increased risk of acquiring the disease X.

Annotations

- ▶ **Label:** genetic predisposition to disease of type X
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000033

Hierarchy**Direct Super Types**

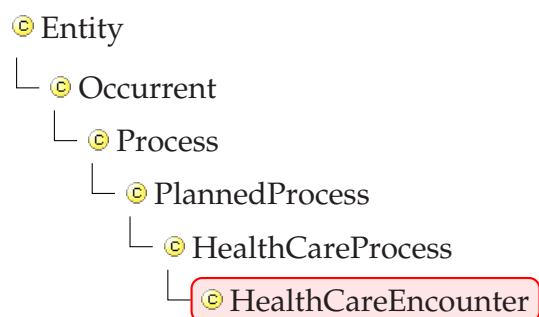
- PredispositionToDiseaseOfTypeX

11.1.52 HealthCareEncounter**Definition**

A temporally-connected health care process that has as participants an organization or person realizing the health care provider role and a person realizing the patient role. The health care provider role and patient are realized during the health care encounter

Annotations

- **Label:** health care encounter
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000097

Hierarchy**Direct Super Types**

- HealthCareProcess

Direct Sub Types

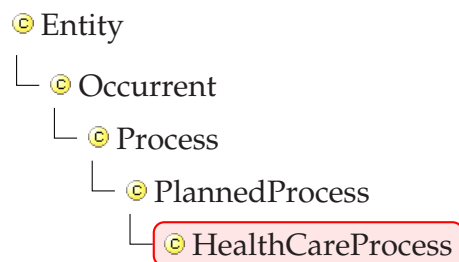
- ▶ ☉ EmergencyDepartmentEncounter
- ▶ ☉ InpatientEncounter
- ▶ ☉ OutpatientEncounter

11.1.53 HealthCareProcess**Definition**

A planned process with the objective to improve the health status of a patient that directly involves the treatment, diagnosis, or prevention of disease or injury of a patient

Annotations

- ▶ **Label:** health care process
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000096

Hierarchy**Direct Super Types**

- ▶ ☉ PlannedProcess

Direct Sub Types

- ▶ ☉ HealthCareProcessAssay
- ▶ ☉ HealthCareProcessBiomaterialTransformation
- ▶ ☉ HealthCareProcessDataTransformation
- ▶ ☉ DiagnosticProcess
- ▶ ☉ Treatment
- ▶ ☉ HealthCareEncounter
- ▶ ☉ Hospitalization
- ▶ ☉ TreatmentProcess

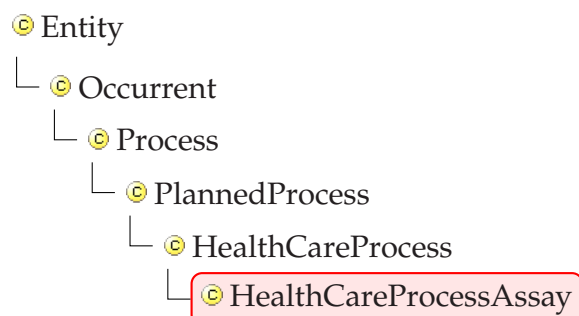
11.1.54 HealthCareProcessAssay**Definition**

A health care process with the objective to produce information about the material entity that is the evaluant, by physically examining it or its proxies.

Annotations

- ▶ **Label:** health care process assay
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000108

Hierarchy



Direct Super Types

- ▶ HealthCareProcess

Direct Sub Types

- ▶ PhysicalExamination
- ▶ ClinicalLaboratoryTest
- ▶ ClinicalHistoryTaking

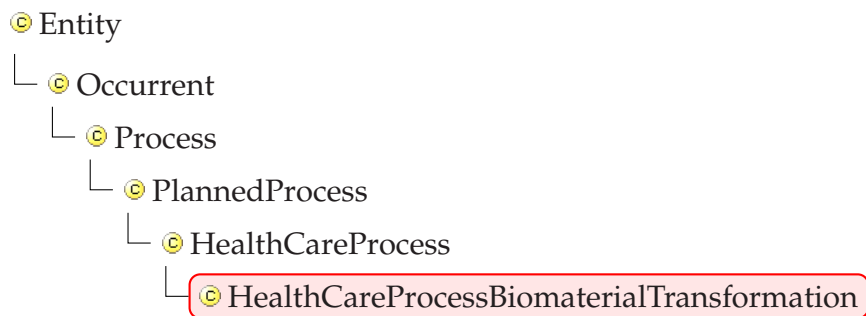
11.1.55 HealthCareProcessBiomaterialTransformation

Definition

A health care process which results in physical changes in a specified input material

Annotations

- ▶ **Label:** health care process biomaterial transformation
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000109

Hierarchy**Direct Super Types**

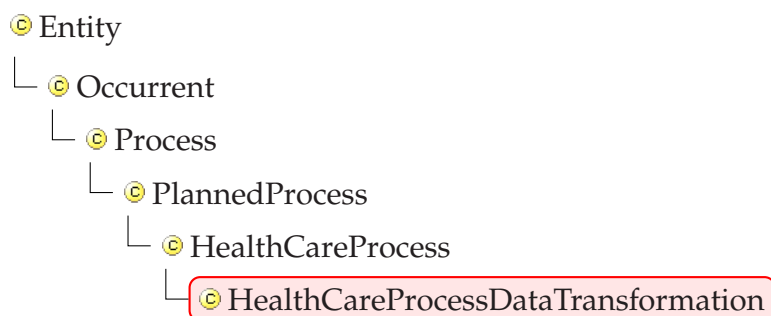
- **HealthCareProcess**

11.1.56 HealthCareProcessDataTransformation**Definition**

A health care process that produces output from input data

Annotations

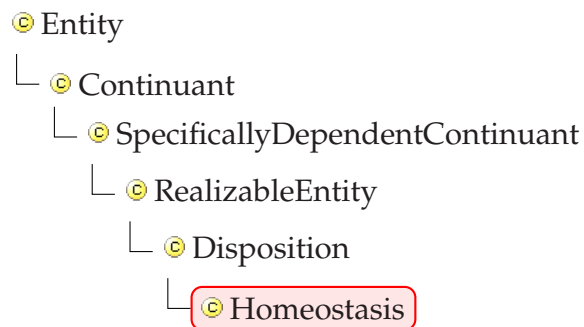
- **Label:** health care process data transformation
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000110

Hierarchy**Direct Super Types**

- **HealthCareProcess**

11.1.57 Homeostasis**Annotations**

- **Label:** homeostasis
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000032

Hierarchy**Direct Super Types**

- Disposition

Direct Sub Types

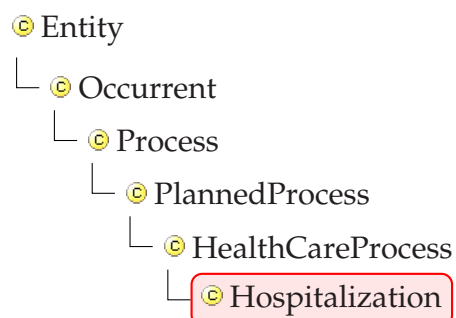
- NormalHomeostasis
- AbnormalHomeostasis

11.1.58 Hospitalization**Definition**

TODO

Annotations

- **Label:** hospitalization
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000098

Hierarchy**Direct Super Types**

- HealthCareProcess

11.1.59 ImageFinding

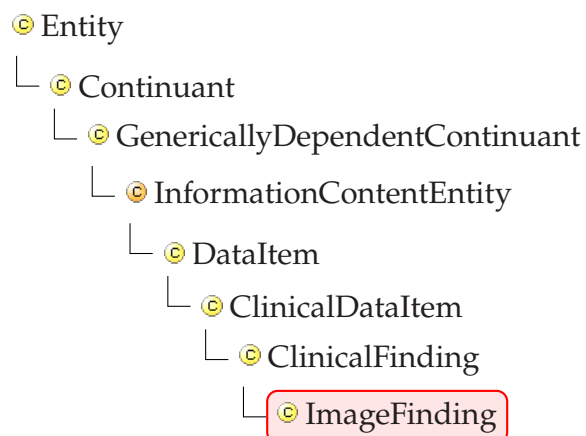
Definition

A representation of an image that supports an inference to an assertion about some quality of a patient.

Annotations

- ▶ **Label:** image finding
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000017

Hierarchy



Direct Super Types

- ▶ ClinicalFinding

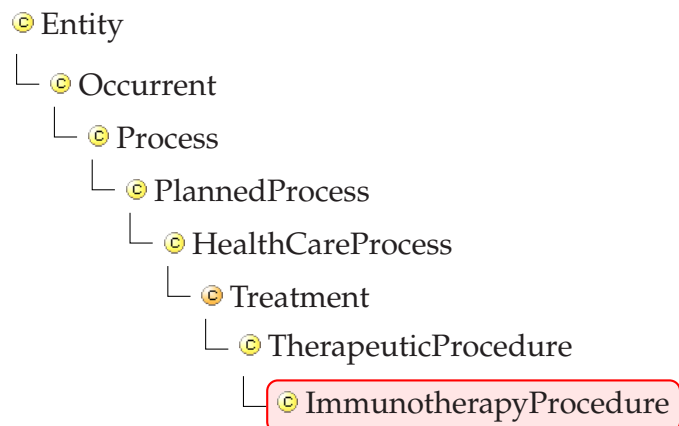
11.1.60 ImmunotherapyProcedure

Definition

A therapeutic procedure that uses immune system derived entities.

Annotations

- ▶ **Label:** immunotherapy procedure
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000114

Hierarchy**Direct Super Types**

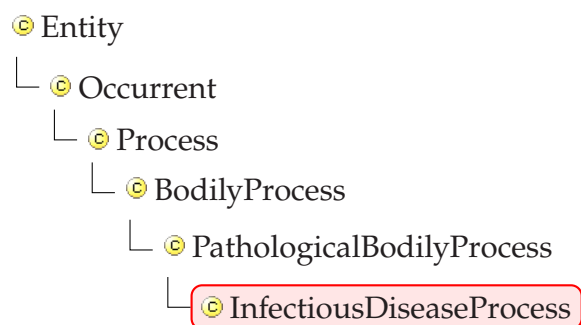
- TherapeuticProcedure

11.1.61 InfectiousDiseaseProcess**Definition**

The process in which an infectious disease unfolds

Annotations

- **Label:** infectious disease process
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000140

Hierarchy**Direct Super Types**

- PathologicalBodilyProcess

11.1.62 InflammatoryProcess

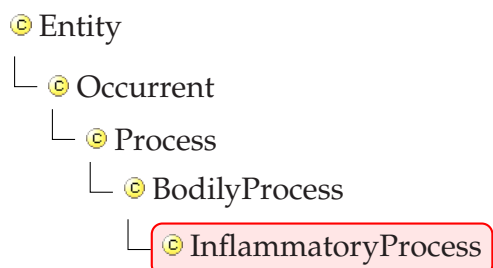
Definition

A bodily process caused by some disorder that results in recruitment of leukocytes into a localized tissue site, typically causing localized pain and swelling.

Annotations

- ▶ **Label:** inflammatory process
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000095

Hierarchy



Direct Super Types

- ▶ BodilyProcess

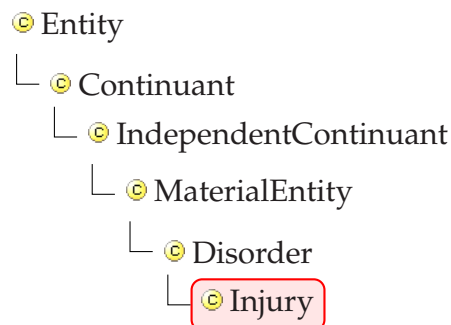
11.1.63 Injury

Definition

A disorder that involves some structural damage that is immediately caused by a catastrophic external force.

Annotations

- ▶ **Label:** injury
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000102

Hierarchy**Direct Super Types**

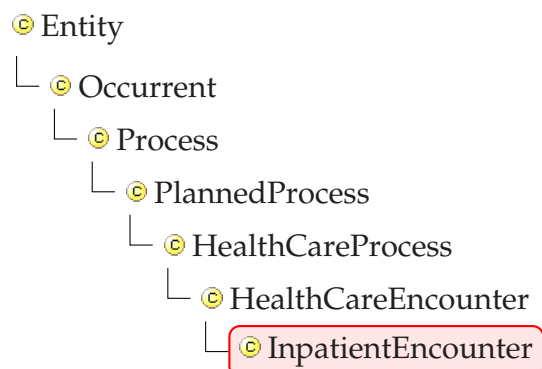
- Disorder

11.1.64 InpatientEncounter**Definition**

A health care encounter involving a patient who has been admitted to a health care facility and remains in a hospital facility for at least one night.

Annotations

- **Label:** inpatient encounter
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000100

Hierarchy**Direct Super Types**

- HealthCareEncounter

11.1.65 LaboratoryFinding

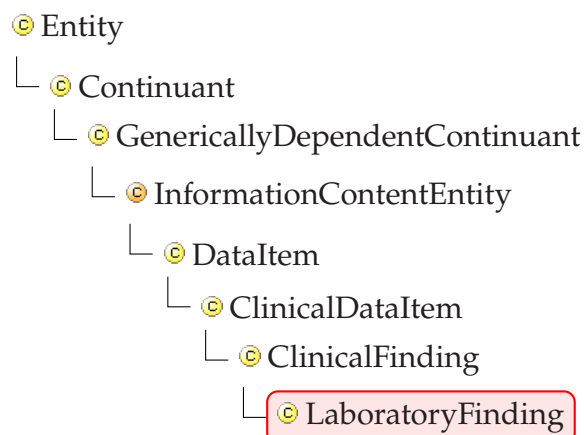
Definition

A representation of a quality of a specimen that is the output of a laboratory test and that can support an inference to an assertion about some quality of the patient.

Annotations

- ▶ **Label:** laboratory finding
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000018

Hierarchy



Direct Super Types

- ▶ ((ClinicalFinding))

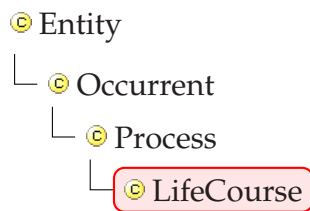
11.1.66 LifeCourse

Definition

A process which has as parts all the processes in which a given organism is participant.

Annotations

- ▶ **Label:** life course
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000092

Hierarchy**Direct Super Types**

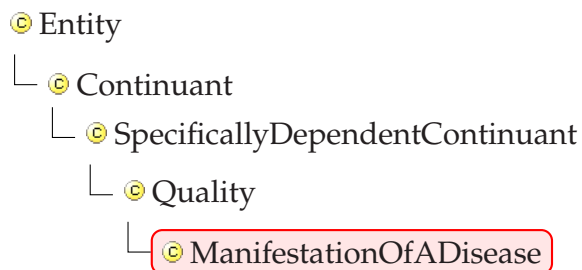
- Process

11.1.67 ManifestationOfADisease**Definition**

A quality of a patient that is (a) a deviation from clinical normality that exists in virtue of the realization of a disease and (b) is observable.

Annotations

- **Label:** manifestation of a disease
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000022

Hierarchy**Direct Super Types**

- Quality

Direct Sub Types

- PreclinicalManifestationOfADisease
- ClinicalManifestationOfADisease

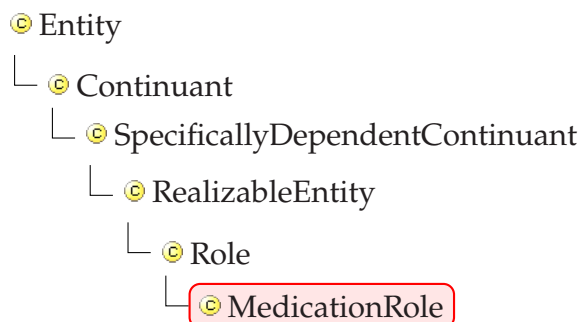
11.1.68 MedicationRole**Definition**

A role borne by some material entity which can be delivered/administrated into some organism and the role is realized during a clinical treatment process aiming to treat symptoms, signs or diagnosed disease.

Annotations

- ▶ **Label:** medication role
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000148

Hierarchy



Direct Super Types

- ▶  Role

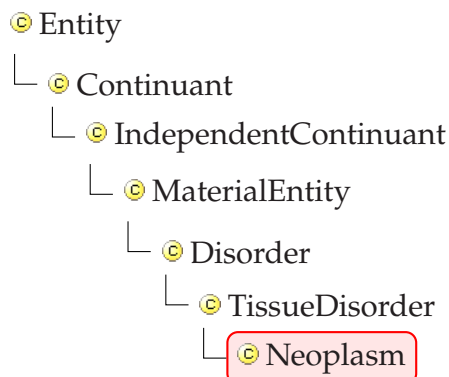
11.1.69 Neoplasm

Definition

A tissue disorder that has resulted from a dysregulation of cell proliferation leading to a net increase in mass

Annotations

- ▶ **Label:** neoplasm
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000147

Hierarchy**Direct Super Types**

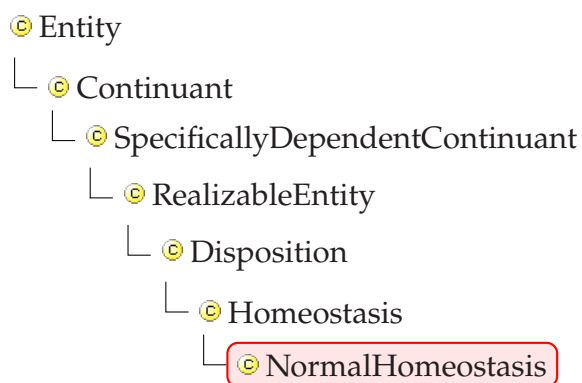
- TissueDisorder

11.1.70 NormalHomeostasis**Definition**

Homeostasis of a type that is not clinically abnormal.

Annotations

- **Label:** normal homeostasis
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000038

Hierarchy**Direct Super Types**

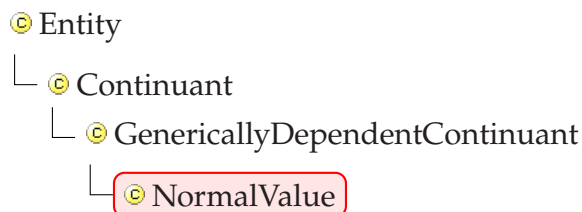
- Homeostasis

11.1.71 NormalValue**Definition**

A value for a quality reported in a lab report and asserted by the testing lab or the kit manufacturer to be normal based on a statistical treatment of values from a reference population.

Annotations

- ▶ **Label:** normal value
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000074

Hierarchy**Direct Super Types**

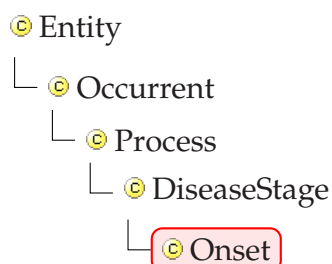
- ▶ GenericallyDependentContinuant

11.1.72 Onset**Definition**

A disease stage that marks the beginning of a disease

Annotations

- ▶ **Label:** onset
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000118

Hierarchy

Direct Super Types

- ▶  DiseaseStage

Direct Sub Types

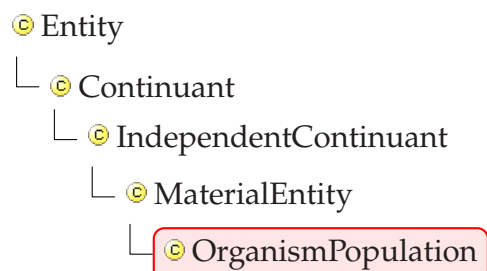
- ▶  AcuteOnset

11.1.73 OrganismPopulation**Definition**

An aggregate of organisms of the same type.

Annotations

- ▶ **Label:** organism population
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000084

Hierarchy**Direct Super Types**

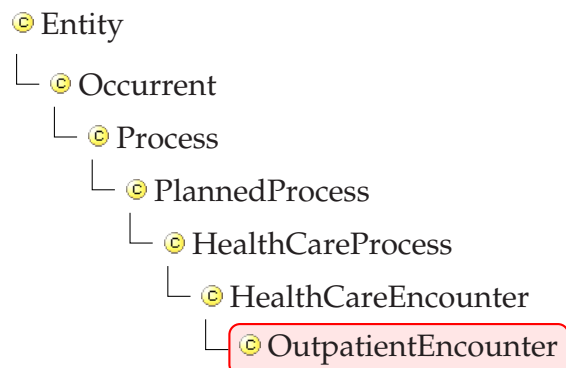
- ▶  MaterialEntity

11.1.74 OutpatientEncounter**Definition**

TODO

Annotations

- ▶ **Label:** outpatient encounter
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000099

Hierarchy**Direct Super Types**

- ▶ HealthCareEncounter

Direct Sub Types

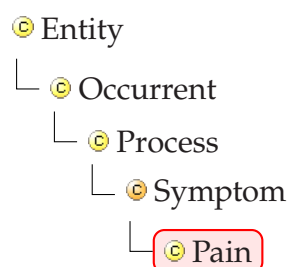
- ▶ FollowUpHealthCareEncounter
- ▶ RoutineHealthCareEncounter

11.1.75 Pain**Definition**

A bodily process in an organism S involving two integrated levels: (a) activation of the nociceptive system and associated emotion generating brain components of S, and (b) a simultaneous aversive sensory and emotional experience on the part of S, where (b) is phenomenologically similar to the sort of aversive experience involved in pain with concordant tissue damage.

Annotations

- ▶ **Label:** pain
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000085

Hierarchy

Direct Super Types

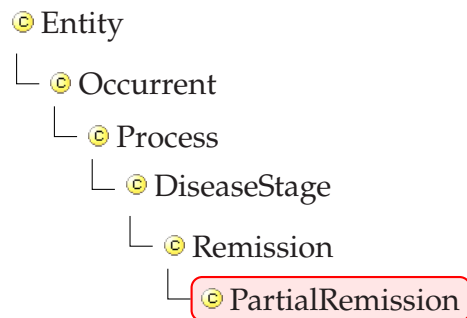
-  Symptom

11.1.76 PartialRemission**Definition**

A remission which is characterized by a prolonged lack of some manifestations of a disease

Annotations

- **Label:** partial remission
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000121

Hierarchy**Direct Super Types**

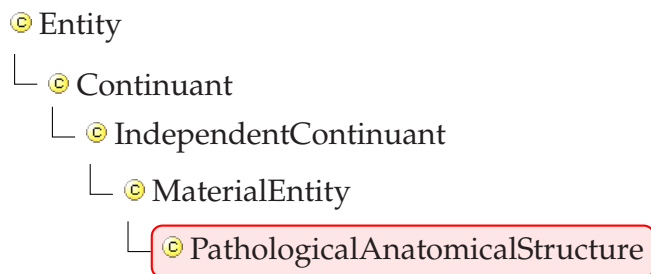
-  Remission

11.1.77 PathologicalAnatomicalStructure**Definition**

An anatomical structure (FMA) is pathological whenever (1) it has come into being as a result of changes in some pre-existing canonical anatomical structure, (2) through processes other than the expression of the normal complement of genes of an organism of the given type, and (3) is predisposed to have health-related consequences for the organism in question manifested by symptoms and signs.

Annotations

- **Label:** pathological anatomical structure
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000078

Hierarchy**Direct Super Types**

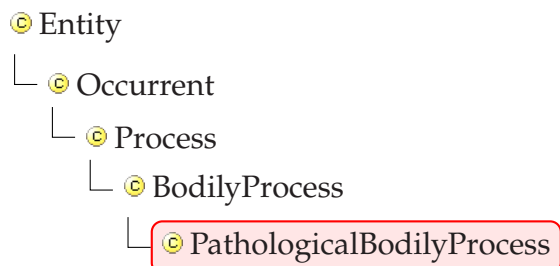
- ▶ MaterialEntity

11.1.78 PathologicalBodilyProcess**Definition**

A bodily process that is clinically abnormal.

Annotations



- ▶ **Label:** pathological bodily process
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000061

Hierarchy**Direct Super Types**

- ▶ BodilyProcess

Direct Sub Types

- ▶ CancerProcess
- ▶ AllergicDiseaseProcess
- ▶ InfectiousDiseaseProcess
- ▶ AutoimmuneDiseaseProcess
- ▶ PathologicalDerivation
- ▶ PathologicalTransformation

- ▶  CongenitalProcess
- ▶  PathologicalInvasion

11.1.79 PathologicalDerivation

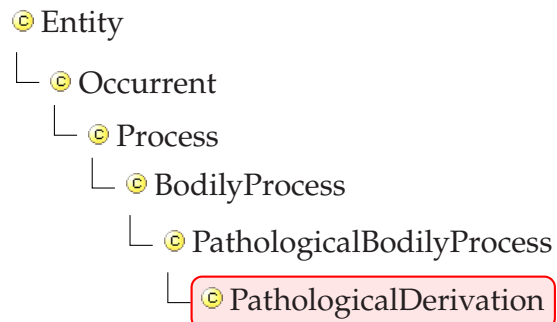
Definition

A pathological bodily process in which matter is reorganized in such a way as to give rise to new pathological formations which take the place of entities existing earlier.

Annotations

- ▶ **Label:** pathological derivation
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000081

Hierarchy



Direct Super Types

- ▶  PathologicalBodilyProcess

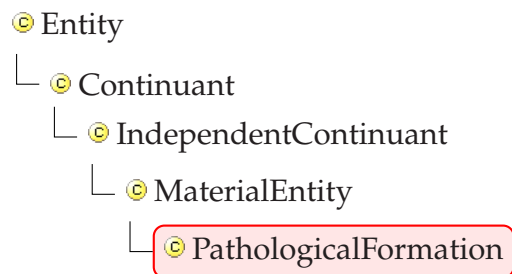
11.1.80 PathologicalFormation

Definition

TODO: Define, relate to disorder, and place in the OGMS hierarchy.

Annotations

- ▶ **Label:** pathological formation
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000077

Hierarchy**Direct Super Types**

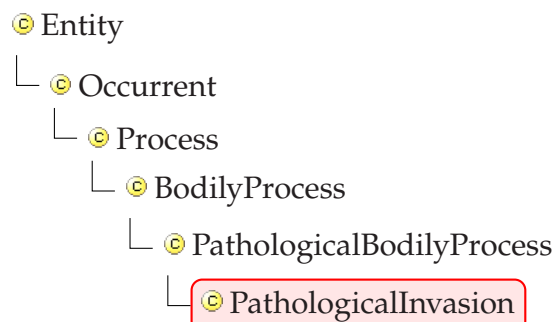
- ▶ MaterialEntity

11.1.81 PathologicalInvasion**Definition**

TODO: Define.

Annotations

- ▶ **Label:** pathological invasion
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000082

Hierarchy**Direct Super Types**

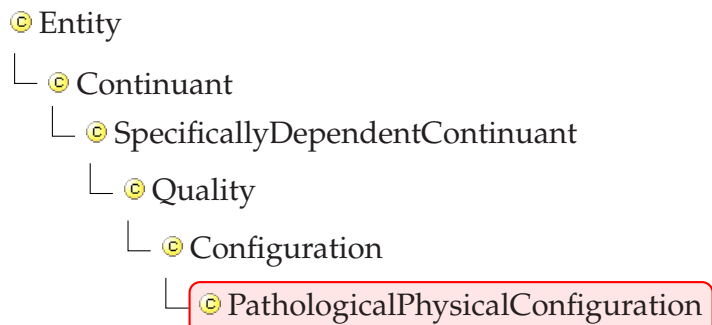
- ▶ PathologicalBodilyProcess

11.1.82 PathologicalPhysicalConfiguration**Definition**

A configuration which deviates in some way from a canonical configuration for a particular organism.

Annotations

- ▶ **Label:** pathological physical configuration
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000040

Hierarchy**Direct Super Types**

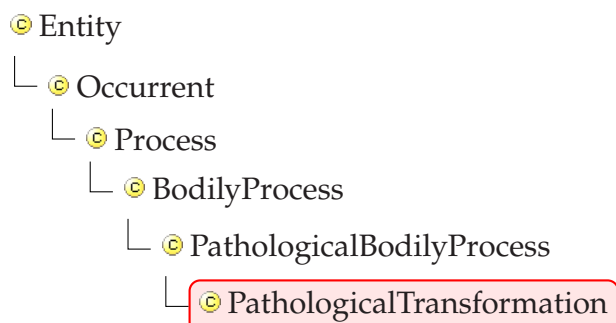
- ▶ ((Configuration))

11.1.83 PathologicalTransformation**Definition**

A pathological bodily process in which a canonical anatomical structure becomes a pathological anatomical structure.

Annotations

- ▶ **Label:** pathological transformation
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000080

Hierarchy**Direct Super Types**

- ▶ ((PathologicalBodilyProcess))

11.1.84 PatientSymptomReport

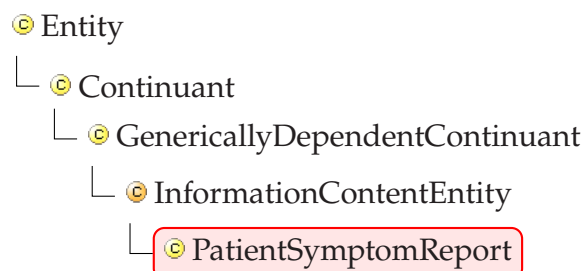
Definition

A communication from a patient about something they perceive as being abnormal about their body or life.

Annotations

- ▶ **Label:** patient symptom report
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000088

Hierarchy



Direct Super Types

- ▶  InformationContentEntity

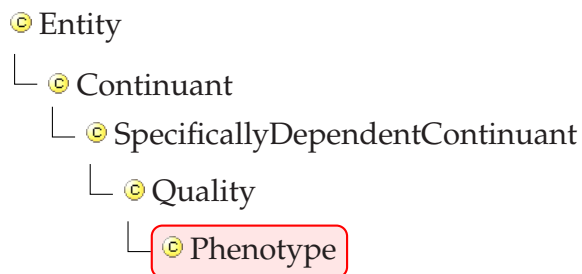
11.1.85 Phenotype

Definition

A (combination of) quality(ies) of an organism determined by the interaction of its genetic make-up and environment that differentiates specific instances of a species from other instances of the same species.

Annotations

- ▶ **Label:** phenotype
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000023

Hierarchy**Direct Super Types**

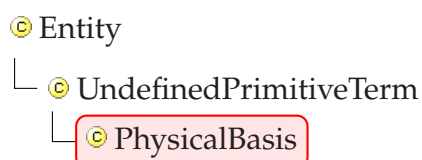
- Quality

Direct Sub Types

- DiseasePhenotype
- ClinicalPhenotype

11.1.86 PhysicalBasis**Annotations**

- **Label:** physical basis
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000070

Hierarchy**Direct Super Types**

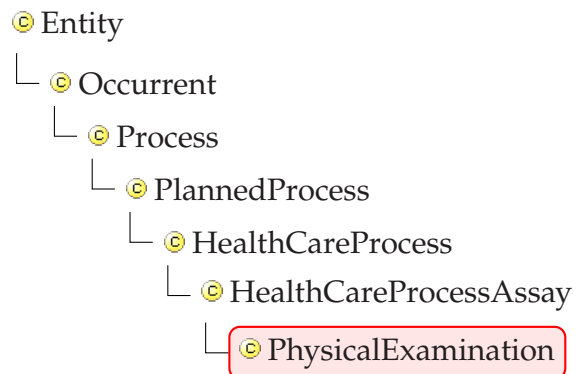
- UndefinedPrimitiveTerm

11.1.87 PhysicalExamination**Definition**

A sequence of acts of observing and measuring qualities of a patient performed by a clinician; measurements may occur with and without elicitation.

Annotations

- ▶ **Label:** physical examination
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000057

Hierarchy**Direct Super Types**

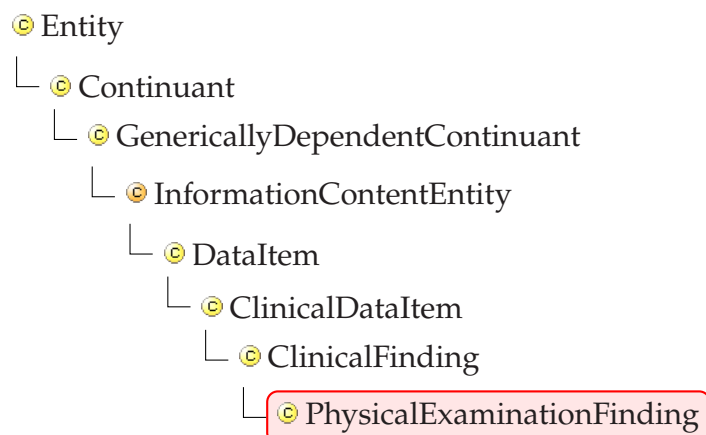
- ▶ HealthCareProcessAssay

11.1.88 PhysicalExaminationFinding**Definition**

TODO: Define.

Annotations

- ▶ **Label:** physical examination finding
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000083

Hierarchy

Direct Super Types

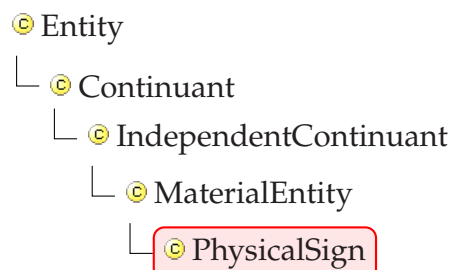
- ▶  ClinicalFinding

11.1.89 PhysicalSign**Definition**

An abnormal material entity that is part of a patient and hypothesized to be clinically relevant.

Annotations

- ▶ **Label:** physical sign
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000129

Hierarchy**Direct Super Types**

- ▶  MaterialEntity

Direct Sub Types

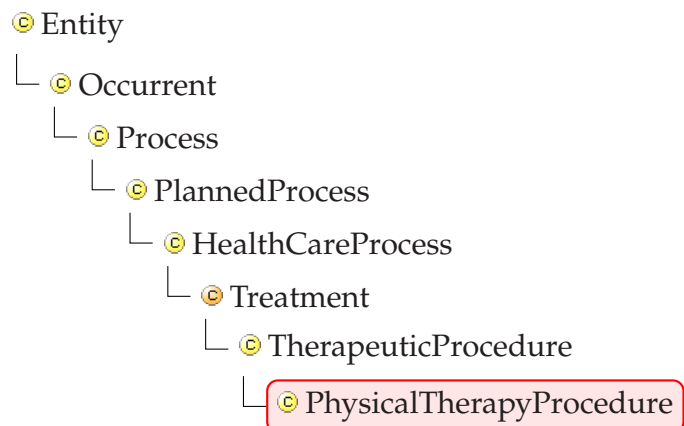
- ▶  VitalSign

11.1.90 PhysicalTherapyProcedure**Definition**

A therapeutic procedure that uses physical conditioning

Annotations

- ▶ **Label:** physical therapy procedure
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000115

Hierarchy**Direct Super Types**

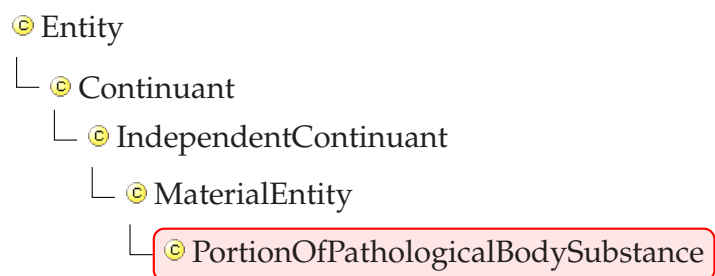
- TherapeuticProcedure

11.1.91 PortionOfPathologicalBodySubstance**Definition**

TODO: Define, relate to disorder, and place in the OGMS hierarchy.

Annotations

- **Label:** portion of pathological body substance
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000079

Hierarchy**Direct Super Types**

- MaterialEntity

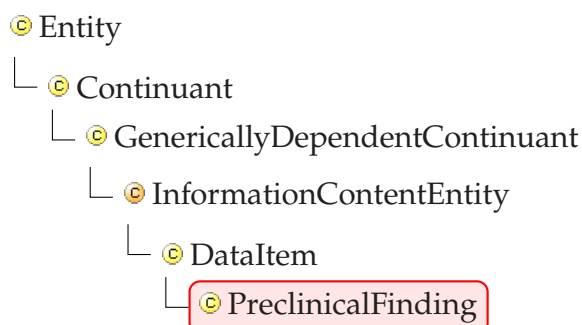
11.1.92 PreclinicalFinding

Definition

A representation of a quality of a patient that is (1) recorded by a clinician because the quality is hypothesized to be of clinical significance and (2) refers to qualities obtaining in the patient prior to their becoming detectable in a clinical history taking or physical examination.

Annotations

- ▶ **Label:** preclinical finding
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000019

Hierarchy**Direct Super Types**

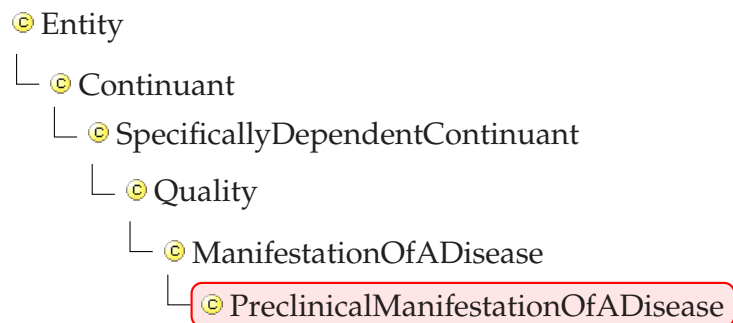
- ▶ DataItem

11.1.93 PreclinicalManifestationOfADisease**Definition**

A manifestation of a disease that exists prior to the time at which it would be detected in a clinical history taking or physical examination, if the patient were to present to a clinician. A realization of a disease that exists prior to its becoming detectable in a clinical history taking or physical examination.

Annotations

- ▶ **Label:** preclinical manifestation of a disease
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000026

Hierarchy**Direct Super Types**

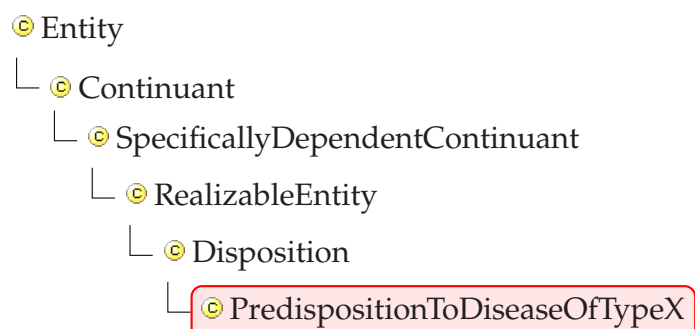
- ManifestationOfADisease

11.1.94 PredispositionToDiseaseOfTypeX**Definition**

A disposition in an organism that constitutes an increased risk of the organism's subsequently developing the disease X.

Annotations

- **Label:** predisposition to disease of type X
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000030

Hierarchy**Direct Super Types**

- Disposition

Direct Sub Types

- GeneticPredispositionToDiseaseOfTypeX

11.1.95 ProcessualSign

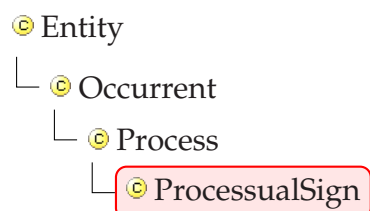
Definition

An abnormal processual entity occurring in a patient that is hypothesized to be clinically relevant.

Annotations

- ▶ **Label:** processual sign
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000141

Hierarchy



Direct Super Types

- ▶ ((Process))

11.1.96 Prognosis

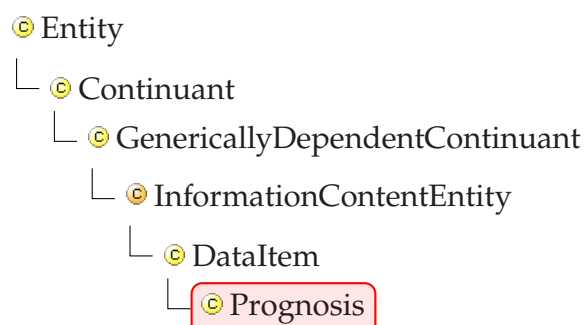
Definition

A hypothesis about some future part of a disease course.

Annotations

- ▶ **Label:** prognosis
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000093

Hierarchy

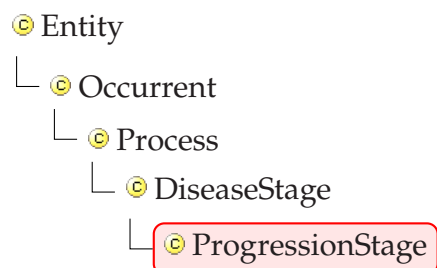


Direct Super Types

-  DataItem

11.1.97 ProgressionStage**Annotations**

- **Label:** progression stage
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000133

Hierarchy**Direct Super Types**

-  DiseaseStage

Direct Sub Types

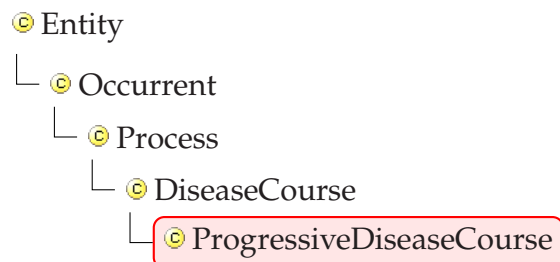
-  CancerProgressionStage

11.1.98 ProgressiveDiseaseCourse**Definition**

A disease course that (a) does not terminate in a return to normal homeostasis and (b) would, absent intervention, involve an increasing deviation from homeostasis.

Annotations

- **Label:** progressive disease course
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000065

Hierarchy**Direct Super Types**

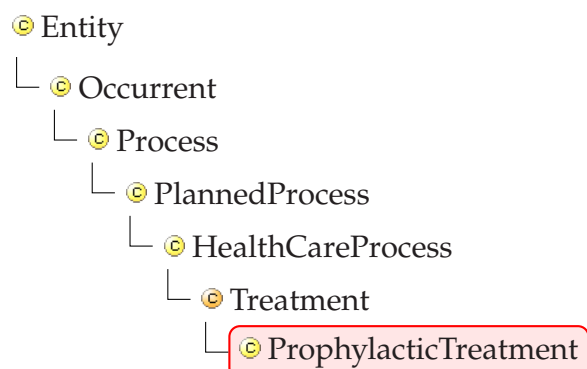
- DiseaseCourse

11.1.99 ProphylacticTreatment**Definition**

A treatment whose completion is hypothesized by a health care provider to prevent the signs and symptoms of a disorder or pathological process.

Annotations

- **Label:** prophylactic treatment
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000111

Hierarchy**Direct Super Types**

- Treatment

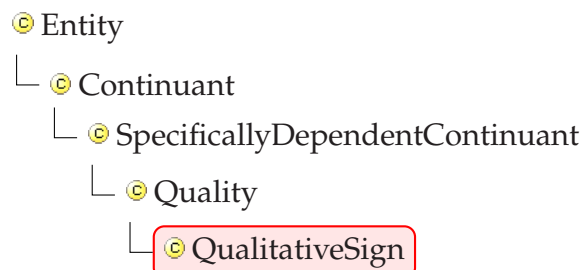
11.1.100 QualitativeSign**Definition**

An abnormal observable quality of a part of a patient that is hypothesized to be clinically relevant.

Annotations

- ▶ **Label:** qualitative sign
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000142

Hierarchy



Direct Super Types

- ▶ Quality

11.1.101 RadiationTherapyProcedure

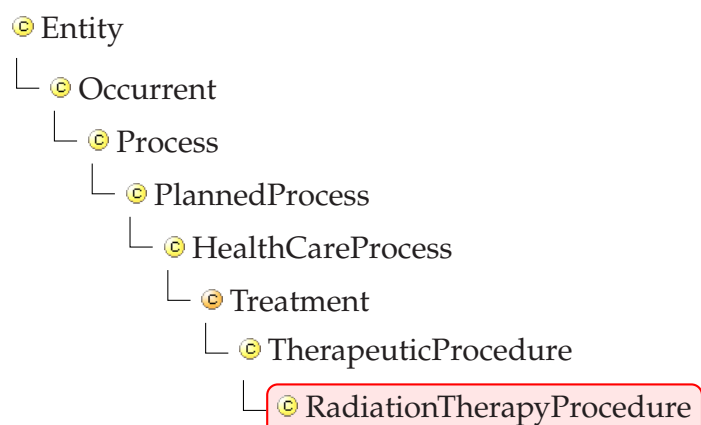
Definition

A therapeutic procedure that uses radiation.

Annotations

- ▶ **Label:** radiation therapy procedure
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000116

Hierarchy

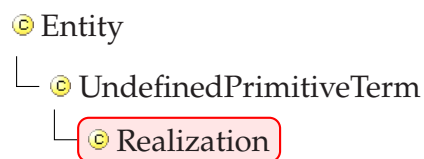


Direct Super Types

-  TherapeuticProcedure

11.1.102 Realization**Annotations**

- **Label:** realization
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000071

Hierarchy**Direct Super Types**

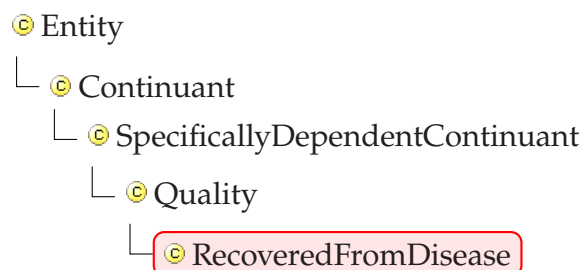
-  UndefinedPrimitiveTerm

11.1.103 RecoveredFromDisease**Definition**

A quality in which complete clearance of the disorder is attained; however, physiological 'memory' may persist

Annotations

- **Label:** recovered from disease
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000122

Hierarchy**Direct Super Types**

-  Quality

11.1.104 Relapse

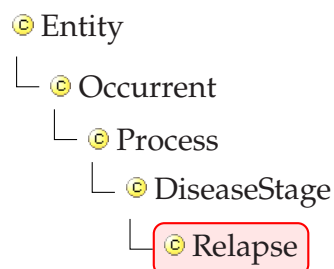
Definition

A disease stage which is preceded by a remission and characterized by the return of a manifestation of a disease.

Annotations

- ▶ **Label:** relapse
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000105

Hierarchy



Direct Super Types

- ▶ ((DiseaseStage))

11.1.105 Remission

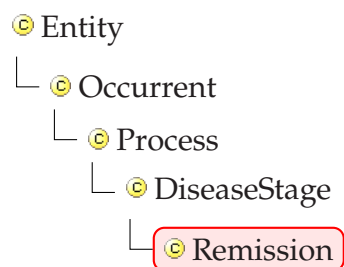
Definition

A disease stage which is characterized by the lack of a manifestation of a disease

Annotations

- ▶ **Label:** remission
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000106

Hierarchy



Direct Super Types

- ▶  DiseaseStage

Direct Sub Types

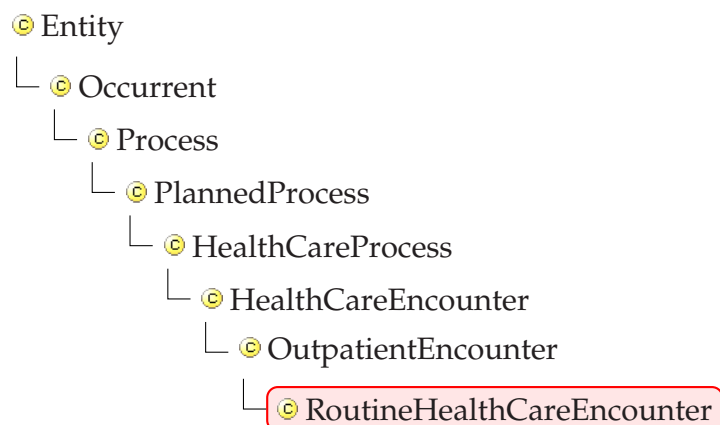
- ▶  PartialRemission
- ▶  CompleteRemission

11.1.106 RoutineHealthCareEncounter**Definition**

A health care encounter that is regularly scheduled for the purpose of health monitoring.

Annotations

- ▶ **Label:** routine health care encounter
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000124

Hierarchy**Direct Super Types**

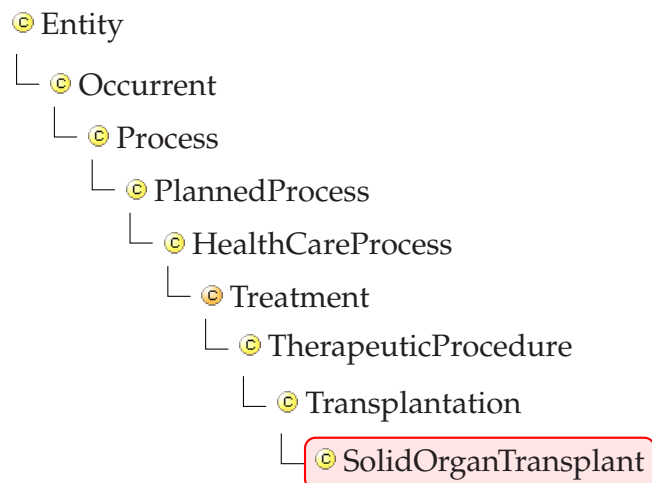
- ▶  OutpatientEncounter

11.1.107 SolidOrganTransplant**Definition**

A transplantation in which the body part is a non-fluid tissue

Annotations

- ▶ **Label:** solid organ transplant
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000144

Hierarchy**Direct Super Types**

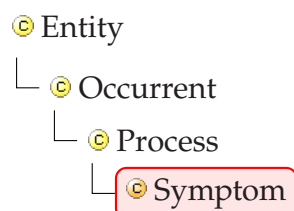
- ▶ Transplantation

11.1.108 Symptom**Definition**

A process experienced by the patient, which can only be experienced by the patient, that is hypothesized to be clinically relevant.

Annotations

- ▶ **Label:** symptom
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000020

Hierarchy**Direct Super Types**

- ▶ Process

Direct Sub Types

- ▶ Pain

Equivalent Classes

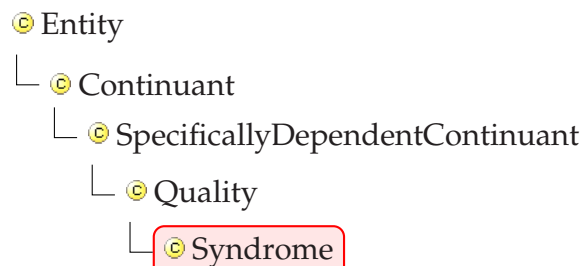
- ▶  SymptomProcess

11.1.109 Syndrome**Definition**

A pattern of signs and symptoms that typically co-occur.

Annotations

- ▶ **Label:** syndrome
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000086

Hierarchy**Direct Super Types**

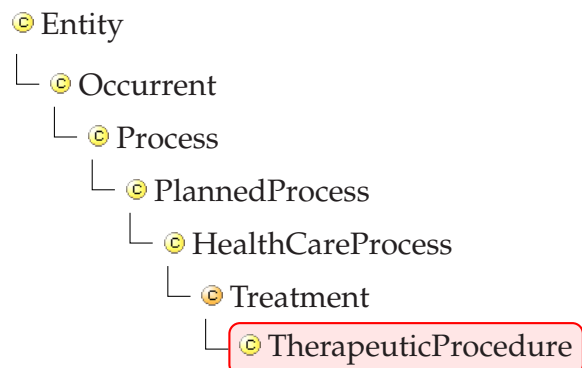
- ▶  Quality

11.1.110 TherapeuticProcedure**Definition**

A treatment whose completion is hypothesized by a health care provider to eliminate a disorder or to alleviate the signs and symptoms of a disorder or pathological process.

Annotations

- ▶ **Label:** therapeutic procedure
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000112

Hierarchy**Direct Super Types**

- Treatment

Direct Sub Types

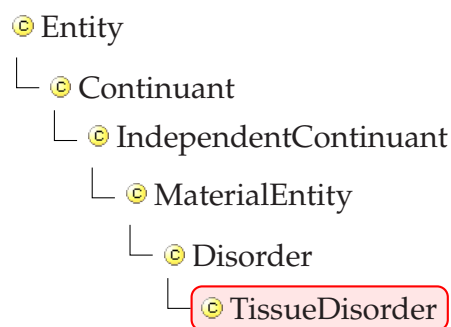
- RadiationTherapyProcedure
- Transplantation
- PhysicalTherapyProcedure
- ChemotherapyProcedure
- ImmunotherapyProcedure

11.1.111 TissueDisorder**Definition**

A disorder of some macroscopic part of a tissue

Annotations

- **Label:** tissue disorder
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000146

Hierarchy

Direct Super Types

-  Disorder

Direct Sub Types

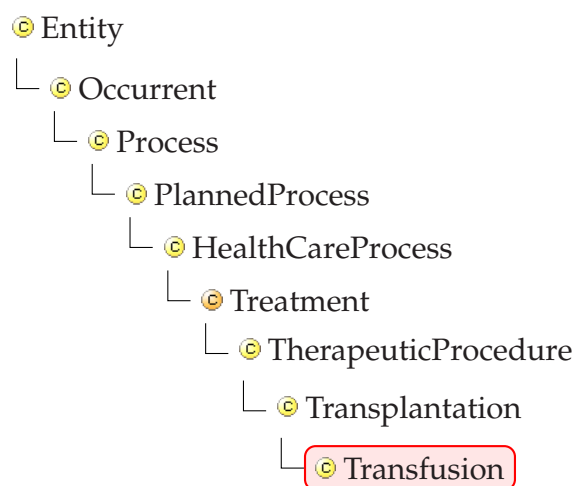
-  Neoplasm

11.1.112 Transfusion**Definition**

A transplantation in which the body part is a bodily fluid

Annotations

- **Label:** transfusion
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000145

Hierarchy**Direct Super Types**

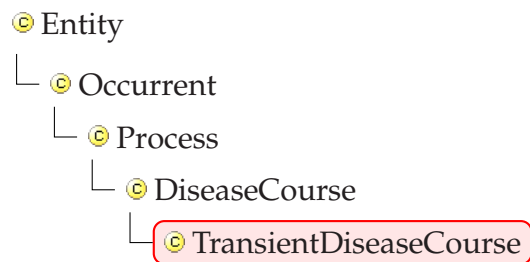
-  Transplantation

11.1.113 TransientDiseaseCourse**Definition**

A disease course that terminates in a return to normal homeostasis.

Annotations

- **Label:** transient disease course
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000066

Hierarchy**Direct Super Types**

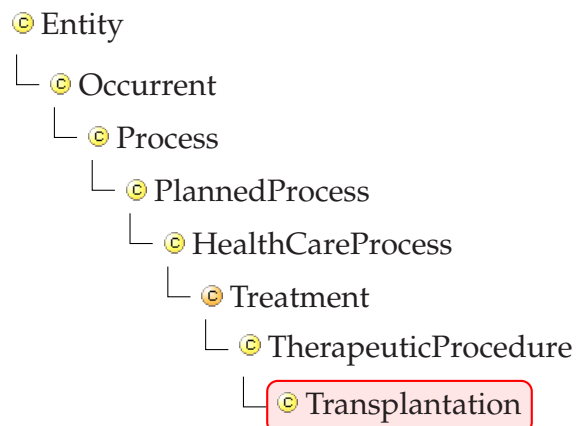
- DiseaseCourse

11.1.114 Transplantation**Definition**

A therapeutic procedure in which a body part is transferred into a organism

Annotations

- **Label:** transplantation
- **ID:** http://purl.obolibrary.org/obo/OGMS_0000143

Hierarchy**Direct Super Types**

- TherapeuticProcedure

Direct Sub Types

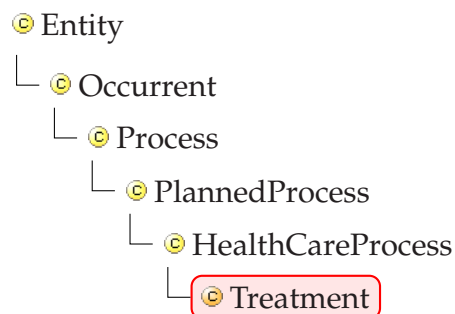
- Transfusion
- SolidOrganTransplant

11.1.115 Treatment**Definition**

A planned process whose completion is hypothesized by a health care provider to eliminate, prevent, or alleviate a disorder, the signs and symptoms of a disorder, or a pathological process

Annotations

- ▶ **Label:** treatment
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000090

Hierarchy**Direct Super Types**

- ▶ HealthCareProcess

Direct Sub Types

- ▶ TherapeuticProcedure
- ▶ ProphylacticTreatment

Equivalent Classes

- ▶ TreatmentProcess

11.1.116 UndefinedPrimitiveTerm**Annotations**

- ▶ **Label:** _undefined primitive term
- ▶ **ID:** http://purl.obolibrary.org/obo/OGMS_0000067

Hierarchy**Direct Super Types**

- Entity

Direct Sub Types

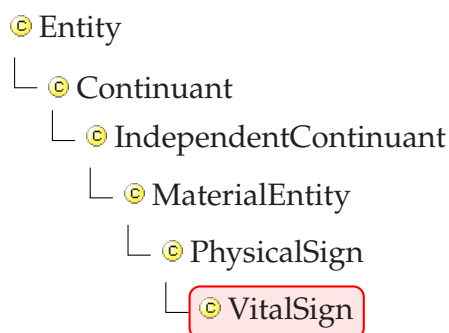
- Realization
- PhysicalBasis
- ClinicallyAbnormal

11.1.117 VitalSign**Definition**

A physical sign in which a non-zero value is standardly considered to be an indication that the organism is alive.

Annotations

- Label:** vital sign
- ID:** http://purl.obolibrary.org/obo/OGMS_0000029

Hierarchy**Direct Super Types**

- PhysicalSign

Infectious Disease Ontology

The Infectious Disease Ontology (IDO) is an ontology of entities generally relevant to both the biomedical and clinical aspects of infectious diseases, including terms such as ‘pathogen’, ‘host’, ‘vector’, and ‘vaccine’.

12.1 Named Classes

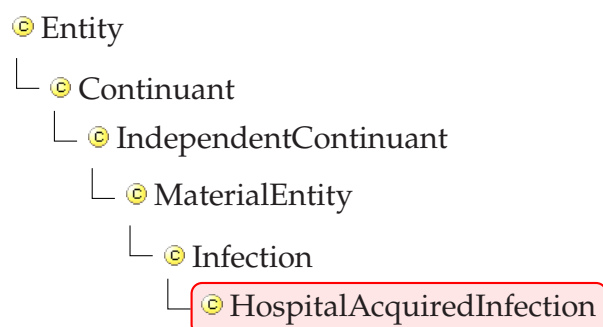
12.1.1 HospitalAcquiredInfection

| Definition |
|--|
| An infection resulting from a transmission process that unfolds in a hospital. |

Annotations

- **Label:** hospital-acquired infection
- **ID:** http://purl.obolibrary.org/obo/IDO_0000630

Hierarchy



Direct Super Types

- Infection

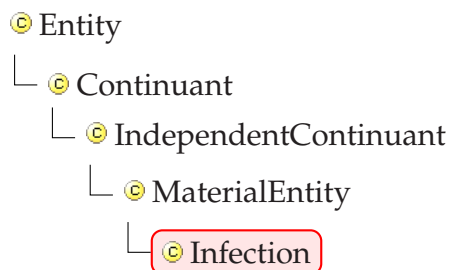
12.1.2 Infection

Definition

A part of an extended organism that itself has as part a population of one or more infectious agents and that (1) exists as a result of processes initiated by members of the infectious agent population and is (2) clinically abnormal in virtue of the presence of this infectious agent population, or (3) has a disposition to bring clinical abnormality to immunocompetent organisms of the same Species as the host (the organism corresponding to the extended organism) through transmission of a member or offspring of a member of the infectious agent population.

Annotations

- ▶ **Label:** infection
- ▶ **ID:** http://purl.obolibrary.org/obo/IDO_0000586

Hierarchy**Direct Super Types**

- ▶ MaterialEntity

Direct Sub Types

- ▶ HospitalAcquiredInfection

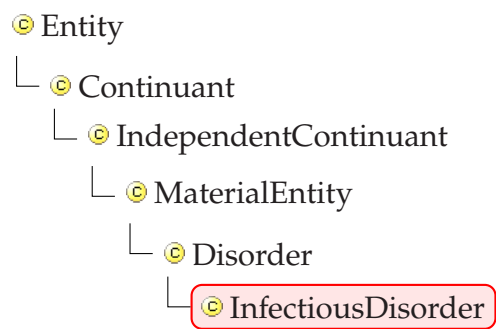
12.1.3 InfectiousDisorder**Definition**

An infection that is clinically abnormal.

Annotations

- ▶ **Label:** infectious disorder
- ▶ **ID:** http://purl.obolibrary.org/obo/IDO_0000504

Hierarchy



Direct Super Types

- Disorder

Ontology of Biomedical Investigations

The OBI is an ontology for representing biomedical investigations, including study designs, the collection and preparation of the targets of investigation, assays, instrumentation and reagents used, as well as the data generated and the types of analysis performed on the data to reach conclusions, and their documentation.

13.1 Named Classes

13.1.1 DiseaseStage

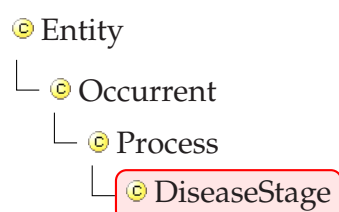
Definition

a part of an occurrence of a disease process which is associated with position in the normal progression of the disease

Annotations

- ▶ **Label:** disease stage
- ▶ **ID:** http://purl.obolibrary.org/obo/OBI_0000278

Hierarchy



Direct Super Types

- ▶ Process

Direct Sub Types

- ▶ Onset
- ▶ ProgressionStage
- ▶ Asymptomatic

- ▶  Relapse
- ▶  Remission

13.1.2 PlannedProcess

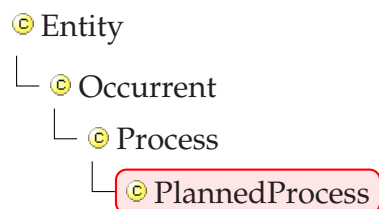
Definition

A process that realizes a plan which is the concretization of a plan specification.

Annotations

- ▶ **Label:** planned process
- ▶ **ID:** http://purl.obolibrary.org/obo/OBI_0000011

Hierarchy



Direct Super Types

- ▶  Process

Direct Sub Types

- ▶  AncillaryHealthCareProcess
- ▶  DiseaseProphylaxis
- ▶  HealthCareProcess

Mental Functioning Ontology

The Mental Functioning Ontology (MFO) is an overarching ontology for all aspects of mental functioning, founded on the BFO and related to the OGMS.

14.1 Named Classes

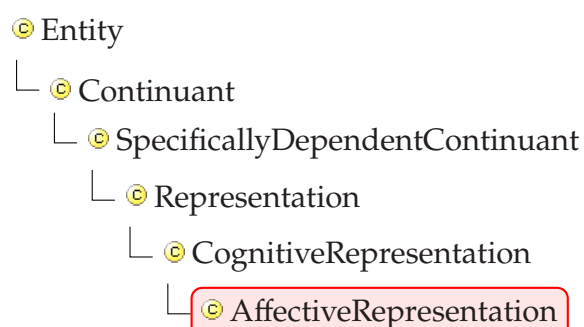
14.1.1 AffectiveRepresentation

| Definition |
|---|
| A cognitive representation sustained by an organism about its own emotions. |

Annotations

- **Label:** affective representation
- **ID:** http://purl.obolibrary.org/obo/MF_0000039

Hierarchy



Direct Super Types

- CognitiveRepresentation

14.1.2 Agreeableness

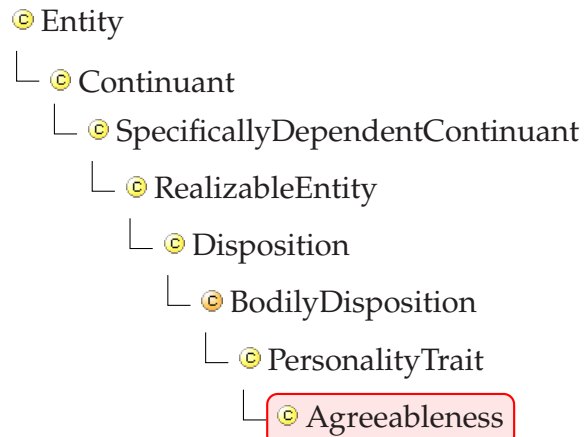
| Definition |
|--|
| A personality trait manifesting itself in individual behavioral characteristics that are |

perceived as kind, sympathetic, cooperative, warm, and considerate.

Annotations

- ▶ **Label:** agreeableness
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000022

Hierarchy



Direct Super Types

- ▶ PersonalityTrait

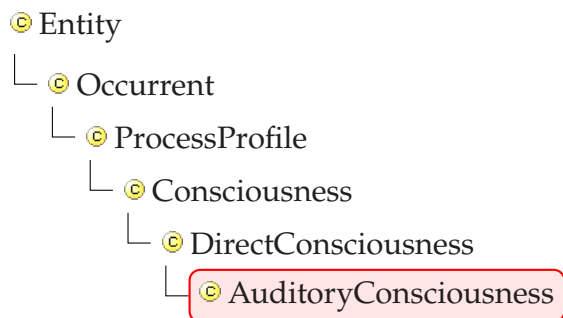
14.1.3 AuditoryConsciousness

Definition

Auditory consciousness is consciousness of an auditory stimulus, as a part of a conscious process of hearing.

Annotations

- ▶ **Label:** auditory consciousness
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000035

Hierarchy**Direct Super Types**

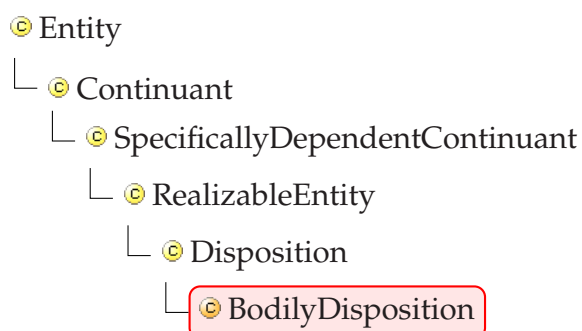
- DirectConsciousness

14.1.4 BodilyDisposition**Definition**

A bodily disposition is a disposition that inheres in some extended organism. Examples are: my disposition to catch a cold when exposed to a virus, my ability to speak the English language.






Annotations

- **Label:** bodily disposition
- **ID:** http://purl.obolibrary.org/obo/MF_0000032

Hierarchy**Direct Super Types**

- Disposition

Direct Sub Types

- ▶  Personality
- ▶  PersonalityTrait
- ▶  Capability
- ▶  EmotionalActionTendency
- ▶  MentalDisposition

Equivalent Classes

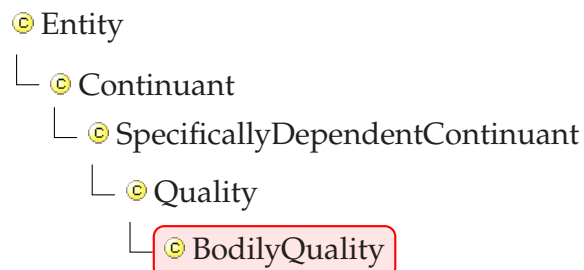
- ▶  inheresInAtAllTimes ExtendedOrganism

14.1.5 BodilyQuality**Definition**

A bodily quality is a quality that inheres in some extended organism.

Annotations

- ▶ **Label:** bodily quality
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000074

Hierarchy**Direct Super Types**

- ▶  Quality

Direct Sub Types

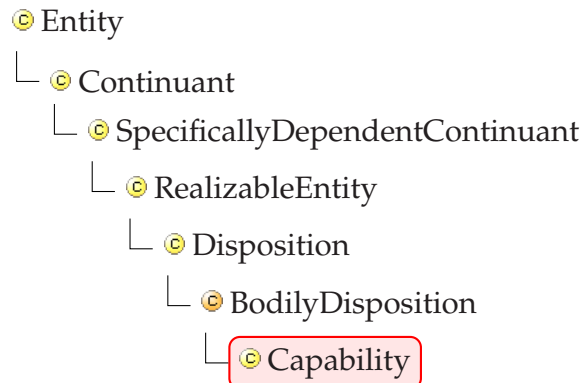
- ▶  MentalQuality

14.1.6 Capability**Definition**

A bodily disposition whose realization ordinarily brings benefits to an organism or group of organisms, where "ordinarily" means within a typical range or context.

Annotations

- ▶ **Label:** capability
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000043

Hierarchy**Direct Super Types**

- ▶ BodilyDisposition

Direct Sub Types

- ▶ MentalCapability
- ▶ MusicalCapability

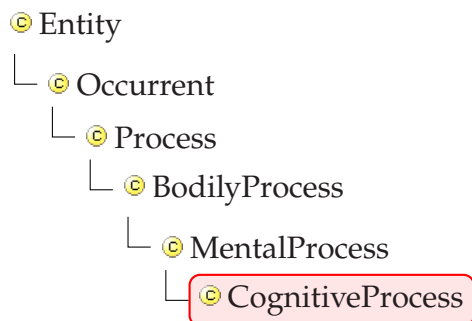
14.1.7 CognitiveProcess**Definition**

A mental process that creates, modifies or has as participant some cognitive representation.

Annotations

- ▶ **Label:** cognitive process
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000008

Hierarchy



Direct Super Types

- ▶ MentalProcess
- ▶ hasParticipantAtAllTimes CognitiveRepresentation

Direct Sub Types

- ▶ MentalCalculation
- ▶ MentalCounting
- ▶ EpistemicProcess

14.1.8 CognitiveRepresentation

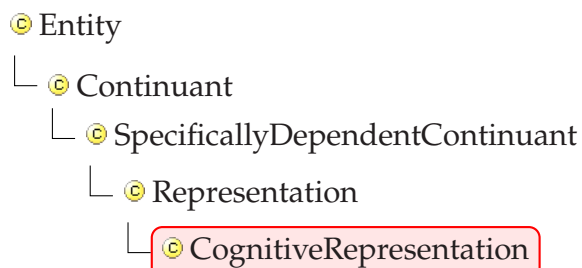
Definition

A representation which specifically depends on an anatomical structure in the cognitive system of an organism.

Annotations

- ▶ **Label:** cognitive representation
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000031

Hierarchy



Direct Super Types

-  Representation
-  MentalRepresentation

Direct Sub Types

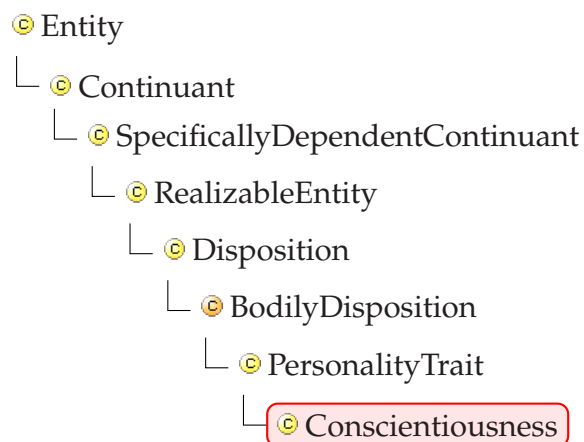
-  AffectiveRepresentation
-  Appraisal

14.1.9 Conscientiousness**Definition**

A personality trait manifesting itself in individual behavioral characteristics that are perceived as careful, self-disciplined, dependable, vigilant, dutiful, and goal-oriented.

Annotations

- **Label:** conscientiousness
- **ID:** http://purl.obolibrary.org/obo/MF_0000028

Hierarchy**Direct Super Types**

-  PersonalityTrait

14.1.10 Consciousness**Definition**

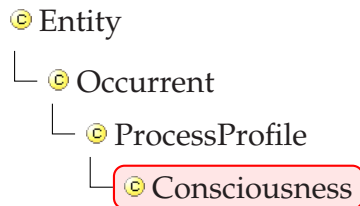
Consciousness is an inseparable part of all mental processes. It is that part of the mental process that: a) confers a subjective perspective, a phenomenology, an experience of the mental process of which it is a part; and b) intends the object or event that the mental

process is about, should such exist; i.e., it confers intentionality on the mental process.

Annotations

- ▶ **Label:** consciousness
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000017

Hierarchy



Direct Super Types

- ▶ ProcessProfile
- ▶ realizes IntentionalModality
- ▶ occurrentPartOf (MentalProcess Consciousness)
- ▶ hasParticipantAtAllTimes Intentionality

Direct Sub Types

- ▶ HigherOrderConsciousness
- ▶ DirectConsciousness

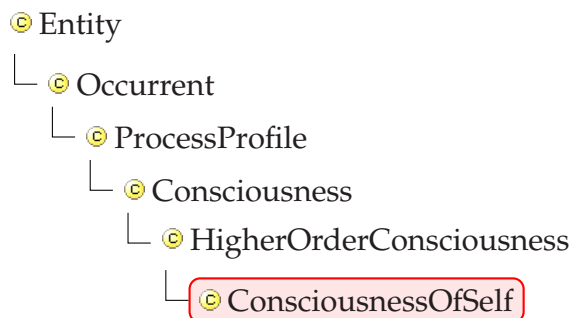
14.1.11 ConsciousnessOfSelf

Definition

Consciousness of self is the higher order consciousness that reflexively includes the awareness that the organism that is the subject of the conscious experience exists.

Annotations

- ▶ **Label:** consciousness of self
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000067

Hierarchy**Direct Super Types**

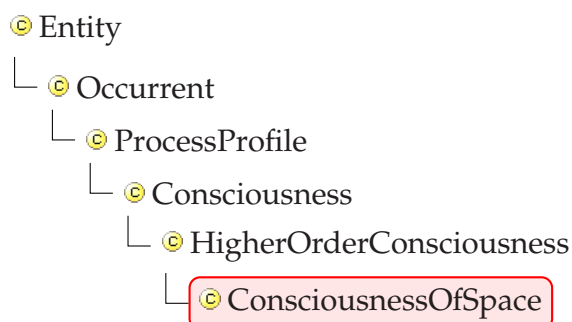
- HigherOrderConsciousness

14.1.12 ConsciousnessOfSpace**Definition**

The subjective experience of the spatial surroundings one inhabits as an embodied entity.

Annotations

- **Label:** consciousness of space
- **ID:** http://purl.obolibrary.org/obo/MF_0000077

Hierarchy**Direct Super Types**

- HigherOrderConsciousness

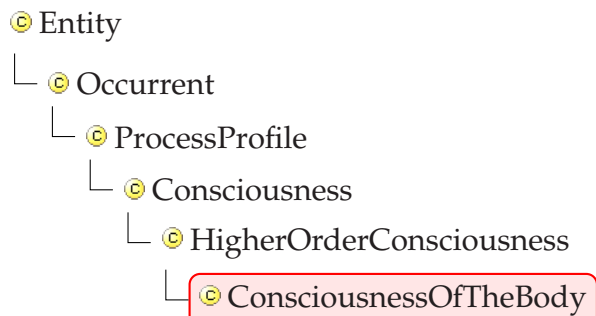
14.1.13 ConsciousnessOfTheBody**Definition**

The subjective experience of being an embodied entity.

Annotations

- **Label:** consciousness of the body
- **ID:** http://purl.obolibrary.org/obo/MF_0000078

Hierarchy



Direct Super Types

- HigherOrderConsciousness

14.1.14 ConsciousnessOfTime

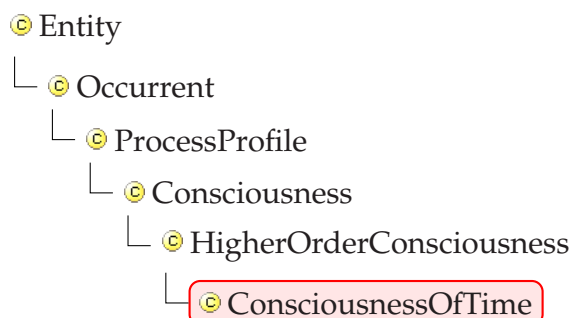
Definition

The subjective experience of time as a coherent process inhabited by oneself as an embodied thinking being

Annotations

- **Label:** consciousness of time
- **ID:** http://purl.obolibrary.org/obo/MF_0000072

Hierarchy



Direct Super Types

-  HigherOrderConsciousness

14.1.15 DirectConsciousness

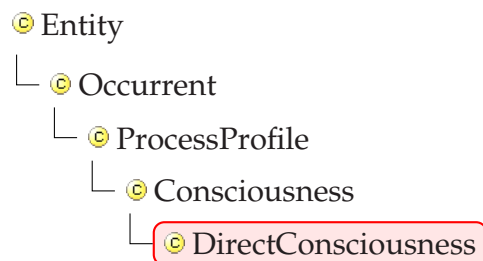
Definition

Direct consciousness is consciousness of phenomenal experience, it is the given experience in consciousness of (for example) sounds, tastes, emotions and bodily feelings.

Annotations

- **Label:** direct consciousness
- **ID:** http://purl.obolibrary.org/obo/MF_0000037





Hierarchy



Direct Super Types

-  Consciousness

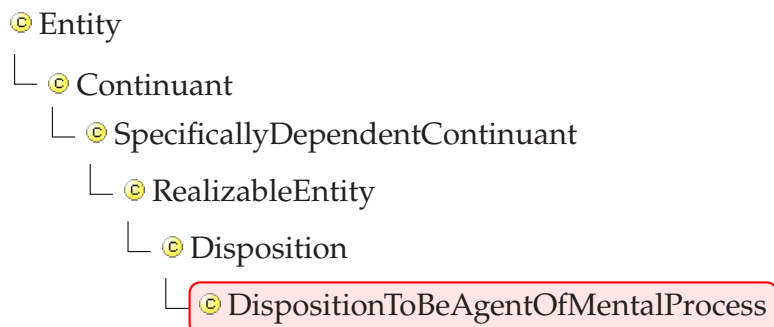
Direct Sub Types

-  TactileConsciousness
-  OlfactoryConsciousness
-  VisualConsciousness
-  AuditoryConsciousness

14.1.16 DispositionToBeAgentOfMentalProcess

Annotations

- **Label:** disposition to be agent of mental process
- **ID:** http://purl.obolibrary.org/obo/MF_0000001

Hierarchy**Direct Super Types**

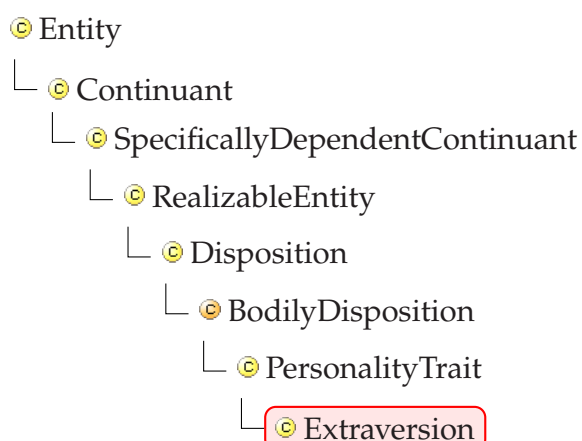
- ▶ Disposition
- ▶ dispositionOfAtAllTimes MentalFunctioningRelatedAnatomicalStructure

14.1.17 Extraversion**Definition**

A personality trait manifesting itself in individual behavioral characteristics that are perceived as positive, assertive, social, and outgoing.

Annotations

- ▶ **Label:** extraversion
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000063

Hierarchy**Direct Super Types**

- ▶ PersonalityTrait

14.1.18 HigherOrderConsciousness

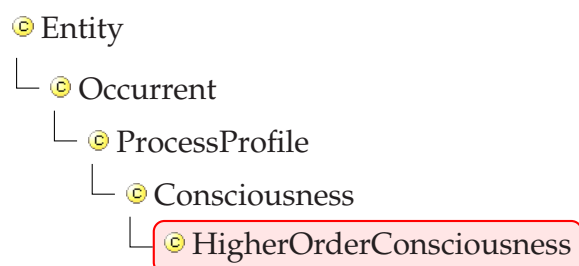
Definition

Higher order consciousness is consciousness of one's own mental states, a self-reflexive consciousness of the experience of being conscious, of having mental processes ongoing.

Annotations

- ▶ **Label:** higher order consciousness
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000101

Hierarchy



Direct Super Types

- ▶ Consciousness

Direct Sub Types

- ▶ ConsciousnessOfTheBody
- ▶ Intersubjectivity
- ▶ ConsciousnessOfSpace
- ▶ ConsciousnessOfSelf
- ▶ ConsciousnessOfTime

14.1.19 HumanBeing

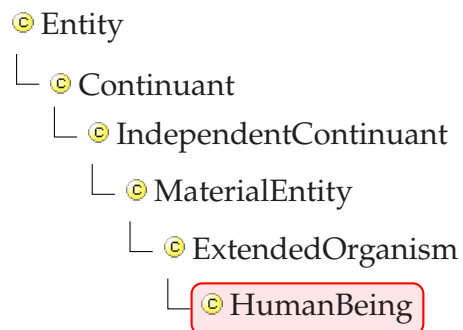
Definition

An extended organism that is a member of the species *Homo sapiens*.

Annotations

- ▶ **Label:** human being
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000016

Hierarchy



Direct Super Types

- ▶ ExtendedOrganism

Direct Sub Types

- ▶ HumanPatient

14.1.20 Intelligence

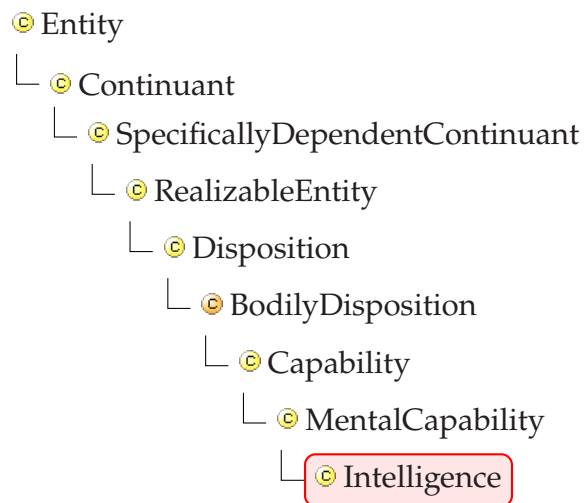
Definition

A mental capability realised in processes involving understanding complex ideas, adapting effectively to the environment, learning from experience, engaging in various forms of reasoning, and overcome obstacles through the outcome of thinking processes.

Annotations

- ▶ **Label:** intelligence
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000025

Hierarchy



Direct Super Types

- MentalCapability

14.1.21 Intentionality

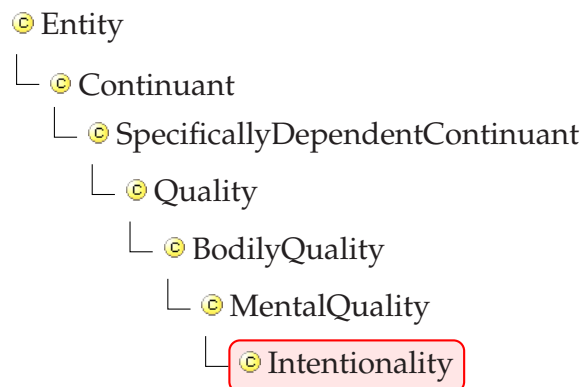
Definition

Intentionality is the fundamental quality of conscious mental processes of always having content, of being directed towards, or about something.

Annotations

- **Label:** intentionality
- **ID:** http://purl.obolibrary.org/obo/MF_0000073

Hierarchy



Direct Super Types

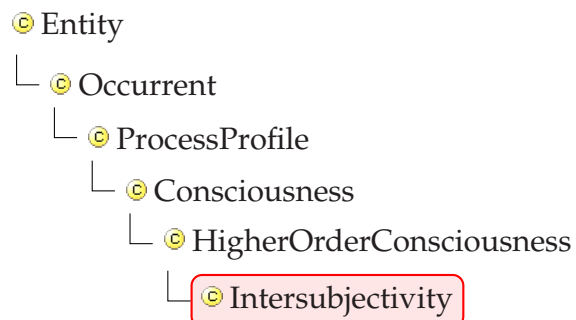
-  MentalQuality

14.1.22 Intersubjectivity**Definition**

The subjective experience of other beings as self-aware entities.

Annotations

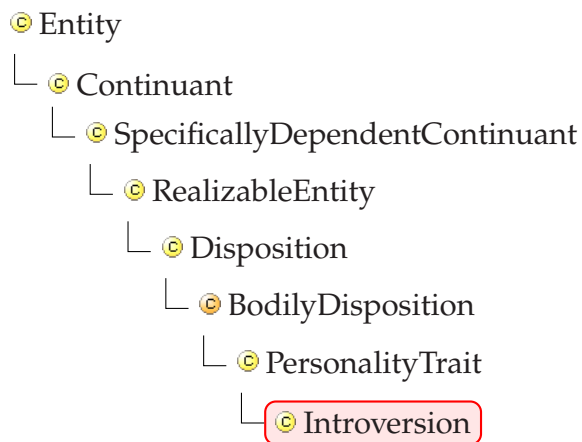
- **Label:** intersubjectivity
- **ID:** http://purl.obolibrary.org/obo/MF_0000079

Hierarchy**Direct Super Types**

-  HigherOrderConsciousness

14.1.23 Introversion**Annotations**

- **Label:** introversion
- **ID:** http://purl.obolibrary.org/obo/MF_0000026

Hierarchy**Direct Super Types**

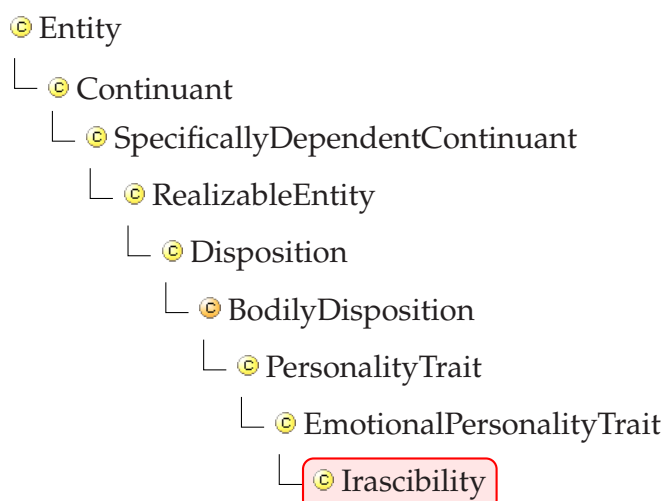
- PersonalityTrait

14.1.24 Irascibility**Definition**

A mental disposition to frequent or easily incited outbursts of anger.

Annotations

- **Label:** irascibility
- **ID:** http://purl.obolibrary.org/obo/MF_0000029

Hierarchy

Direct Super Types

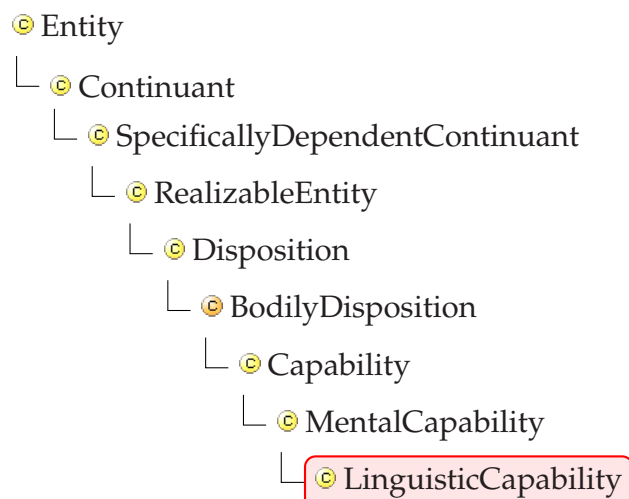
- ▶  PersonalityTrait
- ▶  EmotionalPersonalityTrait

14.1.25 LinguisticCapability**Definition**

A mental capability that is realised in processes of communication involving language or in expressions of language.

Annotations

- ▶ **Label:** linguistic capability
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000050

Hierarchy**Direct Super Types**

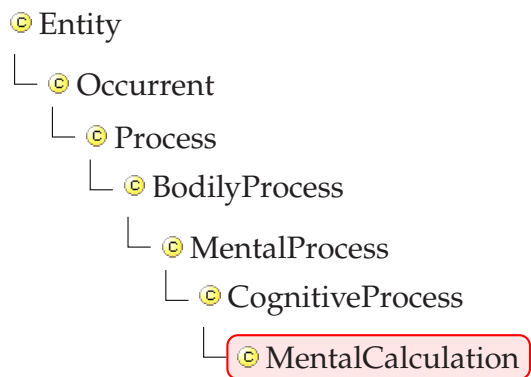
- ▶  MentalCapability

14.1.26 MentalCalculation**Definition**

A cognitive process that involves the manipulation of mental representations of numeric entities in order to compute the outcome of a mathematical function.

Annotations

- ▶ **Label:** mental calculation
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000005

Hierarchy**Direct Super Types**

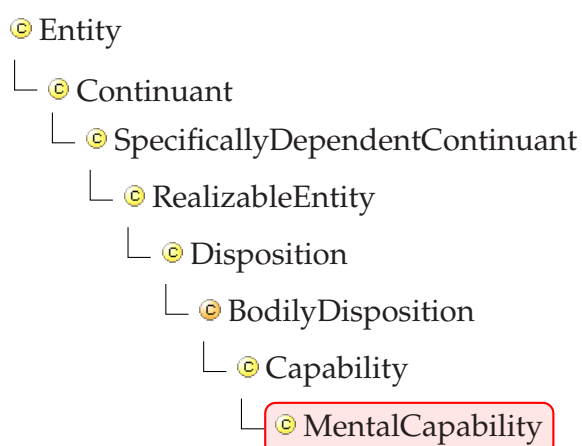
- CognitiveProcess

14.1.27 MentalCapability**Definition**

A personal capability that includes mental processes in its realisation.

Annotations

- **Label:** mental capability
- **ID:** http://purl.obolibrary.org/obo/MF_0000048

Hierarchy**Direct Super Types**

- Capability

Direct Sub Types

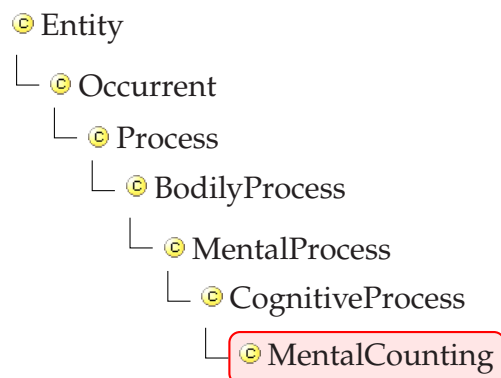
- ▶  LinguisticCapability
- ▶  Intelligence

14.1.28 MentalCounting**Definition**

A cognitive process that involves the mental representation of sequential numbers.

Annotations

- ▶ **Label:** mental counting
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000004

Hierarchy**Direct Super Types**

- ▶  CognitiveProcess

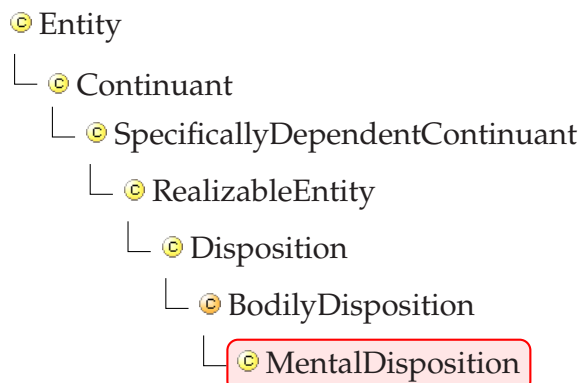
14.1.29 MentalDisposition**Definition**

A mental disposition is a bodily disposition that is realized in a mental process.

Annotations

- ▶ **Label:** mental disposition
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000033

Hierarchy



Direct Super Types

- ▶ BodilyDisposition
- ▶ hasRealization MentalProcess

14.1.30 MentalFunctioningRelatedAnatomicalStructure

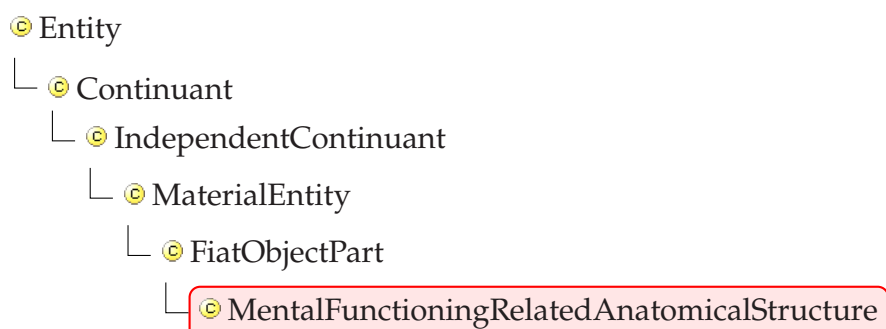
Definition

An anatomical structure in which there inheres the disposition to be the agent of a mental process.

Annotations

- ▶ **Label:** mental functioning related anatomical structure
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000000

Hierarchy



Direct Super Types

- ▶ FiatObjectPart
- ▶ hasDispositionAtSomeTime DispositionToBeAgentOfMentalProcess

14.1.31 MentalProcess

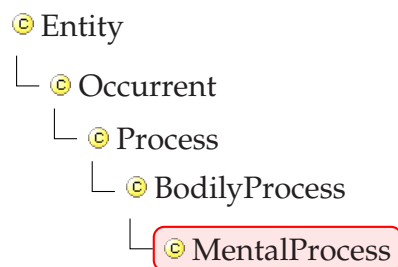
Definition

A bodily process that occurs in the brain, and that can of itself be conscious, or can give rise to a process that can of itself be conscious or can give rise to behaviour.

Annotations

- ▶ **Label:** mental process
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000020

Hierarchy



Direct Super Types

- ▶ BodilyProcess
- ▶ realizes MentalDisposition
- ▶ hasOccurrentPart Consciousness

Direct Sub Types

- ▶ CognitiveProcess
- ▶ Wanting
- ▶ AppraisalProcess
- ▶ AffectiveProcess

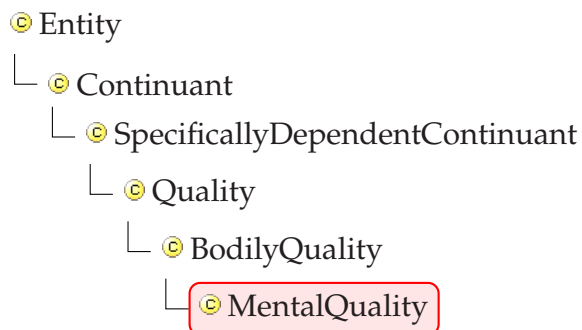
14.1.32 MentalQuality

Definition

A mental quality is a bodily quality that inheres in those structures of the extended organism that are essential for mental functioning.

Annotations

- ▶ **Label:** mental quality
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000075

Hierarchy**Direct Super Types**

- ▶ BodilyQuality

Direct Sub Types

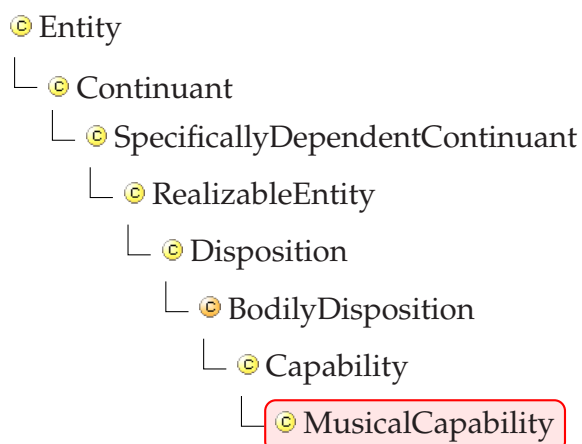
- ▶ Intentionality
- ▶ MentalRepresentation
- ▶ SubjectiveImportance
- ▶ SubjectiveLikelihood

14.1.33 MusicalCapability**Definition**

A capability that is realised in an activity of producing or interpreting music.

Annotations

- ▶ **Label:** musical capability
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000044

Hierarchy

Direct Super Types

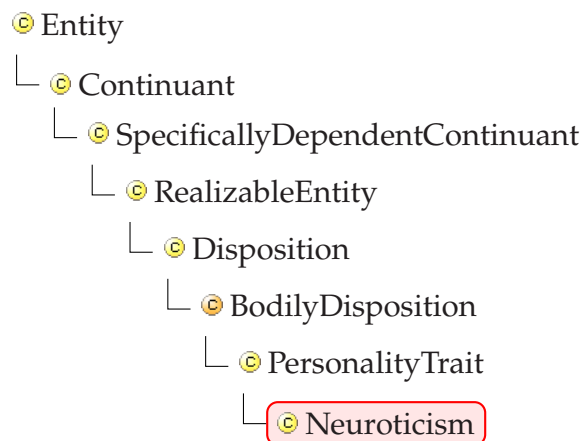
- ▶  Capability

14.1.34 Neuroticism**Definition**

A personality trait manifesting itself in individual behavioral characteristics that are perceived as angry, anxious, depressed, unstable, and vulnerable.

Annotations

- ▶ **Label:** neuroticism
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000064

Hierarchy**Direct Super Types**

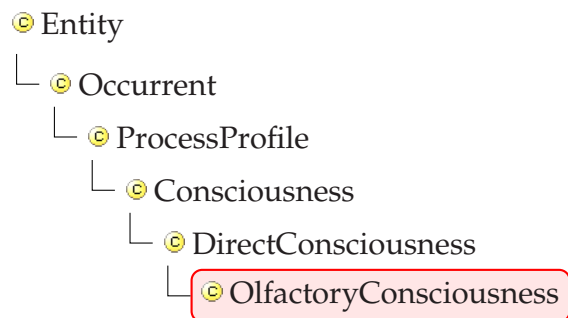
- ▶  PersonalityTrait

14.1.35 OlfactoryConsciousness**Definition**

Olfactory consciousness is consciousness of an olfactory stimulus (scent), as experienced through the olfactory sensory medium as a part of a process of smelling.

Annotations

- ▶ **Label:** olfactory consciousness
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000066

Hierarchy**Direct Super Types**

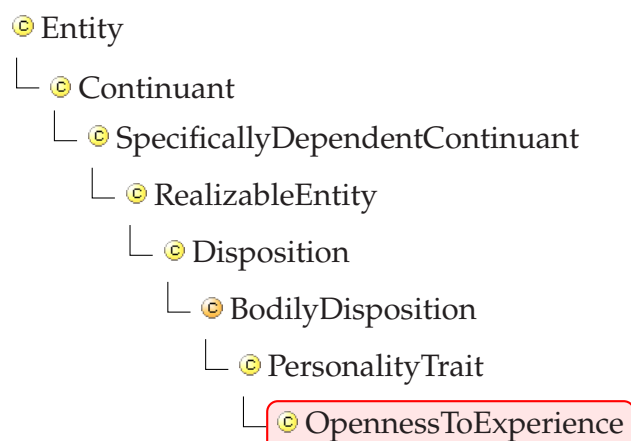
- DirectConsciousness

14.1.36 OpennessToExperience**Definition**

A personality trait manifesting itself in individual behavioral characteristics that are perceived as revealing, curiosity, an appreciation of novelty and variety of experiences and ideas, invention, and unpredictability.

Annotations

- **Label:** openness to experience
- **ID:** http://purl.obolibrary.org/obo/MF_0000065

Hierarchy**Direct Super Types**

- PersonalityTrait

14.1.37 Personality

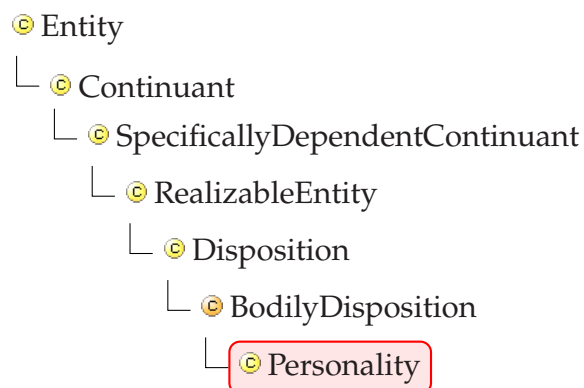
Definition

A personality is a complex sum of dispositions and predispositions towards mental processes and behaviour. It inheres in a person.

Annotations

- ▶ **Label:** personality
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000202

Hierarchy



Direct Super Types

- ▶ BodilyDisposition

14.1.38 PersonalityTrait

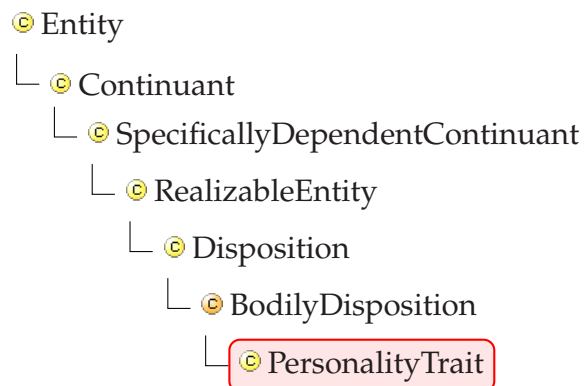
Definition

A personality trait is an individual disposition or predisposition that forms part of an overall personality and is realized in repeated occurrences of a specific mental process type or behavioural profile.

Annotations

- ▶ **Label:** personality trait
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000203

Hierarchy



Direct Super Types

- ▶ BodilyDisposition
- ▶ continuantPartOf Personality

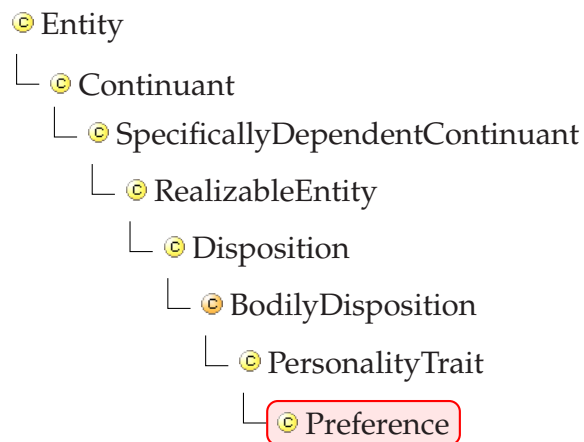
Direct Sub Types

- ▶ Extraversion
- ▶ Preference
- ▶ OpennessToExperience
- ▶ Neuroticism
- ▶ Irrascibility
- ▶ Agreeableness
- ▶ EmotionalPersonalityTrait
- ▶ Conscientiousness
- ▶ Introversion

14.1.39 Preference

Annotations

- ▶ **Label:** preference
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000042

Hierarchy**Direct Super Types**

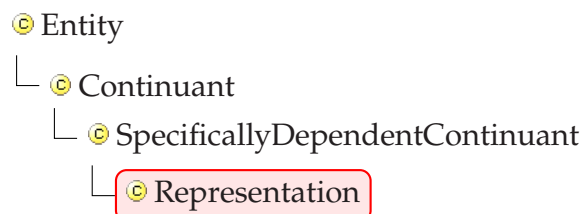
- PersonalityTrait

14.1.40 Representation**Definition**

A dependent continuant which is about a portion of reality.

Annotations

- **Label:** representation
- **ID:** http://purl.obolibrary.org/obo/MF_0000030

Hierarchy**Direct Super Types**

- SpecificallyDependentContinuant

Direct Sub Types

- CognitiveRepresentation
- MentalRepresentation

14.1.41 SubliminalProcess

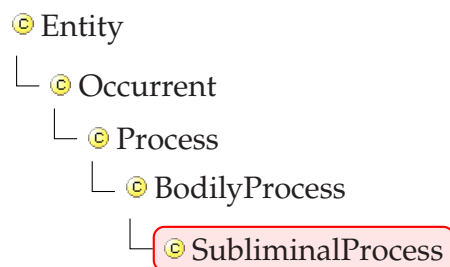
Definition

A mental process that involves neuronal activity in response to a sensory stimuli but which is not the subject of consciousness.

Annotations

- ▶ **Label:** subliminal process
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000088

Hierarchy



Direct Super Types

- ▶ BodilyProcess

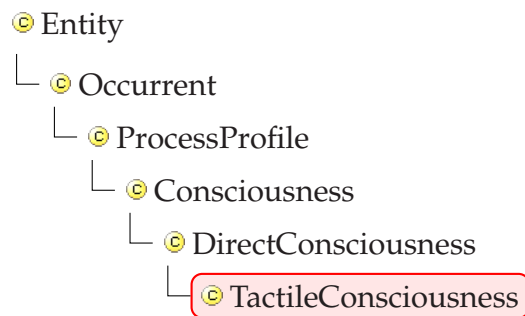
14.1.42 TactileConsciousness

Definition

Tactile consciousness is consciousness that is experienced in the tactile sensory medium, through the sensory medium of touch and pressure sensation.

Annotations

- ▶ **Label:** tactile consciousness
- ▶ **ID:** http://purl.obolibrary.org/obo/MF_0000036

Hierarchy**Direct Super Types**

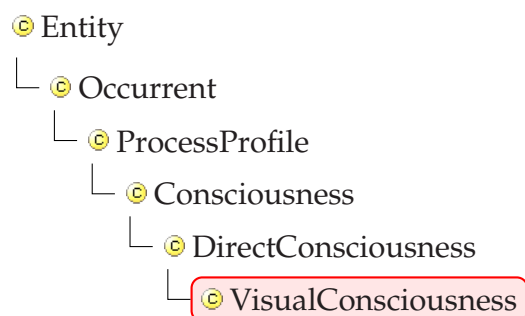
- DirectConsciousness

14.1.43 VisualConsciousness**Definition**

Visual consciousness is consciousness of a visual stimulus, as experienced through the visual sensory medium as a part of a process of seeing.

Annotations

- **Label:** visual consciousness
- **ID:** http://purl.obolibrary.org/obo/MF_0000034

Hierarchy**Direct Super Types**

- DirectConsciousness

14.1.44 Wanting**Definition**

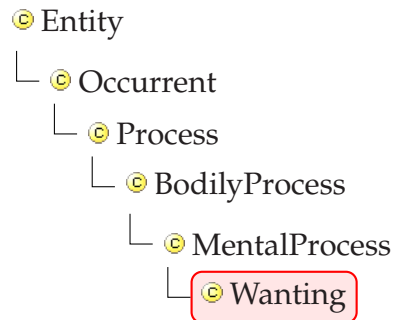
A mental process that involves thinking about a state of affairs that is not yet the case

together with a desire for that state of affairs to come about.

Annotations

- **Label:** wanting
- **ID:** http://purl.obolibrary.org/obo/MF_0000045

Hierarchy



Direct Super Types

- MentalProcess

Emotion Ontology

The Emotion Ontology is an ontology for affective phenomena such as emotions and moods. It builds on the MFO and the BFO.

15.1 Named Classes

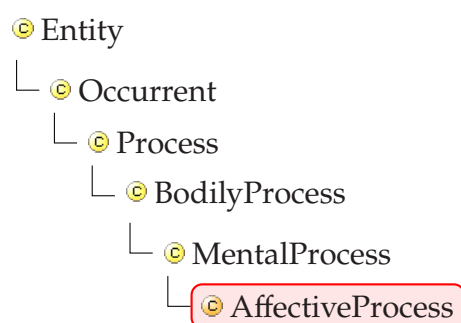
15.1.1 AffectiveProcess

| Definition |
|---|
| A mental process that has positive or negative valence. |

Annotations

- ▶ **Label:** affective process
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000195

Hierarchy





Direct Super Types

- ▶ MentalProcess

Direct Sub Types

- ▶ MoodProcess
- ▶ SubjectiveAffectiveFeeling
- ▶ EmotionProcess
- ▶ BurdenProcess

Equivalent Classes

- (MentalProcess   (processProfileOf Valence)

15.1.2 AnxiousMood

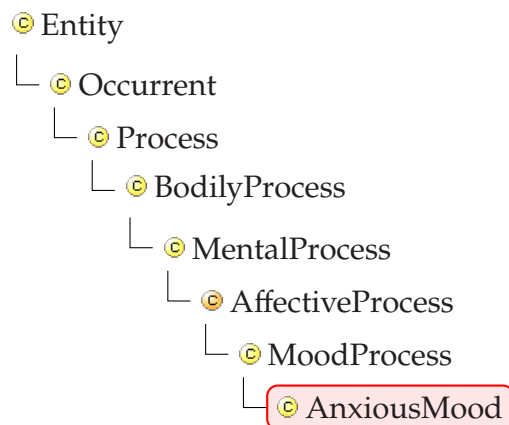
Definition

A mood process that is a generalised feeling of fearfulness and gives rise to a heightened disposition to experience anxiety, fear and other negatively valenced emotions.



Annotations

- **Label:** anxious mood
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000196

Hierarchy



Direct Super Types

-  MoodProcess
-  hasOccurrentPart NegativeValence

15.1.3 Appraisal

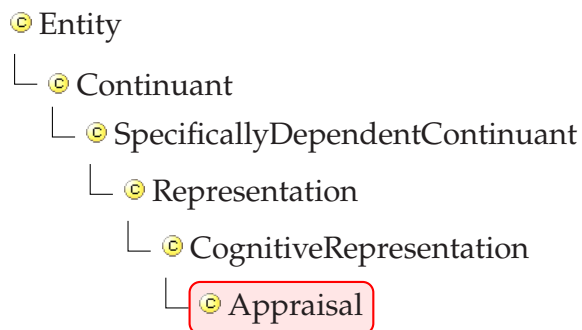
Definition

A cognitive representation of the emotional relevance of an object or event to the organism.

Annotations

- **Label:** appraisal
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000005

Hierarchy



Direct Super Types

- ▶ CognitiveRepresentation
- ▶ isoutputof AppraisalProcess

Direct Sub Types

- ▶ AppraisalOfGoalImportance
- ▶ AppraisalOfLoss
- ▶ AppraisalOfPleasantness
- ▶ AppraisalOfPredictability
- ▶ AppraisalOfExpectedness
- ▶ AppraisalOfBurden
- ▶ AppraisalOfBurdenObject
- ▶ AppraisalOfBurdensomeness

15.1.4 AppraisalAsExpected

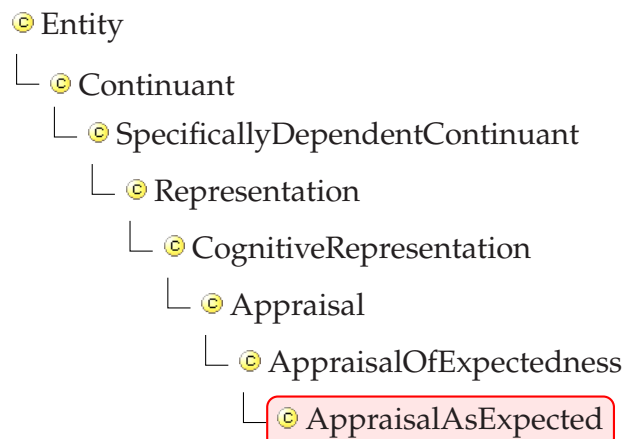
Definition

An appraisal that represents an evaluation that an event was expected.

Annotations

- ▶ **Label:** appraisal as expected
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000068

Hierarchy



Direct Super Types

- AppraisalOfExpectedness

15.1.5 AppraisalAsNotExpected

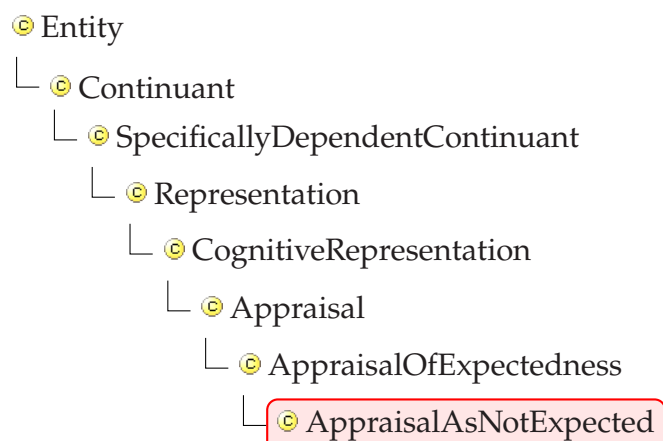
Definition

An appraisal that represents an evaluation that an event was not expected.

Annotations

- **Label:** appraisal as not expected
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000069

Hierarchy



Direct Super Types

- AppraisalOfExpectedness

15.1.6 AppraisalAsNotPredictable

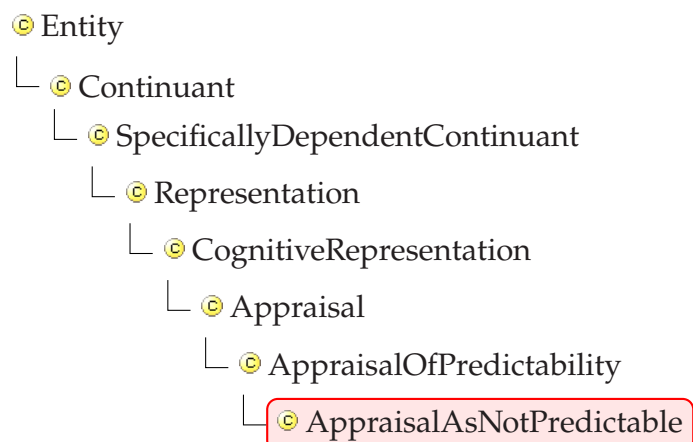
Definition

An appraisal that represents an evaluation that an event was not easy to predict.

Annotations

- ▶ **Label:** appraisal as not predictable
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000067

Hierarchy



Direct Super Types

- ▶ AppraisalOfPredictability

15.1.7 AppraisalAsPleasant

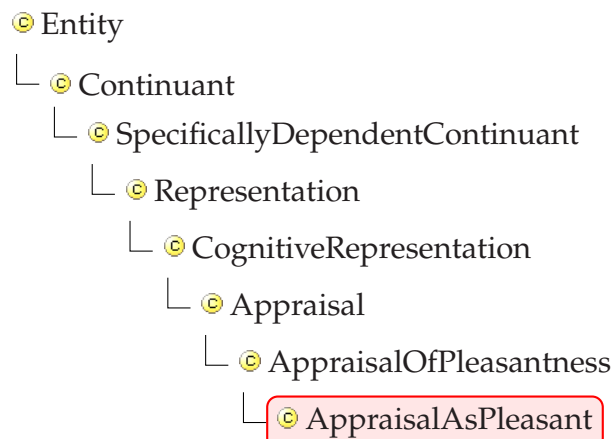
Definition

An appraisal that represents an evaluation that an object or event is pleasant.

Annotations

- ▶ **Label:** appraisal as pleasant
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000070

Hierarchy



Direct Super Types

- AppraisalOfPleasantness

15.1.8 AppraisalAsPredictable

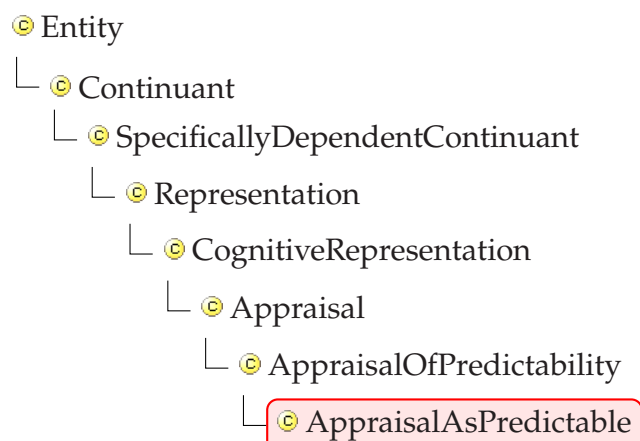
Definition

An appraisal that represents an evaluation that an event was easy to predict.

Annotations

- **Label:** appraisal as predictable
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000066

Hierarchy



Direct Super Types

- AppraisalOfPredictability

15.1.9 AppraisalAsUnpleasant

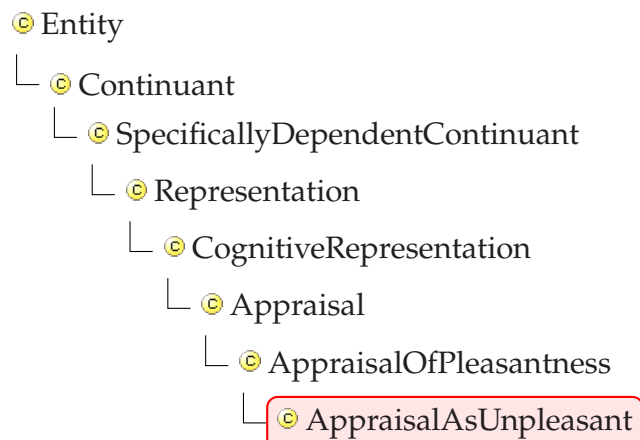
Definition

An appraisal that represents an evaluation that an object or event is unpleasant.

Annotations

- ▶ **Label:** appraisal as unpleasant
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000071

Hierarchy



Direct Super Types

- ▶ AppraisalOfPleasantness

15.1.10 AppraisalOfExpectedness

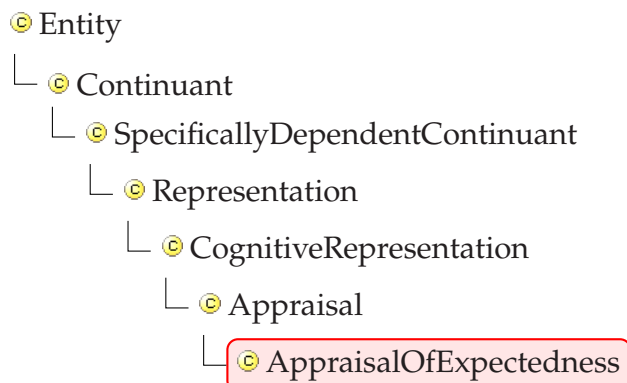
Definition

An appraisal that represents an evaluation of whether an event was expected to occur.

Annotations

- ▶ **Label:** appraisal of expectedness
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000060

Hierarchy



Direct Super Types

- Appraisal

Direct Sub Types

- AppraisalAsNotExpected
- AppraisalAsExpected

15.1.11 AppraisalOfGoalImportance

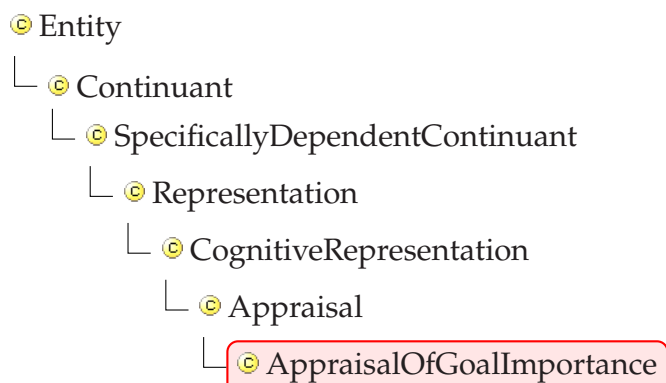
Definition

An appraisal that represents an evaluation of whether an event or object is important to the person's goals or needs.

Annotations

- **Label:** appraisal of goal importance
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000072

Hierarchy



Direct Super Types

-  Appraisal

Direct Sub Types

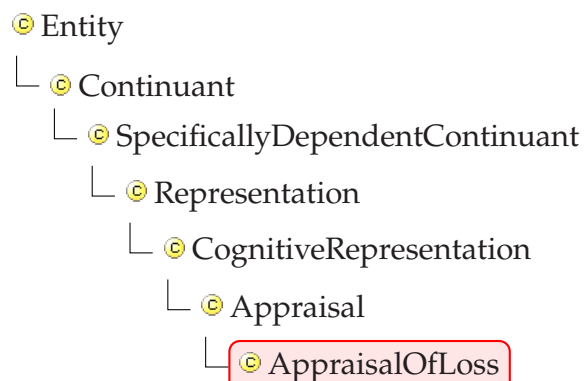
-  EvaluationAsNotImportantToGoals
-  EvaluationAsImportantToGoals

15.1.12 AppraisalOfLoss**Definition**

An appraisal that represents a belief that something or someone that is important to the person has been lost to the person.

Annotations

- **Label:** appraisal of loss
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000106

Hierarchy**Direct Super Types**

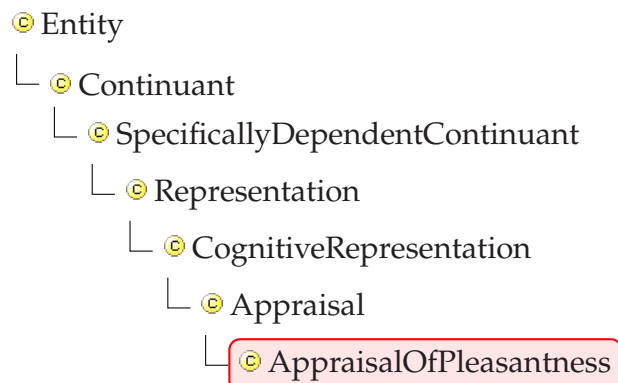
-  Appraisal

15.1.13 AppraisalOfPleasantness**Definition**

An appraisal that represents an evaluation of the pleasantness of an object or event.

Annotations

- **Label:** appraisal of pleasantness
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000061

Hierarchy**Direct Super Types**

- ((Appraisal))

Direct Sub Types

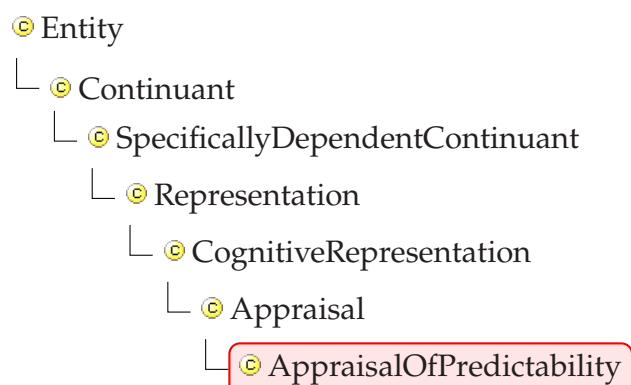
- ((AppraisalAsUnpleasant))
- ((AppraisalAsPleasant))

15.1.14 AppraisalOfPredictability**Definition**

An appraisal that represents an evaluation of how predictable an event was.

Annotations



- **Label:** appraisal of predictability
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000059

Hierarchy

Direct Super Types

- ▶  Appraisal

Direct Sub Types

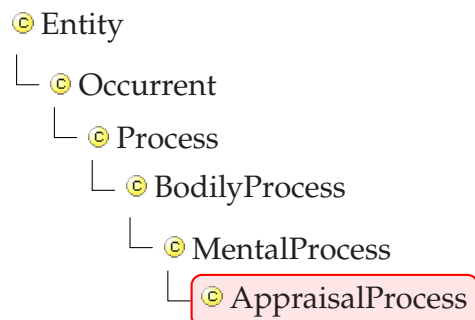
- ▶  AppraisalAsNotPredictable
- ▶  AppraisalAsPredictable

15.1.15 AppraisalProcess**Definition**

A mental process that gives rise to an appraisal.

Annotations

- ▶ **Label:** appraisal process
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000002

Hierarchy**Direct Super Types**

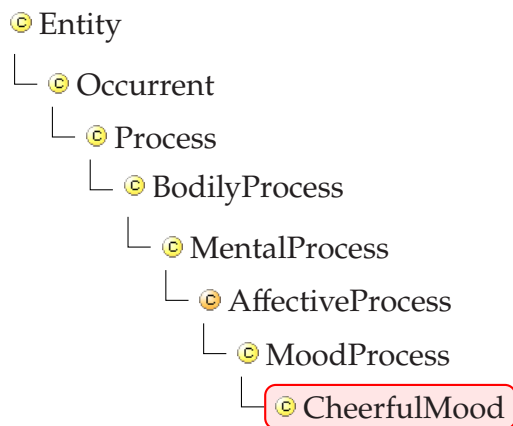
- ▶  MentalProcess
- ▶  occurrentPartOf EmotionProcess

15.1.16 CheerfulMood**Definition**

A mood process that is is a general feeling of well-being and gives rise to a heightened disposition to happiness, amusement and other positively valenced emotions.

Annotations

- ▶ **Label:** cheerful mood
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000198

Hierarchy**Direct Super Types**

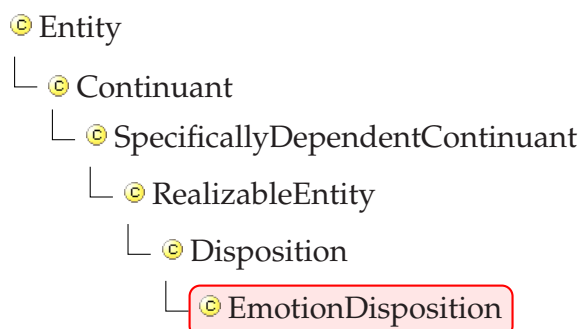
- ▶ **MoodProcess**
- ▶ **hasOccurrentPart PositiveValence**

15.1.17 EmotionDisposition**Definition**

An emotion disposition is a disposition to repeated emotion process individuated by being of the same type and about the same object.

Annotations

- ▶ **Label:** emotion disposition
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000199

Hierarchy**Direct Super Types**

- ▶ **Disposition**

15.1.18 EmotionProcess

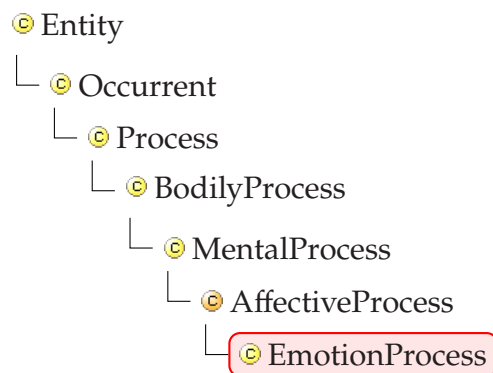
Definition

An affective process that is a synchronized aggregate of constituent mental processes including an appraisal process, which is valenced, has an object, and gives rise to an action tendency.

Annotations

- ▶ **Label:** emotion process
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000001

Hierarchy



Direct Super Types

- ▶ AffectiveProcess
- ▶ hasOccurrentPart AppraisalProcess
- ▶ hasOccurrentPart PhysiologicalProcessInvolvedInAnEmotion
- ▶ hasOccurrentPart EmotionalBehaviouralProcess
- ▶ hasOccurrentPart SubjectiveAffectiveFeeling
- ▶ hasAgent ExtendedOrganism

Direct Sub Types

- ▶ NegativeEmotion
- ▶ PositiveEmotion
- ▶ Stress(Emotion)

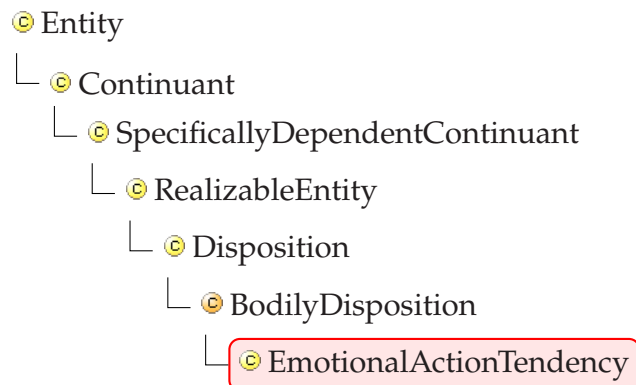
15.1.19 EmotionalActionTendency

Definition

A bodily disposition to behaviour that inheres in an organism by virtue of the physical changes brought about by an emotion process.

Annotations

- ▶ **Label:** emotional action tendency
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000007

Hierarchy**Direct Super Types**

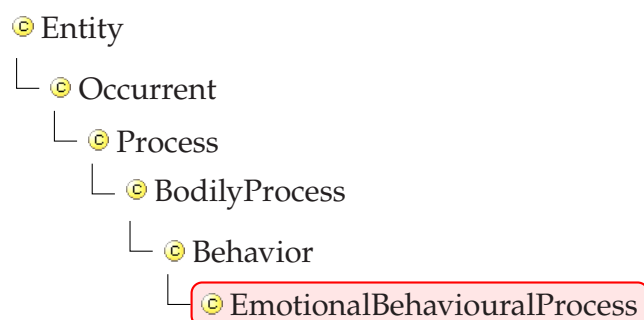
- ▶ **BodilyDisposition**
- ▶ **inheresIn ExtendedOrganism**

15.1.20 EmotionalBehaviouralProcess**Definition**

An emotional behavioural process is the behaviour of the organism in response to the appraisal, which includes the characteristic facial expressions for particular emotion types.

Annotations

- ▶ **Label:** emotional behavioural process
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000004

Hierarchy

Direct Super Types

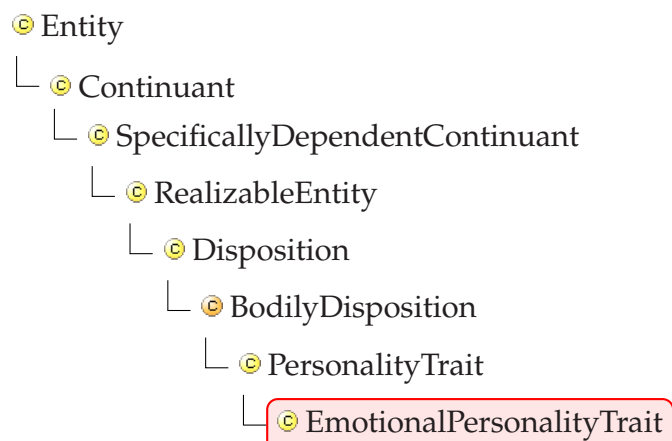
-  Behavior

15.1.21 EmotionalPersonalityTrait**Definition**

An emotional personality trait is a personality trait, a part of an overall personality, which predisposes the individual to repeated occurrences of a characteristic emotional process.

Annotations

- **Label:** emotional personality trait
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000204

Hierarchy**Direct Super Types**

-  PersonalityTrait

Direct Sub Types

-  Irascibility

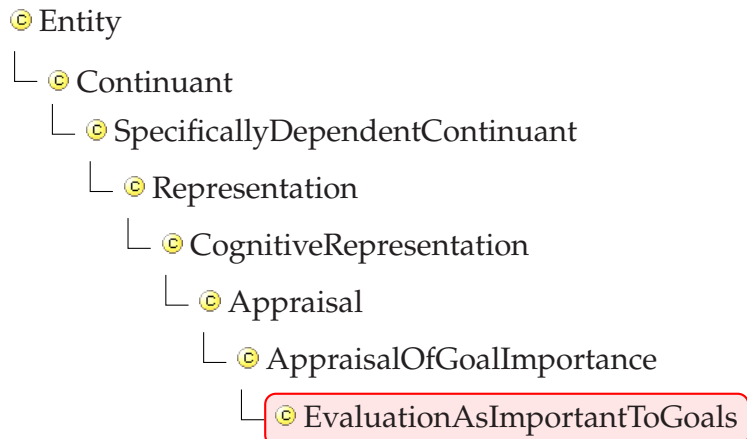
15.1.22 EvaluationAsImportantToGoals**Definition**

An appraisal that represents an evaluation that the event or object is important to the person's goals or needs.

Annotations

- ▶ **Label:** evaluation as important to goals
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000073

Hierarchy



Direct Super Types

- ▶ AppraisalOfGoalImportance

15.1.23 EvaluationAsNotImportantToGoals

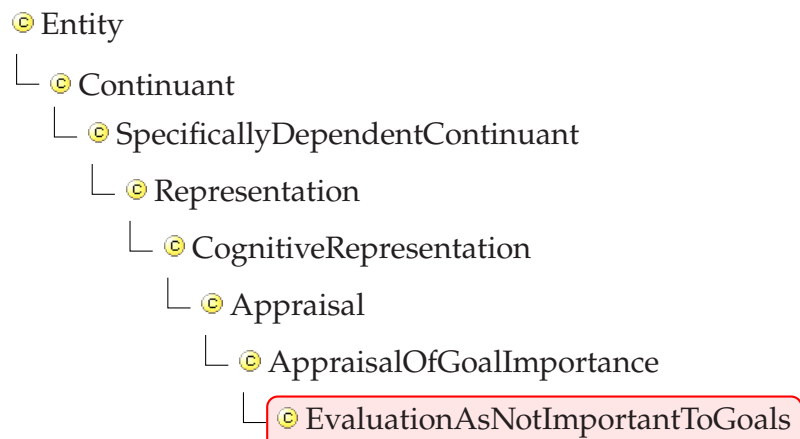
Definition

An appraisal that represents an evaluation that the event or object is not important to the person's goals or needs.

Annotations

- ▶ **Label:** evaluation as not important to goals
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000074

Hierarchy



Direct Super Types

- AppraisalOfGoalImportance

15.1.24 ExcitedMood

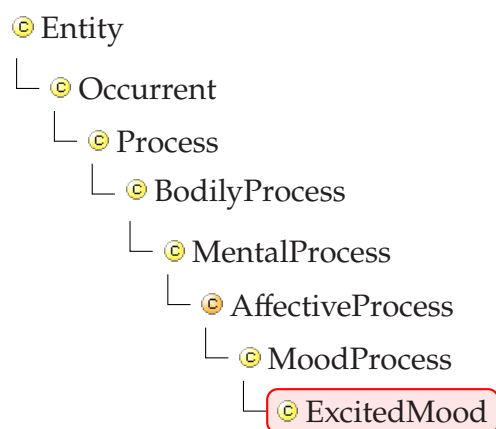
Definition

A mood process that is a generalised feeling of enthusiasm, eagerness and energy, and gives rise to a heightened disposition to experience positively valenced emotions.

Annotations

- **Label:** excited mood
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000219

Hierarchy



Direct Super Types

- MoodProcess

15.1.25 FeelingExhausted

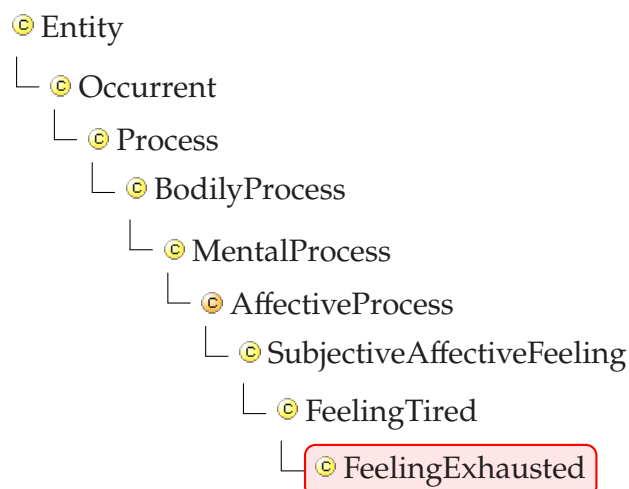
Definition

Feeling tired to an extremely strong degree.

Annotations

- ▶ **Label:** feeling exhausted
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000112

Hierarchy



Direct Super Types

- ▶ ((FeelingTired))

15.1.26 FeelingOfPain

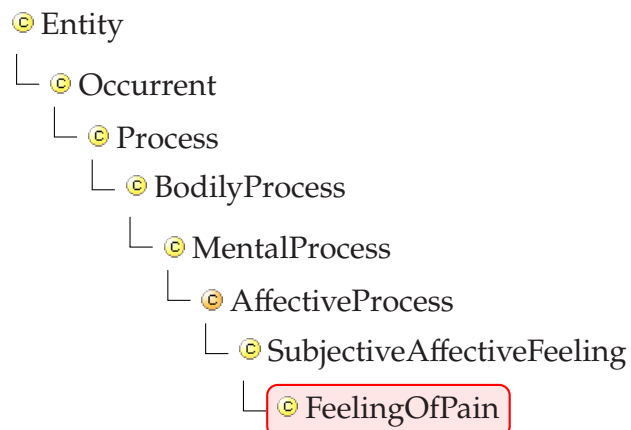
Definition

A subjective affective feeling in an organism S, involving two integrated levels: (a) activation of the nociceptive system and associated emotion generating brain components of S, and (b) a simultaneous aversive sensory and emotional experience on the part of S, where (b) is phenomenologically similar to the sort of aversive experience involved in pain with concordant tissue damage.

Annotations

- ▶ **Label:** feeling of pain
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000203

Hierarchy



Direct Super Types

- SubjectiveAffectiveFeeling

15.1.27 FeelingTired

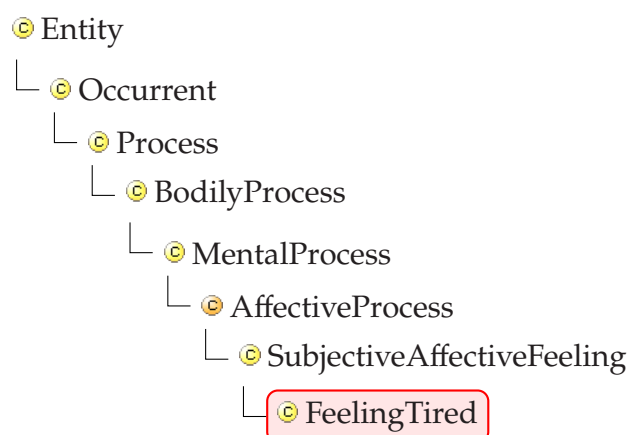
Definition

A subjective affective feeling of a need for sleep.

Annotations

- **Label:** feeling tired
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000080

Hierarchy



Direct Super Types

- SubjectiveAffectiveFeeling

Direct Sub Types

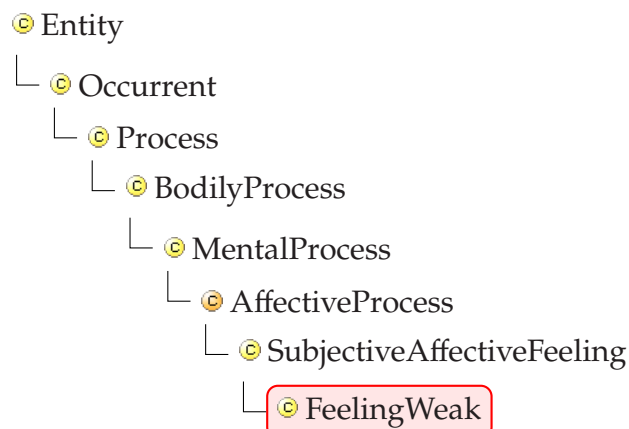
- ▶  FeelingExhausted

15.1.28 FeelingWeak**Definition**

A subjective affective feeling of weakness, lack of energy and/or capability, faintness, absence of strength.

Annotations

- ▶ **Label:** feeling weak
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000119

Hierarchy**Direct Super Types**

- ▶  SubjectiveAffectiveFeeling

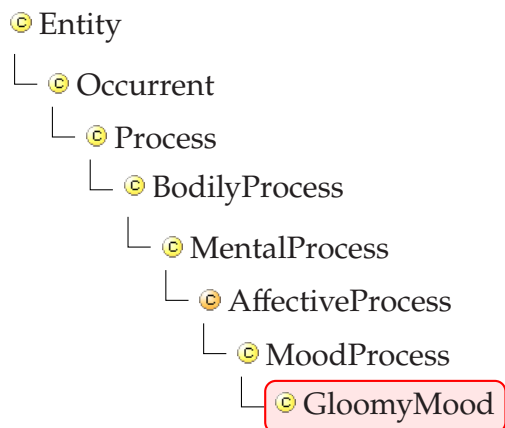
15.1.29 GloomyMood**Definition**

A mood process that is a general feeling of being down, having a negative outlook and gives rise to a heightened disposition to experience negatively valenced emotions.

Annotations

- ▶ **Label:** gloomy mood
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000216

Hierarchy



Direct Super Types

- MoodProcess

15.1.30 IrritableMood

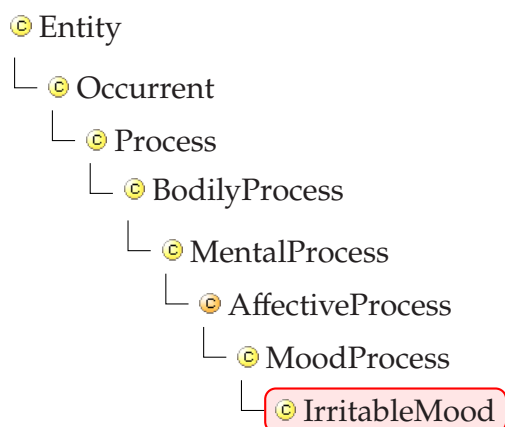
Definition

A mood process that is a general feeling of annoyance and gives rise to a heightened disposition to anger and other negatively valenced emotions.

Annotations

- **Label:** irritable mood
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000197

Hierarchy



Direct Super Types

- MoodProcess

-  hasOccurrentPart NegativeValence

15.1.31 MerryMood

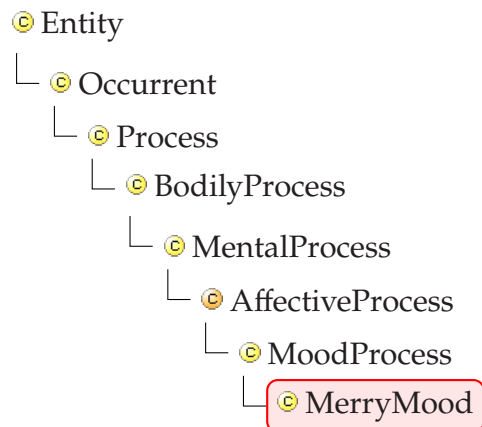
Definition

A mood process that is a general feeling of enjoyment and festivity and gives rise to a heightened disposition to experience happiness, joy and other positively valenced emotions.

Annotations

- **Label:** merry mood
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000201

Hierarchy



Direct Super Types

-  MoodProcess

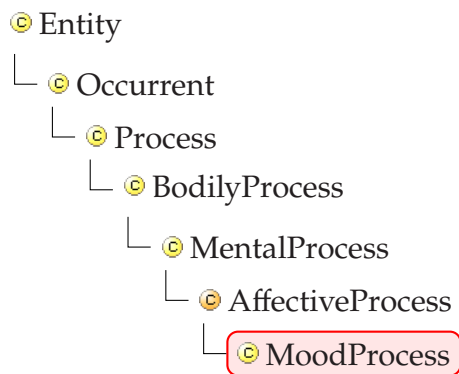
15.1.32 MoodProcess

Definition

A mood process is a mental process that involves affect (is valenced), and gives rise to a number of behavioural dispositions, but unlike an emotion has no object. Moods are usually longer-lived than emotion processes, but there are exceptions.

Annotations

- **Label:** mood process
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000193

Hierarchy**Direct Super Types**

- ▶ AffectiveProcess

Direct Sub Types

- ▶ MerryMood
- ▶ GloomyMood
- ▶ ExcitedMood
- ▶ AnxiousMood
- ▶ IrritableMood
- ▶ CheerfulMood

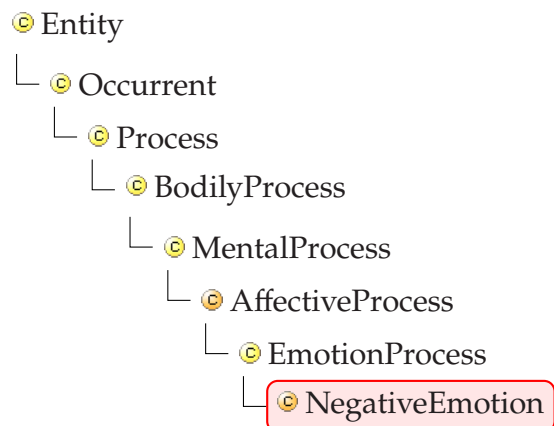
15.1.33 NegativeEmotion**Definition**

A negative emotion is an emotion that has a negative valence.

Annotations

- ▶ **Label:** negative emotion
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000212

Hierarchy



Direct Super Types

- EmotionProcess

Equivalent Classes

- (EmotionProcess hasOccurrentPart NegativeValence)

15.1.34 NegativeValence

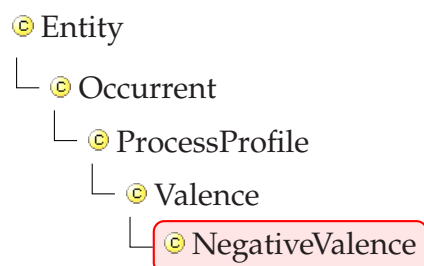
Definition

A valence that is negative, unpleasant or bad.

Annotations

- **Label:** negative valence
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000208

Hierarchy



Direct Super Types

- Valence

15.1.35 PhysiologicalProcessInvolvedInAnEmotion

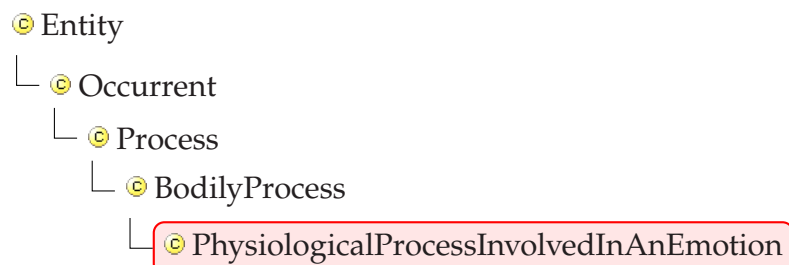
Definition

A bodily process that encompasses all the neurophysiological changes accompanying an emotion, which take place in the central nervous system (CNS), neuro-endocrine system (NES) and autonomous nervous system (ANS).

Annotations

- **Label:** physiological process involved in an emotion
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000003

Hierarchy



Direct Super Types

- BodilyProcess

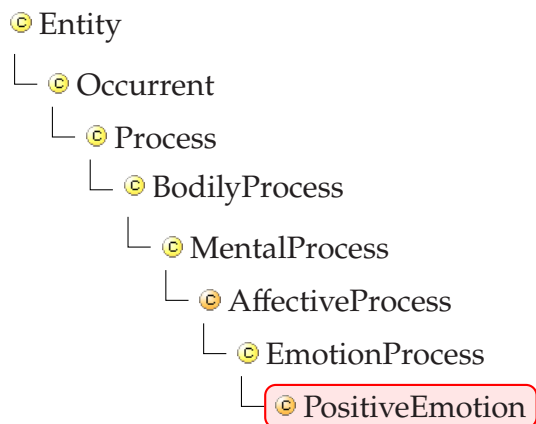
15.1.36 PositiveEmotion

Definition

A positive emotion is an emotion that has a positive valence.

Annotations

- **Label:** positive emotion
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000211

Hierarchy**Direct Super Types**

- EmotionProcess

Equivalent Classes

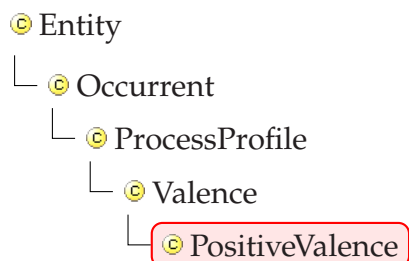
- (EmotionProcess hasOccurrentPart PositiveValence)

15.1.37 PositiveValence**Definition**

A valence that is pleasant, positive or good.

Annotations

- **Label:** positive valence
- **ID:** http://purl.obolibrary.org/obo/MFOEM_000207

Hierarchy**Direct Super Types**

- Valence

15.1.38 Stress(Emotion)

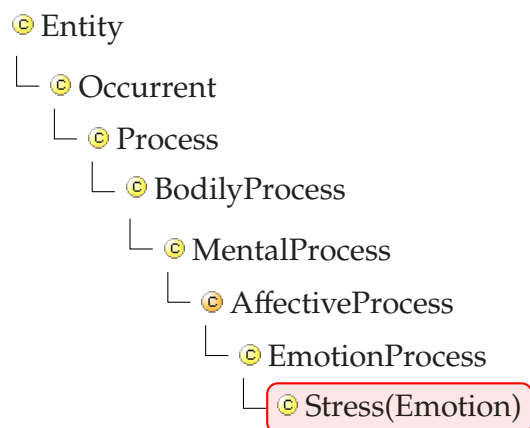
Definition

A negative emotion in response to a stressful elicitor. May be acute or chronic. Associated with health implications, such as impaired resistance to infectious diseases.

Annotations

- ▶ **Label:** stress (emotion)
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000029

Hierarchy



Direct Super Types

- ▶ EmotionProcess
- ▶ hasOccurrentPart NegativeValence

15.1.39 SubjectiveAffectiveFeeling

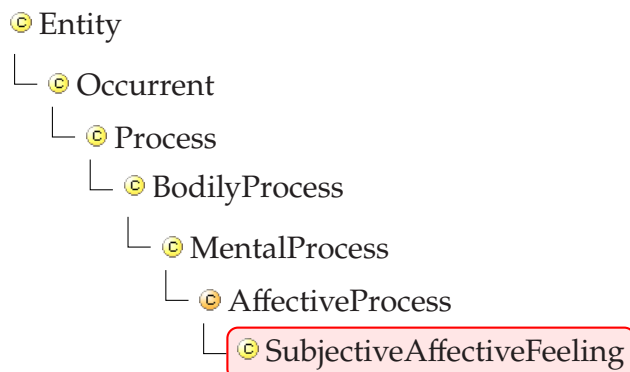
Definition

An affective process that involves the experience of internal or external sensory stimuli.

Annotations

- ▶ **Label:** subjective affective feeling
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000006

Hierarchy



Direct Super Types

- ▶ AffectiveProcess

Direct Sub Types

- ▶ FeelingOfPain
- ▶ FeelingWeak
- ▶ FeelingTired
- ▶ FeelingOfBurden

15.1.40 Valence

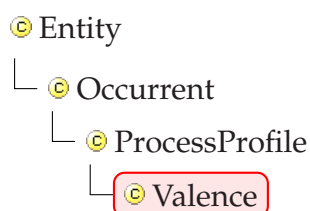
Definition

Valence is a process profile of an emotion, mood, or affective bodily feeling (such as pleasure and pain). Valence can be positive or negative, with different strengths in both directions. For example, pleasure is positively valenced while pain is negatively valenced.

Annotations

- ▶ **Label:** valence
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000194



Hierarchy



Direct Super Types

- ▶  ProcessProfile

Direct Sub Types

- ▶  NegativeValence
- ▶  PositiveValence

15.2 Properties

15.2.1 hasoutput

Annotations

- ▶ **Label:** hasOutput
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000213

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

15.2.2 isoutputof

Annotations

- ▶ **Label:** isOutputOf
- ▶ **ID:** http://purl.obolibrary.org/obo/MFOEM_000008

Facets

- ▶ **Property Type:** ObjectProperty
- ▶ **Functional:** False

Biomedical Burden Ontology

The BBO is an ontology of biomedical burdens. It includes support for burden-related entities, such as treatment burden, symptom burden, and burden appraisals.

16.1 Named Classes

16.1.1 AppraisalOfBurden

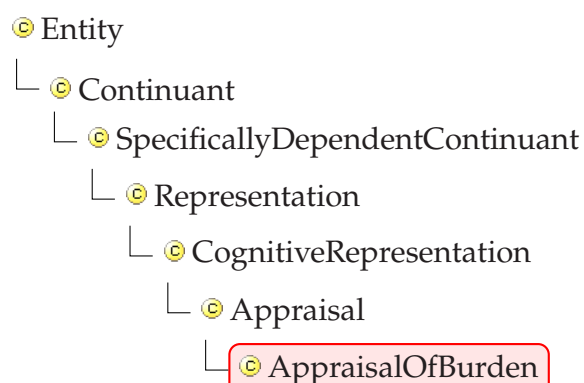
Definition

An Appraisal of Burden is an appraisal that is produced by an appraisal process, which occurs as part of a Burden Process. Each Appraisal of Burden is constituted by an Appraisal of Burden Object and an Appraisal of Burdensomeness. The former specifies the Situation that is perceived as burdensome, while the latter specifies the reasons why the Situation is perceived as burdensome.

Annotations



- **Label:** Appraisal Of Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#AppraisalOfBurden>

Hierarchy











Direct Super Types

- **C** Appraisal

- ▶  hasContinuantPart 1 AppraisalOfBurdenObject
- ▶  hasContinuantPart 1 AppraisalOfBurdensomeness

Direct Sub Types

- ▶  AppraisalOfCognitiveBurden
- ▶  AppraisalOfDiseaseBurden
- ▶  AppraisalOfEmotionalBurden
- ▶  AppraisalOfEpistemicBurden
- ▶  AppraisalOfFinancialBurden
- ▶  AppraisalOfSideEffectBurden
- ▶  AppraisalOfSymptomBurden
- ▶  AppraisalOfTreatmentBurden

16.1.2 AppraisalOfBurdenObject

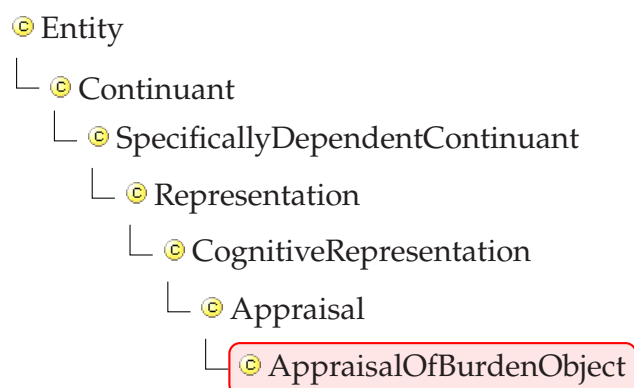
Definition

An Appraisal of Burden Object is an appraisal that is about a given Situation that is perceived/appraised as burdensome.

Annotations

- ▶ **Label:** Appraisal Of Burden Object
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#AppraisalOfBurdenObject>

Hierarchy



Direct Super Types

- ▶  Appraisal

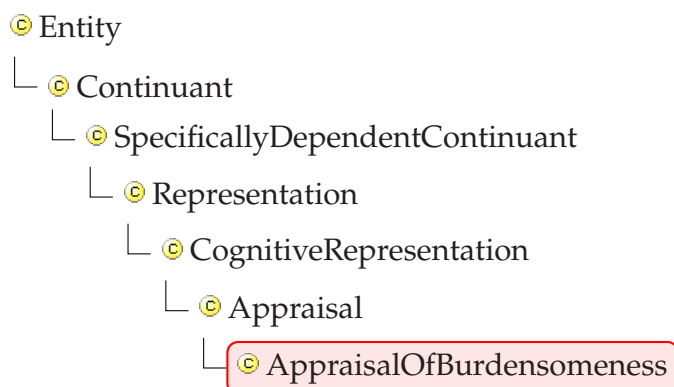
16.1.3 AppraisalOfBurdensomeness

Definition

An Appraisal of Burdensomeness is an appraisal that refers to the impacts of (or effects) of a Situation. It denotes the reasons why a Situation is appraised as burdensome.

Annotations

- **Label:** Appraisal Of Burdensomeness
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#AppraisalOfBurdensomeness>

Hierarchy**Direct Super Types**

- ((Appraisal))

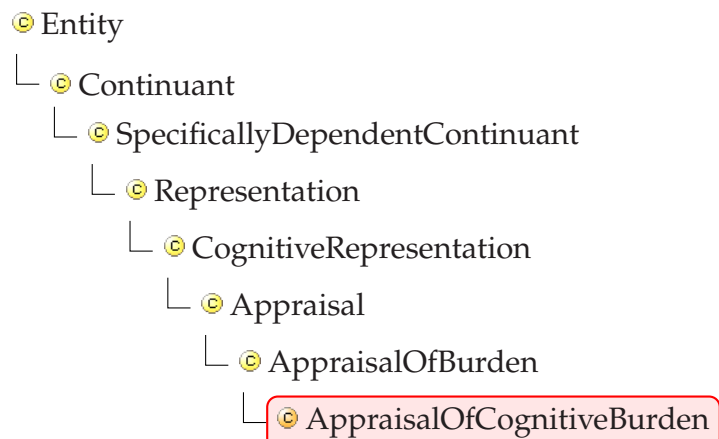
16.1.4 AppraisalOfCognitiveBurden**Definition**

An Appraisal of Cognitive Burden is an Appraisal of Burden that refers to a cognitive process.

Annotations

- **Label:** Appraisal Of Cognitive Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#AppraisalOfCognitiveBurden>

Hierarchy



Direct Super Types

- AppraisalOfBurden

Equivalent Classes

- (AppraisalOfBurden hasContinuantPart (AppraisalOfBurdenObject concretizes (RepresentationalInformationContentEntity isAbout (Situation hasSituationPart CognitiveProcess))))

16.1.5 AppraisalOfDiseaseBurden

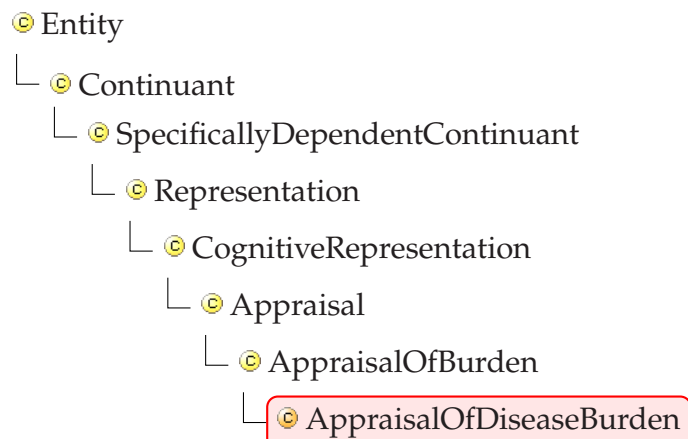
Definition

An Appraisal of Disease Burden is an Appraisal of Burden that refers to a disease-related process, where the notion of a disease-related process is understood to be a process that realizes a disease.

Annotations

- **Label:** Appraisal Of Disease Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#AppraisalOfDiseaseBurden>

Hierarchy



Direct Super Types

- AppraisalOfBurden

Equivalent Classes

- (AppraisalOfBurden hasContinuantPart (AppraisalOfBurdenObject concretizes (RepresentationalInformationContentEntity isAbout (Situation hasSituationPart realizes Disease))))

16.1.6 AppraisalOfEmotionalBurden

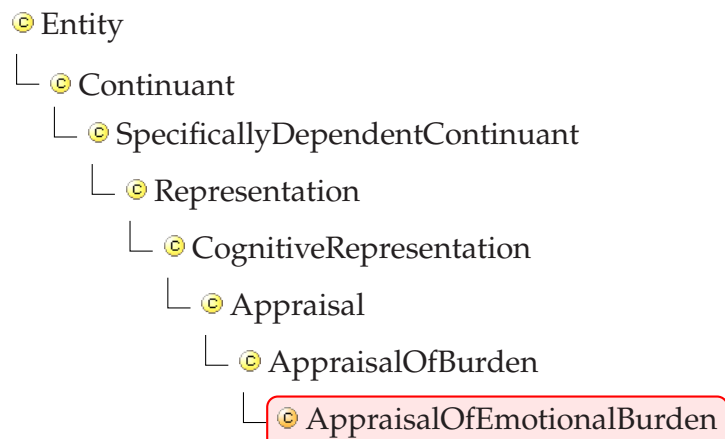
Definition

An Appraisal of Emotional Burden is an Appraisal of Burden that refers to an emotion process.

Annotations

- **Label:** Appraisal Of Emotional Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#AppraisalOfEmotionalBurden>

Hierarchy



Direct Super Types

- AppraisalOfBurden

Equivalent Classes

- (AppraisalOfBurden hasContinuantPart (AppraisalOfBurdenObject concretizes (RepresentationalInformationContentEntity isAbout (Situation hasSituationPart EmotionProcess))))

16.1.7 AppraisalOfEpistemicBurden

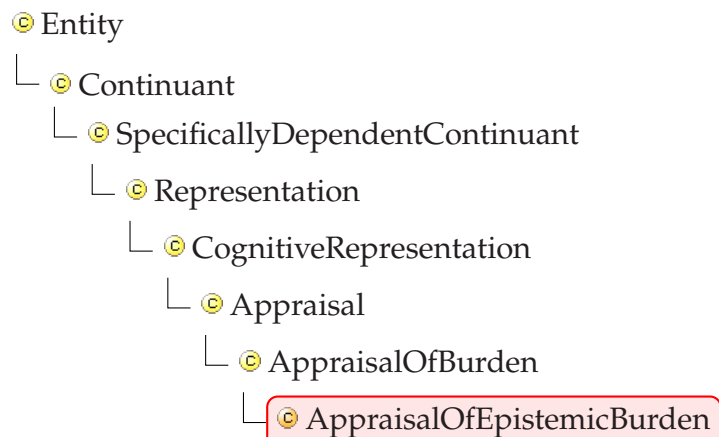
Definition

An Appraisal of Epistemic Burden is an Appraisal of Burden that refers to an Epistemic Process.

Annotations

- **Label:** Appraisal Of Epistemic Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#AppraisalOfEpistemicBurden>

Hierarchy



Direct Super Types

- AppraisalOfBurden

Equivalent Classes

- (AppraisalOfBurden hasContinuantPart (AppraisalOfBurdenObject concretizes (RepresentationalInformationContentEntity isAbout (Situation hasSituationPart EpistemicProcess))))

16.1.8 AppraisalOfFinancialBurden

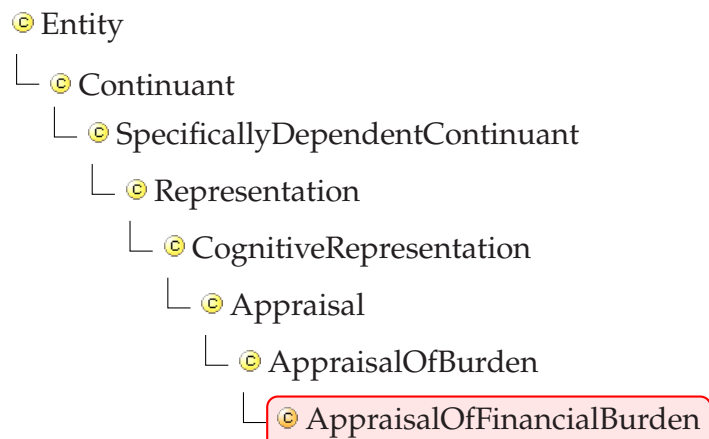
Definition

An Appraisal of Financial Burden is an Appraisal of Burden that refers to a financial process (i.e., an Act of Financial Instrument Use).

Annotations

- **Label:** Appraisal Of Financial Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#AppraisalOfFinancialBurden>

Hierarchy



Direct Super Types

- AppraisalOfBurden

Equivalent Classes

- (AppraisalOfBurden hasContinuantPart (AppraisalOfBurdenObject concretizes (RepresentationalInformationContentEntity isAbout (Situation hasSituationPart ActOfFinancialInstrumentUse))))

16.1.9 AppraisalOfSideEffectBurden

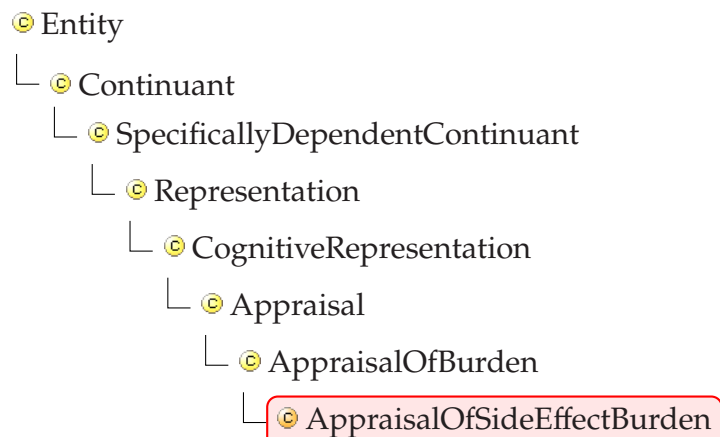
Definition

An Appraisal of Side-Effect Burden is an Appraisal of Burden that refers to a side-effect.

Annotations

- **Label:** Appraisal Of Side-Effect Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#AppraisalOfSideEffectBurden>

Hierarchy



Direct Super Types

- AppraisalOfBurden

Equivalent Classes

- (AppraisalOfBurden hasContinuantPart (AppraisalOfBurdenObject concretizes (RepresentationalInformationContentEntity isAbout (Situation hasSituationPart SideEffect))))

16.1.10 AppraisalOfSymptomBurden

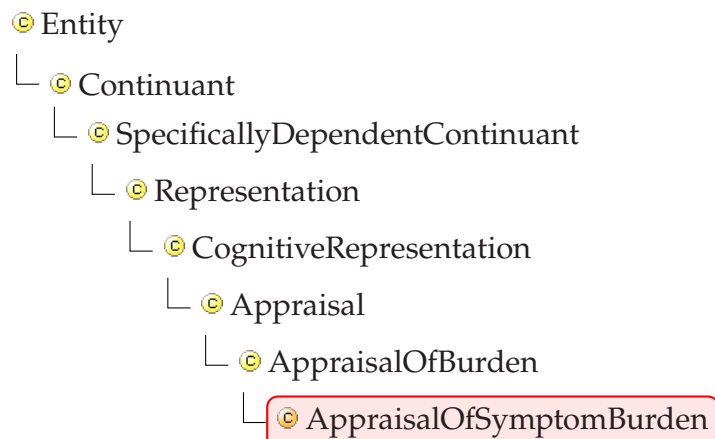
Definition

An Appraisal of Symptom Burden is an Appraisal of Burden that refers to a Symptom Process.

Annotations

- **Label:** Appraisal Of Symptom Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#AppraisalOfSymptomBurden>

Hierarchy



Direct Super Types

- AppraisalOfBurden

Equivalent Classes

- (AppraisalOfBurden \sqcap \sqcap hasContinuantPart (AppraisalOfBurdenObject \sqcap \sqcap concretizes (RepresentationalInformationContentEntity \sqcap \sqcap isAbout (Situation \sqcap \sqcap hasSituationPart SymptomProcess))))

Disjoint Classes

- AppraisalOfTreatmentBurden

16.1.11 AppraisalOfTreatmentBurden

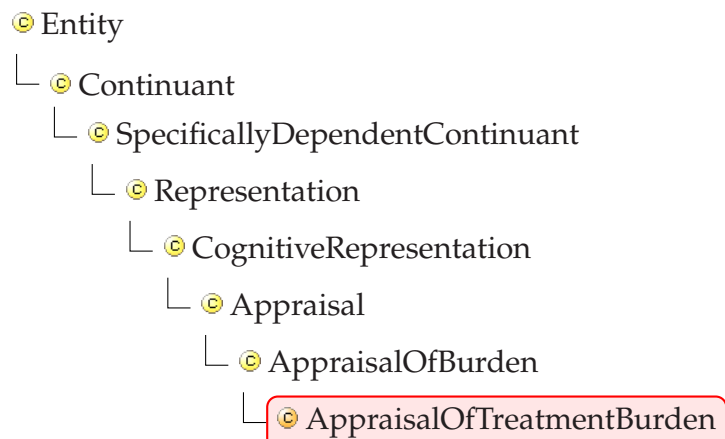
Definition

An Appraisal of Treatment Burden is an Appraisal of Burden that refers to a Treatment Process.

Annotations

- **Label:** Appraisal Of Treatment Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#AppraisalOfTreatmentBurden>

Hierarchy



Direct Super Types

- AppraisalOfBurden

Equivalent Classes

- (AppraisalOfBurden \sqcap \sqcap hasContinuantPart (AppraisalOfBurdenObject \sqcap \sqcap concretizes (RepresentationalInformationContentEntity \sqcap \sqcap isAbout (Situation \sqcap \sqcap hasSituationPart TreatmentProcess))))

Disjoint Classes

- AppraisalOfSymptomBurden

16.1.12 BurdenProcess

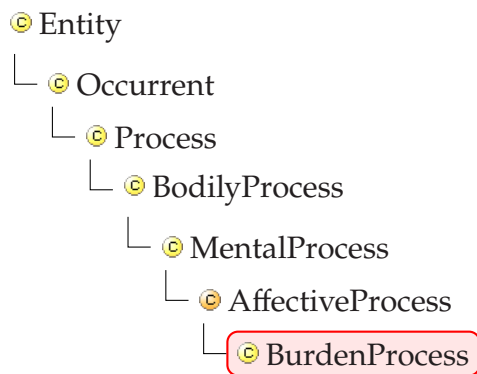
Definition

A Burden Process is a negatively valenced affective process. As with emotion processes, a Burden Process is a synchronized aggregate of constituent mental processes including an appraisal process that refers to the Situation that is appraised as burdensome.

Annotations

- **Label:** Burden Process
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#BurdenProcess>

Hierarchy



Direct Super Types

- ▶ AffectiveProcess
- ▶ (processProfileOf) NegativeValence

Direct Sub Types

- ▶ CognitiveBurden
- ▶ DiseaseBurden
- ▶ EmotionalBurden
- ▶ EpistemicBurden
- ▶ FinancialBurden
- ▶ SideEffectBurden
- ▶ SymptomBurden
- ▶ TreatmentBurden

16.1.13 CaregiverRole

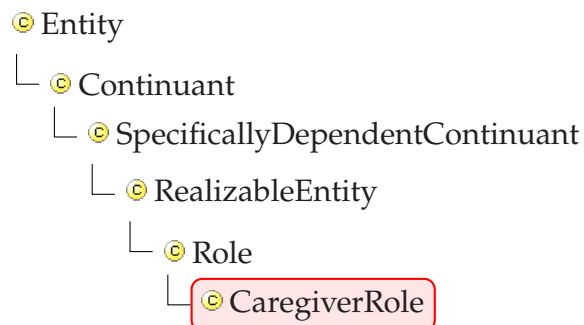
Definition

A Caregiver Role is a role borne by caregivers.

Annotations

- ▶ **Label:** Caregiver Role
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#CaregiverRole>

Hierarchy



Direct Super Types

- Role

Direct Sub Types

- FormalCaregiverRole
- InformalCaregiverRole

16.1.14 ChronicDisease

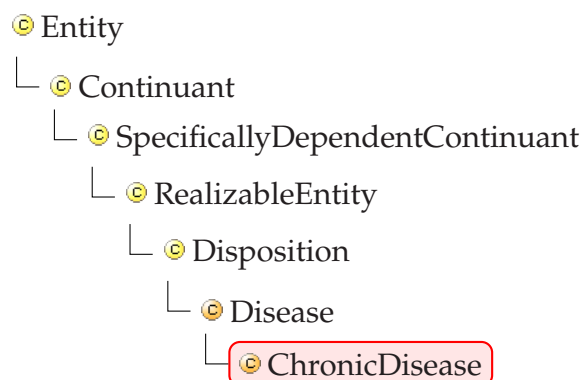
Definition

A Chronic Disease is a disease of chronic duration. Chronic Diseases are realized in chronic disease courses.

Annotations

- **Label:** Chronic Disease
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#ChronicDisease>








Hierarchy



Direct Super Types

-  Disease

Equivalent Classes

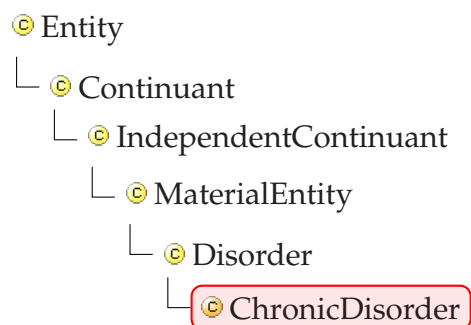
- ((Disease   hasRealization ChronicDiseaseCourse)  (Disease   hasRealization (PathologicalBodilyProcess   occurrentPartOf ChronicDiseaseCourse)))

16.1.15 ChronicDisorder**Definition**

A Chronic Disorder is a disorder of chronic duration. Chronic Disorders are the material basis of Chronic Diseases.

Annotations

- **Label:** Chronic Disorder
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#ChronicDisorder>

Hierarchy**Direct Super Types**

-  Disorder

Equivalent Classes

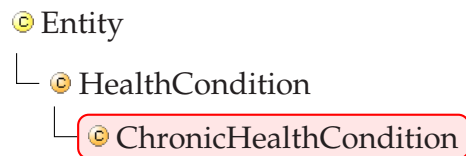
- (Disorder   materialBasisOf ChronicDisease)

16.1.16 ChronicHealthCondition**Definition**

A Chronic Health Condition is a Health Condition of chronic duration. Chronic Health Conditions can be Chronic Diseases, Chronic Disorders, or Chronic Disease Courses.

Annotations

- ▶ **Label:** Chronic Health Condition
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#ChronicHealthCondition>

Hierarchy**Direct Super Types**

- ▶ HealthCondition

Equivalent Classes

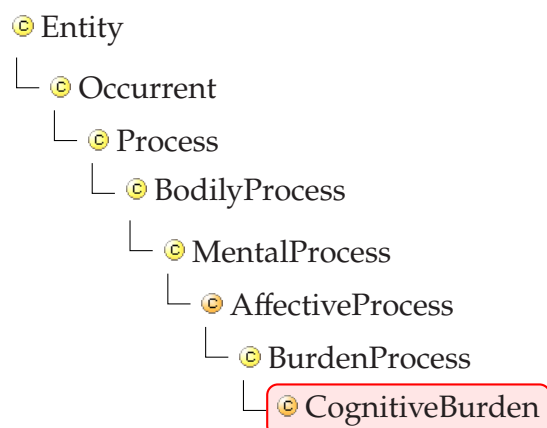
- ▶ (HealthCondition \sqcup (ChronicDiseaseCourse \sqcup ChronicDisease \sqcup ChronicDisorder))

16.1.17 CognitiveBurden**Definition**

A Cognitive Burden is a type of burden that features appraisals related to cognitive processes.

Annotations

- ▶ **Label:** Cognitive Burden
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#CognitiveBurden>

Hierarchy

Direct Super Types

-  BurdenProcess

Equivalent Classes

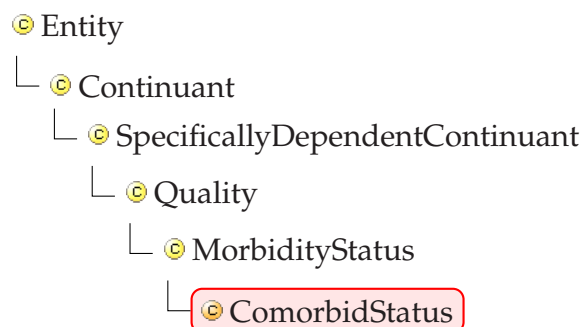
- (BurdenProcess  hasOccurrentPart (AppraisalProcess  hasOutput AppraisalOfCognitiveBurden))

16.1.18 ComorbidStatus**Definition**

A Comorbid Status is a type of Morbidity Status. It applies to individuals that are the bearers of exactly two diseases.

Annotations

- **Label:** Comorbid Status
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#ComorbidStatus>

Hierarchy**Direct Super Types**

-  MorbidityStatus

Equivalent Classes

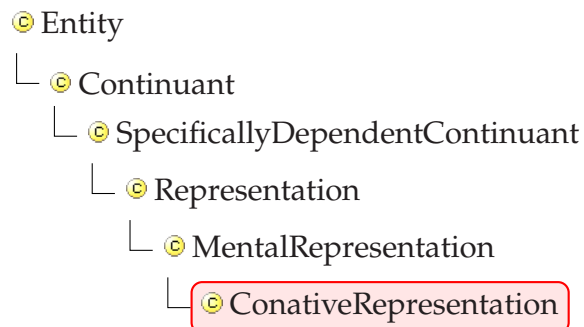
- (MorbidityStatus  inheresIn  bearerOf 2 Disease)

16.1.19 ConativeRepresentation**Definition**

A Conative Representation is a Mental Representation that has a world-to-mind direction of fit. This contrasts with cognitive representations that have a mind-to-world direction of fit.

Annotations

- ▶ **Label:** Conative Representation
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#ConativeRepresentation>

Hierarchy**Direct Super Types**

- ▶ MentalRepresentation
- ▶ concretizes Objective

Direct Sub Types

- ▶ Expectation

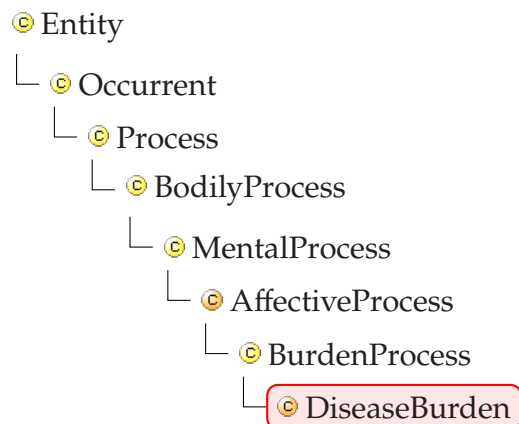
16.1.20 DiseaseBurden**Definition**

A Disease Burden is a type of burden that features appraisals related to disease processes.

Annotations

- ▶ **Label:** Disease Burden
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#DiseaseBurden>

Hierarchy



Direct Super Types

- BurdenProcess

Equivalent Classes

- (BurdenProcess hasOccurrentPart (AppraisalProcess hasOutput AppraisalOfDiseaseBurden))

16.1.21 EmotionalBurden

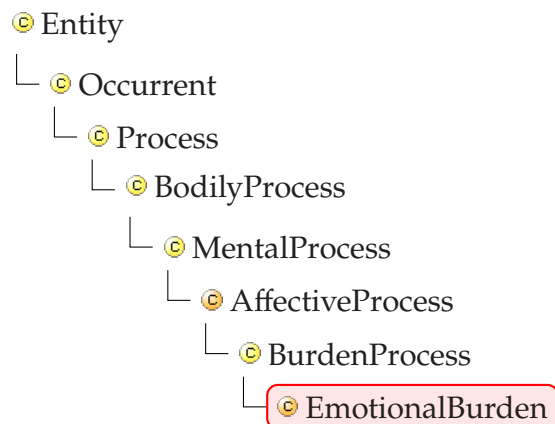
Definition

An Emotional Burden is a type of burden that features appraisals related to emotional processes.

Annotations

- **Label:** Emotional Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#EmotionalBurden>

Hierarchy



Direct Super Types

- BurdenProcess

Equivalent Classes

- (BurdenProcess hasOccurrentPart (AppraisalProcess hasOutput AppraisalOfEmotionalBurden))

16.1.22 EpistemicBurden

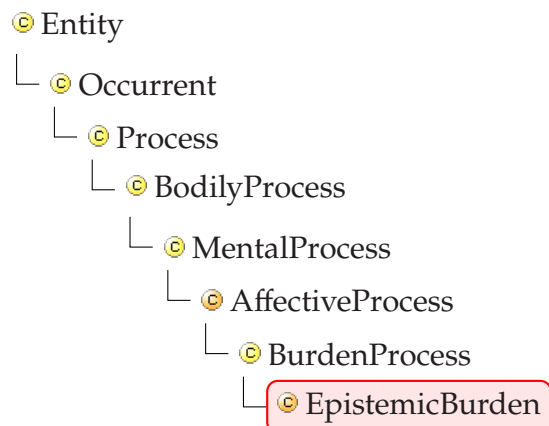
Definition

An Epistemic Burden is a type of burden that features appraisals related to epistemic processes.

Annotations

- **Label:** Epistemic Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#EpistemicBurden>

Hierarchy



Direct Super Types

- BurdenProcess

Equivalent Classes

- (BurdenProcess \equiv hasOccurrentPart (AppraisalProcess \equiv hasOutput AppraisalOfEpistemicBurden))

16.1.23 EpistemicProcess

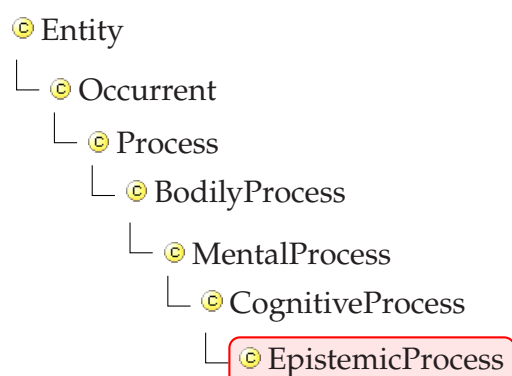
Definition

An Epistemic Process is a cognitive process that is concerned with the acquisition, formation, or manipulation of epistemic representations.

Annotations

- **Label:** Epistemic Process
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#EpistemicProcess>

Hierarchy



Direct Super Types

-  CognitiveProcess

16.1.24 Expectation

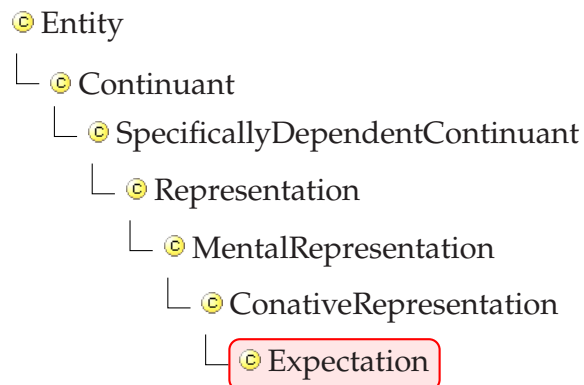
Definition

An Expectation is a Conative Representation that refers to future Situations or states-of-affairs.




Annotations

- **Label:** Expectation
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#Expectation>



Hierarchy



Direct Super Types

-  ConativeRepresentation
-  hasContinuantPart 1 SubjectiveImportance
-  hasContinuantPart 1 SubjectiveLikelihood

Direct Sub Types

-  NegativeExpectation
-  PositiveExpectation

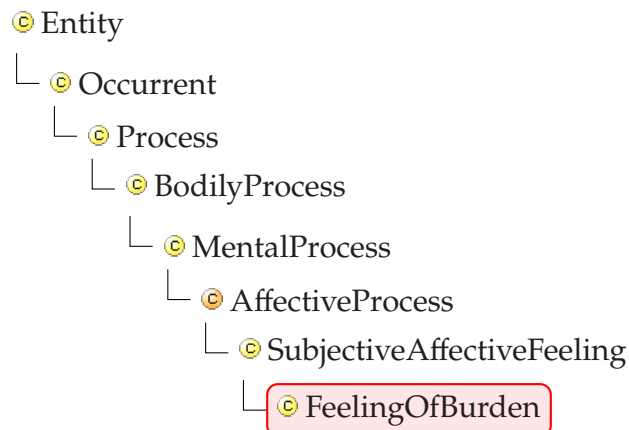
16.1.25 FeelingOfBurden

Definition

A Feeling of Burden is a subjective affective feeling experienced by individuals who are subject to burden.

Annotations

- **Label:** Feeling Of Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#FeelingOfBurden>

Hierarchy**Direct Super Types**

- SubjectiveAffectiveFeeling

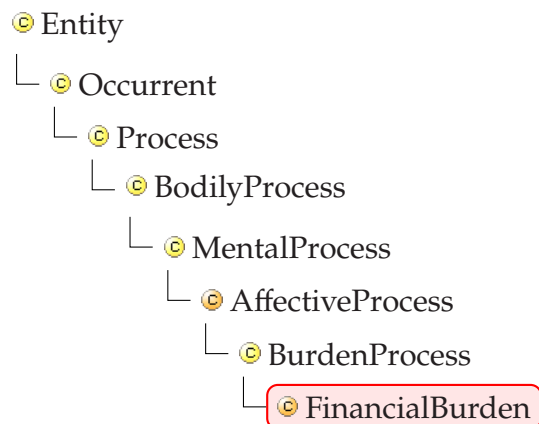
16.1.26 FinancialBurden**Definition**

A Financial Burden is a type of burden that features appraisals related to financial processes (i.e., processes that involve the depletion of an individual's financial resources).

Annotations

- **Label:** Financial Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#FinancialBurden>

Hierarchy



Direct Super Types

- BurdenProcess

Equivalent Classes

- (BurdenProcess hasOccurrentPart (AppraisalProcess hasOutput AppraisalOfFinancialBurden))

16.1.27 FormalCaregiverRole

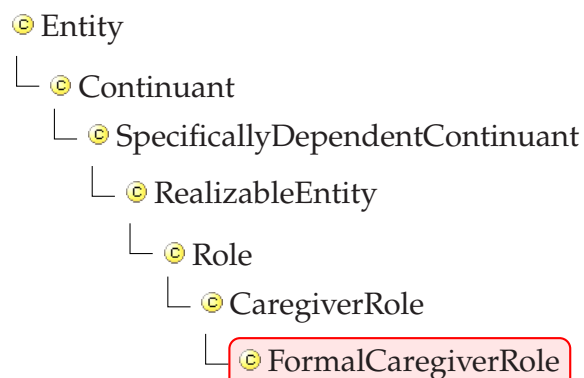
Definition

A Formal Caregiver Role is a caregiver role borne by formal caregivers, such as health professionals.

Annotations

- **Label:** Formal Caregiver Role
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#FormalCaregiverRole>

Hierarchy



Direct Super Types

- ▶  CaregiverRole

16.1.28 HealthCondition**Definition**

A Health Condition is a disorder, a disease, or a disease course.

Annotations

- ▶ **Label:** Health Condition
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#HealthCondition>

Hierarchy**Direct Super Types**

- ▶  Entity

Direct Sub Types

- ▶  ChronicHealthCondition

Equivalent Classes

- ▶ (Disease  Disorder  DiseaseCourse)

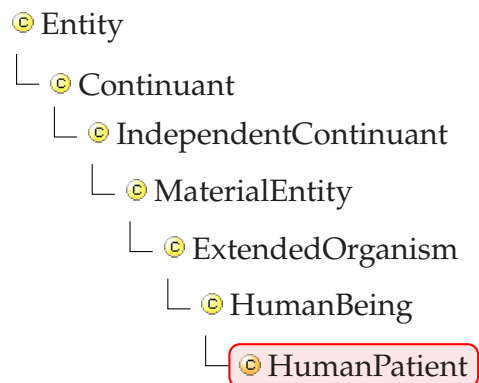
16.1.29 HumanPatient**Definition**

A Human Patient is a human being that is the bearer of a Patient Role.

Annotations

- ▶ **Label:** Human Patient
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#HumanPatient>

Hierarchy



Direct Super Types

- HumanBeing

Direct Sub Types

- HumanPatientWithChronicHealthCondition

Equivalent Classes

- (HumanBeing bearerOf PatientRole)

16.1.30 HumanPatientWithChronicHealthCondition

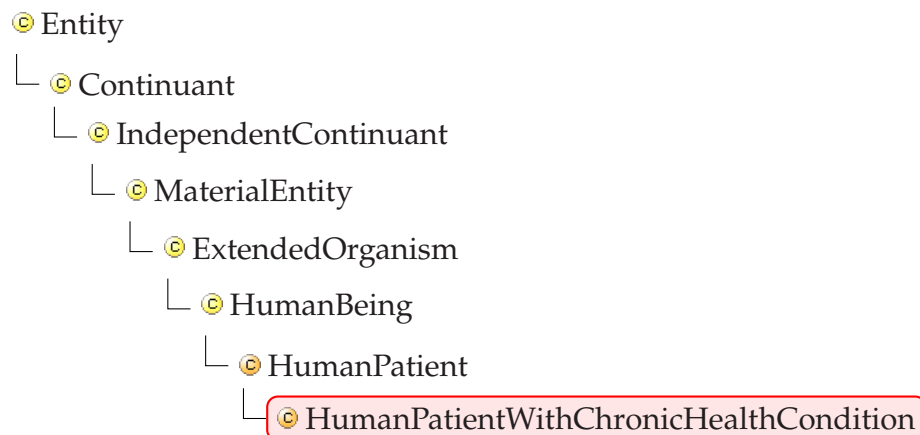
Definition

A Human Patient With Chronic Health Condition is a Human Patient that has at least one Chronic Health Condition.

Annotations

- **Label:** Human Patient With Chronic Health Condition
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#HumanPatientWithChronicHealthCondition>

Hierarchy



Direct Super Types

- HumanPatient

Equivalent Classes

- (HumanPatient (participatesIn ChronicDiseaseCourse hasContinuantPart ChronicDisorder bearerOf ChronicDisease))

16.1.31 InformalCaregiverRole

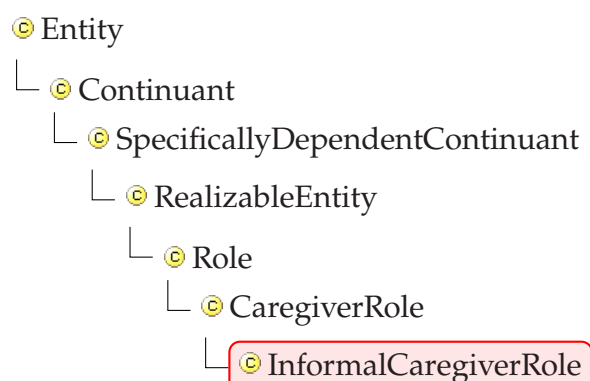
Definition

An Informal Caregiver Role is a role borne by informal caregivers, such as family members.

Annotations

- **Label:** Informal Caregiver Role
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#InformalCaregiverRole>

Hierarchy



Direct Super Types

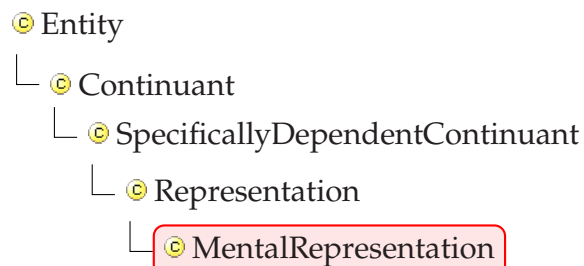
- ▶  CaregiverRole



16.1.32 MentalRepresentation**Definition**

A Mental Representation is a representation that is also a mental quality.

Annotations

- ▶ **Label:** Mental Representation
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#MentalRepresentation>

Hierarchy**Direct Super Types**

- ▶  MentalQuality
- ▶  Representation

Direct Sub Types

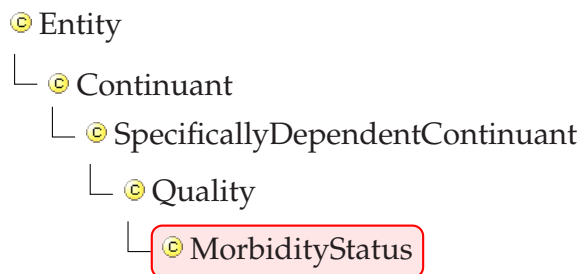
- ▶  CognitiveRepresentation
- ▶  ConativeRepresentation

16.1.33 MorbidityStatus**Definition**

A Morbidity Status is a type of quality that inheres in a bearer in virtue of the number of distinct diseases borne by the bearer.

Annotations

- ▶ **Label:** Morbidity Status
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#MorbidityStatus>

Hierarchy**Direct Super Types**

- Quality

Direct Sub Types

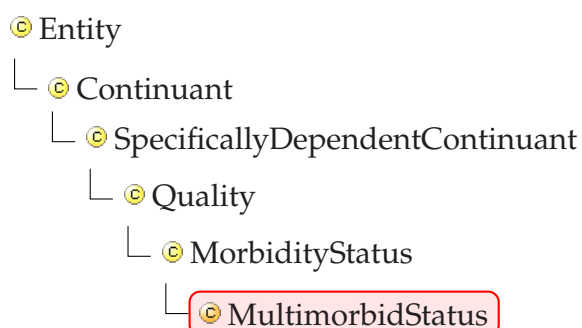
- ComorbidStatus
- MultimorbidStatus
- UnimorbidStatus

16.1.34 MultimorbidStatus**Definition**

A Multimorbid Status is a type of Morbidity Status. It applies to individuals that are the bearers of two or more diseases.

Annotations

- **Label:** Multimorbid Status
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#MultimorbidStatus>

Hierarchy**Direct Super Types**

- MorbidityStatus

Equivalent Classes

- (MorbidityStatus   inheresIn  bearerOf 2 Disease)

16.1.35 NegativeEffect

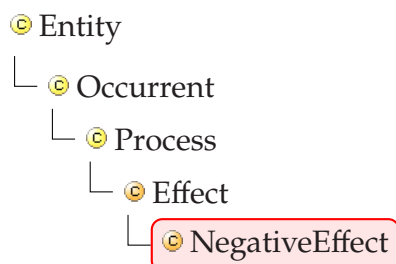
Definition

A Negative Effect is an effect that either 1) decreases the Subjective Likelihood associated with a Positive Expectation or 2) increases the Subjective Likelihood associated with a Negative Expectation.

Annotations

- **Label:** Negative Effect
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#NegativeEffect>











Hierarchy



Direct Super Types

-  Effect

Equivalent Classes

- (Effect  ((DecreaseOfQuality   affects (SubjectiveLikelihood   continuantPartOf PositiveExpectation))  (IncreaseOfQuality   affects (SubjectiveLikelihood   continuantPartOf NegativeExpectation))))))

16.1.36 NegativeExpectation

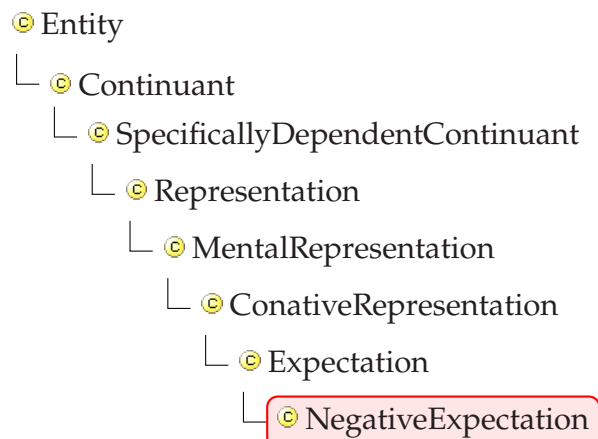
Definition

A Negative Expectation is an Expectation that refers to a Situation that an individual optimistically expects not to occur.

Annotations

- **Label:** Negative Expectation
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#NegativeExpectation>

Hierarchy



Direct Super Types

- **Expectation**

16.1.37 PatientRole

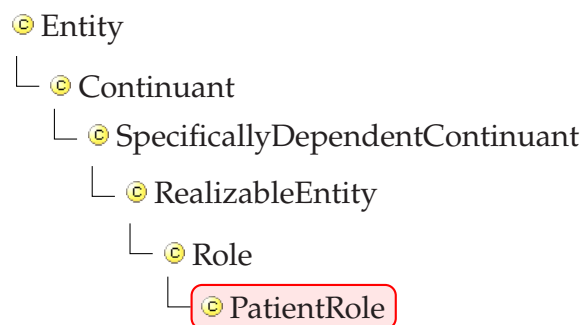
Definition

A Patient Role is a role borne by patients.

Annotations

- **Label:** Patient Role
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#PatientRole>

Hierarchy



Direct Super Types

- **Role**

16.1.38 PortionOfReality

Definition

A Portion of Reality is an entity that acts as a container for other entities.

Annotations

- ▶ **Label:** Portion Of Reality
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#PortionOfReality>

Hierarchy



Direct Super Types

- ▶ Entity

Direct Sub Types

- ▶ Situation

16.1.39 PositiveEffect

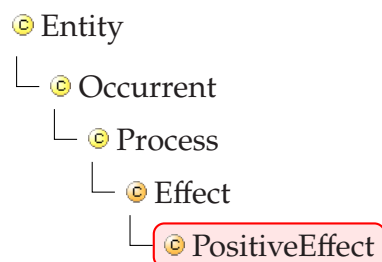
Definition

A Positive Effect is an effect that either 1) increases the Subjective Likelihood associated with a Positive Expectation or 2) decreases the Subjective Likelihood associated with a Negative Expectation.

Annotations

- ▶ **Label:** Positive Effect
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#PositiveEffect>

Hierarchy



Direct Super Types

- Effect

Equivalent Classes

- (Effect ((DecreaseOfQuality affects (SubjectiveLikelihood continuantPartOf NegativeExpectation)) (IncreaseOfQuality affects (SubjectiveLikelihood continuantPartOf PositiveExpectation))))

16.1.40 PositiveExpectation

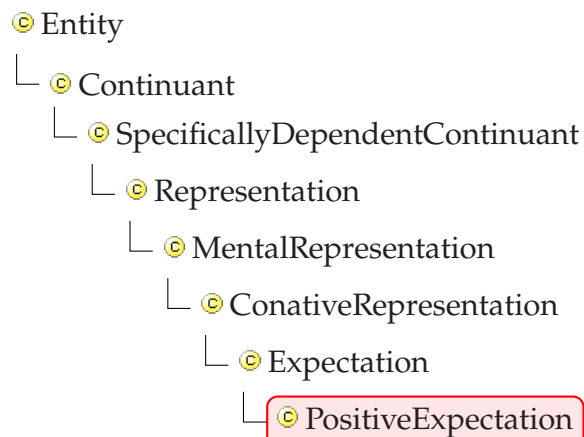
Definition

A Positive Expectation is an Expectation that refers to a Situation that an individual optimistically expects to occur.

Annotations

- **Label:** Positive Expectation
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#PositiveExpectation>

Hierarchy



Direct Super Types

- Expectation

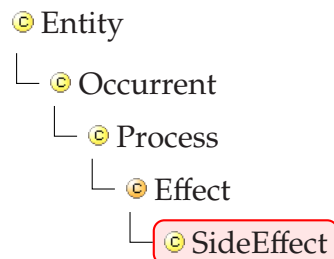
16.1.41 SideEffect

Definition

A Side-Effect is an unintended effect of a Treatment Process.

Annotations

- **Label:** Side-Effect
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#SideEffect>

Hierarchy**Direct Super Types**

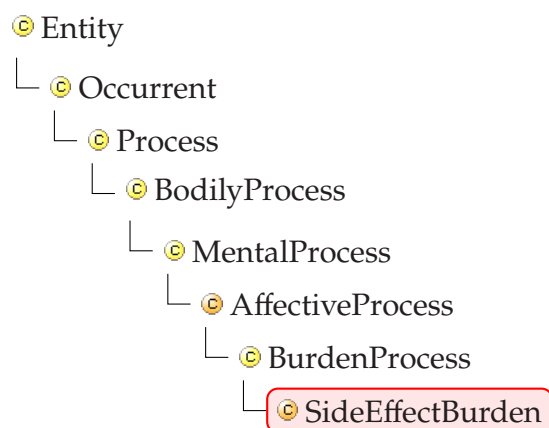
- Effect

16.1.42 SideEffectBurden**Definition**

A Side-Effect Burden is a type of burden that features appraisals related to side-effects.

Annotations

- **Label:** Side-Effect Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#SideEffectBurden>

Hierarchy**Direct Super Types**

- BurdenProcess

Equivalent Classes

- (BurdenProcess   hasOccurrentPart (AppraisalProcess   hasOutput AppraisalOfSideEffectBurden))

16.1.43 Situation

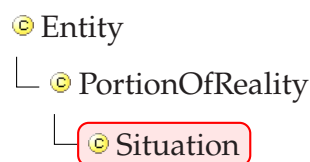
Definition

A Situation is a Portion of Reality that refers to a configuration of entities. A Situation can be either actual or counterfactual.

Annotations

- **Label:** Situation
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#Situation>

Hierarchy



Direct Super Types

-  PortionOfReality

Domain Of

-  hasSituationPart

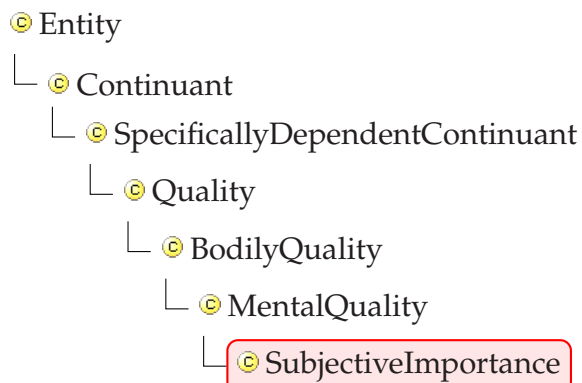
16.1.44 SubjectiveImportance

Definition

A Subjective Importance is a mental quality that signifies the importance of an expected Situation (a Situation represented by an Expectation) to an individual that is the bearer of the Expectation.

Annotations

- **Label:** Subjective Importance
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#SubjectiveImportance>

Hierarchy**Direct Super Types**

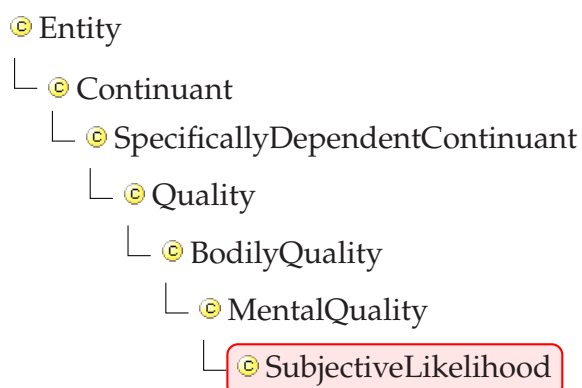
- MentalQuality

16.1.45 SubjectiveLikelihood**Definition**

A Subjective Likelihood is a mental quality that signifies the likelihood of an expected Situation (a Situation represented by an Expectation) materializing.

Annotations

- **Label:** Subjective Likelihood
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#SubjectiveLikelihood>

Hierarchy**Direct Super Types**

- MentalQuality

16.1.46 SymptomBurden

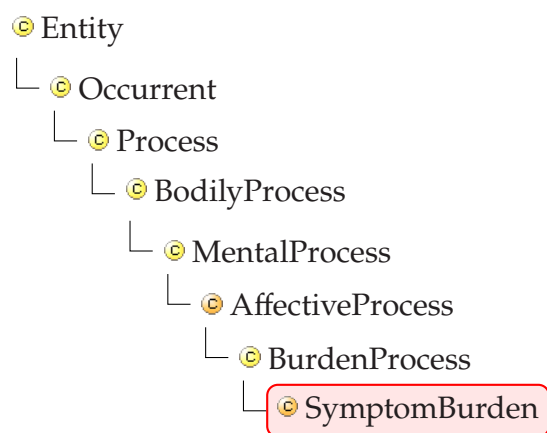
Definition

A Symptom Burden is a type of burden that features appraisals related to symptom processes.

Annotations

- ▶ **Label:** Symptom Burden
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#SymptomBurden>

Hierarchy



Direct Super Types

- ▶ ((BurdenProcess))

Equivalent Classes

- ▶ ((BurdenProcess)) hasOccurrentPart ((AppraisalProcess)) hasOutput AppraisalOfSymptomBurden))

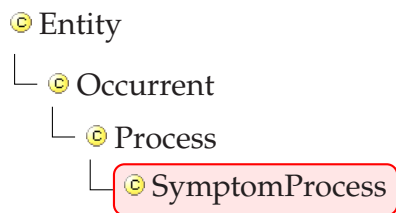
16.1.47 SymptomProcess

Definition

A Symptom Process is a process experienced by an individual as part of a disease course.

Annotations

- ▶ **Label:** Symptom Process
- ▶ **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#SymptomProcess>

Hierarchy**Direct Super Types**

- Process

Equivalent Classes

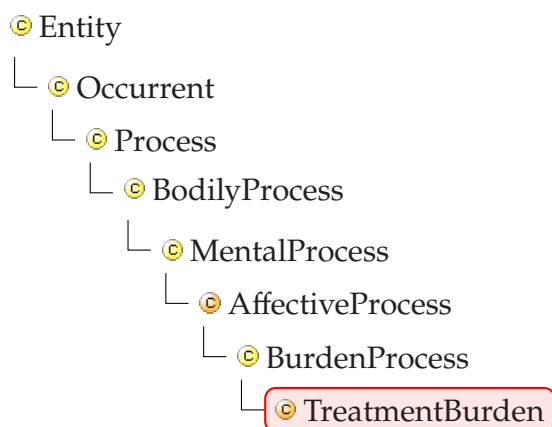
- Symptom

16.1.48 TreatmentBurden**Definition**

A Treatment Burden is a type of burden that features appraisals related to treatment processes.

Annotations

- **Label:** Treatment Burden
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#TreatmentBurden>

Hierarchy**Direct Super Types**

- BurdenProcess

Equivalent Classes

- (BurdenProcess  AppraisalProcess  AppraisalOfTreatmentBurden))

16.1.49 TreatmentProcess

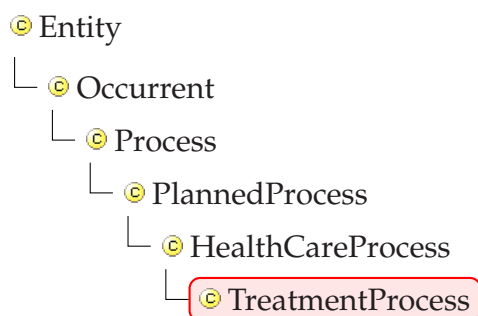
Definition

A Treatment Process is a health care process whose completion is hypothesized by a health care provider to eliminate, prevent, or alleviate a disorder, the signs and symptoms of a disorder, or a pathological process.

Annotations

- **Label:** Treatment Process
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#TreatmentProcess>

Hierarchy



Direct Super Types

-  HealthCareProcess

Equivalent Classes

-  Treatment

16.1.50 UnimorbidStatus

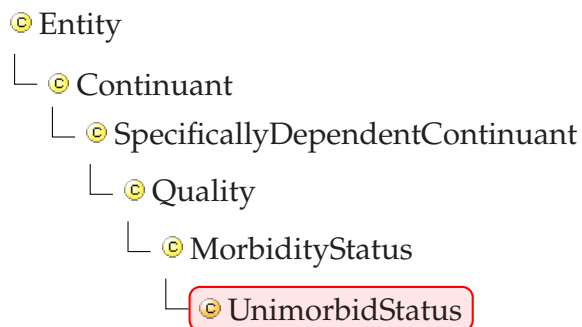
Definition

A Unimorbid Status is a type of Morbidity Status. It applies to individuals that are the bearers of exactly one disease.

Annotations

- **Label:** Unimorbid Status
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#UnimorbidStatus>

Hierarchy



Direct Super Types

- MorbidityStatus

Equivalent Classes

- (MorbidityStatus inheresIn bearerOf 1 Disease)

16.2 Properties

16.2.1 hasSituationPart

Definition

Specifies the entities that comprise a given Situation.

Annotations

- **Label:** has situation part
- **ID:** <http://www.cognosys.co.uk/ontologies/BBO.owl#hasSituationPart>

Facets

- **Property Type:** ObjectProperty
- **Functional:** False

Domain

- Situation