

Description logic view: GFO No Occurrents

Classes

Abstract

Abstract \sqsubseteq Individual
Abstract $\sqsubseteq \neg$ Space_time
Abstract $\sqsubseteq \neg$ Concrete

Amount_{of_s}substrate

Amount_of_substrate \equiv Mass_entity
Amount_of_substrate \sqsubseteq Presential
Amount_of_substrate \sqsubseteq Continuous

Awareness_{level}

Awareness_level $\sqsubseteq \exists$ abstract_part_of Mental_stratum
Awareness_level \sqsubseteq Level

Biological_{level}

Biological_level $\sqsubseteq \exists$ abstract_part_of Material_stratum
Biological_level \sqsubseteq Level

Category

Category \sqsubseteq Item
Category $\sqsubseteq \neg$ Individual

Chemical_{level}

Chemical_level \sqsubseteq Level
Chemical_level $\sqsubseteq \exists$ abstract_part_of Material_stratum

Chronoid

Chronoid \sqsubseteq Temporal_region

Concept

Concept \sqsubseteq Category
Concept $\sqsubseteq \neg$ Universal
Concept $\sqsubseteq \neg$ Symbol_structure

Concrete

Concrete \sqsubseteq Individual
Concrete $\sqsubseteq \neg$ Space_time
Concrete $\sqsubseteq \neg$ Abstract

Configuration

Configuration \sqsubseteq Presential
Configuration $\sqsubseteq \neg$ Material_object
Configuration $\sqsubseteq \neg$ Material_boundary

Continuous

Continuous \equiv Individual $\sqcap \neg$ Discrete
Continuous \sqsubseteq Individual

Dependent

Dependent $\equiv \exists$ depends_on Item
Dependent \sqsubseteq Individual
Dependent $\sqsubseteq \neg$ Independent

Discrete

Discrete \sqsubseteq Individual

Discrete_{presential}

Discrete_presential \sqsubseteq Discrete
Discrete_presential $\sqsubseteq \exists$ instance_of Persistent
Discrete_presential \sqsubseteq Presential
Discrete_presential $\sqsubseteq \neg$ Mass_entity

Entity

Entity \equiv Item \sqcup Set

Function

Function \sqsubseteq Concept

Independent

Independent \sqsubseteq Individual
Independent $\sqsubseteq \neg$ Dependent

Individual

Individual \equiv Abstract \sqcup Concrete \sqcup Space_time \sqcap Dependent \sqcup Independent \sqcap Role \sqcup Individual \sqcap \neg Role
Individual \sqsubseteq $\neg(\exists$ instantiated_by Item)
Individual \sqsubseteq Item
Individual \sqsubseteq \neg Category

Item

Item \equiv Category \sqcup Individual
Item \sqsubseteq Entity
Item \sqsubseteq $\neg(\exists$ has_member Entity)
Item \sqsubseteq \neg Set

Level

Level \sqsubseteq Ontological_layer
Level \sqsubseteq \exists abstract_part_of Stratum
Level \sqsubseteq \neg Stratum

Line

Line \equiv \exists spatial_boundary_of Surface
Line \sqsubseteq Spatial_boundary

Mass_{entity}

Mass_entity \equiv Amount_of_substrate
Mass_entity \sqsubseteq Continuous
Mass_entity \sqsubseteq Presential
Mass_entity \sqsubseteq \neg Discrete_presential

Material_{boundary}

Material_boundary \sqsubseteq \exists depends_on Material_object
Material_boundary \sqsubseteq Presential
Material_boundary \sqsubseteq Dependent
Material_boundary \sqsubseteq \neg Material_object
Material_boundary \sqsubseteq \neg Configuration

Material_{line}

Material_line \sqsubseteq \exists boundary_of Material_surface
Material_line \sqsubseteq Material_boundary
Material_line \sqsubseteq \neg Material_point
Material_line \sqsubseteq \neg Material_surface

Material_object

Material_object \equiv Material_structure
Material_object $\sqsubseteq \exists$ framed_by Topoid
Material_object $\sqsubseteq =$ framed_by Thing
Material_object \sqsubseteq Discrete_presential
Material_object $\sqsubseteq \neg$ Configuration
Material_object $\sqsubseteq \neg$ Material_boundary

Material_persistent

Material_persistent $\sqsubseteq \forall$ instantiated_by Material_object
Material_persistent \sqsubseteq Persistent

Material_point

Material_point $\sqsubseteq \exists$ boundary_of Material_line
Material_point \sqsubseteq Material_boundary
Material_point $\sqsubseteq \neg$ Material_line
Material_point $\sqsubseteq \neg$ Material_surface

Material_stratum

Material_stratum \sqsubseteq Stratum

Material_structure

Material_structure \equiv Material_object
Material_structure \sqsubseteq Discrete_presential

Material_surface

Material_surface $\sqsubseteq \exists$ boundary_of Material_object
Material_surface \sqsubseteq Material_boundary
Material_surface $\sqsubseteq \neg$ Material_point
Material_surface $\sqsubseteq \neg$ Material_line

Mental_stratum

Mental_stratum \sqsubseteq Stratum

Ontological_layer

Ontological_layer \sqsubseteq Category

Persistent

Persistent $\sqsubseteq \exists$ instantiated_by Presential
Persistent \sqsubseteq Universal

Personality_{level}

Personality_level \sqsubseteq Level

Personality_level $\sqsubseteq \exists$ abstract_part_of Mental_stratum

Physical_{level}

Physical_level $\sqsubseteq \exists$ abstract_part_of Material_stratum

Physical_level \sqsubseteq Level

Point

Point $\equiv \exists$ spatial_boundary_of Line

Point \sqsubseteq Spatial_boundary

Presential

Presential \sqsubseteq Individual

Presential \sqsubseteq Concrete

Presential $\sqsubseteq =$ exists_at Thing

Presential $\sqsubseteq \exists$ exists_at Time_boundary

Property

Property \sqsubseteq Concrete

Property \sqsubseteq Dependent

Property $\sqsubseteq \neg$ Relator

Property_{value}

Property_value $\equiv \exists$ value_of Property

Property_value \sqsubseteq Dependent

Property_value \sqsubseteq Concrete

Relational_{role}

Relational_role \sqsubseteq Dependent

Relational_role $\sqsubseteq \exists$ role_of Relator

Relational_role \sqsubseteq Role

Relational_role $\sqsubseteq \neg$ Social_role

Relator

Relator \sqsubseteq Individual

Relator $\sqsubseteq \neg$ Property

Role

Role \sqsubseteq Concrete

Set

Set \sqsubseteq Entity

Set \sqsubseteq \neg Item

Situation

Situation \sqsubseteq Configuration

Social_{role}

Social_role \sqsubseteq Role

Social_role \sqsubseteq Independent

Social_role \sqsubseteq \neg Relational_role

Social_{stratum}

Social_stratum \sqsubseteq Stratum

Space

Space \sqsubseteq Space_time

Space \sqsubseteq \neg Time

Space_{time}

Space_time \sqsubseteq Individual

Space_time \sqsubseteq \neg Abstract

Space_time \sqsubseteq \neg Concrete

Spatial_{boundary}

Spatial_boundary \equiv \exists spatial_boundary_of Space

Spatial_boundary \sqsubseteq Space

Spatial_boundary \sqsubseteq \neg Spatial_region

Spatial_{region}

Spatial_region \sqsubseteq Space

Spatial_region \sqsubseteq \neg Spatial_boundary

Stratum

Stratum \sqsubseteq Ontological_layer

Stratum \sqsubseteq \neg Level

Surface

Surface $\equiv \exists$ spatial_boundary_of Topoid

Surface \sqsubseteq Spatial_boundary

Symbol

Symbol \sqsubseteq Symbol_structure

Symbol_ssequence

Symbol_sequence \sqsubseteq Symbol_structure

Symbol_sstructure

Symbol_structure \sqsubseteq Category

Symbol_structure $\sqsubseteq \neg$ Concept

Symbol_structure $\sqsubseteq \neg$ Universal

Temporal_region

Temporal_region \sqsubseteq Time

Temporal_region $\sqsubseteq \neg$ Time_boundary

Thing

Time

Time \sqsubseteq Space_time

Time $\sqsubseteq \neg$ Space

Time_boundary

Time_boundary \sqsubseteq Time

Time_boundary $\sqsubseteq \exists$ time_boundary_of Chronoid

Time_boundary $\sqsubseteq \neg$ Temporal_region

Token

Token \sqsubseteq Concrete

Token $\sqsubseteq \exists$ instance_of Symbol_structure

Topoid

Topoid \sqsubseteq Spatial_region

Universal

Universal \sqsubseteq Category
Universal \sqsubseteq \exists instantiated_by Item
Universal \sqsubseteq \neg Concept
Universal \sqsubseteq \neg Symbol_structure

Value_space

Value_space \sqsubseteq Universal

Object properties

abstract_has_part

$\text{jhttp://www.onto-med.de/ontologies/gfo.owlabstract}_{p\text{art}_of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlab}$
TransitivePropertyabstract_has_part
 \exists abstract_has_part Thing \sqsubseteq Item
 $\top \sqsubseteq \forall$ abstract_has_part Item

abstract_part_{of}

$\text{jhttp://www.onto-med.de/ontologies/gfo.owlabstract}_{p\text{art}_of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlab}$
TransitivePropertyabstract_part_of
 \exists abstract_part_of Thing \sqsubseteq Item
 $\top \sqsubseteq \forall$ abstract_part_of Item

agent_in

\sqsubseteq participates_in
 \sqsubseteq causes

$\text{jhttp://www.onto-med.de/ontologies/gfo.owlagent}_{i\text{n}} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlhas}_{a\text{gent}}$

boundary_{of}

\sqsubseteq depends_on

$\text{jhttp://www.onto-med.de/ontologies/gfo.owlhas}_{b\text{oundary}} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlboun}$

categorial_part_{of}

\sqsubseteq abstract_part_of

$\text{jhttp://www.onto-med.de/ontologies/gfo.owlhas}_{c\text{ategorial}_{p\text{art}_of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl}$

category_in_iayer

\sqsubseteq categorial_part_of

$\text{jhttp://www.onto-med.de/ontologies/gfo.owlhas}_{c\text{ategory}} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlcateg}$

caused_{by}

$\text{!http://www.onto-med.de/ontologies/gfo.owlcaused}_{by} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlcauses}$

causes

$\text{!http://www.onto-med.de/ontologies/gfo.owlcaused}_{by} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlcauses}$

constituent_{part_of}

\sqsubseteq proper_part_of

$\text{!http://www.onto-med.de/ontologies/gfo.owlconstituent}_{part_of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl}$

depends_{on}

$\text{!http://www.onto-med.de/ontologies/gfo.owlnecessary}_{for} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owldepe}$

\exists depends_on Thing \sqsubseteq Item

$\top \sqsubseteq \forall$ depends_on Item

exists_{at}

$\top \sqsubseteq \leq 1$ exists_at Thing

\exists exists_at Thing \sqsubseteq Presential

$\top \sqsubseteq \forall$ exists_at Time_boundary

framed_{by}

\sqsubseteq occupies

$\text{!http://www.onto-med.de/ontologies/gfo.owlframes}_i \equiv \text{!http://www.onto-med.de/ontologies/gfo.owlframed}_{by} >^{-}$

$\top \sqsubseteq \leq 1$ framed_by Thing

\exists framed_by Thing \sqsubseteq Material_object

$\top \sqsubseteq \forall$ framed_by Topoid

frames

$\text{!http://www.onto-med.de/ontologies/gfo.owlframes}_i \equiv \text{!http://www.onto-med.de/ontologies/gfo.owlframed}_{by} >^{-}$

$\top \sqsubseteq \leq 1$ frames Thing

\exists frames Thing \sqsubseteq Topoid

$\top \sqsubseteq \forall$ frames Material_object

function_{determinant_of}

$\text{!http://www.onto-med.de/ontologies/gfo.owlhas}_{function_determinant} > \equiv < \text{http://www.onto-med.de/ontologies/}$

$\top \sqsubseteq \forall$ function_determinant_of Function

function_{of}

$\text{!http://www.onto-med.de/ontologies/gfo.owlfunction}_{of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlhas}_{fun}$

functional_item_of

\sqsubseteq function_determinant_of
!http://www.onto-med.de/ontologies/gfo.owlhas_functional_item > \equiv < http://www.onto-med.de/ontologies/gfo.owlhas_functional_item >
 \exists functional_item_of Thing \sqsubseteq Role

goal_of

\sqsubseteq function_determinant_of
!http://www.onto-med.de/ontologies/gfo.owlhas_goal > \equiv < http://www.onto-med.de/ontologies/gfo.owlhas_goal >

has_agent

!http://www.onto-med.de/ontologies/gfo.owlagent_n > \equiv < http://www.onto-med.de/ontologies/gfo.owlhas_agent >

has_boundary

!http://www.onto-med.de/ontologies/gfo.owlhas_boundary > \equiv < http://www.onto-med.de/ontologies/gfo.owlhas_boundary >
 $\top \sqsubseteq \leq 1$ has_boundary Thing

has_categorical_part

\sqsubseteq abstract_has_part
!http://www.onto-med.de/ontologies/gfo.owlhas_categorical_part > \equiv < http://www.onto-med.de/ontologies/gfo.owlhas_categorical_part >
 \exists has_categorical_part Thing \sqsubseteq Category
 $\top \sqsubseteq \forall$ has_categorical_part Category

has_category

!http://www.onto-med.de/ontologies/gfo.owlhas_category > \equiv < http://www.onto-med.de/ontologies/gfo.owlhas_category >
 \exists has_category Thing \sqsubseteq Ontological_layer
 $\top \sqsubseteq \forall$ has_category Category

has_constituent_part

\sqsubseteq has_proper_part
!http://www.onto-med.de/ontologies/gfo.owlconstituent_part_of > \equiv < http://www.onto-med.de/ontologies/gfo.owlconstituent_part_of >

has_function

!http://www.onto-med.de/ontologies/gfo.owlfunction_of > \equiv < http://www.onto-med.de/ontologies/gfo.owlfunction_of >
 \exists has_function Thing \sqsubseteq Individual
 $\top \sqsubseteq \forall$ has_function Function

has_function_determinant

!http://www.onto-med.de/ontologies/gfo.owlhas_function_determinant > \equiv < http://www.onto-med.de/ontologies/gfo.owlhas_function_determinant >
 \exists has_function_determinant Thing \sqsubseteq Function
 $\top \sqsubseteq \forall$ has_function_determinant Individual

has_ffunctional_item

⊆ has_function_determinant
|http://www.onto-med.de/ontologies/gfo.owlhas_ffunctional_item > ≡ < http://www.onto-med.de/ontologies/gfo.owlhas_ffunctional_item >
⊤ ⊆ ≤ 1 has_function_item Thing
∃ has_function_item Thing ⊆ Function
⊤ ⊆ ∀ has_function_item Role

has_ggoal

⊆ has_function_determinant
|http://www.onto-med.de/ontologies/gfo.owlhas_ggoal > ≡ < http://www.onto-med.de/ontologies/gfo.owlgoal_of >
∃ has_goal Thing ⊆ Function

has_left_time_boundary

⊆ has_time_boundary
|http://www.onto-med.de/ontologies/gfo.owlhas_left_time_boundary > ≡ < http://www.onto-med.de/ontologies/gfo.owlhas_left_time_boundary >
⊤ ⊆ ≤ 1 has_left_time_boundary Thing

has_member

|http://www.onto-med.de/ontologies/gfo.owlhas_member > ≡ < http://www.onto-med.de/ontologies/gfo.owlmember_of >
∃ has_member Thing ⊆ Set
⊤ ⊆ ∀ has_member Entity

has_part

⊆ abstract_has_part
|http://www.onto-med.de/ontologies/gfo.owlpart_of > ≡ < http://www.onto-med.de/ontologies/gfo.owlhas_part >
TransitivePropertyhas_part
∃ has_part Thing ⊆ Concrete
⊤ ⊆ ∀ has_part Concrete

has_participant

|http://www.onto-med.de/ontologies/gfo.owlhas_pparticipant > ≡ < http://www.onto-med.de/ontologies/gfo.owlparticipant_of >
⊤ ⊆ ∀ has_participant Presential

has_proper_part

⊆ has_part
|http://www.onto-med.de/ontologies/gfo.owlproper_part_of > ≡ < http://www.onto-med.de/ontologies/gfo.owlhas_pproper_part >
TransitivePropertyhas_proper_part

has_requirement

⊆ has_function_determinant

$\text{!http://www.onto-med.de/ontologies/gfo.owlrequirement_of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlhas_}$
 $\exists \text{ has_requirement Thing } \sqsubseteq \text{Function}$

has_right_time_boundary

$\sqsubseteq \text{has_time_boundary}$
 $\text{!http://www.onto-med.de/ontologies/gfo.owlright_boundary_of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl}$
 $\top \sqsubseteq \leq 1 \text{ has_right_time_boundary Thing}$

has_sequ_ence_constituent

$\text{!http://www.onto-med.de/ontologies/gfo.owlsequence_constituent_of} > \equiv < \text{http://www.onto-med.de/ontologies/gf}$

has_spatial_boundary

$\sqsubseteq \text{has_boundary}$
 $\text{!http://www.onto-med.de/ontologies/gfo.owlhas_spatial_boundary} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.o}$
 $\top \sqsubseteq \forall \text{ has_spatial_boundary Spatial_boundary}$

has_time_boundary

$\sqsubseteq \text{has_boundary}$
 $\text{!http://www.onto-med.de/ontologies/gfo.owlhas_time_boundary} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl}$
 $\exists \text{ has_time_boundary Thing } \sqsubseteq \text{Chronoid}$
 $\top \sqsubseteq \forall \text{ has_time_boundary Time_boundary}$

has_token

$\sqsubseteq \text{instance_of}$
 $\text{!http://www.onto-med.de/ontologies/gfo.owlhas_token} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owltoken_of}$
 $\exists \text{ has_token Thing } \sqsubseteq \text{Symbol_structure}$
 $\top \sqsubseteq \forall \text{ has_token Concrete}$

has_value

$\text{!http://www.onto-med.de/ontologies/gfo.owlvalue_of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlhas_value}$
 $\exists \text{ has_value Thing } \sqsubseteq \text{Property}$
 $\top \sqsubseteq \forall \text{ has_value Property_value}$

instance_{of}

$\text{!http://www.onto-med.de/ontologies/gfo.owlinstantiated_by} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlins}$
 $\exists \text{ instance_of Thing } \sqsubseteq \text{Entity}$
 $\top \sqsubseteq \forall \text{ instance_of Category}$

instantiated_{by}

$\text{!http://www.onto-med.de/ontologies/gfo.owlinstantiated}_{by} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlins}$
 $\exists \text{ instantiated_by Thing} \sqsubseteq \text{Category}$

layer_{of}

$\text{!http://www.onto-med.de/ontologies/gfo.owllayer}_{of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlonl}_{ayer}$
 $\exists \text{ layer_of Thing} \sqsubseteq \text{Ontological_layer}$
 $\top \sqsubseteq \forall \text{ layer_of Individual}$

left_{boundary}_{of}

$\text{!http://www.onto-med.de/ontologies/gfo.owlhas}_{left_time_boundary} > \equiv < \text{http://www.onto-med.de/ontologies/gfo}$
 $\top \sqsubseteq \leq 1 \text{ left_boundary_of}^- \text{ Thing}$

level_{of}

$\sqsubseteq \text{layer_of}$
 $\text{!http://www.onto-med.de/ontologies/gfo.owllevel}_{of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlonl}_{evel}$
 $\exists \text{ level_of Thing} \sqsubseteq \text{Level}$

member_{of}

$\text{!http://www.onto-med.de/ontologies/gfo.owlhas}_{member} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owlmemb}$
 $\exists \text{ member_of Thing} \sqsubseteq \text{Entity}$
 $\top \sqsubseteq \forall \text{ member_of Set}$

necessary_{for}

$\text{!http://www.onto-med.de/ontologies/gfo.owlnecessary}_{for} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owldepe}$
 $\exists \text{ necessary_for Thing} \sqsubseteq \text{Item}$
 $\top \sqsubseteq \forall \text{ necessary_for Item}$

occupied_{by}

$\text{!http://www.onto-med.de/ontologies/gfo.owloccupies}_{i} \equiv \text{!http://www.onto-med.de/ontologies/gfo.owloccupied}_{by} >^-$
 $\top \sqsubseteq \leq 1 \text{ occupied_by}^- \text{ Thing}$
 $\exists \text{ occupied_by Thing} \sqsubseteq \text{Space}$
 $\top \sqsubseteq \forall \text{ occupied_by Presential}$

occupies

$\text{!http://www.onto-med.de/ontologies/gfo.owloccupies}_{i} \equiv \text{!http://www.onto-med.de/ontologies/gfo.owloccupied}_{by} >^-$
 $\top \sqsubseteq \leq 1 \text{ occupies Thing}$
 $\exists \text{ occupies Thing} \sqsubseteq \text{Presential}$
 $\top \sqsubseteq \forall \text{ occupies Space}$

on_layer

$\text{[http://www.onto-med.de/ontologies/gfo.owl} \text{layer}_of > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl} \text{on}_l \text{ayer}$
 $\exists \text{ on_layer Thing} \sqsubseteq \text{Individual}$
 $\top \sqsubseteq \forall \text{ on_layer Ontological_layer}$

on_level

$\sqsubseteq \text{on_layer}$
 $\text{[http://www.onto-med.de/ontologies/gfo.owl} \text{level}_of > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl} \text{on}_l \text{evel}$
 $\top \sqsubseteq \forall \text{ on_level Level}$

on_stratum

$\sqsubseteq \text{on_layer}$
 $\text{[http://www.onto-med.de/ontologies/gfo.owl} \text{on}_s \text{tratum} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl} \text{stratum}$
 $\top \sqsubseteq \forall \text{ on_stratum Stratum}$

part_of

$\sqsubseteq \text{abstract_part_of}$
 $\text{[http://www.onto-med.de/ontologies/gfo.owl} \text{part}_of > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl} \text{has}_p \text{art}$
 $\text{TransitiveProperty}$ part_of
 $\exists \text{ part_of Thing} \sqsubseteq \text{Concrete}$
 $\top \sqsubseteq \forall \text{ part_of Concrete}$

participates_in

$\text{[http://www.onto-med.de/ontologies/gfo.owl} \text{has}_p \text{articipant} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl} \text{part}$
 $\exists \text{ participates_in Thing} \sqsubseteq \text{Presential}$

plays_role

$\exists \text{ plays_role Thing} \sqsubseteq \text{Thing}$
 $\top \sqsubseteq \forall \text{ plays_role Role}$

projection_of

$\text{[http://www.onto-med.de/ontologies/gfo.owl} \text{projection}_of > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl} \text{proj}$
 $\top \sqsubseteq \leq 1 \text{ projection_of}^- \text{ Thing}$

projects_to

$\text{[http://www.onto-med.de/ontologies/gfo.owl} \text{projection}_of > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl} \text{proj}$
 $\top \sqsubseteq \leq 1 \text{ projects_to Thing}$
 $\top \sqsubseteq \forall \text{ projects_to Temporal_region}$

proper_{part_of}

⊆ part_of

¡http://www.onto-med.de/ontologies/gfo.owlproper_{part_of} > ≡ < http://www.onto-med.de/ontologies/gfo.owlhas_{part_of} >
 TransitivePropertyproper_part_of

realized_{by}

¡http://www.onto-med.de/ontologies/gfo.owlrealizes_i ≡ ¡http://www.onto-med.de/ontologies/gfo.owlrealized_{by} >⁻

realizes

¡http://www.onto-med.de/ontologies/gfo.owlrealizes_i ≡ ¡http://www.onto-med.de/ontologies/gfo.owlrealized_{by} >⁻

∃ realizes Thing ⊆ Individual

⊤ ⊆ ∀ realizes Function

requirement_{of}

⊆ function_determinant_of

¡http://www.onto-med.de/ontologies/gfo.owlrequirement_{of} > ≡ < http://www.onto-med.de/ontologies/gfo.owlhas_{requirement_of} >

right_{boundary_of}

¡http://www.onto-med.de/ontologies/gfo.owlright_{boundary_of} > ≡ < http://www.onto-med.de/ontologies/gfo.owlhas_{right_boundary_of} >

⊤ ⊆ ≤ 1 right_boundary_of⁻ Thing

role_{of}

∃ role_of Thing ⊆ Role

⊤ ⊆ ∀ role_of Individual

sequence_{constituent_of}

⊆ part_of

¡http://www.onto-med.de/ontologies/gfo.owlsequence_{constituent_of} > ≡ < http://www.onto-med.de/ontologies/gfo.owlhas_{sequence_constituent_of} >

∃ sequence_constituent_of Thing ⊆ Token

⊤ ⊆ ∀ sequence_constituent_of Symbol_sequence

spatial_{boundary_of}

⊆ boundary_of

¡http://www.onto-med.de/ontologies/gfo.owlhas_{spatial_boundary_of} > ≡ < http://www.onto-med.de/ontologies/gfo.owlhas_{spatial_boundary_of} >

∃ spatial_boundary_of Thing ⊆ Spatial_boundary

⊤ ⊆ ∀ spatial_boundary_of Space

stratum_{of}

⊆ layer_of

$\{ \text{http://www.onto-med.de/ontologies/gfo.owl} \# \text{stratum_of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl} \# \text{stratum} >$
 $\exists \text{stratum_of Thing} \sqsubseteq \text{Stratum}$

time_boundary_of

$\sqsubseteq \text{boundary_of}$
 $\{ \text{http://www.onto-med.de/ontologies/gfo.owl} \# \text{time_boundary_of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl} \# \text{time_boundary} >$
 $\exists \text{time_boundary_of Thing} \sqsubseteq \text{Time_boundary}$
 $\top \sqsubseteq \forall \text{time_boundary_of Chronoid}$

token_of

$\{ \text{http://www.onto-med.de/ontologies/gfo.owl} \# \text{token_of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl} \# \text{token} >$

value_of

$\{ \text{http://www.onto-med.de/ontologies/gfo.owl} \# \text{value_of} > \equiv < \text{http://www.onto-med.de/ontologies/gfo.owl} \# \text{value} >$
 $\exists \text{value_of Thing} \sqsubseteq \text{Property_value}$
 $\top \sqsubseteq \forall \text{value_of Property}$

Data properties

Individuals

empty_set

$\text{empty_set} : \text{Set}$

Datatypes

PlainLiteral

string