

gistUnit

gist Unit of Measure, extends the base units from top to cover Rations and lesser used units (this allows someone to exclude Luminosity if they don't want it)

> Base URI: https://ontologies.semanticarts.com/o/gistUnit Version URI: https://ontologies.semanticarts.com/o/gistUnitX.x.x Default Namespace: Default Comment: rdfs:comment

> > Default Label: rdfs:label

Namespaces

https://ontologies.semanticarts.com/gist/

<u>Imports</u>

https://ontologies.semanticarts.com/o/gistTopX.x.x Location: gistTopX.x.x.owl

gist:license

https://creativecommons.org/licenses/by-sa/3.0/

gist:numerator

Domain: gist: RatioUnit Range:gist:UnitOfMeasure Relates a RatioUnit such as meter(s)/second to the numerator Unit (e.g. meter).

> rdfs:label **Numerator**

gist:denominator

Domain:qist:RatioUnit Range:gist:UnitOfMeasure Relates a RatioUnit such as meters/second to the denominator Unit (e.g. second).

> rdfs:label Denominator

Units and Measures

These are the remaining base units that were not essential for the definition of top level concepts

gist:unitSymbol

Domain:gist:UnitOfMeasure Range:string The standard symbol for the unit NOT using any special characters. E.g. square meter would be m^2 rather than m2.

> rdfs:label **Unit Symbol**

aist:unitSymbolUnicode

Domain:gist:UnitOfMeasure Range:string The standard symbol for the unit preferred for pretty printing, may use special characters. E.g. square meter would be m² rather than m^2.

> rdfs:label **Unit Symbol Unicode**

gist:unitSymbolHTML

Domain:gist:UnitOfMeasure Range:string The standard symbol for the unit in HTML format for pretty printing, may use special characters. E.g. to show square meter as m² rather than m², the value of this property would be "<![CDATA[m²]]>" This is for when Unicode not supported and the display will be HTML format.

rdfs:label

Unit Symbol HTML

gist:RatioUnit

--- AND ---

Ratio Unit

EXAMPLE: Miles per hour.

RatioUnit can be (recursively) derived from the conversion factors of the numerator and denominator units. E.g., the derived conversion factor from km/minute to meters/ second is 1000/60 or 16 2/3.

gist:numerator

some gist:UnitOfMeasure

gist:denominator

A UnitOfMeasure composed of a numerator unit and a denominator unit.

rdfs:label

rdfs:comment

rdfs:comment

NOTE: If needed, a conversion factor for a

gist:UnitOfMeasure

some gist: UnitOfMeasure

gist:CurrencyUnit

A unit of money. Note: this is the only unit whose conversion factors include time (i.e., the conversion rates change on a daily basis).

--- AND ---

rdfs:label

Currency Unit

gist:SimpleUnitOfMeasure

gist:hasBaseUnit

has gist: USDollar

gist:CountingUnit

A unit of counting, especially 'each', but also units such as dozens.

--- AND ---

rdfs:label

Counting Unit

gist:SimpleUnitOfMeasure

gist:hasBaseUnit

has gist:_each

gist:DataSizeUnit

A unit to measure amounts of digital information.

--- AND ---

rdfs:label

Data Size Unit

gist:SimpleUnitOfMeasure

gist:hasBaseUnit

has gist:_bit

qist:TemperatureUnit

Unit of measurement for expressing temperature. Per SI, the base of temperature is in Kelvin, to allow for all units to be expressed relative to a real (in this case absolute) zero.

--- AND ---

rdfs:label Temperature Unit

gist:SimpleUnitOfMeasure

gist:hasBaseUnit

has gist:_kelvin

gist:conversionOffset

some double

gist:ElectricalCurrentUnit

Unit of electrical current, which is charge per unit time. The SI unit is the ampere. (Note that electrical current is a composed unit.)

--- AND ---

rdfs:label **Electrical Current Unit**

gist:SimpleUnitOfMeasure

gist:hasBaseUnit

has gist:_ampere

gist:LuminousIntensityUnit

The measure of brightness. The SI unit is the candela.

--- AND ---

rdfs:label

Luminous Intensity Unit

gist:SimpleUnitOfMeasure

gist:hasBaseUnit

has gist:_candela

gist:MoleUnit

Amount of chemical material. Measured in Avogadro units (moles) of 6.02 x 10^23 molecules.

--- AND ---

rdfs:label **Mole Unit**

gist:SimpleUnitOfMeasure

gist:hasBaseUnit

has gist:_mole

gistMagnitude

gist Magnitudes

Base URI : https://ontologies.semanticarts.com/o/gistMagnitude Version URI: https://ontologies.semanticarts.com/o/gistMagnitudeX.x.x Default Namespace:

Default Comment: rdfs:comment Default Label : rdfs:label

Namespaces Namespaces

https://ontologies.semanticarts.com/gist/

https://ontologies.semanticarts.com/o/gistUnitX.x.x

Location : gistUnitX.x.x.owl

gist:license

https://creativecommons.org/licenses/by-sa/3.0/

gist:ProductMagnitude

A magnitude expressed as a product of primitives. (E.g., Force = M*A). --- AND ---

> rdfs:label **Product Magnitude**

> gist:Magnitude

gist:hasUoM some gist:ProductUnit

gist:RatioMagnitude

This is a number whose unit of measure is

--- AND ---

rdfs:label

Ratio Magnitude

rdfs:comment

NOTE: A RatioMagnitude just has one

decimal value.

rdfs:comment

EXAMPLE: Speed. The ratio magnitude is

60, the unit of measure might be

MilesPerHour.

a ratio.

gist:Count

A measure that involves countable amounts ('eaches' as well as cases, etc.). Can be decimal.

--- AND ---

rdfs:label

rdfs:comment

NOTE: Count is not disjoint with all the other magnitudes, as there are some magnitudes that could conceivably be counted.

gist:Magnitude

gist:hasUoM some gist: CountingUnit

A special type of magnitude, due to the way rounding is handled in math and the

--- AND --rdfs:label

temporal aspect of conversion.

gist:Monetary

gist:Magnitude

Monetary

gist:hasUoM

some gist: CurrencyUnit

gist:Percentage

A ratio where the numerator and denominator are of the same unit of measure.

> rdfs:label Percentage

rdfs:comment

NOTE: there are various ways to represent percentage: 50/100 could be represented as '50' or '0.5'. gist uses the latter, as it involves fewer conversions for subsequent use.

Subclass of

gist:RatioMagnitude

gist:InformationQuantity An amount of data, such as 6 petabytes, or 640KB.

--- AND ---

gist:Magnitude

gist:hasUoM

some gist: DataSizeUnit

rdfs:label **Information Quantity**

gist:Magnitude

gist:hasUoM

some gist:RatioUnit

gist:Temperature

The degree or intensity of heat present in a substance or object, especially as expressed according to a comparative

--- AND ---

rdfs:label

Temperature

gist:hasUoM

some gist:TemperatureUnit

gist:Magnitude

gist:ElectricCurrent

A flow of electric charge.

--- AND ---

rdfs:label

Electric Current

gist:hasUoM

some gist:ElectricalCurrentUnit

gist:Magnitude

gist:LuminousIntensity

A measure of the wavelength-weighted power emitted by a light source in a particular direction per unit solid angle. This is based on the luminosity function, a standardized model of the sensitivity of the human eye.

--- AND ---

rdfs:label

Luminous Intensity

gist:Magnitude

gist:hasUoM some gist:LuminousIntensityUnit

gist:MolarQuantity

Amount of a substance, as counted molecules.

--- AND ---

rdfs:label

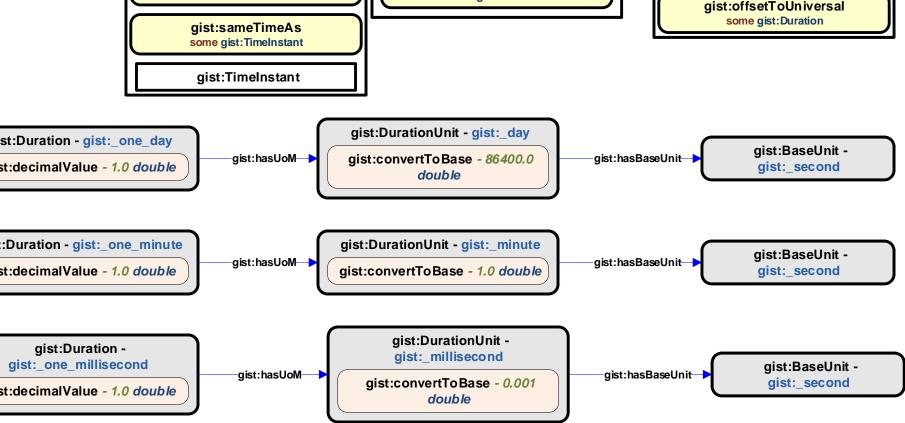
Molar Quantity

gist:Magnitude

gist:hasUoM

some gist: MoleUnit

gistTime gistTime how timezones and some common precisions are modeled gist:GreenwichInstant By default time instants are expressed in Base URI: https://ontologies.semanticarts.com/o/gistTime grenich, if you need to be explicit (to Version URI: https://ontologies.semanticarts.com/o/gistTimeX.x.x calculate offset for instance) Default Namespace: --- AND ---Default Comment: rdfs:comment Default Label: rdfs:label gist:LocalInstant rdfs:label A point in time expressed relative to a local **Greenwich instant Namespaces** time zone. Can be converted to Universal Time using the time zone offset. The https://ontologies.semanticarts.com/gist/ gist precision is used to state how precise this gist:TimeInstant instant is. Typical values would be day, hour, minute or second. <u>Imports</u> gist:timeZoneStandardUsed --- AND --https://ontologies.semanticarts.com/o/gistTopX.x.x has gist:_greenwichTimeZone Location: gistTopX.x.x.owl rdfs:label Local Instant gist:license gist:timeZoneStandardUsed https://creativecommons.org/licenses/by-sa/3.0/ some gist:TimeZoneStandard gist:sameTimeAs gist:offsetToUniversal Domain:gist:TimeInstant Domain:gist:TimeZone Range:gist:Duration Range:gist:TimeInstant How many hours the timezone if off GMT We can have two local time instants refer to the same time, the same universal time. rdfs:label Offset To Universal rdfs:label Same Time As gist:Duration - gist:_one_day gist:timeZoneStandardUsed gist:decimalValue - 1.0 double Domain:gist:TimeInstant Range:gist:TimeZoneStandard the "timezone" with Daylight savings adjust rdfs:label **Time Zone Standard Used** gist:Duration - gist:_one_minute gist:decimalValue - 1.0 double gist:Duration gist:_one_millisecond gist:decimalValue - 1.0 double



gist:TimeZoneStandard -

gist:_greenwichTimeZone

gist:TimeZoneStandard

The algorithm for getting from Greenwich

Mean Time to local time, which includes

the time zone offset and rules about

daylight savings time.

--- AND ---

rdfs:label

Time Zone Standard

gist:Specification

gist:basedOn

some gist:TimeZone

gist:TimeZone

A region that observes a uniform standard

time for legal, commercial, and social

purposes. A typical time zone averages

15° of longitude in width and typically

observes a clock time one hour earlier

than the zone immediately to the east.

--- AND ---

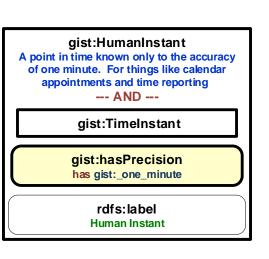
rdfs:label

Time Zone

gist:GeoRegion

gist:DateInstant A point in time known only to the accuracy of one day. Say the signing of the declaration of independence on 7/4/1776 --- AND -- gist:TimeInstant gist:hasPrecision has gist:_one_day rdfs:label

Date Instant



gist:SystemInstant

A point in time known to the accuracy of a

millisecond. For posting transacion

recorded on times

--- AND ---

gist:TimeInstant

gist:hasPrecision has gist:_one_millisecond

rdfs:label

System Instant

gistPlace gistPlace key GIS style primitives Base URI: https://ontologies.semanticarts.com/o/gistPlace Version URI: https://ontologies.semanticarts.com/o/gistPlaceX.x.x gist:geoContains [T] Default Namespace : gist:geoContainedIn (gist:geoContainedIn) Default Comment: rdfs:comment All the transitive places something is Transitive version of geoDirectlyContains Default Label : rdfs:label located in Domain rdfs:label <u>Namespaces</u> Geo Contained In --- OR --https://ontologies.semanticarts.com/gist/ gist gist:GeoRoute gist:GeoSegment https://ontologies.semanticarts.com/o/gistMeasureX.x.x Location : gistMeasureX.x.x.owl gist:Landmark gist:license https://creativecommons.org/licenses/by-sa/3.0/ gist:Room gist:GeoSegment gist:fromPlace A single portion of a GeoRegion which has gist:GeoPoint Range:gist:Place been divided (i.e., segmented). origin gist:GeoRegion rdfs:label From Place gist:GeoVolume gist:toPlace gist:fromPlace Range:gist:Place exactly 1 gist:GeoPoint Destination gist:geoOccupiedBy Range what is in the location rdfs:label --- OR --exactly 1 gist:GeoPoint rdfs:label **Geo Occupied By** gist:GeoRoute gist:GeoRoute gist:GeoSegment gist:geoOccupies An ordered set of GeoPoints that defines a (gist:geoOccupiedBy) path from starting point to ending point. A thing occupies are region gist:Landmark Domain gist:Room --- OR --gist:PhysicalIdentifiableItem gist:GeoPoint gist:OrderedCollection gist:hasPhysicalLocation gist:PhysicalSubstance gist:GeoRegion gist:hasDirectPart Range:gist:Place Where something is located some gist:GeoSegment gist:GeoVolume rdfs:label Range **Has Physical Location** gist:GeoVolume --- OR --rdfs:label gist:Place **Geo Contains** gist:permanentGeoOccupiedBy What is in the fixed location rdfs:label rdfs:label **Geo Occupies Permanent Geo Occupied By** gist:geoDirectlyContains (gist:geoDirectlyContainedIn) The subject geospatially contains the gist:permanentGeoOccupies gist:geoDirectlyContainedIn object. E.g. the area of a city contains the (gist:permanentGeoOccupiedBy) the neighborhood is in the city area of its neighborhoods To be in a fixed position on the earth rdfs:label rdfs:label rdfs:label Geo Directly Contained In **Geo Directly Contains Permanent Geo Occupies**

gist:Place Union of all the geo classes --- OR --rdfs:label gist:GeoRoute gist:GeoSegment gist:Landmark gist:Room gist:GeoPoint gist:GeoRegion gist:GeoVolume gist:Room An enclosed area within a building. --- AND ---

rdfs:label gist:directPartOf

> some gist:Building gist:identifiedBy

some gist:ID

gist:Landmark Something permanently attached to the Earth. --- AND --rdfs:label Landmark gist:PhysicalIdentifiableItem

gist:permanentGeoOccupies

some

--- OR ---

gist:GeoVolume

gist:GeoRegion

gist:Building

A man-made structure for dwelling or working.

> rdfs:label **Building**

Subclass of gist:Landmark

--- AND ---

rdfs:label

Geo Segment

gist:toPlace

--- AND ---

rdfs:label

Geo Route

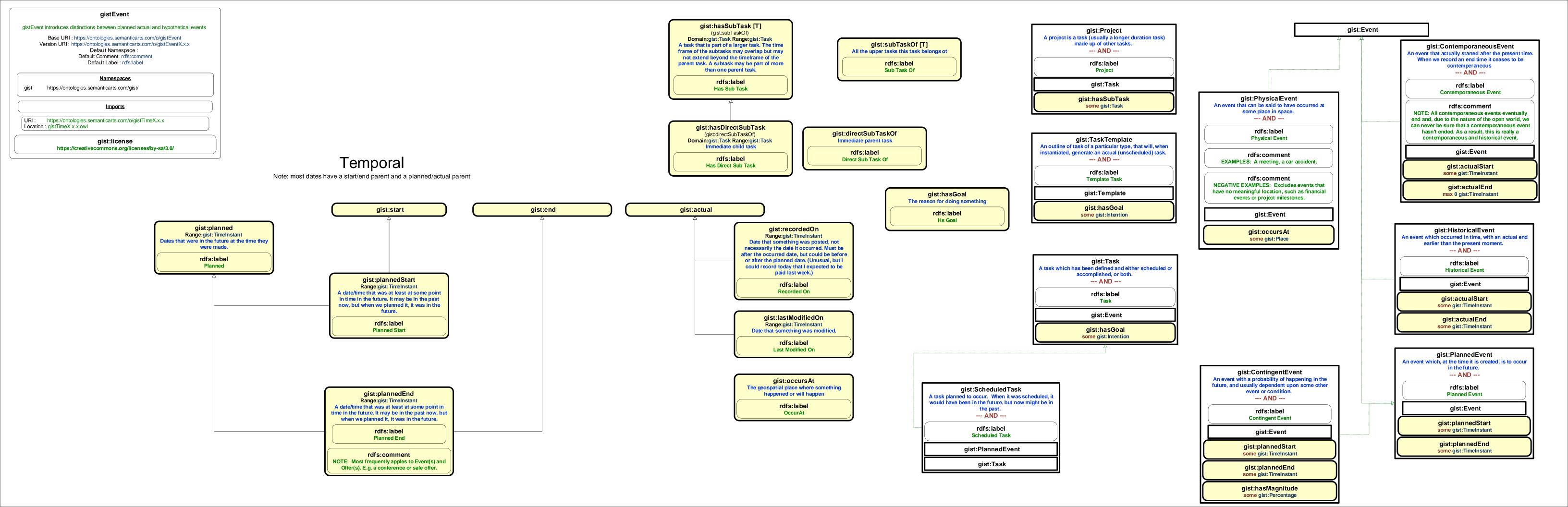
A three-dimensional space on or near the surface of the Earth, such as an oil reservoir, the body of a lake, or an airspace.

--- AND ---

rdfs:label Geo Volume

gist:geoDirectlyContains some gist: GeoPoint

> gist:hasMagnitude some gist: Volume



gistAddress

gist:Address where we have the various kinds of addresses (postal, building as well as electronic)

Base URI: https://ontologies.semanticarts.com/o/gistAddress Version URI: https://ontologies.semanticarts.com/o/gistAddressX.x.x Default Namespace:

Default Comment: rdfs:comment Default Label : rdfs:label

Namespaces

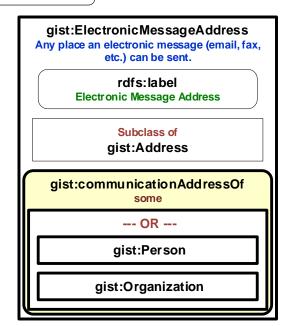
gist https://ontologies.semanticarts.com/gist/

Imports

URI: https://ontologies.semanticarts.com/o/gistPlaceX.x.x Location: gistPlaceX.x.x.owl

gist:license

https://creativecommons.org/licenses/by-sa/3.0/



gist:hasCommunicationAddress

(gist:communicationAddressOf)
Range:gist:Address
Points to a general class of places you can send messages including postal addresses, fax numbers, phone numbers, email, web site, etc.

rdfs:label

Has Communication Address

gist:hasStreetAddress

(gist:streetAddressOf)
Range:gist:BuildingAddress
A place that can be found on a map, has geo coordinates; you could live or work there.

rdfs:label Has Street Address

gist:communicationAddressOf

Whose address is this

rdfs:label

Communication Address Of

gist:streetAddressOf

Whose street address is this

rdfs:label Street Address Of

gist:Address

A reference to a place (real or virtual) that can be located by some routing algorithm, and where messages or things can be sent to or retrieved from. E.g. PO Box or URL to a pdf file.

rdfs:label Address

Subclass of

gist:Content

gist:TelephoneNumber

A numeric code a telephonic device uses for contacting another telephonic device.

rdfs:label Telephone Number

rdfs:comment
EXAMPLES: Mobile, fax, or landline
phone number.

Subclass of gist:Address

gist:communicationAddressOf some

--- OR ---

gist:Person

gist:Organization

gist:PostalAddress

A set of codes the postal authorities can use to deliver physical mail.

rdfs:label

Postal Address

rdfs:comment

EXAMPLES: a street address, a PO Box, an FPO code, or the route codes.

Subclass of

gist:Address

gist:communicationAddressOf

--- OR ---

gist:Person

gist:Organization

gist:BuildingAddress

An address to which you can send mail, or that you could find in the physical world.

rdfs:label Building Address

Subclass of gist:Address

(N) gist:streetAddressOf some gist:Building

gistOrganization

gistOrganization Government Organizations are introduced

Base URI : https://ontologies.semanticarts.com/o/gistOrganization Version URI: https://ontologies.semanticarts.com/o/gistOrganizationX.x.x

Default Namespace: Default Comment: rdfs:comment Default Label: rdfs:label

<u>Namespaces</u>

https://ontologies.semanticarts.com/gist/

<u>Imports</u>

https://ontologies.semanticarts.com/o/gistTopX.x.x

Location : gistTopX.x.x.owl

gist:license

https://creativecommons.org/licenses/by-sa/3.0/

gist:recognizes

Recognizes

rdfs:label

Recognizes

gist:GovernmentOrganization -

gist:_united Nations if the united nations recognizes you as a country you are a country

gist:recognizedBy

(gist:recognizes)
The entity that formally acknowledges the existence of, as the State recognizes the existence of a particular company

Range

--- OR ---

gist:Person

gist:Organization

rdfs:label

Recognized By

gist:directlyRecognizedBy

The party doing the recognition

rdfs:label

Directly RecognizedBy

gist:GovernmentOrganization

An organization established either by fiat (as a conquering army overtakes a land and declares a government) or by delegation from a fiat government, such as a state or local government or a specific agency. Differs from a corporation in that it cannot be owned.

--- AND ---

rdfs:label

Government Organization

rdfs:comment

EXAMPLES: The State of Washington Office of Financial Management; the Food and Drug Administration; the Scottish Parliament.

gist:Organization

gist:recognizedBy

some gist: Country Government

rdfs:comment

NOTE: Establishment by a CountryGovernment may be indirect via local, regional, or national GovernmentOrganization(s) that ultimately are recognized by a CountryGovernment.

gist:CountryGovernment

The geopolitical body that runs a geopolitical region recognized as a country.

--- AND ---

rdfs:label

Country Government

gist:GovernmentOrganization

gist:directlyRecognizedBy

has gist:_unitedNations

gist:governs some gist:GeoRegion

gist:GeoPoliticalRegion

A collection of GeoRegions that are being administered by a Government Organization

--- AND ---

rdfs:label

GeoPolitical Region

gist:Collection

gist:hasMember

some gist:GeoRegion

gist:governedBy

some gist:GovernmentOrganization

gist:Group

A collection of People. The group may or may not be an Organization. Many organizations consist of groups of people, but that is not a defining characteristic.

--- AND ---

rdfs:label Group

gist:Collection

gist:hasMember

some gist:Person

gistContent types of content and mediums Base URI: https://ontologies.semanticarts.com/o/gistContent Version URI: https://ontologies.semanticarts.com/o/gistContentX.x.x Default Namespace : Default Comment: rdfs:comment Default Label : rdfs:label <u>Namespaces</u> https://ontologies.semanticarts.com/gist/

<u>Imports</u> https://ontologies.semanticarts.com/o/gistTopX.x.x

Location : gistTopX.x.x.owl

gist:license

https://creativecommons.org/licenses/by-sa/3.0/

gist:fromAgent The source of a message or shipment Range --- OR ---

gist:Address

gist:Person

gist:Organization

rdfs:label From Agent

gist:toAgent Comment: this is not the inverse of fromAgent. A message can be from someone. If we made it the inverse the person would be "to" the message --- OR ---

gist:Address

gist:Person

gist:Organization

rdfs:label To Agent

gist:about

(gist:describedIn) Domain:gist:Content Subject matter of a document.

> rdfs:label About

gist:containedText

Range:string

Links to the string corresponding to Text

rdfs:label **Contained Text**

gist:encryptedText

Links to the string corresponding to **EncryptedText**

> rdfs:label **Encrypted Text**

gist:renderedOn

What media somethign was rendered On

rdfs:label Rendered On

gist:describedIn Docuemnt the subject matter appeared in

> rdfs:label **Described In**

gist:expressedIn

The language something was expressed in

rdfs:label Expressed In

gist:Message

A specific instance of content sent from an Organization, Person, or Application to at least one other Organization, Person, or Application.

--- AND ---

rdfs:label Message

rdfs:comment

EXAMPLES: An email message, a phone call, a voice message, or a Web Service message.

gist:ContentExpression

gist:fromAgent

--- OR ---

gist:Person

gist:Organization

gist:Address

gist:toAgent some

--- OR ---

gist:Person

gist:Organization

gist:Address

gist:Medium

A physicality on which a work could be implemented or exposed. E.g., paper, clay, or a computer monitor.

gist:Text

Content expressed as words and numbers

(not graphics).

rdfs:label

Text

Equivalent to

--- AND ---

gist:Content

gist:expressedIn some gist:Language

gist:containedText

rdfs:label Medium

Subclass of gist:Category

gist:GeneralMediaType

The real-world media type for content.

rdfs:label **General Media Type**

rdfs:comment

EXAMPLE: audio, still image, video, textual, physical (e.g., a statue), or performance (i.e. a play). Or it could be oil or pastel for a painting.

Subclass of

gist:Category

gist:MimeType

A digitized type that computer applications can recognize.

> rdfs:label MIME Type

Subclass of

gist:Category

gist:ContentExpression

Intellectual Property reduced to text, audio etc. If it contains text (written or spoken), it may be in a language.

> rdfs:label **Content Expression**

> > Subclass of gist:Content

(N) gist:expressedIn some gist:Language

(N) gist:categorizedBy some gist:GeneralMediaType

gist:FormattedContent

Content which is in a particular format. (E.g., html, pdf, jpg.) --- AND ---

> rdfs:label Formatted Content

gist:ContentExpression

gist:expressedIn some gist:MimeType Content which has been expressed, either to print, or through speakers, or on a monitor.

Rendered Content

some gist:MimeType

some gist: Medium

gist:RenderedContent

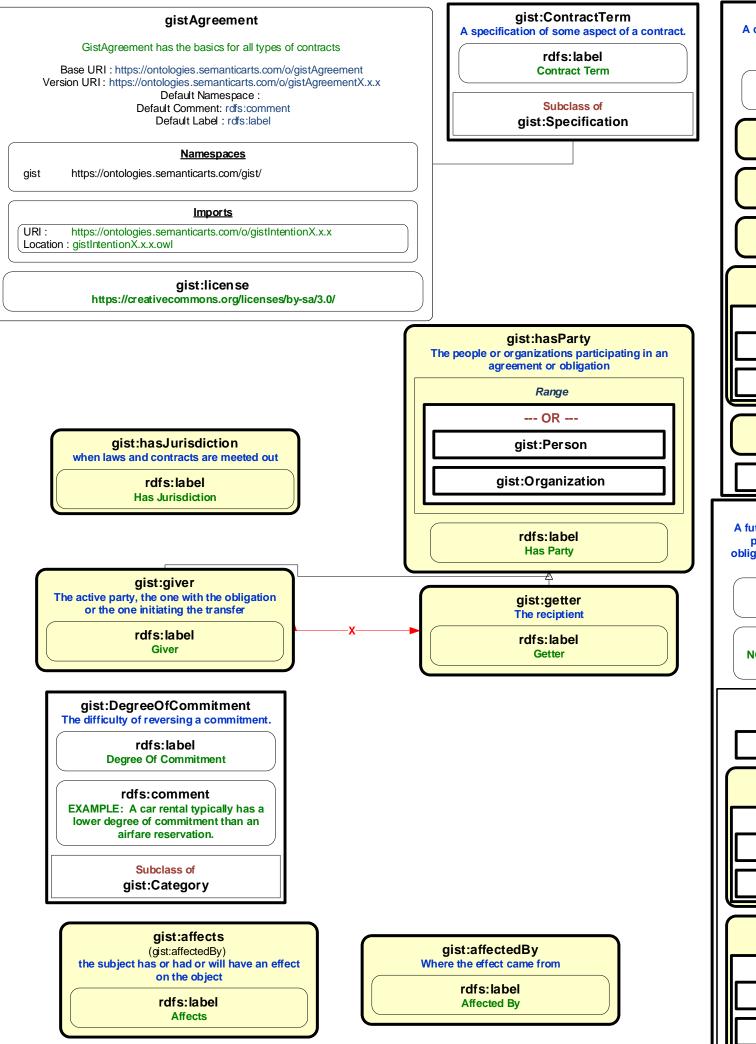
--- AND ---

rdfs:label

gist:ContentExpression

gist:expressedIn

gist:renderedOn



gist:Offer A commitment to buy or sell a described or identified part or service. --- AND --rdfs:label gist:plannedEnd some gist:TimeInstant gist:start some gist:TimeInstant gist:hasMagnitude some gist: Monetary gist:giver --- OR --gist:Person gist:Organization gist:hasDirectPart some gist: CatalogItem gist:ContingentObligation gist:Obligation A future commitment from one organization or person to another. Contracts are sets of obligations to do or forebear, or to indemnify or warrant. rdfs:label Obligation rdfs:comment NOTE: Obligations will often be governed by some Agreement or Offer. Equivalent to --- AND --gist:Commitment gist:giver --- OR --gist:Person gist:Organization gist:getter --- OR --gist:Person

gist:Organization

```
gist:Agreement
   soemthing which two or more People or
    Organizations mutually commit to do
               --- AND ---
               rdfs:label
                Agreement
            gist:Commitment
           gist:hasDirectPart
           min 2 gist:Obligation
             gist:hasParty
                --- OR ---
               gist:Person
            gist:Organization
             gist:Contract
  an Agreement which can be enforced by
               --- AND ---
               rdfs:label
            gist:Agreement
         gist:hasJurisdiction
    some gist:GovernmentOrganization
      gist:ContingentObligation
An obligation that is not yet firm. There is some
contingent event, the occurrence of which will
    cause the obligation to become firm.
               rdfs:label
          Contingent Obligation
             rdfs:comment
    NOTE: A contingent obligation might
    have a getter counterparty (as in the
   case of insurance); but it might not (as
          in the case of an offer).
              Equivalent to
               --- AND ---
           gist:Commitment
               gist:giver
                --- OR ---
              gist:Person
           gist:Organization
           gist:triggeredBy
             some gist:Event
```

```
gist:Commitment
 An obligation (possibly unilateral).
           --- AND ---
            rdfs:label
           Commitment
            gist:giver
              some
            --- OR ---
           gist:Person
        gist:Organization
      gist:categorizedBy
   some gist: DegreeOfCommitment
             --- OR ---
         gist:Restriction
        gist:Requirement
          gist:Account
An agreement having a balance, as in a
bank account, or credit card account, or
    Accounts Receivable account.
            --- AND ---
            rdfs:label
             Account
         gist:Agreement
       gist:hasMagnitude
         some gist:Balance
          gist:Balance
An amount decremented or incremented
    by a series of transactions.
            --- AND ---
            rdfs:label
             Balance
         gist:Magnitude
         gist:affectedBy
        some gist: Transaction
        gist:Transaction
An event which has an effect on at least
         one accumulator.
            rdfs:label
           Transaction
```

Subclass of

gist:Event

gistTemporalRelation

gistTe3mporal the parent class of all Temporal Relations

 $\label{lem:base-urange} \textbf{Base URI:} https://ontologies.semanticarts.com/o/gistTemporalRelation Version URI:} https://ontologies.semanticarts.com/o/gistTemporalRelationX.x.x$

Default Namespace : Default Comment: rdfs:comment Default Label : rdfs:label

<u>Namespaces</u>

gist https://ontologies.semanticarts.com/gist/

<u>Imports</u>

URI: https://ontologies.semanticarts.com/o/gistTimeX.x.x Location: gistTimeX.x.x.owl

gist:license

https://creativecommons.org/licenses/by-sa/3.0/

gist:connectedTo

A non owning, non causal, non-subordinate (ie. peer to peer) relationship.

rdfs:label Connected To

gist:TemporalRelation

A relationship existing for a period of time.

rdfs:label Temporal Relation

rdfs:comment

NOTE: A temporal relation must be gist:connectedTo a minimum of two objects. For example, a temporal relation representing a period of employment is connected both to the person and to the role/position they held.

rdfs:comment

EXAMPLES: employs-Employment, hasStreetAddress-EstablishedLocation. One important context for reifying a property.

(N) gist:start some gist:TimeInstant

(N) gist:end some gist:TimeInstant

(N) gist:connectedTo min 2 owl:Thing

gistCategory

gist:Category is how we model Taxonomies and Tags

Base URI: https://ontologies.semanticarts.com/o/gistCategory Version URI: https://ontologies.semanticarts.com/o/gistCategoryX.x.x Default Namespace:

Default Comment: rdfs:comment
Default Label : rdfs:label

Namespaces

gist https://ontologies.semanticarts.com/gist/

<u>Imports</u>

URI: https://ontologies.semanticarts.com/o/gistTopX.x.x

Location : gistTopX.x.x.owl

gist:license

https://creativecommons.org/licenses/by-sa/3.0/

gist:hasTag

Used for folksonomy style categories (non controlled vocabulary)

rdfs:label has Tag

gist:Tag

This is for folksonomy type terms, which can be made up on the fly by users.

--- AND ---

rdfs:label

gist:Category

gist:hasTag some string

gist:ControlledVocabulary A collection of terms approved and managed by some organization or person. --- AND -- rdfs:label Controlled Vocabulary gist:Collection gist:hasMember some gist:Category gist:governedBy some --- OR --gist:Person gist:Organization

gist:hasSubCategory Has Sub Category

rdfs:label

Has Sub Category

gist:hasSuperCategory

(gist:hasSubCategory)
Categories linked in this way are to represent true sub types. The categories aren't subtypes but classes defined by a supercategory will be a superclass of one derrived from its sub

rdfs:label

Has Super Category

gist:hasUniqueSuperCategory

Used for taxos that must have single parents

rdfs:label

Has Unique Super Category

gist:hasNavigationalParent

(gist:hasNavigationalChild)
Used for informal hierarchical
taxonomies. Supports polyhierarchies

rdfs:label

Has Navigational Parent

gist:hasNavigationalChild

Used for informal hierarchical taxonomies. Supports polyhierarchies

rdfs:label

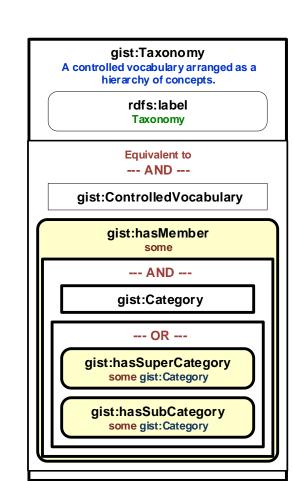
Has Navigational Child

gist:hasUniqueNavigationalParent [F]

Used for taxos that must have single parents

rdfs:label

Has Unique Navigational Parent



gistIntention the Teleological aspect of systems. Whey are we doing something.

Base URI : https://ontologies.semanticarts.com/o/gistIntention Version URI: https://ontologies.semanticarts.com/o/gistIntentionX.x.x

Default Namespace: Default Comment: rdfs:comment Default Label: rdfs:label

<u>Namespaces</u>

https://ontologies.semanticarts.com/gist/

https://ontologies.semanticarts.com/o/gistTopX.x.x

Location: gistTopX.x.x.owl

gist:license

https://creativecommons.org/licenses/by-sa/3.0/

gist:prevents

Domain:gist:Intention Range:gist:Behavior The intention (say a law) is intended to prevent this kind of behavior (say jaywalking)

> rdfs:label **Prevents**

gist:allows

Domain:gist:Intention Range:gist:Behavior The intention (say a grant) allows a particular kind of activity (for instance

rdfs:label

gist:requires

Domain:gist:Intention Range:gist:Behavior An intention that sets out a state of satisfaction (you are required to drive on right side of the road)

> rdfs:label Requires

gist:conformsTo

Range:gist:Intention The subject conforms to the Object, e.g. meet an obligation, meet terms of an offer, adhere to a specification

> rdfs:label **Conforms To**

gist:basisFor

(gist:basedOn) Reason for an event

> rdfs:label **Basis For**

gist:Restriction

A description of things one is prevented from doing. Most laws are restrictions.

--- AND ---

rdfs:label Restriction

gist:Intention

gist:prevents

some gist:Behavior

gist:Requirement

A documented physical or functional need that a particular design, product, or process must be able to perform. Alternately, the obligation of a person or organization to behave in a certain way (i.e., drive on the right side of the road).

> rdfs:label Requirement

Subclass of gist:Intention

gist:requires some gist:Behavior

gist:Specification

A set of requirements to be satisfied by a material, design, product, or service.

> rdfs:label **Specification**

Subclass of gist:Requirement

gist:Goal

A specific intentional endpoint. One can tell whether it has been achieved, as opposed to an intention, which may not have an evaluation function.

rdfs:label

Subclass of gist:Intention

gist:Permission

A description of things one is permitted to do. This could be broad, such as free speech, but more often is very specific, such as the right of egress through a

rdfs:label Permission

gist:Intention

gist:allows

some gist:Behavior

gist:ProductSpecification

Offering something which could be physically warehoused or digitally stored.

--- AND ---

rdfs:label

Product Specification

gist:CatalogItem

gist:categorizedBy some gist:ProductCategory

particular property.

--- AND ---

gist:BundledCatalogItem Any combination of descriptions of things

gist:CatalogItem

A description of a product or service to be

delivered, given in a sufficient level of detail

that a receiver could determine whether

delivery constituted discharge of the

obligation to deliver.

rdfs:label

Catalog Item

rdfs:comment NOTE: In short, an unambiguous

characterization of what it is that a potential

buyer is paying for.

Subclass of

gist:Specification

offered together. Could be a kit (several parts offered together), but could also be a product plus a warranty.

--- AND ---

rdfs:label

Bundled Catalog Item

gist:CatalogItem

gist:hasDirectPart

some gist: CatalogItem

gist:ProductCategory

Any of many ways of categorizing products, including models, NATO product codes, and the like.

rdfs:label

Product Category

Subclass of

gist:Category

gist:ServiceSpecification

A description of something that can be done for a person or organization (which produces some form of an act).

--- AND ---

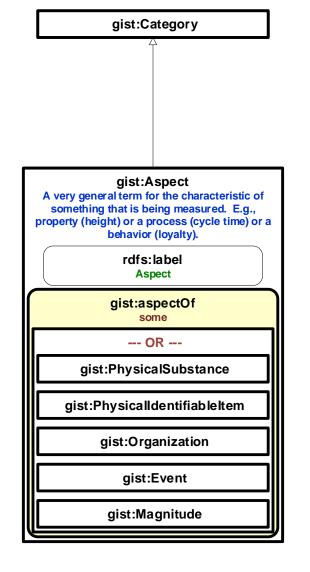
rdfs:label **Service Specification**

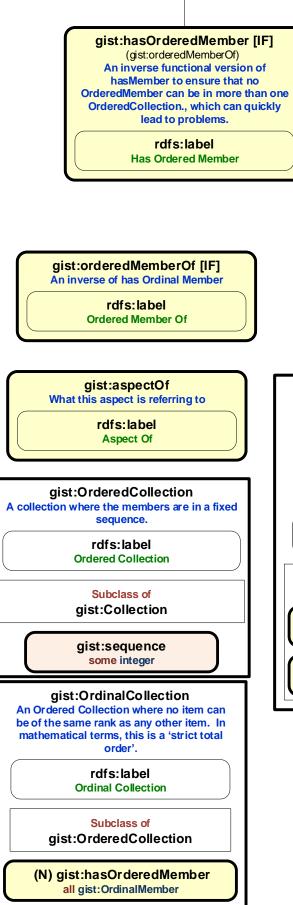
gist:CatalogItem

gist:basisFor some gist: Event

gistMeasure gistMeasure adds the act of measuring to magnitude $\label{lem:base-url} \textbf{Base URI:} https://ontologies.semanticarts.com/o/gistMeasure \\ \textbf{Version URI:} https://ontologies.semanticarts.com/o/gistMeasureX.x.x \\$ Default Namespace : Default Comment: rdfs:comment Default Label: rdfs:label **Namespaces** https://ontologies.semanticarts.com/gist/ <u>Imports</u> https://ontologies.semanticarts.com/o/gistEventX.x.x Location : gistEventX.x.x.owl gist:license

https://creativecommons.org/licenses/by-sa/3.0/





gist:hasMember

gist:Category gist:OrdinalMember A member of an Ordinal Collection. It necessarily precedes or is preceded by another Ordinal Member in the same collection. (This last condition cannot be formally stated in OWL). rdfs:label **Ordinal Member** (NS) gist:orderedMemberOf some gist:OrdinalCollection Subclass of --- OR --gist:directlyPrecedes some gist:OrdinalMember gist:directlyPrecededBy some gist: Ordinal Member

Subclass of gist:Magnitude A generic ordering relation indicating that the Subject has the same order as or comes before the Object. The 'greater than or equal to' symbol is often used

gist:ReferenceValue

A measure that was neither measured nor estimated

but set by fiat. For instance, a goal. There is no

Measurement associated with a ReferenceValue.

rdfs:label

Reference Value

rdfs:label Precedes gist:directlyPrecedes (gist:directlyPrecededBy) A generic ordering relation indicating that the Subject comes immediately before the Object. rdfs:label **Directly Precedes**

gist:precedes [T]

for this relation.

gist:directlyPrecededBy Inverse of directly precedes

> rdfs:label **Directly Preceded By**

gistDimensionedUnits

gistX.x.x dimensioned units of measure. This extension allows (and requires) you to have a conversion factor for all units with the same dimension. If you introduce MilesPerHour you will have to supply the conversion to MetersPerSecond (even though the system "knows" how to convert Miles to meters and hours to seconds. You will have to supply and additional conversion when you introduce KilometersPerHour. Any new combination of primtive rations requires a new Dimension. While this is a burden, it allows units to be converted in sparql

Base URI: https://ontologies.semanticarts.com/o/gistUnitDim Version URI: https://ontologies.semanticarts.com/o/gistUnitDimX.x.x

Default Namespace :
Default Comment: rdfs:comment
Default Label : rdfs:label

<u>Namespaces</u>

gist https://ontologies.semanticarts.com/gist/

<u>Imports</u>

URI: https://ontologies.semanticarts.com/o/gistUnitX.x.x Location: gistUnitX.x.x.owl

gist:license

https://creativecommons.org/licenses/by-sa/3.0/

gist:CoherentUnit

A unit that is expressed in units that have no conversions. It may be a simple unit. It may also be a product or ratio unit that bottoms out in simple units.

--- OR ---

rdfs:comment

NOTE: coherent unit is the physics term for this, informally you might think of it as the standard unit for a given dimension.

rdfs:comment

NOTE: in principle, the CoherentUnit for a ProductUnit or RatioUnit can be inferred by recursively decomposing the products and ratios into their respective CoherentUnits, bottoming out in SimpleUnits

rdfs:comment

EXAMPLEs: a simple unit: kilogram

rdfs:comment

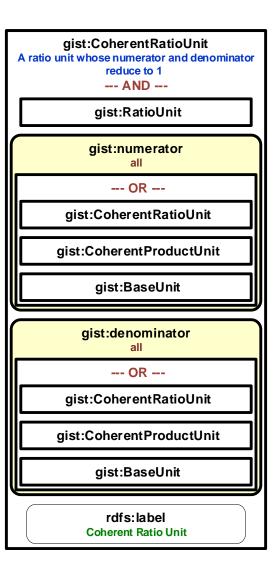
EXAMPLEs: the standard unit for acceleration is meters per square second (feet per square second requires a conversion)

gist:BaseUnit

gist:CoherentRatioUnit

gist:CoherentProductUnit

rdfs:label Coherent Unit



gist:CoherentProductUnit A ratio unit whos numerator and denominator reduce to 1 --- AND --gist:ProductUnit gist:multiplier --- OR --gist:CoherentRatioUnit gist:CoherentProductUnit gist:BaseUnit gist:multiplicand --- OR --gist:CoherentRatioUnit gist:CoherentProductUnit gist:BaseUnit rdfs:label **Coherent Product Unit**

gist:convertToStandard

gist:convertToBase

Domain:gist:UnitOfMeasure Range:double Note this kind of conversion will

Note this kind of conversion will only work with temperatures if they are in Kelvin or Rankine (with a true 0). You multiply to get to the base, divide to go from the base. mph to mps is .44704. The multiple from kph to mps is .277778

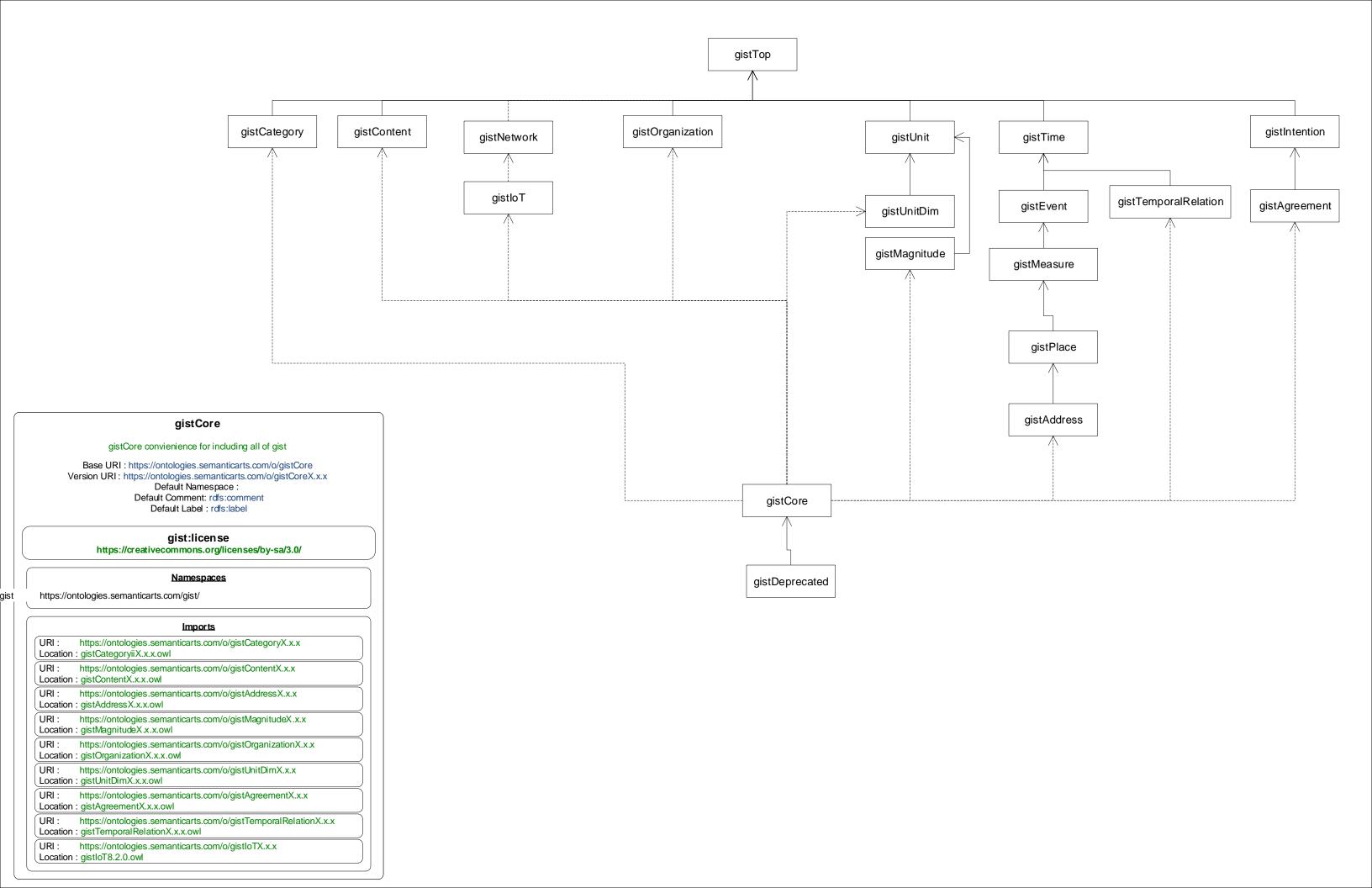
To convert 60 mph to kph is (60 * .44704 / .277778 or 96.56056 kph

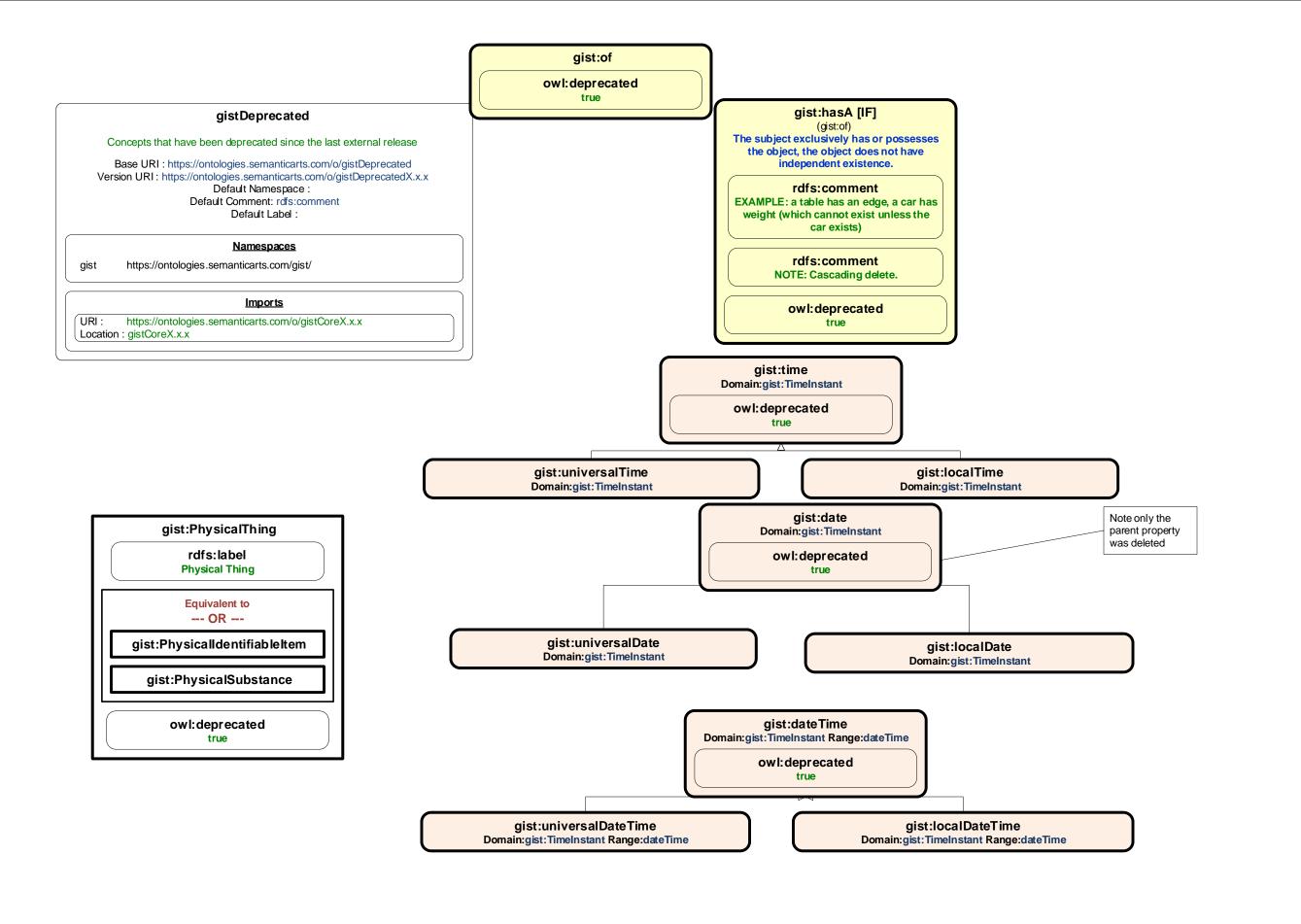
rdfs:label Convert To Standard

gist:hasStandardUnit
Domain:gist:UnitOfMeasure
Range:gist:CoherentUnit
For a complex unit refers to a unit that
has all the component parts in SI

rdfs:label Has Standard Unit

gist:hasBaseUnit





gist:party

Range:gist:SocialBeing
The people or organizations participating
in an agreement or obligation

owl:deprecated

true

gist:TimeInterval

rdfs:label Time Interval

rdfs:comment

EXAMPLE: Jan 1 through Jan 8, 2013.

rdfs:comment

NEGATIVE EXAMPLE: "8:00am" (with no date).

rdfs:comment

NOTE: While Time Interval has a Duration, it is not itself a Duration.

rdfs:comment

NOTE: The end should be later than the start, but this is not enforced via OWL.

owl:deprecated

true

(N) gist:start some gist:TimeInstant

(N) gist:end some gist:TimeInstant

(N) gist:hasMagnitude some gist:Duration

Change Log Management

-As you work, record changes on the change log as version X.x until it is time to save out a release (internal or external)

-Then, before saving out a release, update all change log entries marked as "X.x" to the version number you are about to save out (this should be all changes since last release)

KEY for Change Log

V: Visio/Visualization changes only, not affect the owl (callouts, layout, grouping etc)

CL: for clarity only, better comments, fixing typos, laying out differently, etc.

AD: purely additive, will not affect anything already existing. RF: refactoring, no semantic import. Includes changing names where old name is deprecated.

SU: has semantic import from usage perspective, e.g. a comment changes usage which could give semantic errors.

SI: has semantic import from inference perspective. axiom added, removed, changed etc.

BI: Backwards incompatible

gistX.x Change Log

gist9 Change Log	
X.x.x 11/27/2018	42 issues from git went into this release many of which were not backward compatible hence X.x.x
X.x.x 11/27/2018	Most are in the gistCouncil persentation of 12/6/2018
X.x.x 12/6/2018	Also changed gist:occuredAt to gist:occurAt
X.x.x 3/27/2019	changed gist:occurAt to gist:occursAt
X.x.x 3/27/2019	Physical Event changed it from ocurs At GeoRegion to occurs At Place
X.x.x 3/27/2019	geoOccupies range changed from GeoRegion or GeoVolume to Place
X.x.x 3/27/2019	removed gist:preferredTerm (we can use skos:prefLabel if we need this)
X.x.x 3/27/2019	Relaxed exactly 1 to some values for RatioUnit and ProductUnit
X.x.x 3/27/2019	changed all namespaces from http: to https:
X.x.x 3/30/2019	made a definition for taxonomy that would distinguish it from controlled vocabulary (by being hierarchical)

To be included in ChangeLog of next external release: