

gist Unit of Measure ontology

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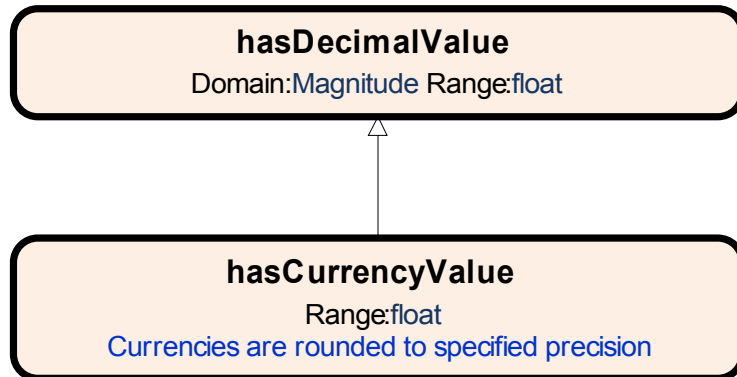
gist

- A minimalist upper ontology, designed primarily for business use

We partitioned out the UOM

Concepts	Count
Object Properties	4
Datatype Properties	4
Fundamental classes	2
Fundamental instances	11
Other classes	27

4 Datatype Properties



convertToBase
Domain: UnitOfMeasure Range: float
used to convert from one unit of measure to another if they both have the same zero base. Note this is the conversion factor to multiply a unit by to get to the base. So the conversion factor for inch would be 0.0254. You divide by the convertToBase number to get from a base unit to another.

hasConversionOffset
Domain: UnitOfMeasure Range: float
Used for temperature conversion because Celsius and Fahrenheit have non zero zero bases. It's the kelvin temperature of zero in the other temperature scale

“base units”

— ALL DIFFERENT —

UnitOfMeasure - **candela**

UnitOfMeasure - **ampere**

UnitOfMeasure - **second**

UnitOfMeasure - **mole**

UnitOfMeasure - **cubic_meter**

UnitOfMeasure - **square_meter**

UnitOfMeasure - **kelvin**

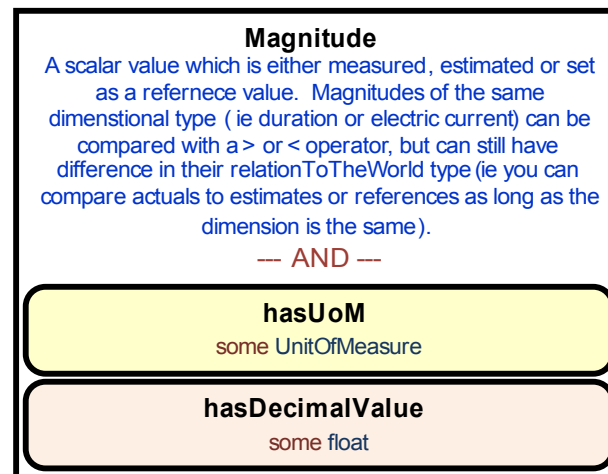
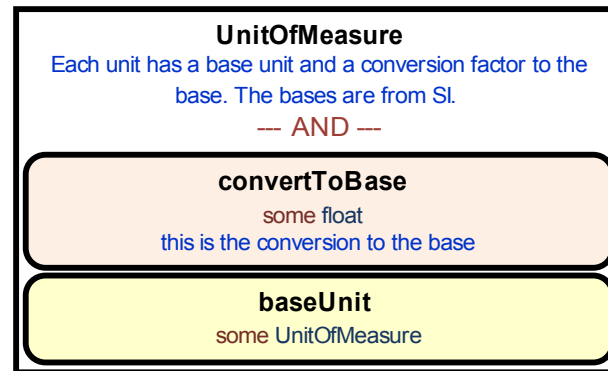
UnitOfMeasure - **meter**

UnitOfMeasure - **kilogram**

UnitOfMeasure - **US_Dollar**

UnitOfMeasure - **each**

Two key classes



The rest
are
derived

The screenshot displays the Protégé ontology editor interface. The main window shows the 'Inferred class hierarchy' for the 'DistanceUnit' class. The hierarchy is as follows:

- owl:Thing
 - Magnitude
 - Area
 - Count
 - Currency
 - MonetaryAmount
 - Duration
 - ElectricCurrent
 - Extent
 - Luminance
 - MolarQuantity
 - Ratio
 - Percentage
 - Temperature
 - Volume
 - Weight
 - UnitOfMeasure
 - AreaUnit
 - CountingUnit
 - CurrencyUnit
 - DistanceUnit
 - DurationUnit
 - ElectricalCurrentUnit
 - LuminescenceUnit
 - MassUnit
 - MoleUnit
 - RatioUnit
 - TemperatureUnit
 - VolumeUnit

The right-hand side of the interface shows the 'Class Annotations' and 'Class Usage' for 'DistanceUnit'. The 'Annotations' section contains a comment: "Units to measure linear distance such as feet and kilometers." The 'Description' section shows the equivalent classes: 'UnitOfMeasure and baseUnit value meter'. The 'Superclasses' section shows 'UnitOfMeasure'. The 'Inherited anonymous classes' section shows 'baseUnit some UnitOfMeasure and convertToBase some float'.

The rest
are
derived

The screenshot displays the Semantic Cartographer (glistUOM) interface. The main window title is "glistUOM (http://ontologies.semanticarts.com/glistUOM) - [C:\DataResearch ad E...". The interface includes a menu bar (File, Edit, Ontologies, Reasoner, Tools, Refactor, Tabs, View, Window, Help) and a toolbar with navigation and search icons. The "Active Ontology" is "glistUOM (http://ontologies.semanticarts.com/glistUOM)".

The left pane shows the "Inferred class hierarchy" for "Extent". The hierarchy is as follows:

- owl:Thing
 - Magnitude
 - Area
 - Count
 - Currency
 - MonetaryAmount
 - Duration
 - ElectricCurrent
 - Extent
 - Luminance
 - MolarQuantity
 - Ratio
 - Percentage
 - Temperature
 - Volume
 - Weight
 - UnitOfMeasure
 - AreaUnit
 - CountingUnit
 - CurrencyUnit
 - DistanceUnit
 - DurationUnit
 - ElectricalCurrentUnit
 - LuminescenceUnit
 - MassUnit
 - MoleUnit
 - RatioUnit
 - TemperatureUnit
 - VolumeUnit

The right pane shows "Class Annotations" and "Class Usage" for "Extent".

Class Annotations:

- Annotations: Extent
 - comment: "A measure of distance which can either be distances over the earth, but could also be height, width, length, depth, girth etc."

Description: Extent

- Equivalent classes:
 - Magnitude and hasUoM some DistanceUnit
- Superclasses:
 - Magnitude
- Inherited anonymous classes:
 - hasUoM some UnitOfMeasure and hasDecimalValue some float
- Members:
- Disjoint classes:

Questions or other topics

- Compound Units
 - Ratios (i.e., speed)
 - Products (i.e., newtons)
- Unit conversion
- Measure
- Measurement