

Cartographic Scale

Linked Data for Libraries Cartographic Materials Working Group

Ontology Modeling Examples -- **Draft**, June 2017

Ontologies

@prefix bf: <<http://id.loc.gov/ontologies/bibframe/>> .

@prefix cart: <<http://geocartframe.org/>> .

@prefix rdau: <<http://rdaregistry.info/Elements/u/>> .

Classes

bf:Scale

subclasses:

cart:HorizontalScale

cart:VerticalScale

cart:NotToScale

cart:ScaleIndeterminable

cart:ScaleNotDetermined

cart:ScalesDiffer

cart:ScaleVaries

cart:ScaleAccuracy

Named individuals:

cart:explicitScale

cart:approximateScale

cart:inaccurateScale

cart:scaleAccuracyUnknown

cart:ScaleSource

Named individuals:

cart:representativeFraction

cart:verbalStatement

cart:scaleBar

cart:calculatedFromPrimarySource

cart:derivedOther

Object Properties

bf:scale

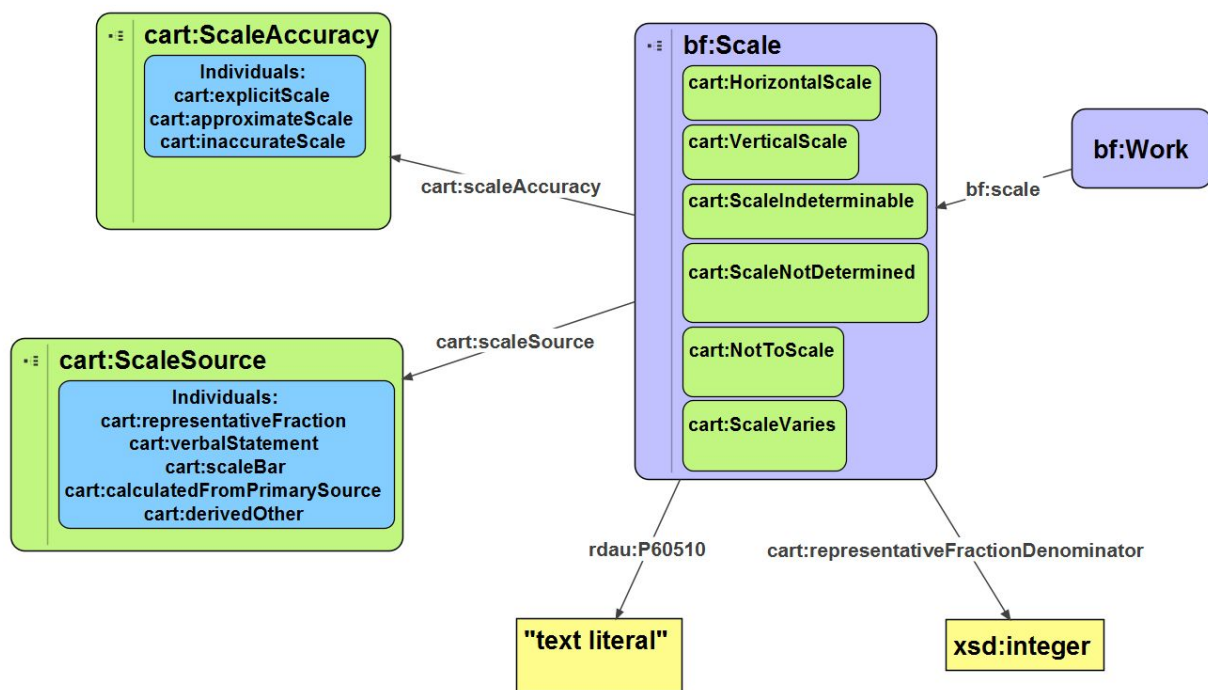
cart:scaleAccuracy
cart:scaleSource

Data Properties

cart:representativeFractionDenominator

rdau:P60510 ["has additional scale information"]

Illustration



Examples

Example 1 "Scale 1:24,000."

:work1 bf:scale :scale1 .

:scale1 a cart:HorizontalScale ;

```
cart:representativeFractionDenominator "24000"^^xsd:integer ;
cart:scaleAccuracy cart:explicitScale ;
cart:scaleSource cart:representativeFraction .
```

Example 2 "Scale approximately 1 inch to a mile."

```
:work2 bf:scale :scale2 .
```

```
:scale2 a cart:HorizontalScale ;
      cart:representativeFractionDenominator "63360"^^xsd:integer ;
      rdau:P60510 "1 inch to a mile" ;
      cart:scaleAccuracy cart:approximateScale ;
      cart:scaleSource cart:verbalScale .
```

Example 3 Scale example inaccurately stated: "Scale approximately 1:40,000 not 1:63,360"

```
:work3 bf:scale :scale3a, :scale3b .
```

```
:scale3a a cart:HorizontalScale ;
      cart:representativeFractionDenominator "63360"^^xsd:integer ;
      cart:scaleAccuracy cart:inaccurateScale ;
      cart:scaleSource cart:representativeFraction .
```

```
:scale3b a cart:HorizontalScale ;
      cart:representativeFractionDenominator "40000"^^xsd:integer ;
      rdau:P60510 "Scale approximately 1:40,000 not 1:63,360" ;
      cart:scaleAccuracy cart:approximateScale ;
      cart:scaleSource cart:calculatedFromPrimarySource .
```

Example 4 Pictorial View

```
:work4 bf:scale :scale4 .
```

```
:scale4 a cart:NotToScale .
```

Example 5 Map 1: England Scale bar approximately 1:1,500,000 ;
Map 2: Inset of London - Scale Not Given

:work5 dcterms:hasPart :part1, :part2 .

:part1 bf:scale :scale5a .

:scale5a cart:representativeFractionDenominator "1500000"^^xsd:integer ;
cart:scaleAccuracy cart:approximateScale ;
cart:scaleSource cart:scaleBar .

:part2 bf:scale :scale5b .

:scale5b a cart:scaleNotDetermined ;
rdau:P60510 "Scale Not Given." .

Appendix:

RDA unconstrained scale-related properties

CURIE	Label	Definition	SubpropertyOf
rdau:P60498	"has other details of cartographic content"	"Relates a resource to an indication of mathematical data and other features of the cartographic content of a resource not recorded in statements of scale, projection, and coordinates."	
rdau:P60510	"has additional scale information"	"Relates a resource to an indication of supplemental information about scale."	rdau:P60565 "has scale"
rdau:P60563	"has horizontal scale of cartographic content"	"Relates a resource to a ratio of horizontal distances in the cartographic content of a resource to the actual distances they represent."	rdau:P60565 "has scale"
rdau:P60564	"has scale of still image or three-dimensional form"	"Relates a resource to a ratio of the dimensions of a still image or three-dimensional form contained or embodied in a resource to the dimensions of the thing it represents."	rdau:P60565 "has scale"
rdau:P60565	"has scale"	"Relates a resource to a ratio of the dimensions of the content of an image or three-dimensional form to the dimensions of the thing it represents"	
rdau:P60579	"has vertical scale of cartographic content"	"Relates a resource to a scale of elevation or vertical dimension of the cartographic content of a resource."	rdau:P60565 "has scale"
rdau:P60874	"has scale designation"	"Relates a resource to a general designation of a lack of a ratio of the dimensions of the content of an image or three-dimensional form to the dimensions of the thing it represents."	

RDA scale designation values

CURIE	Label	Definition
rdasca:1001	"scales differ" @en	"A scale designation for a resource consisting of more than one image, map, etc., with different scales." @en
rdasca:1002	"scale not given" @en	"A scale designation for a resource when no scale can be determined." @en
rdasca:1003	"scale varies" @en	"A scale designation for a resource whose scale is variable across the resource, when the range of values cannot be determined." @en
rdasca:1004	"not drawn to scale" @en	"A scale designation for a still image or three-dimensional form that is not to scale." @en