# Enrichment of Schema.org to enable controlled vocabularies web publication with a SKOS description of concepts and schemes.

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| Change history | Version 1 – October 15th 2012 |  |
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# We propose to introduce a new sub-class of Intangible : Concept, mapped with skos:Concept.

# The class Enumeration is considered as equivalent to skos:ConceptScheme. We propose to add a property to Enumeration : hasTopConcept.

# Open questions:

# Should we keep Concept a subclass of Intangible? There is an implicit disjunction between Intangible and other “tangible” classes (Person, CreativeWork, etc). This could raise issues with the fact that SKOS does not endorse such a disjointness (http://www.w3.org/TR/skos-primer/#seccombining). It is not very clean conceptually, sure, but some case may welcome the possibility to have a resource typed both as a Person and a Concept.

# Should we keep ConceptScheme as equivalent to Enumeration, following the practices hinted at http://blog.schema.org/2012/05/schemaorg-markup-for-external-lists.html and http://www.w3.org/wiki/WebSchemas/ExternalEnumerations , or should we create an new sub-class to put the emphasis on a new type of resources?

**schema.org**

# [Thing](http://schema.org/Thing) > Intangible > Concept

A concept can be viewed as an idea or notion; a unit of thought. However, what constitutes a unit of thought is subjective, and this definition is meant to be suggestive, rather than restrictive. The notion of a concept is useful when describing the conceptual or intellectual structure of a knowledge organization system, and when referring to specific ideas or meanings established within a KOS (such as thesauri and classification schemes) (from <http://www.w3.org/TR/2009/REC-skos-reference-20090818/#concepts>, as for the description of the attributes below)

| **Property** | **Expected Type** | **Description** |
| --- | --- | --- |
| **Properties from** [**Thing**](http://schema.org/Thing) |
| **additionalType** | URL  | An additional type for the item, typically used for adding more specific types from external vocabularies in microdata syntax. This is a relationship between something and a class that the thing is in. In RDFa syntax, it is better to use the native RDFa syntax - the 'typeof' attribute - for multiple types. Schema.org tools may have only weaker understanding of extra types, in particular those defined externally. |
| **description** | Text  | A short description of the item. |
| **image** | URL  | URL of an image of the item. |
| **name** | Text  | The name of the item. |
| **url** | URL  | URL of the item. |
| **Properties from** [**Intangible**](http://schema.org/Intangible) **- NONE** |
| **Properties from** [**Concept**](http://schema.org/CreativeWork) |
| altLabel | Text | An alternative lexical label for a resource. |
| hiddenLabel | Text | A lexical label for a resource that should be hidden when generating visual displays of the resource, but should still be accessible to free text search operations. |
| inEnumeration | Enumeration | A concept may be a member of more than one Enumeration.  |
| topConceptOf | Enumeration | Relates a concept to the Enumeration that it is a top level concept of. |
| broader | [Concept](http://schema.org/MediaObject)  | Relates a concept to a concept that is more general in meaning. Broader concepts are typically rendered as parents in a concept hierarchy (tree). |
| broadMatch | [Concept](http://schema.org/MediaObject) | broadMatch is used to state a hierarchical mapping link between two conceptual resources in different Enumerations. |
| closeMatch | [Concept](http://schema.org/MediaObject) | closeMatch is used to link two concepts that are sufficiently similar that they can be used interchangeably in some information retrieval applications. |
| narrowMatch | [Concept](http://schema.org/MediaObject) | narrowMatch is used to state a hierarchical mapping link between two conceptual resources in different Enumerations. |
| relatedMatch | [Concept](http://schema.org/MediaObject) | relatedMatch is used to state an associative mapping link between two conceptual resources in different concept schemes. |
| notation | Text | A notation, also known as classification code, is a string of characters such as "T58.5" or "303.4833" used to uniquely identify a concept within the scope of a given concept scheme. |
| changeNote | Text | A note about a modification to a concept.  |
| definition | Text | A statement or formal explanation of the meaning of a concept. |
| editorialNote | Text | A note for an editor, translator or maintainer of the vocabulary. |
| example | Text | An example of the use of a concept. |
| historyNote | Text | A note about the past state/use/meaning of a concept. |
| scopeNote | Text | A note that helps to clarify the meaning and/or the use of a concept. |
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# [Thing](http://schema.org/Thing) > [Intangible](http://schema.org/Intangible) > [Enumeration](http://schema.org/Enumeration)

Lists or enumerations—for example, a list of cuisines or music genres, etc.

| **Property** | **Expected Type** | **Description** |
| --- | --- | --- |
| **Properties from [Thing](http://schema.org/Thing)** |
| **additionalType** | URL | An additional type for the item, typically used for adding more specific types from external vocabularies in microdata syntax. This is a relationship between something and a class that the thing is in. In RDFa syntax, it is better to use the native RDFa syntax - the 'typeof' attribute - for multiple types. Schema.org tools may have only weaker understanding of extra types, in particular those defined externally. |
| **description** | Text | A short description of the item. |
| **image** | URL | URL of an image of the item. |
| **name** | Text | The name of the item. |
| **url** | URL | URL of the item. |
| [[**hasTopConcept**](http://schema.org/Place)](http://schema.org/Place) | [[[**Concept**](http://schema.org/Place)](http://schema.org/Place)](http://schema.org/Place) | [[**Relates, by convention, a Enumeration to a concept which is topmost in the broader/narrower concept hierarchies for that Enumeration, providing an entry point to these hierarchies.**](http://schema.org/Place)](http://schema.org/Place) |

### More specific types

* [BookFormatType](http://schema.org/BookFormatType)
* [ItemAvailability](http://schema.org/ItemAvailability)
* [OfferItemCondition](http://schema.org/OfferItemCondition)
* [Specialty](http://schema.org/Specialty)

## Mapping table

|  |  |  |  |
| --- | --- | --- | --- |
| [Schema.org](http://schema.org/Place) | [Skos](http://schema.org/Place) | Skos label | Skos definition |
| [[name](http://schema.org/Place)](http://schema.org/Place) | [[prefLabel](http://schema.org/Place)](http://schema.org/Place) | [[preferred label](http://schema.org/Place)](http://schema.org/Place) | [[The preferred lexical label for a resource, in a given language](http://schema.org/Place)](http://schema.org/Place) |
| inEnumeration | [inScheme](http://schema.org/Place) | [[is in scheme](http://schema.org/Place)](http://schema.org/Place) | [[A concept may be a member of more than one concept scheme](http://schema.org/Place)](http://schema.org/Place) |
| Enumeration | ConceptScheme |  |  |
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