



General description

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| Name | Object Record |
| Intent | To model the situation when knowledge about objects in the domain of discourse can be either certified and known to be true, or subject to interpretation/uncertainty. |
| Solution description | Two classes are defined, the :Object class and the :Record class. Instances of the former represent the certainly known or verified instances of the entities being modelled, whereas instances of the latter represent records or snapshots of things that have been stated about the former, but which do not reach the same level of certainty. Instances of the two classes are linked by the :isRecordOf and :hasRecord object properties, which are defined to be functional and inverse functional, respectively. Object- or datatype properties carrying the specific domain knowledge linkage or facts are defined as subproperties of :objectOrRecordLinkage (object properties) or of :objectOrRecordAttribute (datatype properties). The domain of both of these properties is the union of :Object and :Record, i.e., all datatype or object properties can be applied to either a :Record or :Object. To differentiate between the certainly known and the less certainly known facts at query time, the user checks for explicit typing of the node using the property as either an :Object or a :Record. |
| Consequences | Modellers using this pattern need to fit their property subsumption hierarchies beneath the two top-level objectOrRecordLinkage and objectOrRecordAttribute properties. An alternate solution is to skip that part of the pattern, and instead use separate sets of properties for the Object and Record classes, possibly using property chaining to simplify querying for Record-level attributes associated with some particular Object. |
| Competency Questions | Which addresses have been recorded for Robert de Niro? What are the given dates of birth of Seneca the Younger? What color hair have witnesses reported for the bank robber? |
| Scenarios | Different witnesses giving conflicting information about the perpetrators of a crime. Different historical sources giving different (possibly conflicting) information about a person or event. Persons having multiple addresses. |
| Domains | Vocabulary Identity Parts and Collections General |
| Reusable OWL building block | http://karlhammar.com/ontologies/2016/10/ObjectRecord.ttl |