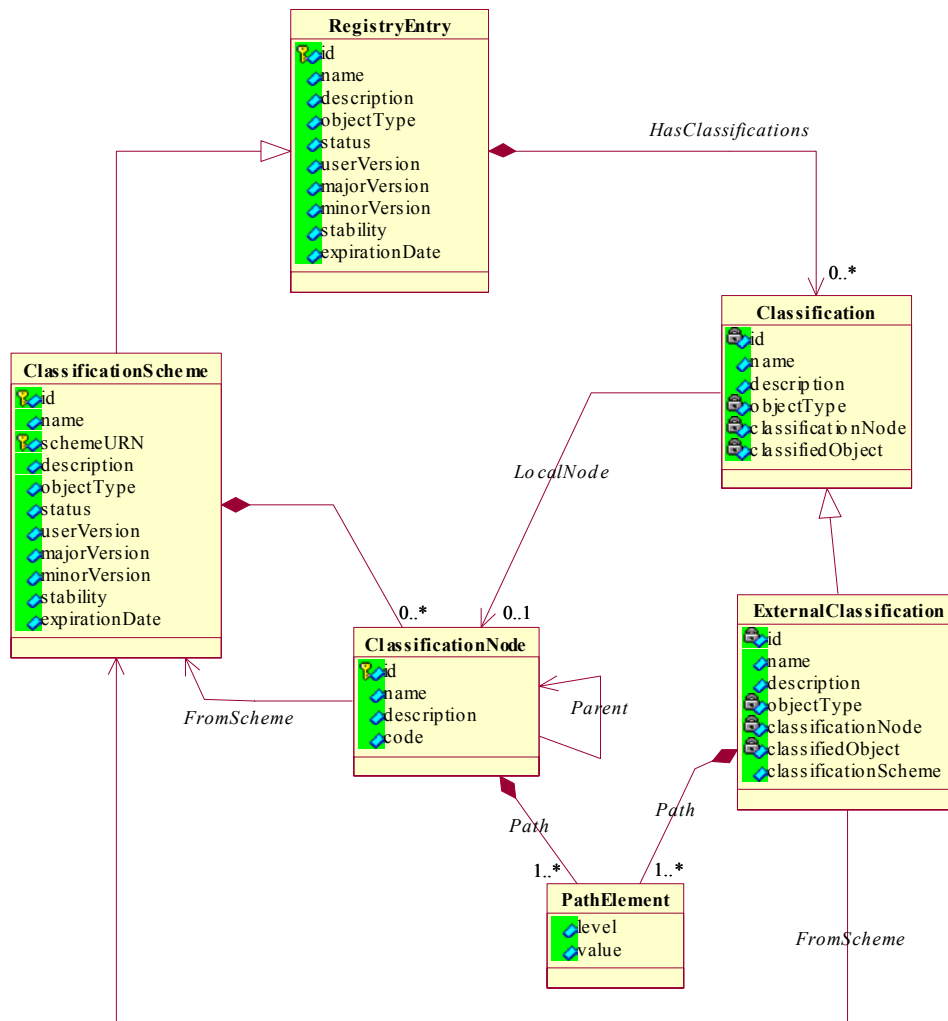


## Possible RIM Submodels for supporting External Classifications – 7 Sept 2001

The following diagram is derived from Farrukh Najmi's proposal for supporting external classifications. It is restricted to its potential effect on RegistryEntryQuery from ebRS Section 8.2.2



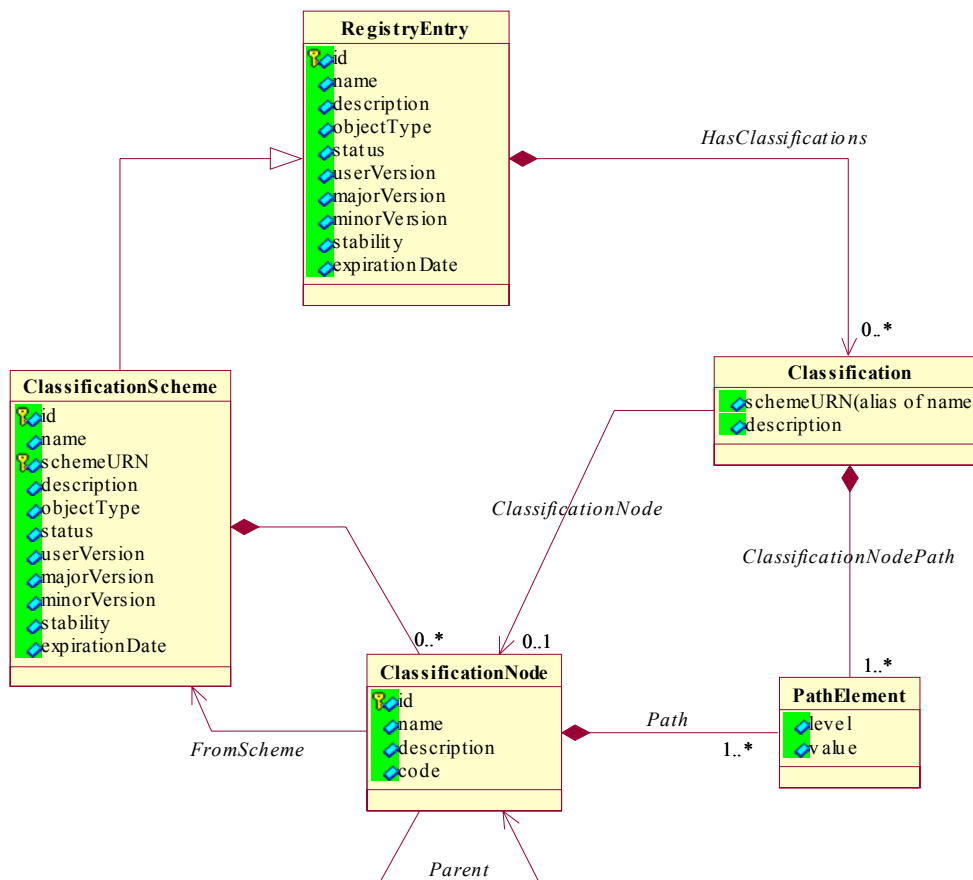
Assumptions/Requirements that could be enforced!!

- 1) The above diagram is specialized for support of a RegistryEntryQuery (cf ebRS Section 8.2.2). The attributes marked as “locked” are not necessarily visible to the query; instead, the query must follow a visible link to get to attributes that can be queried.
- 2) A ClassificationScheme instance could reference a classification scheme held by some other Registry for which the “id” is NOT known. Thus we need a new attribute for ClassificationScheme, call it schemeURN, that provides a human friendly handle for referencing a classification scheme that may reside elsewhere. This attribute must identify a unique ClassificationScheme instance because name is reserved for use as a common human friendly name. Thus “NAICS” may be the name of a registry entry for the North American Industry Classification Scheme, while its schemeURN must uniquely determine it, e.g. schemeURN=urn:ntis-gov:naics:1997.
- 3) There are 3 possible ways to get from ExternalClassification to ClassificationScheme, i.e. the name attribute, the classificationScheme attribute, and the FromScheme association. I don't think we need all 3 possibilities. We could delete the classificationScheme attribute and require that the name attribute identify the schemeURN of exactly one classification scheme registry entry in the local Registry.
- 4) In the proposed new ebRIM there is a getPath() method defined for the ClassificationNode class. I've chosen to model that method as an association to a set of name/value pairs. The purpose of doing this is to ensure support for classification schemes that have named levels, e.g. Genus=Homo and Species=sapien. In schemes without

named levels we could use “path” shortcuts instead, e.g. path=geography/japan, and treat the path shortcut as an attribute.

- 5) I think the name attribute of Classification is really not used at all if the classification references a local node. If so, couldn't we require that Classification.name is a shortcut for Classification.classificationNode.FromScheme.schemeURN? This would reduce the difference between a local Classification instance and an ExternalClassification instance so that a Query wouldn't have to be written differently for each situation.
- 6) If the above item 5 is agreeable, then the proposed new ExternalClassification class could be deleted from the diagram and replaced with a Path association directly to a set of PathElements.

The following diagram incorporates the above assumptions and shows ONLY the visible attributes that could be queried in a RegistryEntryQuery (cf ebRS Section 8.2.2). The name attribute of Classification is re-named as schemeURN, with the additional requirement that it be a URN that identifies a ClassificationScheme instance.



#### Comments/Rules

- 1) If a Classification is an ExternalClassification, then the only attributes that can be queried in a ClassificationNodeFilter are Path attributes.
- 2) At present RegistryEntryQuery does not support a Path branch; instead, it assumes the existence of a path attribute in the ClassificationNode class. Does it make sense to support both? If we want to support classification schemes with named levels (e.g. Genus/Species), I think the answer is yes!
- 3) At present Classification does not have a “path” attribute. But we could assume the existence of one by defining a method that returns some value derived from Classification.ClassificationNodePath or Classification.ClassificationNode.Path.
- 4) At present RegistryEntryQuery does not support the FromScheme association. We could delete it from the diagram for now, or we could replace it by a FromScheme association from Classification to ClassificationScheme. The latter would allow one to Query the internal metadata for a reference to an external classification scheme.