

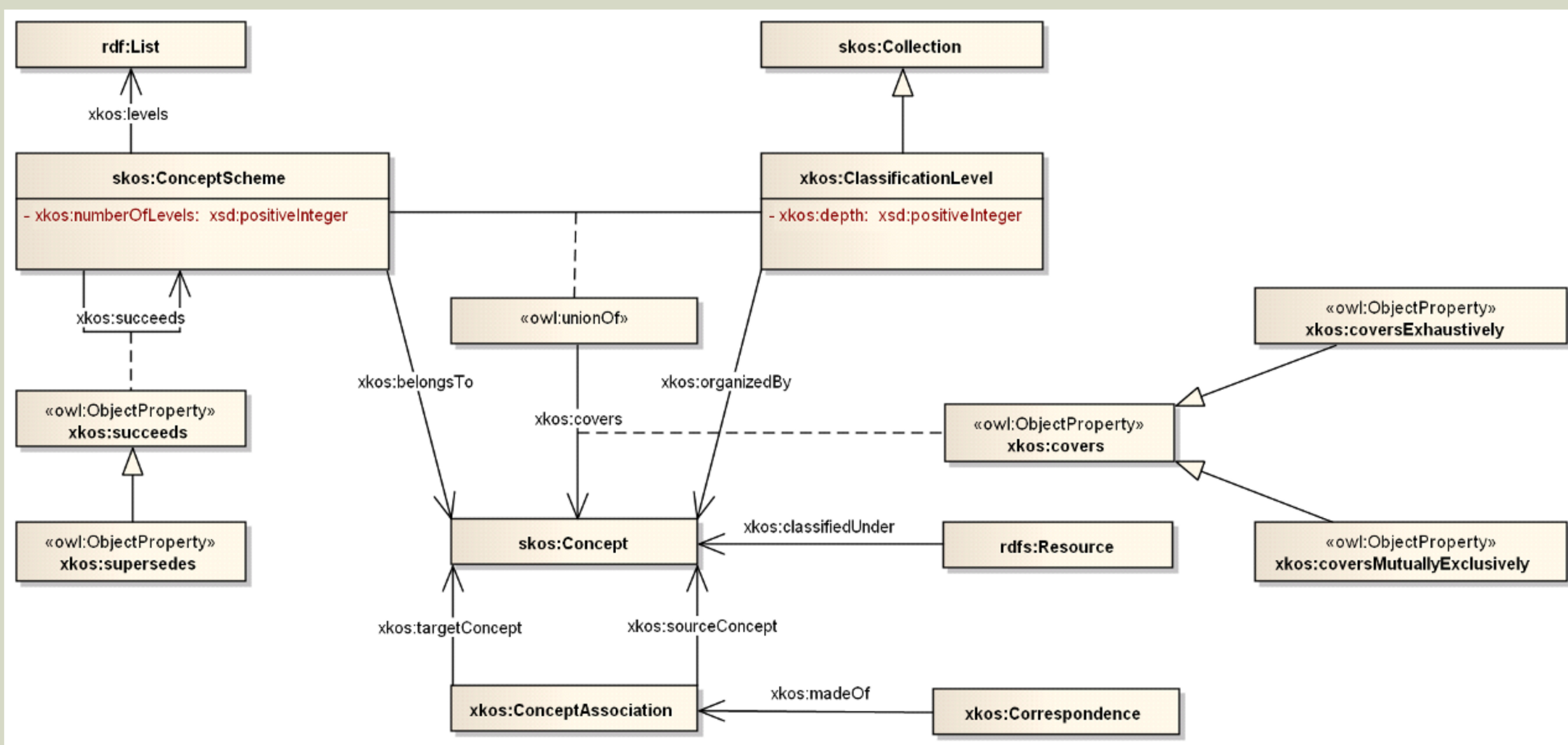
# XKOS: An SKOS Extension for Statistical Classifications\*

The Simple Knowledge Organization System (SKOS) vocabulary was designed to support the relationships within a simple thesaurus. XKOS provides added detail to satisfy the requirements of classification systems and concept management for the statistical community.

The goal is to provide a common means for making statistical classifications available through emerging web technologies by building on existing RDF vocabularies.

The XKOS classification model focuses on the following functions: overall structural definition, hierarchical and associative semantic properties, correspondence between classification schemes, and specification of textual properties. The diagrams below describe specific XKOS extensions in these areas and provide examples of their use.

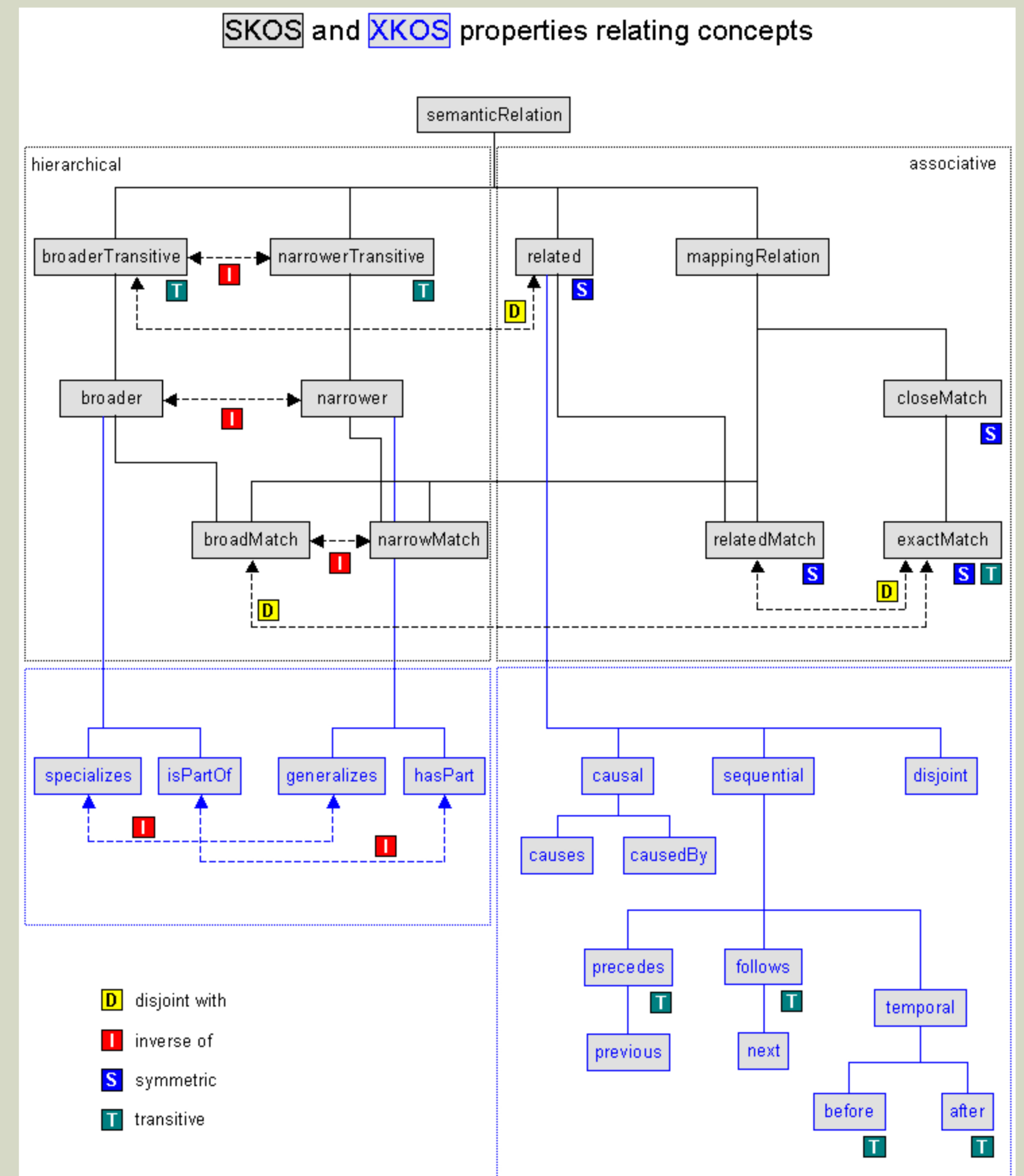
## XKOS classification model



This high level diagram shows how collections are made up of concepts which are grouped within concept schemes and organized by classification levels. The concept schemes show change over time and indicate relationships between versions. Concepts can be associated with each other and describe their correspondence. Further details on coverage and classification resources are supported.

Example A shows an example from ANZLIC of a concept scheme and the use of classification levels

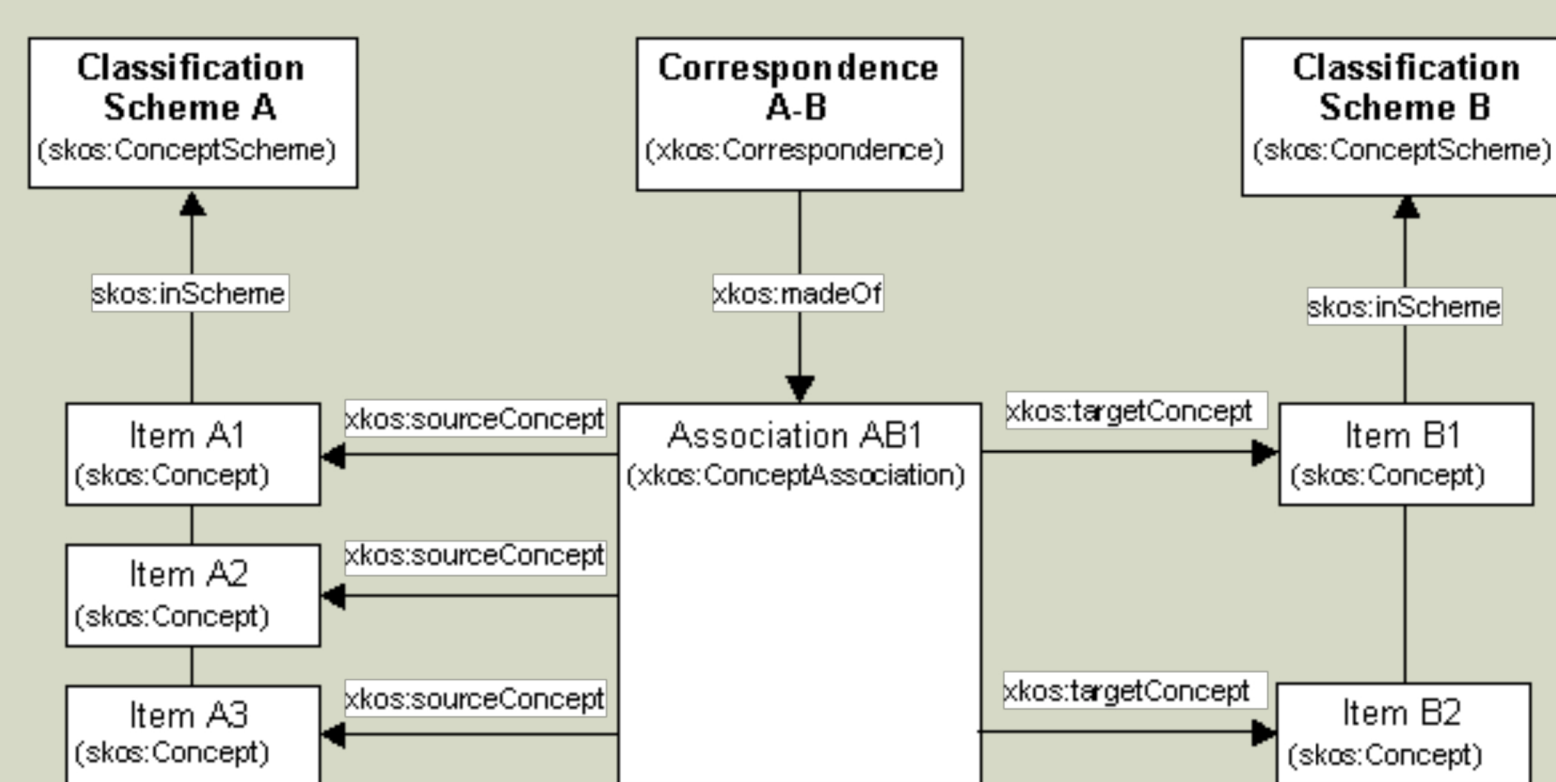
## Relational properties



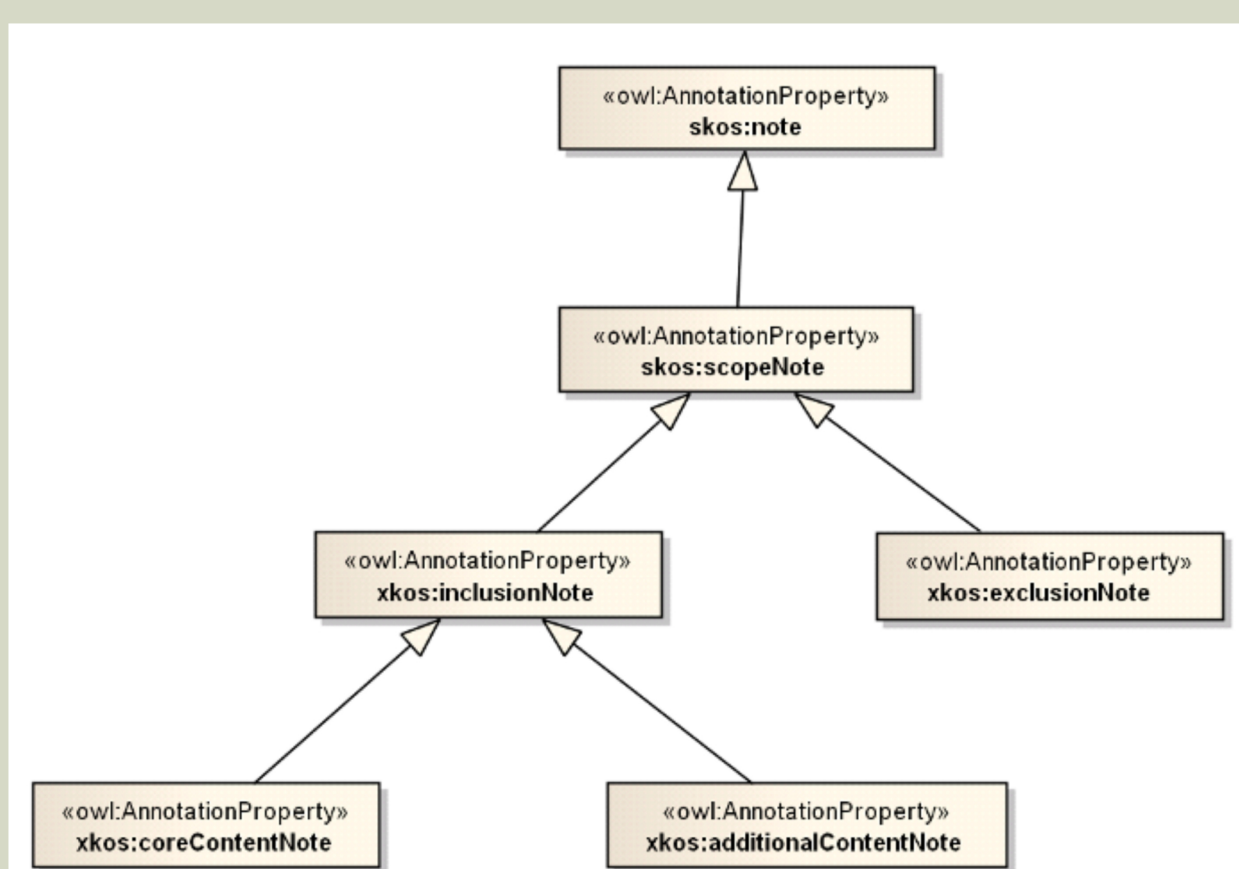
## Correspondence structure

Managing classifications over time as well as comparison requires the ability to capture the correspondence between classifications. The XKOS Correspondence structure on the right is made up of associations between source and target concepts.

Example C shows a mapping between FCL 2012 and CPC V2



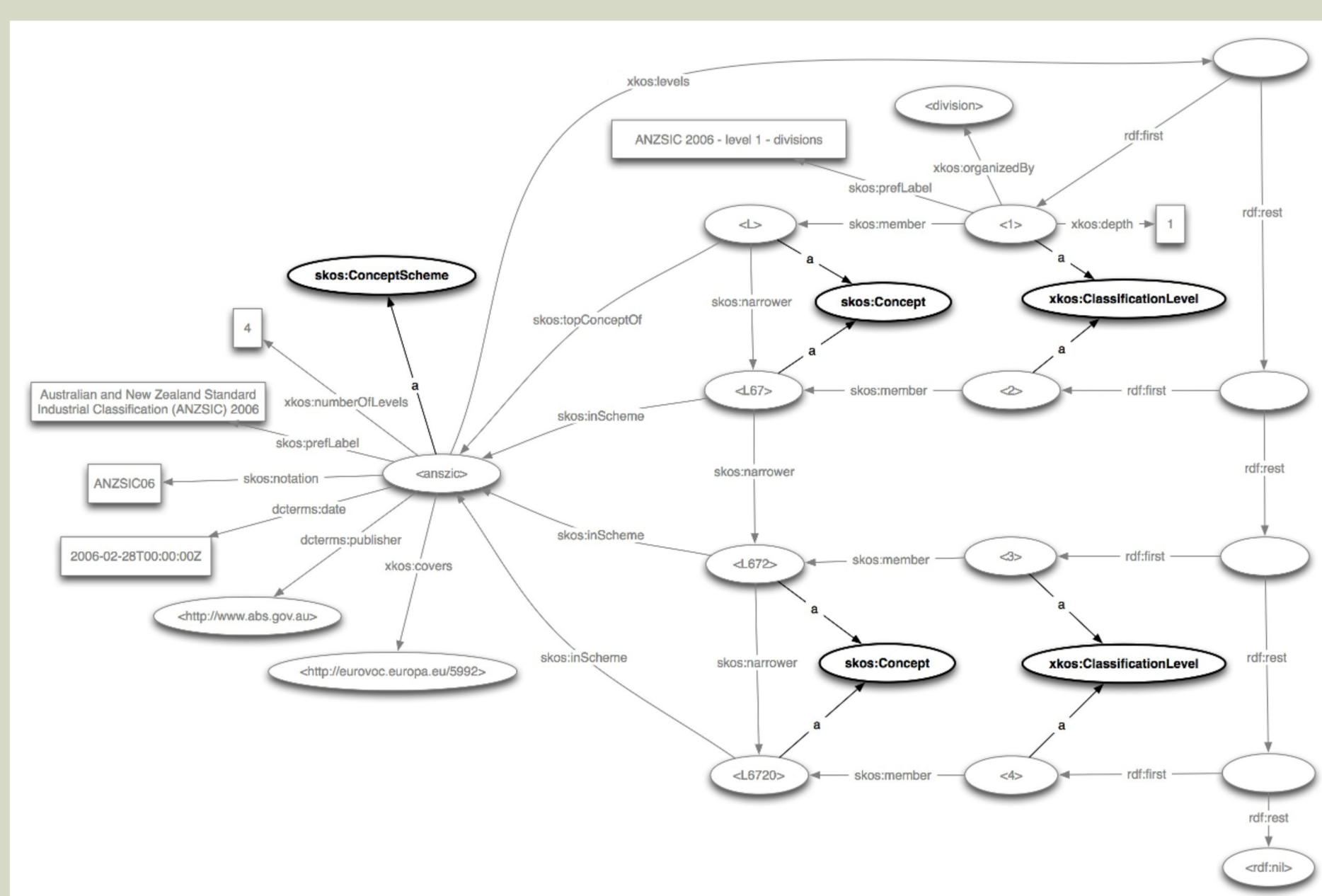
XKOS expands the basic SKOS relationships (broader, narrower, and related) to reflect the detail required by statistical concept management. Within a hierarchical relationship broader and narrower are extended to reflect the nature of the relationship in terms of generic (generic-specific) and partitive (whole-part) associations. Within associative relationships, the basic "related" relationship is further differentiated to supply details on causal, sequential, and disjoint relations. The model above shows how XKOS has provided extensions for the generic semantic relation as described by SKOS. Example A below shows these semantic relationships with ISSCAAP.



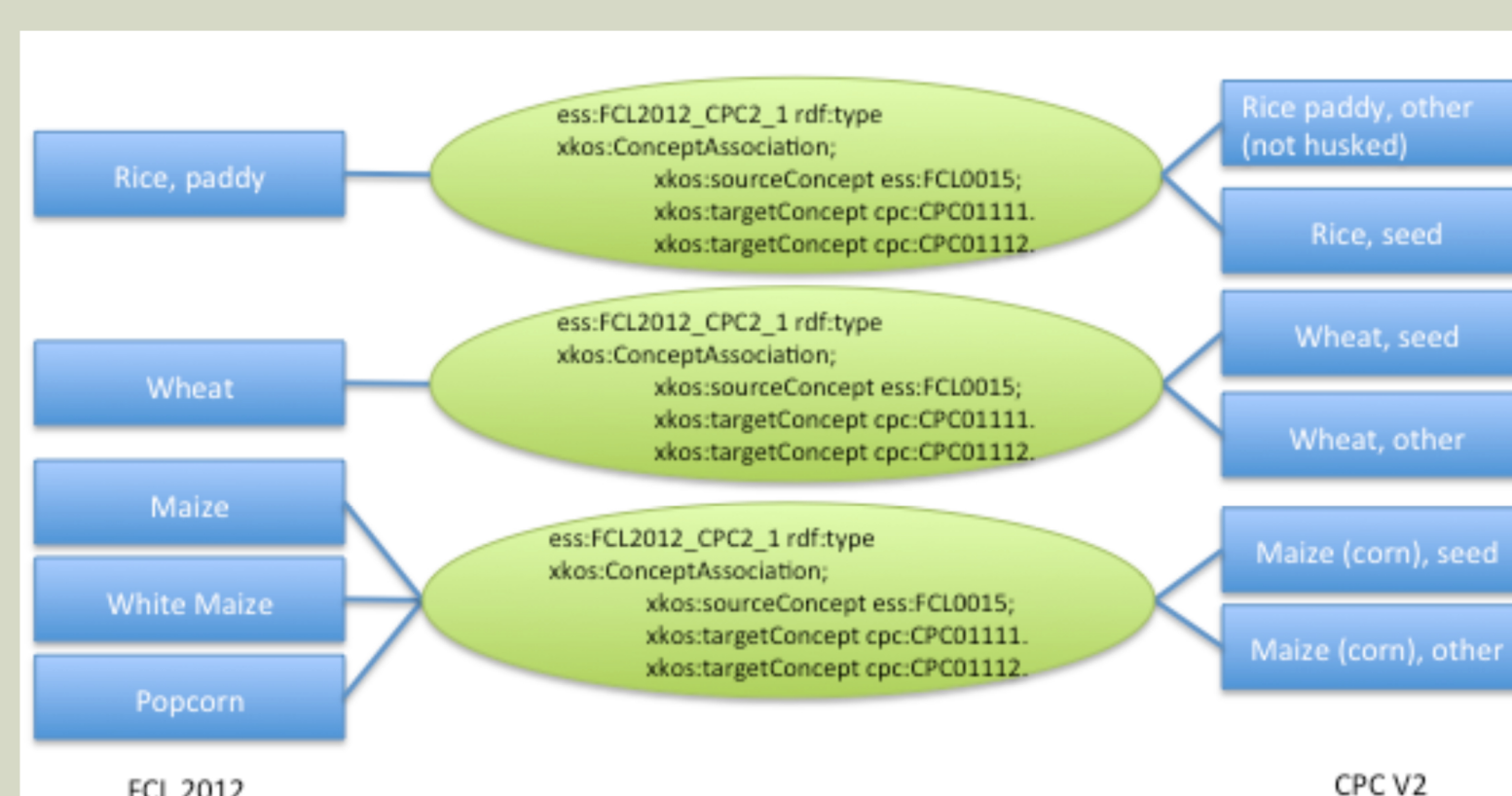
XKOS has extended textual content including type definitions within scope notes and label information needed for common presentations. The diagram to the left shows specification of descriptions covering inclusion and exclusion as well as differentiating between core and additional content.

Example D shows the addition of a maxLength specification to a standard SKOS label

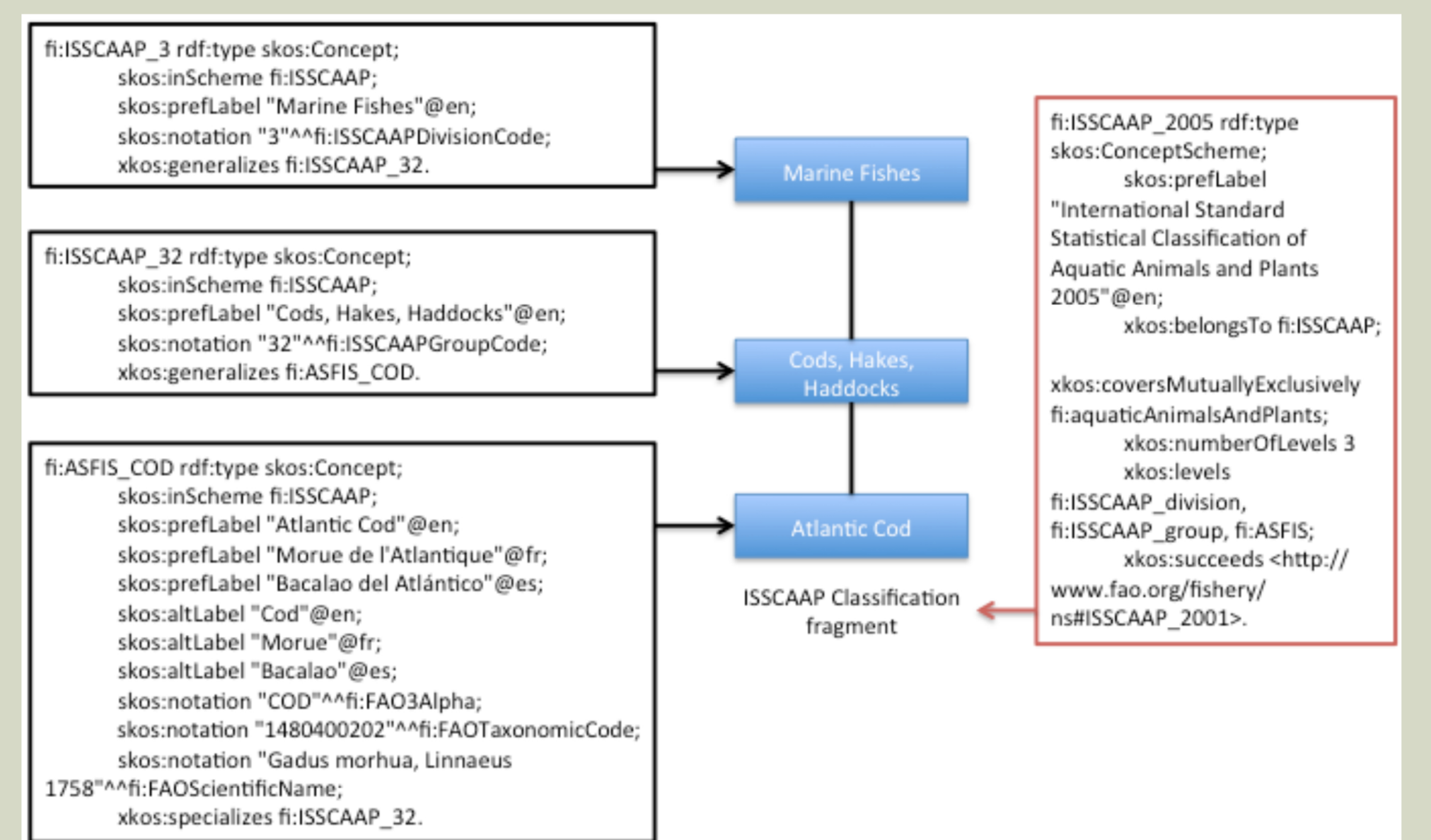
## Example B: ANZSIC06



## Example C: FCL 2012 to CPC V2



## Example A: ISSCAAP Classification Fragment



## Example D: Label with XKOS extension

