**Classifications and Order Relations – Modelling team discussion**

This is the model we discussed last time, with a couple of fixes:



Figure 1

It describes the order relations as subtypes of a more generic **Relation** class. In addition, there is an **EquivalenceRelation** class to model equivalence semantics. Relations’ characteristics and semantics are given by controlled vocabularies (in blue).

The model in Figure 1 can be used to represent classification hierarchies, as depicted in this diagram:



Figure 2

The classes in pink on the left are abstract. They are realized (dashed lines) by the four green classes in the middle. In turn, those Node-based classes are extended by the Classification ones on the right. Classes in green are part of the current model. The two classes in white are not there yet but I believe they are necessary to specify that a **Statistical Classification** is not structured by any **Node Parent Child** relation but by a specialization based on **Classification Items**.

Alternatively, we could model the relation’s semantics by specialized classes rather than controlled vocabularies. This second option of the model is shown next in Figure 3:



Figure 3

With this model the classification example of Figure 2 will look like the one depicted in Figure 4:



Figure 4