**Rough Set Semantics for Identity management on the Web**

Identity relations are at the foundation of the Linked Open Data initiative and on the Semantic Web in general. They allow the interlinking of alternative descriptions of the same thing. However, the traditional notion of identity (owl:sameAs) is often problematic, e.g. when objects are considered the same in some contexts but not in others. The standing practice in such cases is to use weaker relations of relatedness (e.g. skos:related). Unfortunately, this limits reasoners in drawing inferences.

We propose a method that treats a given identity relation as a collection of indiscernability pairs, assigning meaning to such relations in terms of shared properties/values. Reflexivity, symmetry and (in some cases) transitivity are preserved under indiscernability, allowing reasoners to infer new results.

Reinterpreting identity in this way allows the calculation of upper and a lower bounds, turning crisp identity into rough indiscernability, based on the well-understood rough-set semantics. These rough sets can be used to provide automated assistance for finding false positive and false negative errors for existing linksets.

In a series of experiments we show that this method can indeed be used to improve on linksets that are the result of state of the art automated alignment mappings.