A Collaborative Platform for Multilingual Ontology Development

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Abstract : Ontologies provide a common understanding of a specific domain of interest that can be communicated between people and used as background knowledge for automated reasoning in a wide range of applications. In this paper we address the design of multilingual ontologies following well-defined knowledge engineering methodologies with the support of novel collaborative development approaches. In particular, we present a collaborative platform which allows ontologies to be developed incrementally in multiple languages. This is made possible via an appropriate mapping between language independent concepts and one lexicalization per language (or a lexical gap in case such lexicalization does not exist). The collaborative platform has been designed to support the development of the Universal Knowledge Core, a multilingual ontology currently in English, Italian, Chinese, Mongolian, Hindi, and Bangladeshi. Its design follows a workflow-based development methodology that models resources as a set of collaborative objects and assigns customizable workflows to build and maintain each collaborative object in a community driven manner, with extensive support of modern web 2.0 social and collaborative features.

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