

Legal Knowledge Modeling and Acquisition for Legal Reasoning in a Linked Open Data Framework

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Abstract of the Talk

Machine readable, actionable rules represent a precondition for developing systems endowed with automatic reasoning facilities for advanced information services in the legal domain. In this talk we present an approach for legal knowledge representation and reasoning within a Linked Open Data framework. It is based on the distinction between provisions and norms and it is able to provide advanced reasoning facilities for advanced legal information retrieval (like implementing Hohfeldian reasoning) and legal compliance checking for deontic notions. It is also shown how the approach can handle norm defeasibility. Such methodology is implemented by decidable fragments of OWL 2, while legal reasoning is implemented by available decidable reasoners. Moreover, an approach based on machine learning and natural language processing is presented, able to bridge the gap between knowledge modeling and knowledge acquisition.