Legal RDF Dictionary

Exchanging XML-data of legal documents marked up with the same datastructure DTD or XML Schema) poses no significant problems. For data stemming from different structures an interface is needed, which "maps" one structure to the other in other to make these data comparable. The concept for this interface is the "RDF Dictionary".

The RDF Dictionary is build with XML standards, including RDF (Resource Description Framework). The RDF Dictionary does not code or structure (digital) content. It builds on top of existing structures of digital content (valid XML documents). Rather than declaring semantics for one particular document, it declares semantics of a DTD or an XML Schema, which is used as a datastructure for many instance documents. This ensures a multiplier effect for the labour intensive declaring of semantics.

The RDF Dictionary is an important factor in allowing for diversity in the standardisation process in the legal field. Standardisation is used here in the meaning of datastructures being created for legal information, first and foremost contained in legal documents. Reference is made to LEXML (http://www.lexml.de) and LegalXML (http://www.legalXML.org). Uniformity is not desirable (and may even not be possible). A way to compare structures is needed, not to try to make uniform structures. One of the main goals of the RDF Dictionary is to facilitate cultural diversity during the standardisation process, law and language both being an important expression of culture. Without an RDF Dictionary and its „higher level of interactivity" approach, it will not be feasible to take advantage of the possibilities of XML to create one global legal information space, while at the same time allowing for diversity.

The traditional classification of legal terms is a hierarchy. The broadest term stands at the top, refined by narrower terms. Each (narrow) term has no more than one broader term as its „parent". Hierarchical classification is, after a flat list, the easiest way to classify terms. For a long time people have been aware that hierarchical classification is a rather inadequate way of describing legal reality. The reason that hierarchical classification remains the most practised way of classifying probably lies in the means of storage. Any piece of information should be stored just in one place. If one stores it in more than one place, the possibility of inconsistencies is created. Unless stored in a computer system, this requirement usually can

be satisfied only in a flat list or hierarchical structure. Of course the strict hierarchical structures in such traditional systems are often softened by card indexes, thesauri and other cross linking methods. But the basis is and remains a hierarchical structure.

Legal databases have, so far, in practice not brought any significant other method of storing and retrieving, apart from full text search. Full text search offers relief in some cases, in many cases it is a rather inaccurate and inefficient way to find one's way in an information surplus.

Legal ontologies hold promises in this field. Where they apply RDF based ontology languages like DAML+OIL ontologies break through hierarchy by allowing multiple inheritance. A (narrower) term can have more than one broader term as parents. A legal ontology contains a structured view of the legal system, which view potentially comes closer to legal reality than traditional structured views.

What does the RDF Dictionary add to these developments? The RDF Dictionary is not a legal ontology, at least not in the traditionel sense. It does in itself not try to describe the legal system. What it does, is link structures to one another. It facilitates the interoperability, the communication, between data structures. Such a structure is in most cases an XML Schema, describing the structure of a particular kind of legal document, like judgement or contract. There is, however, no reason to exclude a DAML+OIL ontologies from the benefits of the RDF Dictionary. The legal RDF Dictionary not only links these structures, it also offers a user the possibility to compare various structures and use the structure which best suits his needs at that moment for the particular task he is performing. A structure once made is in principle static. As things change over time a structure may in parts loose its usefulness. The RDF Dictionary makes sure a user can always choose to use the latest structure. He may even mix parts of structures, as RDF offers the capability of mixing namespaces. Namespaces in this context are nothing more than one particular XML Schema or a legal ontology.

As it is often problematic to translate legal terms litterally from one language to another language (each term being embedded in its own jurisdiction and legal culture) the RDF Dictionary uses legal "Archetypes" to map key legal concepts across language and jurisdiction borders. An example for judgement/Urteil/vonnis can be found in a very first draft for an RDF Dictionary (http://rdf.lexml.de). Judgement is described by its aspects, each aspect

being a legal Archetype, like: "written", "enforceable", "subject to appeal", "rendered by a public body", "preceded by proceeding between two or more parties".

The RDF Dictionary concept is applicable on many levels: from the level of one small particular domain, or a small geographic area, to a national level, bilateral level, going on to an international, supranational and finally global level. It is possible, even desirable, that on all of these levels RDF Dictionaries will come into existence. These Dictionaries complement and reinforce one another, by forming a network and sharing the same architecture. Each RDF Dictionary can take advantage of the work which has been done for other RDF Dictionaries by the simple, but very effective, name space mechanism provided by XML/RDF. The architecture of the RDF Dictionary allows for organic growth not only of one particular RDF Dictionary itself, but also of the network.

The European legal standards organisation, LEXML, and the American legal standards organsiation, LegalXML, both host a project for the development of an RDF Dictionary. The respective development teams cooperate with the aim to establish a global RDF Dictionary for the legal world. A number of European governments is considering to develop an RDF Dictionary for their national legal system. The W3C having expressed interest in the RDF Dictionary concept, their support will contribute to acceptance and further development.

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