

ICT Tools for the Discovery of Semantic Relations in Legal Documents

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Abstract. This paper reports the experience of the development and the evaluation of a set of pre-competitive tools to support legal professionals in exploring a complex corpus of norms and documents in the legal domain. The research addresses two complementary goals: using ICT to support the simplification of the corpus of norms and using ICT to facilitate search and retrieval of information in large archives in the legal domain. The contribution of this work is in the development of tools beyond state of the art for the e-discovery of relationships between sections of norms or other legal documents. To reach the best results in terms of effectiveness, the tools combine statistical and the semantic approaches. The effectiveness of the statistical tool has been measured in terms of precision, through an assessment procedure that involved some experts of the legal domain.

Keywords: E-Government, Information Retrieval, Semantic Annotation, Collaborative Tagging.

1 Introduction

The field of law involves a large number of professionals and represents a multi-billion business. The workers of the legal domain have to afford a challenging amount of text, information and knowledge represented in thousands of documents. Especially in continental Civil Law countries, like Italy, the system of the laws is particularly complex. The Italian system of laws, by example, is composed by more than one hundred thousand of different norms. Thousands of civil servants, judges, public prosecutors and lawyers, highly specialised, need to manage this huge corpus of laws, archives of court verdicts and rulings or just written opinions.

A recent user survey conducted in the framework of the European funded *Judicial Management by Digital Libraries Semantics* (JUMAS) project [1] offers

