

The Automatic Generation of Hypertext Links in Legal Documents

Erich SCHWEIGHOFER*, Dieter SCHEITHAUER**

*Institute of Public International Law and International Relations,
Research Center for Computers and Law
A-1090 Vienna, Universitätsstraße 2
Tel. +43 1 4064341-14, fax +43 1 4027941
E-mail: erich.schweighofer@univie.ac.at

**Institute of Applied Computer Science and Information Systems
A-1010 Vienna, Liebiggasse 4
Tel. +43 1 4062376-13, fax +43 1 4060197
E-mail: ds@ifs.univie.ac.at

Abstract. Huge legal information retrieval systems very often produce information overload for the user. This problem can be solved by automatically generated document summaries and structured meta-information. In addition, the user needs a flexible instrument for browsing and structuring of this output as well as for referring to the original documents. Hypertext is an appropriate tool for this purpose. The quantity of necessary hypertext links makes manual insertion impractical. KONTERM is a prototype for the semi-automatic analysis of documents and the automatic generation of hypertext links. Concepts are identified by terms and context-related probabilistic rules. The transformation of ASCII documents to HTML documents results in an remarkable improvement of the presentation. With the hypertext features, the prototype KONTERM constitutes a useful information assistant for the practitioner and the academic.

1 Introduction

The information crisis in law [Simitis70] was the impetus for the development of legal information retrieval systems in many jurisdictions. The coverage of these information retrieval systems is now quite satisfying, and the systems are huge and powerful. A major drawback is that efficient use still requires profound user experience. Deep structure in information retrieval systems with various document types, indices and fields can only be used if the users are well trained and experienced [Schweighofer95b]. Possible solutions for this problem are improved information retrieval systems [Turtle95, Turtle/Croft90] or hypertext applications [for an overview see Di Giorgi/Nannucci94]. The main advantage of hypertext systems is the self-explaining structure of the non-linear network offering deep structure of knowledge representation also to inexperienced users.

The importance of deep but self-explaining structure in legal documentation is shown by the gap between legal information retrieval systems and legal commentaries. The latter constitute the most useful tool for the lawyer in presenting legal knowledge in a comprehensive, analytical and abstract analysis of the legal materials on a particular subject. Applications of artificial intelligence are limited to small areas of law and have not achieved the necessary broad coverage.