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Telecommunication and AI & Law

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PREFACE

The Editors
University of Limburg, Maastricht, The Netherlands

1 Introduction

This book contains the proceedings of the JURIX Conference of 1995, which had as its theme 'Legal Knowledge-based Systems and Telecommunication'. The Conference was held on November 30, and December 1, 1995 in Maastricht. It was organised by the JURIX Foundation for Legal Knowledge systems and hosted by the Department of Metajuridica and the MATRIKS research institute, both of the University of Limburg.

2 The conference theme

The 1995 JURIX Conference is already the eighth conference of an uninterrupted series started in 1988. Each conference is characterised by its own theme indicated below:

1988	Paradigms in legal informatics, Exploring the future of Dutch research programmes in legal informatics.
1989	An overview of criteria for validation and practical use, Exploring the quality of applications resulting from research programs in the Netherlands.
1990	Legal knowledge-based systems: aims for research and development.
1991	Model-based legal reasoning.
1992	Information technology and law.
1993	Intelligent tools for drafting legislation, Computer-supported comparison of law.
1994	Legal knowledge-based systems: the relation with legal theory.
1995	Legal knowledge-based systems and telecommunication.

The theme of the eight JURIX conference 'Legal Knowledge-based Systems and Telecommunication' reflects the increasing importance of telecommunication both in the fields of computer science and of law. This importance is, amongst others, shown in the rapid expansion of the Internet, and, in particular, of the World-Wide Web,¹ in the ongoing discussion on the 'Electronic Super Highway(s)', and, from the legal point of view, in the developments on Electronic Data Interchange (EDI).

Given the increasing prominence of telecommunication, it is clear that the recent developments will also influence legal knowledge-based systems. The papers in these conference proceedings illustrate many aspects of such an influence.

In 1995, JURIX has returned to its original practice, viz accepting not only papers addressing the theme of the conference, but also other papers that reflect the state of the art in the subfield of Artificial Intelligence and Law. As a consequence, these proceedings do not only provide insight into the impact of the rapid developments in the area of telecommunications but also in the wider context within which this impact takes place.

3 The contributions

In his invited speech, called *Argument in Artificial Intelligence and Law*, Bench-Capon discusses the role of arguments in recent research in Artificial Intelligence and Law, and

¹ It goes without saying that JURIX has a Web-site of its own, the address of which is <http://jurix.bsk.utwente.nl/>.

points out that dialogical approaches to legal arguments deal with the most critical aspect of legal reasoning.

Janssen van Raay offers in his invited speech *A telematics union* some thoughts about the role of telematics in the European Union.

De Feijter gives in his invited speech *The PALMA-project on European co-operation: How IT-applications lead to communication* an overview of an IT-project to stimulate the co-operation of the police forces in the 'Euregio' (Aachen, Liège, and Maastricht).

In their contribution *LACA: An achitecture for legal agents*, Heesen, Homburg and Offereins address the issue of communicating legal knowledge-based systems. They propose an architecture for legal agents which communicate their intentions to each other, enabling the spanning of legal tasks over different co-operating systems.

Mitrakas takes a different point of departure in the legal issues that arise around the increased use of electronic data interchange. In his paper *Towards the development of selection criteria for the regulation of EDI* he points out that contracts may not be the ideal way to deal with these issues, because they may contain pitfalls for the unsuspecting or weak trade partner. As a step toward the solution, he proposes the introduction of a standard, legally binding framework for EDI.

Again a different approach to legal knowledge-based systems and telecommunication is seen in the paper *Knowledge-based systems and distributed processing models* by Guidotti and Turchi. The paper describes the CABALA-project in which a distributed database about environmental law can be consulted by means of one central user interface, which makes use of a conceptual network that characterises the documents in the database.

Grütters discusses an uncommon, but interesting approach to legal knowledge systems in his paper *A simulation model for the Dutch asylum procedure: a different approach of law and AI*. The SMAP simulation model described in the paper models the Dutch asylum procedure and makes it possible to analyse the causes of delays in the asylum procedure.

The CONTRACT NEGOTIATOR is a software tool that supports business (wo)men in identifying actual and potential issues and to consider the legal strength of their positions on each of these issues. In *Computer supported contract negotiation: CONTRACT NEGOTIATOR - an experimental prototype*, Akroyd and Edwards describe how this tool can be used for both advisory and educational uses.

Leenes and Svensson discuss in their contribution *Large-scale computer networks and the future of legal knowledge-based systems* the future of legal knowledge systems in the light of the rapid developments in the field of telecommunications. Their conclusions about this future are pessimistic, although with some optimistic reservations.

Groendijk and Tragter describe the results of an artificial neural net to predict the amount of smart-money that is allotted in cases of tortuous causation of disablement. In their paper *Statistical and neural approaches to smart-money determination*, they compare the outcomes of the net to a statistical approach.

Peek addresses the issue of isomorphic representation of legal provisions in his paper *Structure-preserving representations of complex references*. He proposes to use the feature-structure formalism, stemming from computational linguistics, as a means to represent rules which refer to other rules.

The diversity of the research on Law and Artificial Intelligence is illustrated by the paper by Royackers and Dignum about individualised obligations. In their *The idea of obligation; or: How to interpret O(p)?* they deal with some problems that arise if the standard system of deontic logic is extended with individualised obligations. They propose to solve a particular problem by the introduction of group obligations.

In their *Regulative effects of legal decision-support systems*, Tragter and Oskamp raise the issue as to what legal consequences are to be attached to the phenomenon that standardisation of a part of the law by means of a decision-support system influences the

contents of the law itself. The authors draw the conclusion that there must be requirements on these systems, and they list the ones already mentioned in the literature.

Legal intelligent tutoring systems are both discussed in a paper by Centinia, Routen and Hartmann, and by Muntjewerff and Winkels. The former paper, called *STATUTOR: Too intelligent by half?*, describes a tool that allows graphical representations of legal arguments. By means of this tool, it is first possible to assist students in constructing arguments, and second to assess arguments produced by students by comparing them to the argument graph produced by the system on the basis of its legal knowledge base.

The paper by Muntjewerff and Winkels, *ROSA; A model-based computer system for teaching and learning legal case solving*, proposes a coaching system to support and assist law students in learning to solve legal cases. This system is based on a model for legal assessment developed in the context of the KADS methodology for building knowledge-based systems.

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H.B. Verheij

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JURIX '95: The editors

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Another source of information are the Web pages of the JURIX foundation:

<http://jurix.bsk.utwente.nl/>