Computerized Legal Information Services:
An Introduction

By Jon Bing*

1. Introduction: Lawyers and information systems
Any legal decision has a factual and a normative component.

The facts of the case are those circumstances comprising the legal problem
to be settled. It may be within any sector of society and of different levels of
generality, and is explained or documented to the lawyer by clients, witnesses,
letters, files etc. The problems in managing a large amount of data on a certain
problem may be formidable indeed, but in this small paper, we will not dwell
on this side of information needs or systems.¹

The normative component comprises those valid, legal rules within the legal
system of the jurisdiction which applies themselves to the facts or circumstances
of the case. As any rule also has to components – the antecedent qualifying in
which cases the rule is applicable, and the consequent, qualifying the conse-
quences of such application – the relevant rules may, initially, be seen as those
rules in which the facts of the case match the criteria of the antecedent.

Often the lawyer may have a sufficient background knowledge of law to in-
tuitively understand which rules are to be applied. But more often, rules have
to be argued.

A legal rule can only² be argued on the basis of legal sources. Such legal
sources generally take the form of texts, like, for instance, statutes, regulation,
cases, administrative decisions, and legal literature. The task set out for the
lawyer confronted with a novel problem is then to identify those legal sources
which contain the arguments necessary to construct the legal rules which, ap-
plied to the problem, produce a result.

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Fig 1 - Retrieval process.
This is, obviously, a somewhat simplified model of legal decisions. But the interesting part is that even on this level, the problem of retrieval emerges quite clearly. The amount of textual material to be searched is very large, and the retrieval can only be solved by the help of tools – which in this context will be named *information retrieval systems*.

As the information retrieval problem is basic to legal research, one is not surprised to find a wealth of traditional tools. The typical tool may be seen as the back-in-the-book index of a compilation of statutes or regulations. The editor has studied each statute or regulation, and assigned one or more indexing terms to the document. The terms describe either the type of facts or circumstances governed by the rules implied by the document (for instance, *DOMESTIC ANIMALS*), or a legal classification of the rule implied (for instance *TORT*). The lawyer using the compilation, and looking for a statute or regulation governing the liability of domestic animals, may find both these terms useful.

Observing this small and commonplace example, one easily may determine some properties of this information system. One may, for instance, observe that the user is limited in his or her choice of search terms to those included in the index. Though the problem may include a bull, the term *BULL* cannot be employed as a search term, as the index only contain the more general term *DOMESTIC ANIMALS*. One also may observe that the user cannot easily combine search terms, a request like *DOMESTIC ANIMALS AND TORT* is not easily carried out, and would presume that the user jotted down references and determined whether any of the references for the two search terms were identical.

This example may serve to illustrate how lawyers always have relied on information systems to assist them in locating relevant documents in the different traditional compilations etc they have employed. The back-in-the-book index is only one example. Others may be citation indexes or commentaries, which to each section of a statute cite the leading cases relevant to that section, legislative history, doctrine etc.

Actually, one may pause to notice that legal sources to a certain degree is *self indexing*, or chained. A case will cite other cases or text books. These will in their turn cite other legal sources, chaining the documents together in a complex conglomerate of material, which has to be understood and harmonized by the interpretative process of the lawyer. Therefore, legal sources – like a text book – has a double nature, they are both a legal source and to some degree an information system, assisting the lawyer to retrieve related legal sources of possible relevance.

It is easy to appreciate that the wealth of information itself is a problem. Legal research based on conventional tools may be time consuming and difficult. The restrictions of conventional methods – for instance in the choice of search words and their combination – make this process even more cumbersome. Methods for improving the performance of information systems would therefore seem quite welcome – and computerized methods offer such possibilities.

2. Introducing text retrieval

In the 1950'ies, a state legislator in Pennsylvania had a bill passed to change the phrase “retarded child” into the less stigmatic “exception child”. In order