# Data Processing and the Law

## EDITED BY

## Colin Campbell

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# Preface

This collection of essays seeks to describe and represent the current state of play in data processing and the law. The contributors are either distinguished practitioners in applying computers to law or influential commentators on the impact of technology on law . . . or both. Their essays began life as papers presented to the Colloquium on Data Processing and the Law held in Leicester, England, in September 1982. The Colloquium was arranged under the auspices of the United Kingdom Committee on Comparative Law. As with the Committee's previous conferences the aim was to bring together, from different jurisdictions and different parts of the world, experts who could stimulate and sustain a comparative exchange of views and analyses.

In editing the essays I wish to record my thanks to all the contributors—for their participation in the Colloquium and for their assistance in preparing the essays for publication. The Dana Fund for International and Comparative Legal Studies, The Society for Computers and Law, and The National Law Library contributed the financial support which made the Colloquium possible—their generosity is gratefully acknowledged. In addition I wish to acknowledge, with thanks, the administrative help in arranging the Colloquium extended by Phillip Britton, Secretary of the UKNCCL Committee. Last, but by no means least, my thanks go to Hazel Mount for all her assistance in preparing the essays for publication.

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# Introduction

Interest in the relationship between technology and law has grown considerably in recent years. To some extent this merely reflects broader changes in attitude. There is a growing realisation that technology is bringing about rapid changes in society and there are suggestions that we live in an "information age." Yet there have also been marked advances in introducing computers to established legal practices and conventional legal processes. And it has become increasingly difficult to ignore the challenges which technical and electronic developments are presenting to established legal definitions and concepts. The subject matter addressed in this collection of essays is therefore topical and important.

In the United Kingdom a small band of enthusiasts and pioneers began to carry out research and write about "law and technology" in the late 1960s and early 1970s.[1] The Scottish Legal Computer Research Trust was established in 1970 and it was succeeded by the Society for Computers and Law, covering the whole of the United Kingdom, in 1973. The Society is a charity and has tried to promote understanding and dialogue between lawyers (and all users of legal information) on the one hand and technologists on the other: from its birth it has attended to the needs of the smaller jurisdictions in the United Kingdom. For many years much of the effort and work was of a purely exploratory or preparatory nature—but this has changed. We have witnessed major developments and initiatives in the last few years and the pace of change in promoting the uses of technology has quickened. Indeed so much has happened so quickly that a few background remarks need to be made before some of the current issues that deserve attention are discussed.

## Background

If the canvas is broadened beyond the United Kingdom we may accept that the development of computer applications to

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[1] A recent publication contains references to most relevant British publications in this field. See *Applications of Computer Technology to Law—A Selected Bibliography (1969–1981) for British Lawyers.* (Society for Computers and Law 1982).

law has been underway for more than 20 years. Much of the original stimulus, and early effort, came from the United States. As commentators in other countries began to pay attention, and to consider the potential contribution of computers to the legal process, two major points recurred. The first was the acceptance that, like it or not, computers would come to play an important part in manifold areas of legal practice and, yet, secondly, the technical complexities and high financial costs seemed intimidating. The confidence of the early pioneers who had predicted the entry of computers into law offices and legislative chambers seems not to have been shaken by the delays in implementation. And by the 1980s their predictions were at last justified.

That there have been significant recent increases in computer applications to law is only partly due to the claims made about the attractions or superiority of computer techniques. Traditionally proponents of computerising legal research methods have drawn attention to the amount and complexity of the law and its speed of change. They have argued that any technology which can assist in the storage, retrieval and control of the large quantum of words should be exploited. As computers were transformed from complex "mathematical machines" into "bit crunchers" which can handle any information in any "language" they became prime candidates for use in law. It is true that in some jurisdictions the sheer amount of law (which is continuously increasing) helped to stimulate interest in exploring technological solutions. But two other, and perhaps more important, reasons lie behind recent developments.

The first is the change in the economic equation; that is as labour costs have continued to rise the costs of technology and especially micro-processors have fallen dramatically. For managers in any organisation (including a law office, a court or a law school), financial considerations have thus entailed that technology be evaluated as a possible complement to existing practices. But it is not just that technology has fallen in price—it has begun to change in nature in a fundamental way. If the computers, of yesteryear, were large, expensive "mainframe" machines typically housed in purpose-built, air conditioned rooms and tended by a team of dedicated servants, there is now a new breed, a new generation. Mini computers and micro computers—some small enough to be carried around by hand, but fast and powerful enough to do many of the functions previously required by their large predecessors—are

revolutionising modern day computing. Even the computing industry is only now getting ready to grasp the implications of this. But it is selling its robust and tiny computers to all sectors of society. Soon a significant proportion of all members of industrialised societies will have one or more computers—in their offices, in their homes or in their cars. These may be linked to other computers or "dedicated" to single tasks, but they will be cheap, reliable and able to operate in normal workaday environments. These developments have come together pro-pitiously and we stand on the threshold of considerable change in the law.

The media have accustomed us to the notion that a technological revolution is upon us, and that we live in the "information age." In the United Kingdom 1982 was "Informa-tion Technology Year," and in many other countries there is keen appreciation by governments of the need to promote public and business awareness of the changes that are underway. It may seem anomalous that some of the significant developments in recent years find their roots in law—where the profession is renowned for its conservatism—but it re-mains true that this has occurred and that we would do well to consider computer applications to law now. The major reason is that, at last, some of the different paths that may be pursued are becoming clearly delineated—serious discussion and plan-ning is possible; the decisions made in the next four or five years may well determine major patterns of use for the following two or three decades. There are some matters, carrying important implications for the legal profession and the public alike, which require discussion and, dare I say, action.

### Proving the potential

Ever since computers have been capable of handling text and successful demonstrations of systems for retrieval from legal materials took place, it has been claimed that Computer Assisted Law Retrieval (CALR) would become commonplace and offer a boon to the legal profession. Efforts to exploit the potential have been made in numerous jurisdictions but practical or commercial success has been reserved for only a few of the initiatives. In continental Europe the history is of governmental or professional backing being given to systems for lawyers.[2] In the United States it has been commercial

[2] *Cf.* Bing, J. *infra*, pp. 38 *et seq.*

enterprise which has launched the major systems. In Common-
wealth countries nothing of the size achieved in the United
States has been realised—although the "state of the art"
knowledge is equivalent.

In the United States two systems for practicing lawyers
predominate—LEXIS and WESTLAW. The former, owned by
Mead Data Central, comprises many million characters of the
*full text* (*i.e.* authentic copy) of both Federal law and the law of
all the states.[3] Based on dedicated terminals, set annual
subscription and "metered" connect time charges, LEXIS is an
exceedingly large, impressive but expensive on-line informa-
tion retrieval service. WESTLAW, owned by the West Pub-
lishing Company, appears to have decided that its initial policy
of publishing headnotes of cases only and inviting customers to
use conventional published materials for reading full judg-
ments or browsing was erroneous. They now publish their
system using abstracts (including the West Key Concept
system) *and* the full text. Unlike LEXIS they do not require
dedicated technology and their system may be accessed on a
variety of terminals or word processors. Competition between
the two companies (and their different philosophies) is keen
and likely to continue for some years in the United States.
Both of them exhibit the enormous power of modern day
computing and the sophistication of current day tele-
communications. They are, from a technical and organisa-
tional point of view, achievements to be admired. Clearly, the
level of investment required to establish the services was very
high and efforts to secure an adequate return are, accordingly,
strenuous.[4]

In Canada there are information retrieval systems (The Q/L
system has a significant and large database) and, through the
work of the Canadian Law Information Council,[5] efforts are
made to extend access to these systems as widely as possible.
The co-ordinating Council seems to follow a policy of trying to
avoid all unnecessary restrictions on access to the law via
novel technologies. The aim seems to be to try to secure access
to all lawyers and law students, and not just those who can

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[3] Nicolas Harrison states "LEXIS is probably the largest on-line legal
research service in the world . . . the size of the database including NEXIS
libraries, exceeds 25,000 million characters of text . . . " See "LEXIS: a radical
approach to computer assisted legal research" (1981) 15 *Program* 120 at p. 124.

[4] *Cf.* J.F. Sprowl: "WESTLAW vs. LEXIS: computer assisted legal research
comes of age." 1981 15 *Program* 132.

[5] See Annual Report of Canadian Law Information Council 1981–82.

afford high charges.[6] In Europe there are a large number of retrieval services for lawyers—some use full text, some contain abstracts of materials and others hold bibliographic references.[7]

Recently, however, the United Kingdom has become a hotbed for intense commercial competition. It was announced in 1980 that agreement had been reached between the legal publishers Butterworths and Mead Data Central, that LEXIS was to be extended to the United Kingdom and that an English General Library of significant proportions was being established straightaway. At about the same time, the Thompson organization announced that, through a subsidiary (The European Law Centre) it was to use the British STATUS software in a new service to be named EUROLEX.[8] (Clustered round the PRESTEL service there are different sorts of more limited systems for lawyers.) Since 1980 a focus has thus been provided for discussions about the future of CALR.

If Canada has shown caution towards CALR systems[9] it has been unusually progressive in adapting and canalising the power of technology as an aid in legislative drafting. Over 10 years ago it was realised, in Canada, that text captured in magnetic form *once*, could aid the legislative drafting process by expediting the production of successive drafts as they were required. Further, the entire system could, as a by-product, render available a final copy of text which was suitable for subsequent information retrieval from a computerised law database. The pristine economy of this approach is admirable. It appears, to an outsider, both surprising and anomalous that draftsmen in other jurisdictions have not followed the Canadian example. Certainly appropriate technology is available, and one would expect such a system to be exceedingly cost effective.[10] If, as appears to be the case, there is an obligation

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[6] As computer typesetting becomes more popular the cost of mounting databases will fall (in real terms) but law retrieval via remote time-sharing computers (increasingly "old technology") will remain expensive.

[7] *Cf.* Bing, J. and Harvold, T.: *Legal Databases and Information Systems.* Universitetsforlaget, Oslo (1977); Bing, J. and Selmer K.S. (Eds.): *A Decade of Computers and Law.* Universitetsforlaget, Oslo (1980); and the articles by C. Verschoor, G. Bull and W.R. Svoboda in the Special Issue on Legal Retrieval Systems (1981) 15 *Program* 3.

[8] See N. Nunn-Price: "The EUROLEX Experience" (1981) 15 *Program* 142.

[9] *Cf.* Stephen Skelly, *infra,* p. 21.

[10] *Cf.* "The Use of Electronic Data Processing to Assist in the Drafting of Legislation." Memorandum by the Government of Canada to the Meeting of Commonwealth Law Ministers, Sri Lanka, February 1983, available from the Commonwealth Secretariat London.

on government to make the law readily available then
capturing primary material at source in machine readable
form should be ensured.

The other major success story concerns the introduction of
simple computing into law offices. For the enthusiasts of CALR
and proponents of drafting systems, it was ironic to find that
the major inroad into legal practice had little to do with
refining legal research skills but a great deal to do with the
economics of office management. With rising financial over-
heads lawyers in many jurisdictions turned to computer based
time recording, accounting, and word processing systems to
increase productivity, save costs, and improve office efficiency.
Such seemingly mundane "office automation" applications
have proven of relevance to the wider picture however. First
they have brought to lawyers' attention, in practical ways, the
benefits and advantages of a successful computer installa-
tion—so that many lawyers are now prepared to consider, on
their merits, proposals to extend to other areas. Yet, second,
experience so far has made lawyers aware of the need to ensure
compatibility between different types of application. Lawyers
may be increasingly ready to turn to technology but, naturally,
they want to run an integrated and compatible office and not
pay additional costs for extra equipment and the confusion
that usually entails.

Nowadays computer assisted law retrieval can be seen to
work effectively and to be, in many demonstrable ways,
superior to traditional publishing and research methods.
Drafting applications are not so widespread but it is unargu-
able that a well-implemented system can improve significantly
the efficiency of the legislative process and contribute, more
widely, to the retrieval of law. The "legal sector" has shown
itself receptive to office automation. However some areas of
anxiety have been identified by those observing current
developments.

Some of the more frequently expressed worries may be
listed. First, the cost of CALR systems has invited controversy.
In the United States and in the United Kingdom the full text
services offered by LEXIS, WESTLAW and EUROLEX are
expensive. The expense comes from maintaining the huge
databases they seek to provide on large expensive computers—
this means that the charge to users is high.[11] Commentators
have become concerned that the expense may mean that only

[11] The observation in note 6 *supra*, applies here also.

the larger law firms will be able to afford use of the systems. Since such law firms already enjoy greater resources, and since it is the small firms who have the most glaring need for help in coping with the increasing complexity in law and legal practice, fears have been expressed that new distinctions will emerge in the legal profession. There will be greater differences between the large rich firms (and their clientele) and the rest. This is an important point since the legal professions in most countries are comprised of small firms; partnerships are, on the whole, limited to approximately two to five lawyers. Thus in England and Wales over 5,600 firms comprise "small units" of four partners or less.

Another major worry was expressed when the extension of LEXIS to the United Kingdom was announced. Here the issue of "national sovereignty" and copyright of legal materials was identified as a matter for concern. Lawyers in the United Kingdom who use LEXIS in fact connect with computers in Ohio in the United States, and the British materials that they read are held in the United States. Worries about the implications of this were first expressed in Canada where it was understood that the transborder flow of law data raised numerous complex policy questions.[12]

These are two of the popular concerns, but there are others. The history of the computing industry is one of rapid growth . . . and of confusion, incompatibility, and a high rate of wastage. Many commentators, while wishing to encourage innovation, feel that the profound incompatibilties between systems and services is no longer tolerable—certainly a lawyer would wish any applications to his work to be compatible one with the other. The question of maintaining standards is also relevant but governments everywhere have recognised the difficulties in imposing standards on a fast moving industry. The question of access to the law has been raised—a "whole can of worms" as the phrase has it. Will those with access to huge databases almost instantaneously accessible have a profound advantage over other members of the profession? Should all members of the profession be guaranteed access (they are not at the moment) to some legal materials? Should advice agencies or "para-legal" associations receive special consideration? What are the obligations on government in publishing the law of the land—to whom, how, and at what

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[12] *Cf.* Stephen Skelly, *infra*, pp. 26–27.

cost? Is the law itself sufficiently flexible to respond to and guide technological advances?

Interest in such questions has been shown by commentators in many countries in Europe and in the Commonwealth and the salient issues appear to have been accurately identified. Few people have been bold enough, as yet, to offer answers, although, perhaps anomalously, in the United States has come the call from one commentator[13] that major on-line text databases require to be taken into public ownership if profound distortions to the legal system and the legal process are not to ensue.

## The next steps

In the next five years or so there are likely to be two "groups" of further development in *applying* technology to law.[14] The first group will see the realisation of preparatory work that has already been carried out in some areas. As practitioners and administrators assimilate the impact, the seeds are being laid, in the second group, for a novel set of applications. Entering the obvious disclaimer that I am mainly projecting from current knowledge, some remarks on probable developments in the first group may be offered, and then more tentative remarks on the possibilities in the second group.

In a number of countries it has been appreciated that the range and power of technology now available is such that the vital considerations now relate to the planning and the dissemination of systems rather than their technical implementation. Within law the early foundation work that will see new systems introduced has taken place in a number of important areas. First what may be termed property registers have been computerised and while, initially, the justification was plainly administrative (to improve efficiency and save on overheads) the work done will allow for dissemination of information through the provision of "networks" for the legal profession and others. Thus, it should become possible, if it is desired, for the Land Register system in Plymouth in England to be linked to law firms directly.

Other systems for transmitting materials or information which is particularly important to lawyers in practice, could

[13] Gelfand, G.: "Public Control of Computer Assisted Legal Research: A Commentary" (1978) 55 *University of Detroit Journal of Urban Law* 783.

[14] The essays in Part III discuss some of the areas of legal control of technology which are likely to be important in the coming years.

equally well be developed. In the United States, for example, sensible uses of computers to aid in court administration procedures have been developed, and it is easy to understand that, with the investment of relatively limited resources and planning, court administration systems could be introduced in any jurisdiction where pressure on the courts or pressure on selected crucial manpower (judges or barristers for example) is experienced. Similarly the maintenance of court transcripts and the production of judgments could be improved and expedited by adapting available technology. It is here that the advent of the new generation of small, powerful and cheap microprocessors will open up a whole host of new possibilities. The flexibility and reliability of the product is accompanied by dramatic falling costs—improved efficiency can be achieved by using the new technology.

In the past few years publishers in many countries have come to use computers as an integral part of the printing and publishing process.[15] The books and law reports now available have frequently been produced by computer based photo-typesetting methods. Publishers have realised the sense of maintaining the "magnetic copy" of these books and law reports, and, as their stocks of material have grown, have begun to consider how to make the magnetic copy available to the consumers who will have the equipment and means to use and read the copy. Thus, in the United Kingdom, Butterworths have suggested they might make libraries of forms and precedents available on disc for those with appropriate word processors. Sweet and Maxwell have entered into an arrangement with the European Law Centre under which *Current Law* and other secondary materials (legal textbooks, etc.) are to be available for searching on EUROLEX—this may be accessed by various terminals or word processors in solicitors offices.

Within the next five years or so other, novel, methods of publishing (and editing and updating) materials will become established. It seems certain that lawyers will be able to hold their own "electronic library" in their own office or study. Instead of, or as well as being able to dial up remote computers, lawyers will have immediate access to in-house information

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[15] *Statutes in Force* was, of course, produced in such a way although the need to prepare and format tapes so as to facilitate information retrieval was not fully recognized. A more successful enterprise has been the production of *Statutes Revised, Northern Ireland* which stands as an example of the way technology may be harnessed to produce excellent printed copy and promote CALR.

systems and should be able to read the law (primary as well as secondary materials) and all their own papers and correspondence through one terminal. Already such a system, called MicroBIRD, has been announced and enhanced developments are known to be underway.[16]

A second group of developments, however, is not so likely to be *completed* within the next five years but will be well into the planning stages. Earlier it was hinted that not even the computing industry has come to terms with the revolution that has been precipitated by the unlimited, cheap availability of micro-processors. This is plausible enough. Most computer applications to law, so far, were designed many years ago when the technological capabilities were limited and the financial costs were high. Now that the capabilities have been multiplied and the costs have fallen, urgent minds are being applied to the new possibilities. Some examples of what will be done can be hazarded even if the time involved in planning, administering and overcoming inertia (including that flowing from the need to secure acceptable returns on investments) may be not inconsiderable.

First, lawyers who are intimidated by the increasing complexity of their professional lives will call for and will receive "diagnostic" kits which will provide them with intellectual knowhow. These so called "Expert Systems" will provide them with intelligence in a way that will help them in the diagnosis and analysis of the different courses of action open when tackling a given problem. They have been termed IKBS (Intelligent Knowledge Based Systems) recently in a major report to Government which calls for the immediate investment of public funds to support the necessary research and development work.[17]

Second, it seems likely that policy makers (including government departments) will rely more and more explicitly on technology for their modelling and planning capabilites. Just as governments need access to systematic demographic data so that they may plan for the future (budgets for health, social services, etc.) so they may soon come to rely on computers in shaping new laws. Use of modelling techniques

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[16] This was announced by The National Law Library (NLL) in 1982. NLL was established following publication of the report *The National Law Library—The Way Ahead.* (Society for Computers and Law 1979).

[17] *The Alvey Report on A Programme for Advanced Information Technology* (HMSO, 1982). The LEGOL work of Ronald Stamper is one example of work in this area which presaged the Alvey Report.

should allow the identification of the consequences of different administrative or legislative measures under consideration—in areas of complexity the computer will contribute directly to the decision-making.[18]

Third, communications between different offices, courts, and departments *almost all of which* will have computing capabilities will become a matter of course at least during this decade. The so-called "office of the future" with "electronic mail" is, from a technical point of view, already entirely feasible—for widespread implementation it awaits the readiness of the user and the commercial investment of the supplier. Communications within a domestic jurisdiction will speed and improve the effective uses of many aspects of the legal process (no doubt bringing problems as well as benefits in train) and international exchange between jurisdictions will become feasible. Linking homes and offices may become commonplace too.

Of course along with all this will come a need to scrutinise and, I suggest, revise a number of areas of law where established categories or definitions may not prove adequate to guide or control the new technologies. The effects on the laws of contract and carriage and of evidence for example will be important.

### The prospectus

The proven capability of computers in enhancing legal research methods, promoting drafting and improving office automation efficiency is clear. The developments underway in allowing new forms of court administration, new methods of legal publishing and new administrative practices within the legal profession are entirely comprehensible. Where ingenious minds will identify and exploit the more novel aspects of computers is not so clear. But that technology and its imperialistic influence on legal processes will grow is inevitable. There are enthusiasts for all this as well as prophesiers of doom. Like most other changes in law and its administration there will be costs as well as benefits. What the ultimate balance sheet will look like will depend on decisions now made—including decisions on some of the following issues.

An elementary issue is for governments to consider the nature and extent of their interest in applications of the sorts reviewed above. This will almost inevitably involve rather wide policy matters. In different jurisdictions law reporting

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[18] *Cf.* W.R. Svoboda, *infra*, pp. 110–112.