

**COMPUTERS AND THE LAW:
THE CHALLENGE TO GOVERNMENTS**

Memorandum by the Commonwealth Secretariat
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When Law Ministers met in Barbados in 1980 they had a lively discussion about the use of computers in the legal area. Since then the cost of hardware has fallen dramatically while at the same time the capacity of the machines has soared.

2. A number of companies have begun to establish electronic legal data bases and to offer competitive, and at times overlapping, computerised services to the legal profession.

3. This development carries with it a number of complex and potentially controversial issues of policy for governments. Should a private concern enjoy control over an area of legal materials and be free to set its own charges for access to it? Does the public interest require that these systems be compatible and accessible by conventional computer terminals rather than on the personalised or "dedicated" terminals which some systems require customers to hire simply for access to the electronic library in question? To what extent should governments intervene to influence developments and protect public access? What is the status of the statute book and of court judgments, and how strong is the position of a government who wishes to require orderly and compatible development in this field? Will the benefits of the new technology which should ensure to the legal profession, to governments and to the public at large be realised, or are they endangered by fragmented and competitive activities of uncoordinated electronic publishers, each seeking an area in which their libraries will enjoy a monopoly? These are only some of a number of issues which require resolution but in a manner which encourages rather than discourages the creation of data bases without which the new technology may be in danger of being unused, misused or underused.

4. In the accompanying paper, Professor Colin Campbell (a leading figure in the Society for Computers and Law) highlights some of the developments to date and raises questions which may have to be faced by governments, and sooner rather than later.

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Introduction

The development of computer applications to law has been underway for more than twenty years. Much of the original stimulus, and early effort, came from the United States. As commentators in different countries of the Commonwealth began to pay attention to the potential of computers in the legal process two major points recurred. The first was the acceptance that, like it or not, computers would certainly 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 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 the predictions were at last justified - there is a rapid and marked spread of computer applications to law.

2. That there have been, in the last few years, and will continue to be significant increases in computer applications to law is only partly due to the claims made about the attractions or superiority of computer methods. Traditionally proponents of computerization have drawn attention to the amount and complex structures 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 (rapidly increasing) helped to stimulate interest in exploring technological solutions. But two other, and perhaps more important, reasons lie behind recent developments.

3. The first is the change in the economic equation - i.e. 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 entail that technology be evaluated as a possible complement to the existing organisation. 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. The next stage of technological revolution is underway. Soon a significant proportion of all members of industrialised societies will have one or more computers - in their office, in their home 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 propitiously and we stand on the threshold of considerable change in the law.

4. The media sometimes argue the technological revolution is upon us or that we live in the "information age". In the United Kingdom 1982 is "Information Technology Year", and in many countries there is keen appreciation by governments of the need to promote public and business awareness of the changes underway. It may seem curious that some of the more significant developments find their roots in law - where the profession is renowned for its conservatism - but it seems sensible to consider computer applications to law now. The major reason is that, at last, some of the different paths that may be pursued are now clearly delineated - serious discussion and planning, and not merely academic speculation 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 profession and the public alike, which require discussion and, dare I say, action.

Proving the Potential

5. Since the late 1950s when computers were capable of handling text and when there were demonstrations of systems for retrieval from legal materials, 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.¹ In the United States it has been commercial enterprise which has launched the major systems. In the Commonwealth nothing of the size achieved in the United States has been realised - although the "state of the art" knowledge is equivalent.

6. In the United States two systems predominate - LEXIS and WESTLAW. The former, owned by Mead Data Central, comprises 40,000 million characters of the full text (i.e.

authentic copy) of both Federal law and the law of all the States. Based on dedicated terminals, relatively expensive subscription and connect time charges, LEXIS is an exceedingly large, impressive and costly online information retrieval service. WESTLAW, owned by the West Publishing 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 judgments 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 telecommunications-communications. They are, from a technical and organisational 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.

7. 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,² efforts are made to extend access to these systems as widely as possible. The co-ordinating Council seems to follow a policy of avoiding 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 afford high charges. 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. Recently the United Kingdom has become an arena for intense commercial competition. It was announced in 1980 that LEXIS was to be extended to the United Kingdom and that an English General Library of significant proportions was being established by the major legal publishers Butterworths. At about the same time, the Thompson organisation 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. (And clustered round PRESTEL there are different sorts of more limited services). Since 1980 a focus has thus been provided for discussions about the future of CALR - the themes often echo those developed in Canada in the 1970s and may be a harbinger for discussions underway in Australia.

8. If Canada has shown caution towards CALR systems (being properly attentive to the serious implications that follow) it has been unusually progressive in adapting and canalising the power of technology as an aid in legislative drafting. At an early stage 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 computerized law database. The pristine economy of this approach is admirable. It appears, to an outsider, both surprising and anomalous that draftsmen in other jurisdictions in the Commonwealth have not followed the Canadian example. Certainly appropriate technology is available, and one would expect such a system to be exceedingly cost effective. If, as appears to be the case, there is a government interest in making the law readily available then capturing primary material at source in machine readable form should be ensured. There may be difficulties relating to staffing and traditional publishing methods, but the potential cost savings are significant, the notorious pressure on draftsman's time could be alleviated and a wasteful duplication of effort in having to transform printed legislation into machine-readable form as a separate exercise, would be avoided. Experience in Canada has proved the potential of computers in contributing to the legislative process.

9. 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 legal research but a great deal to do with the economics of office management. With rising financial overheads 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 installation - such that many 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 are 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.

10. 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 unarguable that a well-implemented system can improve significantly the efficiency of the legislative process and contribute, more widely, to 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 development.

11. 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.³ Commentators have become concerned that the expense may mean that only the large 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, fear has 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 Commonwealth countries are comprised of small firms; partnerships are, on the whole, limited to approximately 2-5 lawyers. Thus in England and Wales over 5,600 firms comprise "small units" of 4 partners or less.

12. 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 UK 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 appreciated in Canada where it was understood that the transborder flow of law data raised numerous complex policy questions.⁴

13. 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 incompatibilities 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 to what cost?

14. Interest in such questions has been shown by commentators throughout the Commonwealth⁵ 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 commentator⁶ 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. Before returning to such questions some remarks on the next stages in computer applications to law are necessary.

The Next Steps

15. In the next five years or so there are likely to be two "groups" of further development in applying technology to law. The first group will see the realisation of

preparatory work that has already been done in some areas. As practitioners and administrators assimilate the impact of this, the seeds are being laid, in the second group, for a novel set of applications. If I am allowed the obvious disclaimer that I am only 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.

16. In a number of countries there has been the appreciation that the range and power of technology available is such that the vital considerations now relate to the design and the planning of systems rather than their technical realisation. 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 computerized 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.

17. Other systems for transmitting information materials or information or "knowledge" which is particularly important to lawyers in practice, could equally well be developed. In the United States, for example, sensible use 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.

18. In the past few years publishers in many countries have come to use computers as an integral part of the printing and publishing process. 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 precedent available on disc for those with appropriate word processors. Sweet & 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 other novel methods of publishing material will become established. It seems certain that lawyers will be offered the option of holding an "electronic library" in their own office. The savings in space and overheads can be significant in urban areas; access to materials in this form can be vital in rural areas; in developing countries, in particular, the possible cost savings if such a system were planned properly could be enormous.

19. 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 costs 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, administrating and overcoming inertia - and securing adequate commercial investment to bring the products on to the market - may be not inconsiderable.

20. 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 "Expert Systems" will give them "intelligent"

technological aids to help them in the diagnosis and analysis of the different courses of action which might be pursued to tackle a given problem. Second, it seems likely that some policy makers (and this may include government departments) will turn to technology for their modelling and planning capabilities. 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 use computers for assistance in projecting or identifying the consequences of different administrative or legislative measures under consideration. Already, in Europe, modelling systems to predict the effects of amendments to existing legislation have been designed and used. 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 tail) and international exchange between jurisdictions will become feasible.

The Prospectus

21. 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 impact on law will grow is inevitable. In developed countries technological growth is unlikely to be denied; in developing countries the new low-cost technology could provide enormous advantages conceivably allowing a certain amount of leap-frogging from current practices into more desirable forms without the costs and investment experienced and incurred in Western industrialised countries. There are enthusiasts for all this as well as prophets 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.

22. 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 and legal publishing is treated in different ways - in some cases private enterprise is relied on and in others governments feel they have an unavoidable responsibility to guide and maintain the availability of materials. A vital issue affects access to the law and this relates to how much and what sort of law is published, at what cost, and to whom it is made available. Reliance on free competition and the avoidance of monopoly may be seen as attractive; a counter-argument is that access to the law cannot be left to free enterprise - there are, inescapably, matters of public interest involved. Aside from access to materials by lawyers different issues emerge as the amount of law continues to grow concerning the sort and types of materials made available to laymen or to advisory agencies. Advice on "citizenship" may become necessary.

23. Within each jurisdiction matters pertaining to "sovereignty" will have to be considered. It may well be that some jurisdictions lack the resources or expertise to establish a computer assisted law retrieval system by themselves, but will rely on foreign providers. This may prove to be undesirable. The transborder flow of data is increasingly understood to have complex ramifications and many jurisdictions will, at least, wish to have in their own territory, if not under their own control, the laws of their land.⁷

24. As the availability of cheap technologies increases so too will the call for some influence to be brought to bear on the suppliers of equipment and the providers of systems, to promote compatibility and the maintenance of adequate standards in the legal profession. The new technologies promise enormous benefits and there is no doubt that technically they are superlative accomplishments. Yet current development could be self-defeating if the effects of the introduction of these technologies includes the creation of different sectors within the legal profession, unable to communicate with one another, unlike their professional brethren, capable of handling some types

of tasks but not others ... all because of their dependence on or access to some system or technology. Whether the professional bodies or the governments are best placed to guide in this area may vary from one jurisdiction to another.

25. In most countries where computer applications to law have advanced in serious ways it has become clear that commercial and industrial concerns are, or come to be, as important as legal concerns. Yet in the "information age" the status of law as information - pre-eminent in everyone's lives and regulating all aspects of society - deserves to be recognised. Canada (through the Canadian Law Information Council) provides the clearest case of a country having "grasped this nettle"; there it appears to have been understood that what was needed was a policy about legal information. In the United Kingdom the National Law Library⁸ was founded with similar aims; in Australia there is, equally, understanding of the need to harmonise matters of public - interest with the skills and expertise of publishers in free competition. At the moment these are encouraging developments. The danger is that they might only be token gestures - unable by shortage of resources and manpower to guide, in the way that is needed, technological and commercial development so that the health of legal practice and the legal system is not impaired.

1 See Bing, J.: "Legal Information Services: Some Trends and Characteristics". Paper presented to UKNCCL Colloquium on Data Processing and the Law, Leicester, England 1982.

2 See Annual Report of Canadian Law Information Council 1981-82.

3 As computer typesetting becomes increasingly 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.

4 See Skelly, S.J.: "The Impact of Technology on Legal Information Processing and Some of the Ramifications". Paper presented by UNKCCL Colloquium on Data Processing and the Law, Leicester, England 1982. The worries have subsequently been rehearsed in Australia as well.

5 And, in parallel, within the Council of Europe.

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

7 Skelly, ibid.

8 See The National Law Library - The Way Ahead. Report published by the Society for Computers and Law 1979.