

AUSTRALIAN EXPERIENCE IN THE ESTABLISHMENT OF A COMPUTERIZED LEGAL INFORMATION RETRIEVAL SERVICE

Memorandum by
THE GOVERNMENT OF AUSTRALIA

The legal profession in Australia will soon have access to computer systems for legal information retrieval to assist them in their legal research. The State Governments of Victoria and New South Wales are at an advanced stage in making arrangements with private sector organisations to establish and operate legal information retrieval systems to include at least the statutes, subordinate legislation and case law of those particular States. The plan is for each of the two systems also to include the primary legal materials of at least two other States and, in this way, the two systems will cover the six States of Australia. The Federal Government has indicated that it is prepared to make the Crown copyright material which it holds available to the operators of the Victorian and New South Wales systems so as to provide an almost complete coverage of Australian primary legal materials.

2. This stage has been reached only after discussions and pilot development projects extending over a ten year period. As might be expected, during that time a number of issues and problems were encountered, and it may be of interest to Attorneys of other countries, faced with the question whether to establish their own legal information retrieval systems to know something of the Australian experiences.

Previous Developments

3. The Attorney-General's Department of the Federal Government currently operates an in-house legal information retrieval system, known as SCALE, for use by Government lawyers in the Department. This system was developed as the result of the recommendations of a Committee which enquired into the need for computerized legal information retrieval in Australia in 1972/3. The Committee recommended that the development process should take place in two stages, firstly with the introduction of an interim in-house system in the Attorney-General's Department which could then be used as a basis for the subsequent development of a publicly accessible legal information retrieval system embracing all Australian primary legal materials. The SCALE system has been operating as envisaged within the Attorney-General's Department since 1977 and the full public system is now about to get under way.

Degree of Government Involvement

4. The extent to which Governments should be involved in the establishment of public legal information retrieval systems has been an issue of basic importance, and has been the subject of considerable discussion. In Australia, the private sector initially showed little interest in the establishment or operation of a commercial legal information retrieval system. This situation has changed in recent years, with a number of private organisations being now interested in setting up and operating such a system. This has perhaps been brought about by developments in computer technology which have substantially reduced the cost of computer systems in the last decade, and by the increasing use and acceptance of legal information retrieval systems overseas.

5. In the 1970s it was felt that the Federal Government in Australia would need to take the lead in both the establishment and the funding of the proposed publicly available legal information retrieval system in order for any development to progress. Since the private sector has indicated its desire to establish and operate such a system, the question of the extent of Government involvement has had to be reassessed.

6. The establishment and operation of a computer system for legal information retrieval is a significant commercial undertaking. Considerable financial resources and business initiatives are required, and there is a large amount of risk associated with such a venture. There is a strong case for this type of enterprise to be left in the hands of the private sector, and this has been recognised in the developments which are taking place in Australia.

7. On the other hand, there are a number of aspects in which the development of computerized legal information retrieval systems impinges upon the public interest, and for this reason Governments may wish to maintain some involvement in the operation of such systems.

8. Government will be concerned to ensure that the coverage of material in the data bases is adequate, and that the information is accurate and up to date. It will also wish to avoid the development of incompatible systems, which would result in increased costs to users and variations in the search strategies they would need to employ.

9. In Australia, the conflict between these competing sets of considerations has been resolved in the following way. Systems are to be established by private operators under the auspices of the State Governments. The States of Victoria and New South Wales have called for proposals from private sector organisations, and have indicated the terms and conditions which these proposals will have to meet. The means of Government influence over the operators of the system will be through the granting of licences to include Crown copyright material in the data bases, which is discussed separately below.

10. One of the main stipulations is that the selected operator, in conducting the operation of the system, will need to have regard to the views of the Attorney-General, and an advisory committee established by the Attorney-General, will be concerned to ensure that the system is operated with due regard to the public interest.

11. Apart from these matters of public interest, the Government has, of course, an interest in legal information retrieval as a potential major user. Governments invariably have extensive use for legal materials and are in a position to take advantage of the existence of computerized systems, particularly in relation to the consolidation and publication of statutes.

12. In providing an internal service for the requirements of Government, the SCALE system in Australia is following the example of the JURIS system operated by the Department of Justice in Washington.

Involvement of the Legal Profession

13. Members of the private legal profession will be major users of a commercial legal information retrieval system and will wish to have a say in the way the system should develop. They will have views on what material should be included in the database and will wish to be consulted on the priorities for the inclusion of both primary and secondary legal materials. Other aspects of the facilities and services provided will be of considerable concern to the system's users.

14. The success of the system will depend heavily on its acceptance and use by lawyers in private practice. Consultation in the early stages on the private lawyers' requirements, and feed-back from the users once the system is established, will play an essential part in developing a system to meet the users' needs.

15. In Australia the legal profession has been concerned that public legal information retrieval systems should be available to as wide a range of the profession as possible and not only to large or wealthy law offices. The systems should also cover as much State material as possible, in particular that of the smaller States, which might be of only marginal value for the commercial operator. The profession is also concerned that the charges and costs for the use of the system should be kept within the reach and that, where possible, existing word processing equipment in solicitors' offices could be used to access the system without the need to purchase additional computer terminal equipment.

Use of Crown Copyright

16. Crown copyright is held in both Statutory material and in court judgments and it is open to a Government to use its copyright to ensure that the development of legal information retrieval systems proceeds along lines which are acceptable both to the Government and to the needs of the private legal profession.

17. A Government by virtue of its copyright in essential material has the legal power to restrict permission to include that material in a computer data base to operators who are willing to conform to the standards and guidelines set by it in consultation with the private profession. The use of Crown copyright in this way, however, raises some important policy issues, and in Australia there has been active debate on whether it is appropriate for copyright to be so used. One view is that this is not appropriate because the law should be regarded as being in the public domain, so that it can be disseminated as widely as possible.

18. The State Governments in Australia have indicated that they favour restricting the granting of permission to a selected operator who will thereby obtain a monopoly position. This approach has not commended itself to the Federal Government which has indicated that it is disposed to make its material available to any operator who is prepared to meet terms and conditions of general application. This approach will leave more to the operation of market forces instead of to the monopoly position of the preferred operator.

Royalties

19. A major issue affecting both the cost, or even the possibility, of establishing a legal information retrieval system, is the question of royalties in respect of material where copyright is held by third parties. The SCALE system has been able to be built through the inclusion almost exclusively of Crown copyright material. The Commonwealth Law Reports have been included, for internal Departmental research only, with the agreement of the publisher, the Law Book Company, which holds copyright in the headnotes and catchwords of that publication. For other Case law material, and especially for use in a commercial system the agreement of the publishers would be required and they would presumably require royalties for the use of their material. These costs can be considerable, and would need to be passed on to the users of the information retrieval system through the scale of charges.

Problems of a Federation

20. In a country such as Australia, with a Federal system of Government, and with multiple systems of law, there are additional problems to be faced in the setting up of an appropriate system for legal information retrieval. There may be substantial disparities between the needs and the wishes of the Governments and users in different States and it may be difficult to obtain agreement in the form the system should take. The amount of material to be collected and stored and the cost of operating a legal information retrieval system, are substantially increased by the existence of separate sets of laws in each of the different States. Lawyers in the smaller States may be disadvantaged if the number of users of the system in these States is such that the providers of the legal information retrieval system consider the market to be too small to be viable.

21. The interest which a Government has in its own legal system will tend to result in each Government in a federation becoming involved in a legal retrieval system. There will be a temptation for individual Governments to do their own thing and to establish separate systems. This, however, is likely to prove uneconomic and if there is no co-ordination of the separate systems it could result in confusion for users who will be forced to purchase different equipment for different systems and to use differing search techniques.

22. Modern computer technology enables separate data bases to be linked together and operated as one "distributed" system. But if this is to be done there is a need for all the data bases in the system to be compatible with each other in certain respects. With this in mind an Advisory Committee in Australia has recommended the adoption of the following standards:

- (i) All legal information retrieval systems should be able to be accessed from any user's terminal which has a common industry standard interface.
- (ii) The enquiry dialogue and search strategy a user would need to employ to access the system should be the same for each database which is established. The Committee has recommended that the STATUS computer software developed by the Atomic Energy Research Establishment in England should be the one used for any Australian legal information retrieval system. This is already used in the SCALE system and in the publicly accessible EUROLEX system in Britain and the Kluwer Law Publishers' system in Holland.
- (iii) The database formats should be standardised so that there would be only one type of database structure for Statutes and one type for Case law. This is intended to assist the user in changing quickly from one data base to another without having to refamiliarise himself with the method of display of the material and the way the question is meant to be phrased.

Use of Word Processors for Retrieval

23. Many solicitors' offices are turning to the use of word processors and office management computers to assist in their office administration. It is desirable that specialised additional computer terminals should not be required in order to access public legal information retrieval systems. With the terminal interface recommended, many solicitors' offices should be able to use their existing word processing equipment with a simple device to attach it to a telephone line at minimal expense. This will also have the advantage that legal precedents and standard forms stored on an information provider's computer could, with appropriate commercial arrangements, be transmitted down the telephone line to the solicitor's word processor and modified or combined into documents for his own purposes.

Cost Considerations

24. The viability of commercial legal information retrieval systems depends heavily on the cost of establishing the data bases. The level of charges for the use of the system would need to be sufficient for the operator to recover this initial outlay as well as his on-going operational costs. On the other hand, the charges must be kept sufficiently low to encourage extensive use of the system. This is a delicate equation to balance and we understand that few, if any, legal information retrieval systems around the world have as yet been very profitable.

25. This situation is now changing, however. The cost of computing equipment is falling dramatically, and at the same time processing and storage capacities are increasing, so that the capital costs of equipment required to set up a legal information retrieval system are today substantially reduced. Furthermore, telecommunications systems in Australia, as in other parts of the world, are becoming more sophisticated and less costly to use.

26. In order to establish a database, the legal material must first be rendered into a machine-readable form. This has traditionally been done by manual re-keying, followed by a process of verification or proofreading in order to ensure the accuracy required. For the large volume of material required, this involves a considerable initial expense, together with an on-going cost to keep the data base up-to-date.

27. It is of great assistance if primary legal material can be produced, in the first instance, in machine-readable form. There are outstanding possibilities for this to be achieved through the use of computerized typesetting, which is discussed below.

28. One possible alternative to re-keying is the use of optical character recognition equipment. Significant advances have been made in this area in recent years and we have been following these developments with considerable interest. The difficulty presented for the scanning machine is that legal publications use several different type fonts with proportional spacing and different

sizes of characters. This type of material is much harder for machines to read than, for example, normal typing, which has fixed character dimensions. The older material is also likely to be of poor print quality, making the machine's job all the more difficult.

29. We have not, as yet, satisfied with the accuracy and cost of any of the existing optical character recognition systems, although there have been significant improvements in recent years and we anticipate that in the near future this should provide a cheaper and more effective method than the re-keying of old material.

30. Once the data base is established, the marginal cost of providing access to additional users is relatively small and hence the profitability of a legal information retrieval system depends heavily on the size of the market. In Australia the diversity of jurisdictions leads to a relatively large amount of material to be included in the data base. This, coupled with the relatively small size of the market, is seen as a major problem in establishing the commercial viability of these systems. This was one reason for the need for Government initiative in the first instance, and it is only in recent years that private enterprise organisations have recognised the possibility of a profitable commercial system.

Computerized Typesetting

31. A large part of the cost of establishing a legal data base can be eliminated if the material to be stored is already available in machine readable form. The increasing use of computerized phototypesetting in the printing industry has extended to Government Printers, who are responsible for the printing of statutory material, and also to some legal publishers. As a by-product of this process, computer tapes containing the text of the material in computer-readable form may often be available.

32. Since 1973 the Australian Government Printer has progressively introduced phototypesetting into his operations. The SCALE system in the Attorney-General's Department has largely managed to avoid the problem of expensive data capture, as nearly all of the material for its data bases has been obtained from the Government Printer's system.

33. This has tended, however, to influence the priorities for the inclusion of material into the system, and material not available in machine-readable form is less well represented. The SCALE Statutory data bases contain an extensive coverage of the Australian Commonwealth Statutes and subordinate legislation, and the statutory material of the Australian Capital Territory. In contrast, the SCALE Case Law data base is limited to the publication known as the Commonwealth Law Reports, containing the decisions of the High Court of Australia. This has been obtained by re-keying at a data preparation bureau because of its importance. Any commercial system, however, would need to have a substantially larger case law component in its data base.

Full Text or Headnotes and Catchwords

34. There has been considerable discussion over the years on whether a legal information data base should contain the full text of the Statutes and Cases or whether it should only include the appropriate catchwords and headnotes as in the subject indexes of a computerized library information system.

35. Before considering this question, however, it may be helpful to point out that the technique involved in conducting research through a computerized system necessarily differs from the traditional methods used with books. With the traditional methods, the researcher endeavours to identify principles of law that are relevant to his purpose. Having established some broad principles, he tries to refine these as much as possible to a specific principle covering the case that he has in hand.

36. With a computer, the technique is basically different. A computer does not think in terms of principles, but it enables documents to be retrieved on the basis of the words they contain. These words will be able to point the researcher in the

direction of material which covers the relevant principles. The point to be remembered, however, is that the computer system works basically through the retrieval of words and it is exceedingly capable in this task.

37. Because of the difference in searching techniques, and the greater importance attaching to words in a computer system, the general view now seems to be that it is desirable for computerized legal information retrieval systems to be full text systems.

38. The preference for full text systems is particularly evident in relation to statute law, where the actual words of the statute tend to be of critical significance and the legal researcher can be expected to want to have access to those words, rather than some general summary of the effect of the statute.

39. The need for full text may not be quite as pressing in relation to case law, but experience has shown that a full text system of case law is a much more valuable research tool than one which contains only headnotes and catchwords. It is desirable, of course, that the full text should include the headnote and catchword material, but the full text of the judgments will often deal with matters which would be missed if the researcher was entirely dependent on the headnotes and catchwords.

40. For material of minor value, it may be difficult to justify the cost of keying the full text. In the SCALE system, the approach has been taken of including both the full text and the catchwords and headnotes of the more recent material and just the catchwords and headnotes of earlier cases. This has enabled the inclusion of many years of older material at a modest cost.

41. This difficulty will be overcome in the case of future material with the use of word processors now extending into the area of courts and tribunals. This presents the opportunity for full-text material in machine-readable form from this equipment to be made available for incorporation into a computer legal data base at very little cost. The Federal Attorney-General's Department has, in fact, been using this approach for the SCALE system, on an experimental basis, with promising results. A difficulty here can be the fact that formats used by the word processing system may not be readily convertible to other computing equipment or to a format suitable for information retrieval.

Consolidation of Legislation

42. Experience to date in the Federal Attorney-General's Department has shown that the availability of the legal material in machine-readable form presents a number of opportunities for Governments for the reduction of costs and improvements in efficiency in a number of related areas. One development which is taking place in the Attorney-General's Department is the introduction of an automated system for the incorporation of amendments into existing legislation, without the need for manual text editing.

43. In Australia, amending Acts which are passed by Parliament contain textual instruction as to which words are to be added, replaced or deleted in the existing Principal Acts. When the existing Act is subsequently reprinted, these amendments must, at present, be manually incorporated into the Act by a process of cutting and pasting, and then re-keying of the material for printing.

44. The Attorney-General's Department is developing a set of computer programs which will use the wording of the amending Act to automatically incorporate the amendments into the Principal Act. This requires that the programs must be able to interpret the normal English legal wording in the amending Act, which has been written in the normal way for humans to understand rather than the computer. This development is only possible because, as the amending Bills are printed for presentation to Parliament, they are available in machine-readable form as a by-product of the phototypesetting process, as are the Principal Acts which have to be amended. The automated system should speed up the process of incorporating amendments into the existing legislation and provide an up-to-date consolidated set of Statutes in the computer data base at all times.

45. This development should also provide considerable benefits in the area of legislative publication by avoiding the "cutting and pasting" and re-keying process. Another expected benefit is that, when a Bill is ready for the second reading speech in Parliament, Senators and Members can be provided with a computer printout showing the way the Principal legislation would read if the Bill were to be passed. This would include an indication of the words which it is proposed to change. Such a service should prove to be of considerable benefit to Parliamentarians but, because of the time constraints in presenting Bills to Parliament, this is not currently possible using manual methods.

Reliance on Overseas Systems

46. A major benefit offered by computerized legal information retrieval systems is their comprehensiveness. In addition to the availability of material within a particular country, the possibility now exists for searching data bases in other countries with similar legal systems. Through an extension of the international telephone system, it is now possible, via satellite, to deal in to computer data bases on the other side of the world at relatively modest rates. The Attorney-General's Department is already making use of this facility and, as mentioned previously, some of the overseas systems in fact use similar computer programs to those in the SCALE system.

47. This facility will enable the lawyer to search quickly for precedents not only in the law of his own country but of other countries overseas. The legal draftsman will also be able to locate provisions in the Statutes of overseas countries which may assist in the drafting of laws for his own country.

48. Faced with the costs and technical difficulties of establishment a local legal information retrieval system, a Government may well consider making arrangements for their legal materials to be included in the data bases of an existing overseas system. There has been considerable discussion on the relative merits of this approach in Australia.

49. The availability of existing expertise and the relative economies of scale may be strong arguments in favour of the use of overseas systems. On the other hand, the importance of legal information systems will grow in future years and Governments may see it as undesirable to place the management of the main system providing ready access to their legal data into the hands of overseas organisations

50. A matter for consideration would be, if the system is left in the hands of a foreign corporation, whether there would be sufficient ability to exercise influence over the operation of the system in the public interest.

Conclusion

51. The future will undoubtedly reveal the increasing use of computers for legal information retrieval as in other areas of law. The volume of law is growing at an ever-increasing rate, and the problem of determining the current legal position on any particular issue using traditional manual methods is becoming increasingly unmanageable, time consuming and expensive. There is a growing recognition that manual methods by themselves are no longer adequate to the task of legal research, and the assistance of computers will be essential.

52. Legal digests which have, in the past, served the lawyer well and continue to do so, nevertheless are difficult to maintain and keep up-to-date as new cases are decided. In addition, the work of indexing case material requires a high intellectual skill if a good result is to be obtained, and more countries will soon need to face the problems and issues raised by the establishment of legal information retrieval systems and it is hoped that the Australian experience in this regard will be of value and interest.
