

## USER PREFERENCES, EXPERIMENTS AND THE QUESTION OF THE INITIATIVE IN AUTOMATED LAW RETRIEVAL IN CANADA

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### Résumé de l'article

La documentation automatique en droit a été lancée au Canada en 1968 afin d'améliorer l'état généralement déplorable des sources documentaires dont pouvaient se servir les juristes de l'époque. En effet, des sondages indiquaient que le juriste canadien dépensait moins pour la documentation que son confrère dans des pays comme l'Australie ou la Nouvelle-Zélande dont la situation sur ce point semble pourtant moins favorable. La bibliothèque de la plupart des juristes s'avérait dans ces sondages comme étant sérieusement incomplète, surtout pour ceux qui travaillent en pratique privée, en petits cabinets, en dehors des grandes villes. Sans doute, l'éventail de livres disponibles sur le marché canadien du droit n'était pas de nature à encourager de grands achats, mais entre ce que les créditeurs publient et ce que leurs clients sont prêts à acheter il y a une causalité circulaire. Il semblait donc à la suite de ces sondages que la documentation juridique était stagnante.

Pour sortir de cet état déplorable, on ne pouvait se fier à l'initiative privée. Il n'était pas non plus question de subventions massives directes à cette industrie. Il nous apparaît maintenant que le moyen choisi pour débloquer la documentation juridique, pour convaincre les juristes à réévaluer leurs véritables besoins documentaires, était d'encourager le développement de systèmes de repérage automatique. Ce secteur, développé à l'origine par les universités, s'annonçait comme une possibilité pour court-circuiter les moyens documentaires traditionnels. Deux projets furent mis en marché, DATUM au Québec, Quic/Law dans certaines provinces anglaises.

DATUM est des deux projets celui dont la mise en marché a été poursuivie le plus systématiquement : formule du centre de service n'exigeant pas d'importants sacrifices en temps ou en argent de la part du juriste, banque de données couvrant au moins le minimum vital. L'effet de DATUM au Québec a été non pas un succès éclatant pour la documentation automatique, mais bien davantage une vague d'innovations dans les sources documentaires traditionnelles. La création de la Société québécoise d'information juridique a servi à consolider ces efforts. On peut déceler un mouvement analogue au Canada anglais, sous l'impulsion de QL Systems Ltd., exploitant du système Quic/Law, et notamment du Conseil canadien de la documentation juridique.

Si l'informatique juridique a ainsi servi, malgré soi, à l'amélioration des moyens plus traditionnels de documentation, a-t-elle néanmoins un rôle propre à jouer ? Il nous semble que la réponse est affirmative. Les systèmes de repérage automatique peuvent donner accès à une banque intégrée plus large que ce qui reste maniable sous forme de livre. Ils permettent en principe une mise à jour plus rapide et des recherches plus riches étant donné qu'elles peuvent porter sur des concepts traditionnels aussi bien que sur d'autres et que la qualité des résultats peut être améliorée de façon semi-automatique au fur et à mesure que l'expérience avec le système s'accumule. Enfin, on peut croire qu'au cours des années 80 le coût des moyens traditionnels dépassera celui des systèmes informatisés.

## USER PREFERENCES, EXPERIMENTS AND THE QUESTION OF THE INITIATIVE IN AUTOMATED LAW RETRIEVAL IN CANADA\*

par Ejan Mackaay\*\*

*La documentation automatique en droit a été lancée au Canada en 1968 afin d'améliorer l'état généralement déplorable des sources documentaires dont pouvaient se servir les juristes de l'époque. En effet, des sondages indiquaient que le juriste canadien dépensait moins pour la documentation que son confrère dans des pays comme l'Australie ou la Nouvelle-Zélande dont la situation sur ce point semble pourtant moins favorable. La bibliothèque de la plupart des juristes s'avérait dans ces sondages comme étant sérieusement incomplète, surtout pour ceux qui travaillent en pratique privée, en petits cabinets, en dehors des grandes villes. Sans doute, l'éventail de livres disponibles sur le marché canadien du droit n'était pas de nature à encourager de grands achats, mais entre ce que les éditeurs publient et ce que leurs clients sont prêts à acheter il y a une causalité circulaire. Il semblait donc à la suite de ces sondages que la documentation juridique était stagnante.*

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*DATUM est des deux projets celui dont la mise en marché a été poursuivie le plus systématiquement: formule du centre de service*

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\* This text was written in the Fall of 1977. As a result of developments since that time some of the statements in the text would have to be qualified. I believe nonetheless that the essential ideas are still valid.

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*n'exigeant pas d'importants sacrifices en temps ou en argent de la part du juriste, banque de données couvrant au moins le minimum vital. L'effet de DATUM au Québec a été non pas un succès éclatant pour la documentation automatique, mais bien davantage une vague d'innovations dans les sources documentaires traditionnelles. La création de la Société québécoise d'information juridique a servi à consolider ces efforts. On peut déceler un mouvement analogue au Canada anglais, sous l'impulsion de QL Systems Ltd., exploitant du système Quic/Law, et notamment du Conseil canadien de la documentation juridique.*

*Si l'informatique juridique a ainsi servi, malgré soi, à l'amélioration des moyens plus traditionnels de documentation, a-t-elle néanmoins un rôle propre à jouer? Il nous semble que la réponse est affirmative. Les systèmes de repérage automatique peuvent donner accès à une banque intégrée plus large que ce qui reste maniable sous forme de livre. Ils permettent en principe une mise à jour plus rapide et des recherches plus riches étant donné qu'elles peuvent porter sur des concepts traditionnels aussi bien que sur d'autres et que la qualité des résultats peut être améliorée de façon semi-automatique au fur et à mesure que l'expérience avec le système s'accumule. Enfin, on peut croire qu'au cours des années 80 le coût des moyens traditionnels dépassera celui des systèmes informatisés.*

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## 1.- Introduction

The topic of this presentation is an overview of automated law retrieval in Canada and some guesses about its future. The reason for choosing this general subject rather than a more technical one for presentation to such a specialized audience as is assembled here, is that a recent event in English Canada has considerably modified the outlook for this field as a whole. I am referring to the acquisition by Canada Law Book of a significant interest in Q/L Systems Ltd. and its plan to convert major case law series into a computer bank and to offer a self-service on this bank to the practicing profession. This removes the copyright barrier which so far has been a serious impediment to Q/L Systems in its attempts to offer a realistic service to lawyers. It also puts behind this enterprise the commercial talent and established client relations of one of Canada's chief law publishers. I am convinced that this development along with the creation of the Canadian Law Information Council and the Société québécoise d'information juridique will lead to substantial innovation in, and improvement of, the documentation flow to Canadian lawyers. Within this larger perspective, it has furthermore considerably brightened the outlook for automated law retrieval in our country, which is the area that interests us here.

To appreciate this development one has to know a bit about our documentation problem: we do not have a tradition of book publishing -- and purchasing for that matter -- of the variety and depth that is known in say Germany. Recently I found at a bookstore in Bonn over four book cases filled with currently available books in German on virtually all legal subjects under the sun. Note that these were generally *different* books, not sets of a hundred or so copies of the same text book used by university students. Such an experience is totally unthinkable in a comparable city in Canada, say Ottawa, or even in Montreal or Toronto. We should be lucky if all Canadian legal texts -- excluding case law series -- published or republished since 1970 fill even three bookshelves.

We will therefore start with a brief overview of the Canadian documentation situation. This will allow us to see the interest shown in the late 1960s for automated law retrieval in Canada and the reason for universities to assume a rôle in developing this field which well exceeds that of their American counterparts. We will then follow the evolution of the two major retrieval systems -- DATUM and QL Systems -- since they left the university

environment in 1973. A concluding section looks into what is in store now in automated law retrieval and assesses the anticipated trends in the light of the general development of legal documentation in our country.

## **2.- The Documentation Problem in Canada: a Brief Overview**

The outstanding features of the Canadian documentation problem are that there are two legal traditions -- civil law for most private law subjects in Quebec, common law for other matters and for all areas in the other nine, English speaking provinces -- and two legal languages -- French only in Quebec -- and that our legal market is relatively meagre, at least so say our law publishers. Overall English Canada has some 15,000 lawyers, of which 60% work in Ontario alone. Quebec has some 6,000 lawyers and 2,000 notaries. Distances are enormous: from Halifax -- in the far East -- to Victoria -- West coast -- is farther than from Halifax to Frankfurt, which is meant to show you that telecommunications are one of our major preoccupations.

Operation Compulex and a study Jacques Boucher and I published for Quebec<sup>1</sup> give a good general view of how this profession documents itself. Let me briefly summarize the interesting findings. Research occupies at best 20% of the lawyer's time; of this amount only a third, or less than 7%, i.e. between two and three hours a week, go into retrieving references, the function information systems hope to alleviate. Variation exists according to the size of the law office, with the smaller ones doing less research, the larger ones more and government lawyers and judges more still. Most practitioners prefer to do research in their office library, the smaller even more so than the larger ones. Presumably this reflects in part the fact that public libraries in the outlying regions, where many of the smaller -- but no larger -- offices are located, are incomplete at best, non-existent more often. The content of the libraries varies again according to office size, with what one should consider to be minimally complete collections existing only in the large offices in all instances. Most lawyers delegate some research to younger colleagues or students, but the possibility to do so is very

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1. "Operation Compulex", Department of Justice, 1972. BOUCHER and MACKAAY, "Les habitudes de recherche des juristes québécois", (1973) 33 *Revue du Barreau du Québec* 218-235.

slight in small offices, substantial in the large ones. Among the sources consulted, one finds that case law is first, followed by statutes and doctrine (handbooks) and finally by orders and regulations (delegated legislation). The very low ranking of this last source depends no doubt to a large extent on the appalling problems of accessibility. No systematic, up-to-date compilations of these documents are published and the rule-of-thumb is that to keep up-to-date one has to have the proper connections in government departments, an approach which, of course, is viable only for limited (specialized) fields. With regard to the other sources it should be noted that outlying regions and smaller offices rely more on doctrine and since -- at least in Quebec -- this source was aging at the time of the survey, this must be considered a move by these hard pressed groups to save time and to avoid the cost of purchasing more complete series, at the expense of research quality. Such a philosophy is, of course, only viable as long as all members of the community or region adopt the same attitude (research standard).

As a result of the survey one can identify several groups of practitioners with relatively homogeneous research habits. The least privileged are the small offices in outlying regions. Next are the small offices in the big cities, who at least potentially have access to good public libraries and student help. After this we find, in climbing order of quality in research facilities, the medium and large offices, all of them in major cities. The degree of specialization runs roughly parallel to this order. Further groups are government lawyers and judges. With regard to the first group there seems to be no serious research problem as needs are specialized and the corresponding documentation, as well as decent libraries, well within reach. Judges do a great deal of research and appreciate documentary help (they are now among the most eager users of DATUM), but depend entirely on government financing for this purpose. Given these distinctions, one would expect that among the largest segment of the profession, the private practitioners, the greatest need for automated retrieval -- and other documentary improvements -- and its most ready acceptance would be observed among the smaller offices, while the most specialized needs and the most critical examination of new ventures would occur within the large offices. Of course, the latter group, because of greater resources available for documentation, would nevertheless be among the more desirable clients from a commercial point of view.

Throughout Canada legal documentation is published in differing proportions by commercial publishers, governments --

both federal and provincial -- and University presses. In English Canada the major private publishers are Canada Law Book, Carswell-Methuen, Butterworths and Richard de Boo (in Toronto) and Maritime Law Book Publishers (in Fredericton, N.B.). In Quebec one has Wilson & Lafleur, Editions FM Ltée and recently, Guérin éd. Virtually every University has its Press and most Law Faculties have their Law Review. If one looks at publications by type, it is obvious that in the area of the Statutes (Acts of Parliament), the principal rôle is assumed by governments: they publish the Revised Statutes (an official consolidation, renewed about every twenty-five years) and the Annual Statutes, as they come out. Private publishers generally limit their rôle to bringing out up-dated versions of statutes which are in great demand (for instance in the taxation and labour law fields) as well as annotated codes and statutes.

In the area of case law, the Queen's Printer for Canada publishes the Supreme and Federal Court Reports. Many of these cases appear also in the largest case reporter published by Canada Law Book, the Dominion Law Reports. Overlap is a significant problem, or advantage, as the publishers seem to believe, of this collection, in which barely 20% of the cases do not appear in at least one other reporter. Canada Law Book also publishes other, regional collections such as Ontario Law Reports or specialized ones such as Canadian Criminal cases. Carswell publishes Western Weekly Reports. Until recently the Maritime provinces (the East of Canada) saw their collections gradually die out, but since about 1970 Maritime Law Book seems to have turned the tide by publishing three collections for this region. It uses typing and photo-offset so as to reduce the cost of the operation, which serves only a few hundred subscribers in each case. While initiatives such as these help to create regional balance in the choice of cases to be published, the Western and Maritime provinces complain that the "national" reporters, originating as they do in Ontario and catering foremost to this, the most "juicy" part of the market, do not give adequate coverage of the jurisprudence from their regions. One of the tasks the CLIC -- Canadian Law Information Council -- has set itself is to attempt to redress the balance by encouraging regional publishing through subsidies and otherwise. Apart from these regional publications, various reporters exist to cover specialized areas such as taxation, transportation, labour law, family law, intellectual property and several administrative jurisdictions. The conception in English Canada has been so far that case reporting should generally be left to private enterprise.

In Quebec, by contrast, it has long been felt that there was a definite rôle here for collective action. Until recently the two principal case reports in the province, those of the Court of Appeal and of the Superior Court were published by the Bar and collectively subscribed by its members. In 1974 this responsibility, whose financial burden the Bar found increasingly hard to bear, was transferred to an organization which since has become SOQUIJ, the Société québécoise d'information juridique, a state corporation. Under the new formula all lawyers continue to subscribe collectively to the two reports concerned, while the provincial government covers the deficit. To those who argue that there is no reason for state subsidy to what are basically the tools of trade of lawyers, by no means an underprivileged group, the reply is that these moves may help to ensure better access to law in all regions, that there are economies of scale in publishing such that if the Bar abandoned the Reports and the province would sell them under market conditions to at best 1500 law offices in the province the externalities in the form of decreased access and higher costs to clients would be socially more costly than the subsidy under the present arrangement. Moreover, are not most medical facilities, with which doctors earn their living, financed by government? As it is, the transfer to SOQUIJ has been the occasion for a number of improvements in case publication in Quebec. Selection is now made from all decisions rendered in the province, copies of which are forwarded by all court clerks. The number of cases reported has drastically gone up, as well as the areas of law covered. Various specialized publications have been introduced since. Apart from SOQUIJ' publications, Wilson and Lafleur publish two collections, one with procedural decisions, the other with major decisions which did not find a place in SOQUIJ' reports and older, less accessible but important decisions. Care is taken to avoid overlap between the various Reports. Finally, in Quebec Labour law significant collections of awards and decisions are published by the Department of Labour and by Wilson & Lafleur.

Doctrine -- handbooks, monographs, textbooks -- are published about half-half by private publishers and University presses. As for regulations, Quebec has published a compilation of these within its jurisdiction in 1972. Of the 9,000 pages of this collection, over 8,500 would have to be replaced now as being out of date... The federal and various provincial governments, among them Quebec, have instituted computer processing for the purpose of printing and updating statutes and regulations and in due course these initiatives should pay off in the form of increased accessibility to delegated



legislation. It can only be hoped that this technology will also be available to improve access to ordinances of cities and municipalities.

### **3.- The Question of the Initiative: How to Break the Deadlock?**

In the course of the brief overview of Canada's legal documentation problems we mentioned some of the initiatives that have been taken over the past few years to improve the situation. It should be noted that these and other ventures were undertaken from the early 1970s on, that is after the law retrieval projects had taken off in 1968. This sequence is not accidental. With hindsight it seems to me now that the computer retrieval projects were instrumental in breaking a deadlock among the traditional sources of legal documentation and that their principal impact was not so much the acceptance of computer searching, but rather a variety of innovations in more traditional means, only some of which rely on the use of a computer. It is this thesis which I will defend below. The argument should also demonstrate how it was possible for universities in this country to assume a more substantial and lasting rôle in developing automated law retrieval into a useful service to the profession than their counterpart elsewhere, notably in the U.S.A.

If my analysis in the previous section is accepted, Canadian legal documentation was in 1968 seriously deficient in comparison to that in most other developed countries, even those -- Australia and some Western European countries -- which face similar problems of small lawyer populations, large distances and several languages. That at that time substantial funds were allocated to research into the feasibility of retrieving law by computer as a means of solving this malaise shows either what now would seem to be a rather naive belief in progress through computers -- to jump from the stone into the jet age -- or a desperate gamble to break a deadlock in innovation of traditional sources in a roundabout way. I do not wish to deny that in 1968 many of us held the naive belief just referred to. In all cases we have been disabused, although not to the extent where we feel that Slayton's scathing attacks or his proposed alternative were justified<sup>2</sup>. Yet the unfolding of this development is fully compatible

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2. SLAYTON, "Electronic Legal Retrieval", *Information Canada*, 1974. RUBIN's and my comments on the report in (1974) 15 *Jurimetrics Journal* 108-114, no 2. See also the first part of my "Designing DATUM II: Why Not and How?" in *Datenverarbeitung im Recht*, vol. 6, 1977, pp. 47-81 and its French version in (1976) 11 *Revue juridique Thémis* 160-168, nos 1 and 2, in particular.

with the second hypothesis and, as a matter of fact, I would not be surprised to learn that some people in government explicitly envisaged it.

Given the deplorable state of legal publications in 1968, it would be normal to order one's priorities, as the Canadian Law Information Council subsequently did, by looking first to "improvement of publishing of statute law, regulations and case law and of the means of access to the primary sources of law" and only then to substantive legal literature. With regard to statute publications, governments had long recognized their rôle along with that of private publishers. Governments publish the revised statutes, the annual statutes as well as selected office consolidations of statutes in a given field; private publishers "creamskim" on top of this by providing looseleaf publications in selected areas, where they see a profit. Improvement in this situation could be pursued actively by governments in the form of bill processing systems with ancillary new documentary products (KWIC-lists, manageable "archival" versions of statutes on tape), without fear of treading into the territory of another group. The Federal government has taken a clear initiative here and the provincial governments are now following suit. The quality of means of access to statutes is also a proper concern for government and for its 1970 revision, the Federal government has tried to innovate on this score as well, though with less than the expected success. The CLIC has followed up in this area by its pilot indexing study of the Revised Statutes of Newfoundland, the results of which are to be published later this year. As for regulations, it can be argued that improvements here are possible once the computerized techniques of statute publishing have been perfected. For legislation as a whole, the use of computers signifies a qualitative leap forward in the types of manipulation conceivable within current budgetary constraints.

With regard to case law the situation is more complex. In English Canada this is clearly seen as a responsibility of private publishers, be it, as in the case of the Ontario Law Reports, via a collective subscription by the Upper Canada Law Society (Ontario Bar). It is therefore seen as inappropriate for government to intervene in this market. Unfortunately, the private publishers have discontinued quite a few regional publications in the 1950s and 1960s and in the remaining collections, the selection leaves frequently to be desired and shows substantial overlap from one series to the next. Access to these collections through their indices as well as via general reference tools, such as Canadian Abridgment or

the Canadian Encyclopedic Digest, is good, but relatively traditional and no new ventures were foreseen at the time. Private publishers gave the impression of being satisfied that their products filled needs to the extent that lawyers were willing to pay and that any improvement of their products could only be forthcoming as a result of changes in the latter factor. To fulfill this condition through aggressive sales efforts seemed to be futile; to do so through an increase in Bar fees, totally untenable and to look for government subsidies in this area would be to misjudge the prevailing philosophy of leaving the market to regulate supply of products wherever possible, especially with regard to lawyers.

And yet, by comparative standards, the tools of trade with which our lawyers are working are certainly inadequate. This situation will persist, since lawyers share a view of what it is reasonable to spend on documentation and adjust their standards of what is adequate preparation of a case accordingly. Collectively lawyers thus set a demand function on the basis publishers decide what to publish and we have a traditional market equilibrium. That this equilibrium is set at a low level can be seen in figures provided by the Compulex study: library value per lawyer in 1970 was approximately \$2,000, maintenance \$300 per year, while that same lawyer would bill his client \$40 on average per hour<sup>3</sup>. From these figures it would seem obvious that if research standards were higher and required -- among other things -- that lawyers triple their purchases of documentation, it would not seriously unbalance their cost picture, yet provide very significant incentives for publishing agencies.

It is, of course, unlikely that such a change in standards would come about by appealing to the lawyer's sense of duty or professional responsibility: in reply he would not doubt refer to the poor quality of the available instruments and implicit views about what they ought (not) to cost. And that is where we are in a deadlock.

The quality of legal service is justifiably a subject of concern to government. Yet, as we have seen, it would be considered inappropriate here for government to address the problem of research standards in the legal profession by intervening directly in the legal documentation market or in entrance exams or disciplinary bodies. But nothing prevents government in its rôle of sponsor of research -- there are of course federal-provincial problems

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3. "Compulex", *loc. cit.*, note 1, 7 and 3 respectively.

here, but let us ignore these -- to finance ventures that might lead to significant new products in the market for legal documentation, which might upgrade research standards as well as increase the amount of money lawyers expect to pay for "normal" research. Have not in other areas of the economy deadlocks, such as the one we referred to, been broken by new suppliers bringing in a product which fulfills the same function as the older ones, but better and which is differently "packaged" and commands a substantially "new" price? Research regarding automated case law retrieval systems could very well be justified in this manner as suitable for government grants in Canada. And for obvious reasons, it would have to be located at the universities.

From the very beginning the initiators of the DATUM and QUIC/Law projects were fully tuned in to the dynamics of this situation. Already in 1968 the DATUM group professed its intention of putting within a reasonable time a working system with a realistic bank to the test of the practicing profession and QUIC/Law *de facto* followed suit, although they were hampered by copyright barriers in the creation of a minimally acceptable bank. By contrast, the MODUL group has always declined such an "applied" commitment and -- in my view, as a result of that attitude -- has not seen the same continuity between their research and its application, in this case by Quebec's Official Publisher. In fact, they have ceased to exist as a research group before they had been able to complete their research ambitions satisfactorily. DATUM and QUIC/Law have gradually evolved into service organizations, an evolution which led to formal independence from their respective universities in 1973. At that time, the developmental phase of both projects could be considered completed, but it could equally well be said that the "mood" in lawyers' and governmental circles had then evolved to the point where it was ripe for much wider ventures in the documentation area which would have to include the already the developed retrieval systems. I am referring to the creation of the Canadian Law Information Council and of SOQUIJ in Quebec. We must now examine this evolution in more detail. DATUM will be studied first, mostly because it met with the largest initial acceptance among lawyers and set the tone for much of the CLIC's current plan for a service centre linked to the QUIC/Law system.

#### 4.- DATUM

DATUM was started in 1968 at the University of Montreal with the explicit objective of arriving at a case law retrieval service for Quebec lawyers within a reasonably short time. The two years

envisaged for this task turned out to be three and a half, but by the end of 1971 the system was opened to the public. It then gave access to the decisions published over the last twenty-five years three major case reporters of interest to Quebec lawyers. The system was based on an on-line batch conception and included a French-English thesaurus designed to permit queries in one language to search documents in both.

In the Fall of 1971 a test was organized with one of the large law firms in Montreal to explore what form the service might take. The major finding of this test was that the system was unsuitable for direct use by lawyers, mostly because of the heaviness of the control and search languages and the steep variation in search cost which was totally unintelligible to the inexperienced lawyer. This result pushed the DATUM group to adopt the *service centre* approach: the lawyer communicates his query to a consultant of the centre, who handles the actual interface with the computer and relays the results back to the lawyer-client. Among the advantages of the service centre are the fact that the lawyer needs no knowledge of a special language in order to use the centre, that he communicates with it as he would with a stagiaire in his office; for the centre itself the formula allows more expensive equipment because of economies of scale; it also gives consultants extensive exposure to the system and thus permits them to gain adequate experience with it and hence to use it optimally. Among the disadvantages are, of course, the cost of the consultant's time with which the lawyer is faced<sup>4</sup>.

Within the service centre formula we initially adopted the following principles as presumed preferences of our clients:

- a) send uncorrected computer print-out of results (to guarantee exhaustivity, speed of return and minimal price)
- b) ensure exhaustive research
- c) and quick return
- d) charge a standard price (the lawyer should not have to bear variation in search cost due to technical factors).

Each of these principles turned out to be based on at least partially wrong assumptions. It seems worthwhile to analyse what we discovered during our first year of operation in this respect:

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4. More extensively on the comparison of self-service and service centre, my "Reflections on the First National Conference on Automated Law Research", (1974) 3 *Rutgers Journal of Computers and the Law* 310-327 of which the German version appeared in *Simitis*, (1974) *Materialien zur Rechtsinformatik*, no 3, Metzner Verlag 99-115.

- 1- *Output quality* is paramount to the lawyer; "noise" is very bad since it obliges the lawyer to screen the results himself, something he precisely sought to avoid in delegating the research; more economically, the lawyer's screening time is a cost that must be added to that charged by the service centre and risks making the query too expensive in the client's eyes;

related to this is the finding, that even among relevant references, the lawyer wants only the ten best ones, more being considered "noise". In more technical terms it means that precision to the lawyer is definitely more important than recall in searches by a service centre; whether this conclusion can be generalized to self service is an open question. At any rate, the service centre must carefully screen results.

- 2- *Good understanding* of the client's problem is critical. This finding is related to the previous one. It implies that in practice consultants will take time to discuss the problem with the client over the phone; that they will phone back a client in case of doubt and also to discuss preliminary results with him. These practices reflect the essentially groping nature of research: one refines the formulation as initial results are absorbed.

For the operation of the service centre it implies an increase in the cost of searches: the increased cost appears to be well worth the diminished risk of a dissatisfied client.

- 3- *Speed* is of the essence in only a minor portion of the cases; in most instances the lawyer plans his research well ahead of trial and can leave the service centre a week or more for its research; given this finding there is little economic justification for keeping an on-line batch connected all day.
- 4- *Uniformity of price* is less important than expected; prices may vary provided they correspond to the difficulty of the search as perceived by the client; this perception is presumably related to the complexity of the problem by traditional means, which runs not at all parallel with complexity or costliness in computerized research. There are upper limits to what a lawyer finds it reasonable to pay for searches performed by the centre. The current range of \$35 to \$55 for most questions seems to be close to this threshold for ordinary queries.

In the course of the service centre operation we discovered that this formula could easily be extended to other services, two of which are worth mentioning. The first is the *Service-dossiers*. These are mini-indices of 35 to 250 references on specialized topics such as child custody in divorce cases, expropriation, injunction, professional liability (various kinds), quantum of damages in liability cases, false representation in insurance contracts and the liability of municipalities. The dossiers are presented in the form of

computer print-out of references plus key-word summary and for the larger ones references are grouped under sub-headings within a single listing. They are prepared from a series of computer searches by careful human editing. Thus the fixed costs are substantial -- higher at any rate than for ordinary queries -- the variable ones negligible, but the topics are selected so as to be of interest to a variety of lawyers and usually between 30 and 250 copies of a dossier are sold over the period of its useful life. Up-dates are also available. Dossiers have been very successful presumably because of their handy format, the quality of their content and their very applied character. By their nature the Service-dossiers lie between mass-published indices and digests on the one hand and individualized retrieval on the other. I would think that we have here a novel form of publication, the mini-publication, which might well affect the profession's idea of what are appropriate documentary tools and of the sums it is prepared to spend for them (in this case between \$35 and \$55).

A second extension of the services provided by the centre were surveys of the state of the law. In this case the lawyer exposes to the consultant his entire legal problem and asks him to determine the state of the law on the subject and synthesize it in a short document. Of course, this is a much more complex service and the fees charged are correspondingly higher. It is a natural extension of reference retrieval in that in both cases the lawyer explains his legal problem to the consultant and delegates some part of what he considers to be the research problem to the centre. The experience with this service has been brief and quite successful. It was discontinued, nevertheless, because it was felt that it was very similar to "legal opinions" given by law firms and that there was no reason for a state corporation to compete with private firms in a market which is functioning satisfactorily as it is.

In 1974, the retrieval service was merged with the operation of publishing the law reports of Quebec and the Mini-Biblex, a microfiche collection of the most important sources of the law relevant to Quebec lawyers. Up to then these publications had been the responsibility of the Quebec Bar. With inflation and the rapidly increasing number of courts, of judges within each court and of judgments of publishable interest, the Bar realized in the early seventies that it was no longer capable of providing that service according to professional standards. In an agreement with the Bar in early 1974, the Quebec government assumed responsibility for the main case publications, provided that the Bar would accept a

collective subscription to them for all of its members. The agreement is significant in that it constitutes an explicit intervention by a provincial government in the publication of case reporters, a line of conduct which, as we saw earlier, governments were loath to take in English Canada. The justification for this intervention was considered to lie in the government's ultimate responsibility for the accessibility to law within its jurisdiction. While the government may therefore legitimately finance part of the publication of the primary sources of law, the principle does not state that it should assume the entire cost of it, in other words that no charge should be set for these publications to the legal profession, which, after all, makes its living with them. This consideration, too, is reflected in the agreement.

Within the new organization regrouping the three services, which was eventually to become SOQUIJ, the publication sector has clearly had the greatest success. Innovations introduced in the original publications led a variety of administrative tribunals and agencies to contract with SOQUIJ for the publication of their decisions. As a result case reporting in Quebec has received a very significant boost since 1974<sup>5</sup>. Improvements made by SOQUIJ in the indices to the primary sources, the *Annuaire de jurisprudence*, have brought it recently a contract for the constitution, in cooperation with various committees of the Chamber of Notaries, of the *Répertoire du droit*, which amounts to an Encyclopedia of notarial law to be kept up-to-date with new legislation and case law. In Quebec this is the first significant development of this kind since the publication of the *Répertoire Lévêque* in 1955... Reasonable success is seen for the *Mini-Biblex*. The crucial points here are to ensure regularity of shipments (updates) and to provide a convenient adaptor on regular Xerox-photocopiers for making normal photostats from *fiches*. In the retrieval sector the most profitable and successful activity is clearly that of publishing the service-dossiers. Individual queries have not increased in number since 1974 and recently a number of important decisions have been taken regarding this service: DATUM -- the retrieval programme -- will be held on-line for only two hours a day; henceforth, in order to cut storage cost, only abstracts, not the full text, will be stored in the bank (Note that the publication division of SOQUIJ prepares the abstracts, ensuring that they are appropriately detailed and

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5. See my text on SOQUIJ, in *Datenverarbeitung im Recht*, vol. 6, 1977, pp. 83-90. Its French version has appeared in (1976) 11 *Revue juridique Themis* 9-19, nos 1-2.



unambiguous for good retrieval); the introduction of DATUM II, the new, interactive retrieval system designed for operation by lawyers themselves from their offices, has been delayed indefinitely<sup>6</sup>.

It is worth noting that the sector in which the innovative movement started, namely automated law retrieval, now is the least successful. It looks as though the very launching of a relatively far-out venture purporting to by-pass most existing -- and admittedly inadequate -- means of documentation served only to break a deadlock and unleash the forces -- innovative spirit, public funds for development, client interest -- which were necessary to realize the full potential of traditional sources of law. If this explanation is correct and the dynamics in legal documentation in Canada have thus been restored, what rôle is there for automated law retrieval?

To answer this question, a further fact should be brought into the discussion. It is that over the past two years the proportion of large offices among DATUM's clients has steadily increased, both for the Service-dossiers and for individual queries. Of course, this is not altogether unexpected, as the various changes in the operating mode of the service centre -- extending consultation with the clients, careful screening of results -- are meant to improve quality while adding somewhat to the cost. These are precisely the moves to which one would expect the most critical and wealthiest clients to react most favourably and that is indeed the observed reaction of the large offices. Note that the large offices are also the group whose acceptance, we anticipated, would be the slowest, yet who would be the prime potential clients for self-service, that is for having a terminal in the office for automated law retrieval. Present reaction of these offices toward the service centre suggests that they would be favourably inclined toward a self-service. And that should count as a significant result of the DATUM service centre experience.

Before leaving the discussion on DATUM, I should like to speculate on possible other reasons for its relatively poor performance. The main hypothesis seems to me to be the one already discussed, namely that it is counterproductive to try to jump steps, by going to advanced technology before the potential of present means has fully exploited. It may also be that the service centre formula has reached its inherent limits: by increasing its quality it prices itself out of the market and this tendency can be expected only to accelerate, certainly in comparison to self-service. If this is a

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6. See my text on DATUM II, *loc. cit.*, note 2.

correct -- if partial -- explanation, then QUIC/Law may expect to do better with its self-service approach, to be discussed later. A service centre may then still be useful as a transitional formula -- it fits better into current practices -- and as a back-up for self-service.

A third, important factor would be the limitation of the bank. Currently DATUM only holds the minimal bank of general interest. As the quality of its service started to appeal more to its more demanding clients, the larger offices, it would have been desirable -- though not practicable for copyright reasons -- to extend the data bank into areas likely to appeal to this group, that is into specialized and all-Canadian series. Canada Law Book's entry into the field of automated law retrieval significantly improves perspectives in this regard. It should be noted in the passing that the major point of attraction of the Lexis system in the U.S.A. -- according to observers -- has been its federal tax bank, containing published as well as unpublished material to provide very nearly complete coverage of that field. In each area covered by a data bank, timeliness is also of prime importance, and in this regard as well Datum has not, so far, reached its objective of the bank being ahead of publications.

A last factor to be considered in the unsatisfactory performance of the DATUM centre is the retrieval system. The average "machine cost" of queries is relatively high -- around \$3.50 --, but more seriously it varies greatly without any relation to legal complexity. Moreover, despite the skill acquired by consultants in formulating queries most results contain far too much noise and hence contribute to the centre's cost in the form of screening time. Whether using an on-line system in itself decreases these cost factors seems to me a question unanswered experimentally so far, although proponents of such systems maintain that it does. Be that as it may, I would expect that even more significant advances in this regard could be made with systems which allow one to incorporate in the bank the fruits of past research efforts -- new search terms, re-indexing of missed documents, modification of ranks on the basis of user judgment -- in order to improve performance henceforth.<sup>7</sup> DATUM II is designed to do just these things; whether that constitutes in fact an improvement, only experience can tell.

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7. *Ibid.*

## 5.- Q/L Systems

What is now Q/L Systems Ltd., a private company, started in the 1960 as a research project at Queen's University. Initially the project was meant to facilitate retrieval of treaties, but in 1968 it enlarged its scope to include the development of a retrieval system suitable for Canadian case law. Although the QUIC/Law group has always been very concerned with the creation of a proper data bank, the attitude of the copyright holders for the collections in which they were interested and, to an extent, scarcity of funds have prevented them so far from developing what might be termed a minimally interesting bank for lawyers in any of Canada's common law provinces. It was not the intention of the group initially to carry the project to the stage of a practical test with lawyers. If the project was successful, the results would be made available on suitable terms to private enterprise.

From 1968 to 1972 the group conducted its research, initially by experimenting with modifications to existing IBM programmes such as D.P.S., later, when R. Von Briesen had joined the team, by developing its own, entirely new conception. Among the innovative - at least at the time - features are on-line operation, natural language searching, out-put ranking and low cost. The group also experimented with retrieval -- including high speed data transmission -- over long distances, several thousand miles from Ottawa to Vancouver. As a result of the experimentation, the idea of natural language searching was silently dropped and positional logic re-introduced in an essentially Boolean search language.

In 1972 the group proceeded to a test of its system with several private law firms. The reaction of the lawyers was entirely negative. Henderson, at the time president of the Canadian Bar Association's jurimetrics committee and senior partner in one of the firms participating in this experiment, gives several reasons for this reaction. The most serious and in my view quite foreseeable one is that the data bank at the time was incomplete even for general research, all but useless for the specialized needs of large firms, such as those in which the experiment was conducted. Henderson also mentions that the best results were obtained where a librarian or law clerk was particularly interested in the system. This corresponds to a common observation of all groups who have placed terminals in law offices that only a few lawyers are prepared actually to work with the system and training efforts must be focused on these people. Of course, if the system is widely accepted

and law schools give students "hands-on" experience, this handicap may well disappear. Henderson further mentions several "psychological" barriers a lawyer feels with regard to such a system: he does not like to formulate or type in questions, he can inspect only one page at the time etc. I would regard these as minor factors if the system could render useful services to the lawyer otherwise. A positive feature of Q/L is, in my view, that the commands necessary to handle the system are well within reach of a practicing lawyer who has only little time for a "training session" and will not acquire a thorough experience with it. This is a quality which clearly cannot be attributed to DATUM I.

Having thus suffered a serious setback in its efforts to gain the hearts of Canadian lawyers, the QUIC/Law team directed its attention to other markets. It had various data conversion contracts for the federal government and organized a retrieval service on abstracts for Environment Canada, which is apparently widely used in practice. Its first commercial breakthrough in the legal area came when the major American law publisher West decided to use the system to offer a retrieval service based on the abstracts in its own publications. This service, Westlaw, has received very positive comments by one informed observer.<sup>8</sup> It is now commercially available and appears to be developing into a serious competitor to the LEXIS system.

In English Canada, in the meantime, the question of automated law retrieval had resurfaced in a different forum, the Canadian Law Information Council. This is a non-profit corporation, representing the federal as well as all provincial governments and Bar organizations, the notaries, law teachers and law librarians, in short all segments of the legal community in Canada. Its objective is to improve legal documentation throughout the country. One of the major areas of concern of the Council has been the potential of computer technology for improving legal information and very soon after its formation in 1973, a committee was set up to study the subject. In 1975, the committee expressly recognized the need for an experimental case retrieval service in the common law provinces, modeled on the service formula which had by then already been in practice in Quebec for several years. Discussions were then initiated

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8. SPROWL, "Computer-Assisted Legal Research -- An Analysis of Full Text Retrieval Systems, Particularly the Lexis System", (1976) 1 *American Bar Foundation Research Journal* 175-226. SPROWL, "The WESTLAW System -- A Different Approach to Computer-Assisted Legal Research", 16 *Jurimetrics Journal*, no 3, 142-148.

with the publishers who hold the copyrights in the relevant case reporters. In the face of steadfast and peremptory refusal of this group to entertain even the thought of releasing copyright for this purpose, the committee after some hesitation recommended that an experimental system be installed based on abstracts, which the centre would prepare in order to circumvent the refusal. The service centre was to start in Toronto, which has the largest concentration of lawyers in the country and thus offers the highest chance for success. After substantial funds had been allocated to the implementation of this plan in the 1977/1978 term, news reached the community that the major publisher, Canada Law Book Ltd., had taken a substantial interest in Q/L Systems -- the private company through which the QUIC/Law system is marketed since it left Queen's University -- and that a national computerized legal information retrieval service would be set up with a large bank containing documents published by that company. Retrospectively, the refusal of the publishers can be interpreted only as a desire to reserve for themselves the right to exploit a computer retrieval service, if it was at all commercially promising, a question to which at least Canada Law Book now seems to have given a positive answer.

I believe that initiatives by the CLIC have pulled Canada Law Book into this position well before they would have come there on their own terms. Apart from the threat simply to bypass the publishers and offer a retrieval service to their regular clients, the CLIC had also put pressure on the publishing profession by preparing a study showing the shocking degree of duplication between the various case reporters and the poor service to outlying provinces; by threatening to extend its very successful current awareness service on decisions of the Supreme and Federal Courts of Canada to include those of the major courts of Ontario, clearly an in-road into territory which Canada Law Book considered its own; and by subsidising case law publishers in Western Canada. The publishers have reacted to these initiatives not only by moving into the retrieval field, but also by improving their traditional services: Canada Law Book, for instance, has now instituted a current awareness service on a variety of Canadian courts.

All in all, the CLIC has played a useful rôle here in prodding Canadian law publishers into activity. Since it considers its activity as only supplementary to that of private publishers, it will limit its intervention in the retrieval field to subsidising experimentation with this tool in selected law schools and to setting up a service

centre hooked into the newly expanded QUIC/Law service for those lawyers who would like to have the benefits of computer search without having a terminal themselves. The service will be situated in the Osgoode Hall Law School, Toronto, where there is easy access to a major law library and to student help. CLIC may further "sponsor" new additions to the Q/L bank which would not otherwise be available.

The possibility of "sponsoring" part of the information bank is one aspect of Q/L's interesting pooling scheme. Under this formula anyone may "sponsor" an addition to the bank by providing it in machine readable form or by paying for its conversion by Q/L. The new segment is available to all users and the sponsor receives a small "royalty" for every query addressed to the segment he sponsors, over a given minimal number. This fee is part of the normal service charge to users. The sponsor retains the copyright existing in the material he sponsors.

All signs suggest that while the initial success for computerized retrieval occurred in Quebec, the next phase will be centered around the service that Q/L Systems is now putting into place. The participation of public as well as private groups in this venture opens the possibility of service both to the larger offices preferring self-service and to the smaller firms and the outlying regions who wish to rely on a service centre. If this idea can be successfully implemented in the markets currently envisaged, there would be strong economic reasons for SOQUIJ to transfer its bank into the pool and hook the terminals of the service centre into the Q/L system. Possibly, a newer version of that system would incorporate some of the ideas underlying DATUM II. Be that as it may, if DATUM joined the Q/L movement, Canada would be well on its way toward a truly national law retrieval system.

## **6.- Conclusion**

Legal documentation in Canada has come full circle. Stagnation in traditional publishing in 1968 was attacked by seemingly so innocuous a method as financing research in computerized law research. When this research came out of its academic incubation period in 1973, it set off a series of movements in which innovation was introduced in publishing, lawyers took a new interest in legal documentation and were convinced to devote more resources to it and governments saw that to promote access to law, they could financially intervene in law publishing without stifling private initiative. Governments also improved the publication of statutes for which traditionally they had assumed

responsibility. What started out as a roundabout way of solving a problem has resulted in a shake-up in which priorities have been put in the order in which an unbiased observer would rank them, but with more innovation and more funds flowing into the field as a whole.

In this pecking order, automated law retrieval probably ranks rather low at this time. Yet it has features which in due course -- in the early 1980s -- will make it preferable to traditional means, even if perfected, on economic grounds. With regard to the material itself, computerized operation allows for easier updating than traditional means and can provide, in a single operation and without becoming unduly cumbersome, access to a larger bank. It has the potential for offering higher quality in research, since it can handle traditional as well as other keys and can be made to improve its performance as experience with it accumulates. Computer retrieval also has the potential for providing greater comfort to the user in the form of easier and faster access to documentation which goes beyond the codes and handbooks which the lawyer keeps within reach from his desk. And finally, a comparison of cost between traditional and computerized research tools of equal practical usefulness to the lawyer will turn increasingly in favour of the latter. The cross-over should occur somewhere in the first half of the next decade.

Computer retrieval systems have so far brought great benefit to Canadian lawyers, almost in spite of themselves. They will continue to do so, increasingly, I expect, because of their own virtues.