A Feasibility Study ou the Computer Retrieval of the Law of Quebec

or

The Care and Feeding of your Friendly Neighbourhood Legal Computer

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Have you ever wished that there was a truly well-developed index of Quebec law that could lead you to all the jurisprudence relevant to a particular matter? Or have you ever spent hours poring through cases, searching for that one judgment directly on point? When one realizes that the jurisprudence of Quebec currently amounts to approximately 120,000,000 printed words, and is growing at the rate of 1,700,000 words per year, the enormous difficulty of "thorough" legal research immediately becomes apparent. Luckily, the ultimate legal scholar is waiting on the steps of our profession. Though his parentage is obscure, his mental capabilities are astonishing. He can read more in a minute than you can in a day, and he can print about fifteen times as quickly as the fastest legal stenographer. He's a thoughtful fellow too, one who would almost invariably be able to answer your most complex legal question in less time than it took to ask it.

Why is such a legal "wunderkind" not working for you right now? The problem is, of course, his education. His eagerness to absorb great quantities of information requires several talented instructors and considerable sums of money. While the cost of such instruction and upkeep is not small, the rewards are commensurately large. With the Quebec legal system today undergoing rapid evolution, there could be no more fitting symbol of progressive thought and approach to our law than to be the first area of the world to achieve the complete computerization of its law and jurisprudence, so that the most current answer to every legal inquiry would be but computer-seconds away.

How does one go about educating a computer? The first stage is filling its memory with facts. Of the various systems developed,

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[1] With thanks to Mr. Robert Shapiro of I.B.M. Canada who provided much of the data used herein.

certainly the most satisfactory is the storing of the full text of every Quebec case and statute in the computer. This is superior to the headnote or digest-storing methods in that it eliminates the inadequacies of condensation at the input stage, and allows for the great convenience of a full-text print-out at the output. How can this massive task be done? While optical scanners have been developed which can "read" a printed page into the computer, their capability is as yet limited to only certain kinds of type of too narrow a range for our purposes. Thus, until the development of a more flexible scanner, this task must be performed entirely by key-punch operators typing the full text of the material into machine-readable form. It has been estimated that such a prodigous operation would require approximately 15,000 man-days, at a projected cost of $250,000.

Once the computer's memory has been filled, it must be taught to think, to sort the information and produce the desired responses. Such programs, as developed in the United States, often take the following form. The computer is first instructed to read the material and compile a (bilingual) dictionary of every word used therein, eliminating non-siguificant words such as connections, proper names and numerals, and assign an index number to each word, indicating its sources. Thence a Thesaurus, or Synonym Dictionary is fed into the computer, instructing it that when ordered to search for a word, this should include a list of its synonyms and their French-English equivalents. Thus, the computer knows the locations of every word, as well as the locations of each of their synonyms.

The final step is the search and print-out by the computer. The most efficient and oft-employed search procedure is the Key-Words-in-Combination approach. By this method the computer is asked to find the cases in which a certain combination or sequence of words appears, and other words do not appear. Thus for the simple example of a man slipping on an icy sidewalk, one might ask the computer for all cases which "icy" or "slippery", "sidewalk" or "street" and "fall" and their synonyms appear, but none of those wherein both "automobile" and "collision" (or their synonyms) appear. The machine may then print out the citations or the full texts of the relevant cases, whichever is desired.

Hence with great accuracy and speed, the computer can be trained to perform the most laborious and time-consuming tasks of legal research. What of its cost? The price of such a system is only partially determinable. While one can estimate the cost of manually supplying the computer with the necessary basic data at $250,000, the cost of programming is at present virtually impossible

to evaluate. A major determining factor would be the availability of programs developed by others, which could result in large savings. These would include, for example, Irving Kayton's SYNDIG, or Synonym Dictionary Generator.[2] The cost of computer time and equipment, using the IBM 360/40 and associated hardware, would approximate $14,000 per month (176 hours). However, this cost drops by almost 90% if an "overtime shift" is used on a computer. That is, if a computer is used 16 hours a day rather than 8, the rental charge is roughly 110% of the 8 hour cost. Finally, the costs of operating personnel, once the system is functioning, may be estimated at $4,500 per month.

Who could undertake such a task? It would seem that the most appropriate institution would be either a university or the provincial government. Both are already major users of computers and have the skilled staff required to establish such a system. Nor would such a program lack remunerative appeal, for if the capital requirement were $500,000 and 50 "requests" were made per day, each being charged $25, the system would pay for its maintenance expenses plus a return on investment of approximately 25%.

Thus, with a legal data centre only a telephone call away, and cases being fed directly from the "redaction" offices of the courthouses to the computer, legal research, of primary importance not only to the practitioner but to the jurist and academic as well, would become greatly simplified and streamlined. The road to computerization could bring little but benefits to Quebec law, and its attainment may signify a breathtaking achievement in the search for a modern and truly contemporary legal system.

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[2] I. Kayton, "Retrieving Case Law by Computer", 35 George Washington Law Review 1.