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### Information Technology and The North American Legal Profession

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**Abstract:** This paper explores the disparity between the innovative use of information technology in legal offices on either side of the Atlantic. Internal and external databases and communications are examined. The virtues of litigation support and document generation packages are shown to be well established in North America (though unaccountably neglected in the UK). The paper ends with a call for law firms to adopt strategic plans for technology implementation, proper management structures, a greater appreciation of IT's potential contribution to improving lawyers' lifestyles, the introduction of value billing and an examination of the long term impact of technology on law firms.

#### Introduction

For those who are dissatisfied with the status quo there can be little more frustrating than to glimpse the future, to know that it could be here now while at the same time realising that it will be long before it actually arrives. For the academic commentator who normally struggles to predict the future such a situation is doubly galling. In relation to the impact of information technology on the practice of law we are in exactly this position. A survey of developments in legal firms in the United Kingdom and in North America makes this plain. It is not just that UK firms and facilities are lagging behind their counterparts across the Atlantic (though they generally are in many aspects of this field) it is also that even in North America developments in the field are patchy and highly variegated.

The mundane reality is that lawyers the world over use computers overwhelmingly for the automation of support functions rather than areas at the core of legal practice. While in excess of 60% of UK firms use computers for wordprocessing and accounts, less than 15% use them to run support packages e.g. in relation to conveyancing, debt-collection or litigation. Legal offices in North America are no less committed to computerising their support functions. The latest large law firm study in the United States (IIT, 1990) shows that every one of the top 500 law firms which responded used computerised accounts, timekeeping and billing packages. (94% of their secretaries used a wordprocessing package). Moreover, computerisation is beginning to impact significantly on the work actually done by lawyers in North America. Thus the study revealed that a third of large

law firm lawyers in the USA have workstations on their desks with a further 11% sharing access to one nearby. Similar figures emerged from the American Bar Association's 1989 survey of smaller law firms. Moreover, increasingly the workstations being so installed are personal computers rather than terminals to the minicomputers or mainframes which are running the centralised support systems.

## The State of the Art

Integration of all or even most of the computerised systems used in large offices (e.g. accounts, wordprocessing, litigation support etc) remains the exception rather than the norm on both sides of the Atlantic.<sup>1</sup> Nevertheless the growing popularity of the Unix environment and the benefits promised by integration e.g. better management information, greater potential for strategic planning and client development, easier training, avoidance of duplication in data entry and storage, helps to explain why integration is increasingly being seen as a desirable option (see Cameron, 1990).

If integration is the way of the future, communications are the here and now. Electronic Mail between fee-earners eliminates "telephone tag", enables everyone on the network to be contacted with one message, appointments to be arranged, documents circulated for comment and the experience of colleagues around the office to be shared when a lawyer encounters a problem that is "new" to him or her but not necessarily to everyone in the firm. Curiously, despite its obvious advantages E Mail has yet to take off in many large firms. As a means of communication with outside lawyers or clients it has fared badly at the hands of FAX. Within firms not a few have preferred the alternative of voice or phone-mail which operates like a sophisticated answering machine and permits confidential messages to be accessed, transmitted on and duplicated from within or outwith the firm.<sup>2</sup> Communications also permit lawyers to access their office computers from home, on the road or even on vacation by using a laptop with a modem.

Communications facilities of such a flexible nature have led naturally to a demand for electronic access by lawyers to many of the external agencies with whom they interact on a daily basis. Australian lawyers using desktop PCs and a modem can already inspect on-line all titles to land in the Titles Office and obtain land search certificates covering planning orders, compulsory acquisition proposals and easements in a matter of seconds. Similar access (and electronic filing) is planned for the Companies and the Taxation Offices. Electronic access to court records and case tracking already exists in parts of North America and is planned for Australia. American lawyers can also search all patent files and records of registered and pending trademarks on-line from their offices<sup>3</sup>. Since the infrastructure required for direct access to such databases can be complex there is an increasing trend for the professional bodies for lawyers and suppliers to negotiate between the interested parties and then establish a Value Added Network (VAN) which provides the necessary software standards and security.<sup>4</sup> Thus in England and Wales the Law Society and the Digital Equipment Company are running pilot experiments with Digital's Legal Services VAN to provide computerised local searches, E Mail and the exchange of standardised conveyancing forms.

In-house databases can exist on three levels - the firm, the department or the individual lawyer's hard disk. In each case the aim is either to enhance information retrieval or to capitalise on the knowledge and expertise that exists in the previous workproduct of the firm. Client databases can be used to track the full details of clients (including source of referral) and the past work done for them. This enables firms to avoid conflicts of interest and to engage in promotional activities e.g. by identifying clients who have not made a will, who may be affected by a recent change in the law or who might appreciate receipt of a departmental newsletter or Christmas card. Equally databases can be used to track the location of client documents (e.g. wills, deeds and shares). Workproduct databases may include all work in progress, past work product, a library of house or departmental styles, and all counsel's opinions or research memoranda produced by the relevant section of the firm.

Specialist information databases ranging from the in-house library catalogue to details of case and statute law or personal knowledge which is not available in commercial databases also have their place. However databases are not achieved without cost, and part of that cost is maintenance and self-discipline. This may explain why only 28% of large law firms in America have firmwide databases for attorney workproduct (IIT, 1990).

## **Litigation support**

One of the most prevalent uses of databases in North America (which has made relatively little impact as yet in the United Kingdom) is litigation support (see Christian, 1990). Such databases contain either the full text of all the documentary evidence in a case or abstracts and keywords from such documents. In any litigation where there is a plethora of documents these systems enable lawyers to access and cross check information for inconsistencies far more quickly and effectively than any manual system. The IIT studies over the last two years have shown that over 80% of the largest law firms in the US have attorneys using computers for litigation support - mainly in the guise of document databases. Such databases were originally the product of the liberal discovery rules which prevail in North America and mega-litigation which can produce several hundred thousand documents in a case. Indexation and information retrieval on a manual basis of such quantities of data was both lengthy and expensive - computerisation was therefore an obvious option.<sup>5</sup> Until recently this consisted primarily of document abstraction where teams of coding assistants examined and coded each document prior to entering the details and keywords therefrom into the database in accordance with a coding frame devised by the attorney in charge of the litigation. While this gave searches a high level of precision and recall, such systems were still expensive and time consuming to establish and suffered from the drawback that the coding frame had to be drawn up very early in the litigation when all the relevant issues in the case might not be apparent. Full text database systems were largely eschewed because of their expense and their inability to be searched conceptually. However the last few years have seen the emergence of a new litigation technology - electronic imaging - which may revolutionise existing attitudes to litigation support. This technique utilises optical scanners and OCRs to store graphic and textual images on a searchable optical disk-based database. It is quicker and cheaper than document abstraction because document clerks are not required to organise, code and index the documents into the computer. Nevertheless imaged databases still require each document to be coded in terms of author, receiver, date, title etc for search purposes. Even taking account of the difference in the discovery rules on this side of the Atlantic the growth of multi-party "disaster" litigation suggests that there is considerable scope for litigation support databases in the UK (see Brennels, 1990 and Christian, 1990).

## **New Applications**

One of the reasons for the growth of PCs on lawyers' desks in North America is the wide range of packages now available generally in the DOS or Macintosh environments. Most interesting of all are the automated practice/expert systems and undoubtedly the most talked about of these are the document assembly or document modelling packages (see Klemens, 1990). These systems automate the process of producing documents. Since this is what wordprocessors allegedly do, why all the interest? Leaving aside the complicating factor that hundreds of smaller North American firms are now using WordPerfect macros for unsophisticated document assembly, the short answer is that document modelling packages produce documents of a better quality and greater complexity much more quickly than wordprocessors. To do this requires an "inference engine" (the computer programme) and a "knowledge base" (consisting of expertise and know how e.g. as to when and where a particular type of clause can be inserted in a document). The combination allows the system to cope with grammatical problems (e.g. automatically converting "he" to "his" in appropriate places) and expertise problems (e.g. preventing the inexperienced user - who may be a novice lawyer or para-legal - from inadvertently selecting inconsistent or incompatible clauses).

Typically the package interrogates the user as to the details of the client matter and from the answers entered in reply will generate a first draft of a contract, lease, stock transfer, divorce petition, etc. Used in appropriate areas, i.e. where there is a high volume of labour intensive, low value-added transactions of a certain complexity (examples range from mortgages to currency swap agreements and shareholder agreements to loan transactions) such modelling packages can drastically cut the turn round time of document production. Firms that have implemented applications on these packages have reported spectacular increases in productivity and profitability (output is frequently described as having more than doubled and in some instances ten or twenty-fold productivity increases have been reported) and these claims have been widely publicised. Yet despite this the use of such packages in the profession - indeed of all expert systems - has been slow to develop since few expert practitioners are prepared to contemplate the considerable investment of intellectual capital that the development of such packages requires.

## Complications

The slowness of the North American profession to exploit the advantages of expert systems is an indication that even large firms in today's highly competitive environment find it difficult to approach technological investment as an ordinary business would. Long term strategic plans in relation to technology are unusual and very rarely do firms endeavour to conduct cost-justification studies in order to isolate the areas of practice which might benefit best from particular forms of computerisation.

In practice, apart from the computerisation of the standard "back office" functions which tends to be determined by management fiat, technological development in large law firms in North America is often somewhat ad hoc in nature. Thus while there may be a policy to put as many workstations as possible on fee-earners' desks it is very much up to them what the machines are used for. One can find departments in the same firm with very similar technological needs which have reacted quite differently to the challenge of harnessing new technologies. Some will embrace databases or even expert systems while their colleagues struggle to master wordprocessing or sometimes flatly decline to use computers at all. Again firms have been slow to use all the management information which their systems can generate or to harness client data for promotional purposes. As some analysts have observed this ad hoc approach brings with it many inefficiencies because the available technology is not being exploited to the full - in part because training and computer literacy have not been given the priority which they deserve.

At one time it was thought that computerisation would so increase the productivity of the lawyer that it would create greater leisure time. However, while technology can free the lawyer from the drudgery of routine administration, in practice it actually increases the demands made on the lawyer. This is because as with FAX once the client knows that a short turn round time is feasible the client then expects it and if it is not forthcoming concludes that his or her business is not being valued properly by the lawyer. Similarly diary packages will only work if every fee-earner in the department, if not the firm, enters engagements in the electronic diary. Firmwide styles databases require all fee-earners to enter their styles on the database and - even harder to achieve - sometimes to try to agree on a firmwide style for a particular transaction (although departmental agreements are easier to achieve).

The next problem which computerisation has thrown up in North America stems from the fact that there feeing is normally done on the basis of an hourly rate. If, for example, a document modelling package greatly reduces the time taken to complete a particular transaction, how does this benefit the firm? Alternatively, if the research done for one client is stored on a firmwide database and thus comes to the attention of another fee-earner with the same problem with a different client, is it fair that the first client is charged considerably more than the second because the research does not have to be repeated? Questions such as these have led to a lively debate in North America as to whether

lawyers should be able in such situations to substitute "value billing" for time billing. (Value billing involves charging the client, inter alia, for the value of the work to him or her rather than just the time actually taken to do their work). While some corporate clients are refusing to pay extra for what they regard as basic technology e.g. wordprocessing, in the case of litigation support packages they have been more willing to fund the advantages which the new technology brings. Clearly it is not always possible or reasonable to recover the full cost of initially setting up a litigation support system or a document generation application from the first client to benefit from the software. Value billing allows the lawyer to spread some of these initial costs to later clients over and above the actual hours spent on their cases.

## Conclusions

What can we in the United Kingdom learn from these developments in North America?

- a.** There is clearly a need for firms of all sizes to draw up strategic and business plans covering the future development of the firm, including its technological investment even though traditional partnership structures may inhibit this. Larger firms in particular should have sustained research and development programmes in respect of technology applications. While detailed long-term cost-justification studies may be beyond the resources of many firms, short-term ones ought not to be. There is certainly little excuse for not endeavouring to apply the existing knowledge in this area to the specialities of individual firms.
- b.** Getting management structures right is advice which applies well beyond the confines of technology. Nevertheless it is necessary to strike a happy medium between leaving computer developments to one enthusiastic or willing partner and/or the in-house systems support team on the one hand and endless committee meetings on the other. It is likely that decisions as to the central spine of technological functions will have to be determined on a partnership level. But it is important to adopt a flexible strategy which, while providing encouragement and stimuli to development by individuals and departments, does not dictate a policy which stifles individual experimentation.
- c.** It should also be recognised that the benefits of computerisation apply equally to small firms as to large. Many of the innovative software packages are quite cheap and will run on a stand alone microcomputer. In-house style databases are easier for the small firm to establish since fewer partners means less likelihood of dissensus over the styles to be adopted. In North America several "off the peg" document modelling applications exist which have considerable appeal to small firms e.g. wills, separation agreements, divorce petitions and debt collection. The crucial point is to exploit the existing technology to the full and to provide training to all fee-earners and staff to bring this about. As Lockwood has argued "any competitive advantage created by the computer will accrue not so much to large law firms, versus small law firms, but to those firms which are the most open-minded and adaptable to change" (1982: 753)
- d.** Technology brings significant benefits but always at a cost. Moreover systematisation must precede computerisation. It is no good hoping that computerisation will resolve the difficulties caused by disorganised manual systems.
- e.** As we have seen, in North America it is important that a feeing policy is evolved by firms which spreads the costs of technological investment amongst all clients who benefit from it and not just the first to ask for a service which can be enhanced by the use of technology. In the United Kingdom where hourly billing is less well established than in North America and value to the client is expressly mentioned in the fee tables, value billing to spread the cost of technological investment might be easier to achieve than in North America.

f. Finally, the long term implications of the use of technology should be considered. Some North American firms have reported that technology has led their ratio of secretarial and support staff to lawyers to be halved (some now approach 1:2 or better). Equally significant, whether or not the ratio changes, the division of labour between support staff and lawyers will change. Document assembly brings with it the capacity to delegate the production of legal work to more junior levels or even to unqualified staff -without losing quality control. Yet lawyers will take on more of the other document production work traditionally done by secretarial staff (including messages and memoranda) as well as the proof reading (there are packages to do this) and the research work which is today delegated to trainees and associates. It will indeed be a brave new world - but job satisfaction amongst both groupings will be increased.

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## Bibliography

American Bar Association (1989). **Office Automation in Smaller Firms.**

Brennels, P (1990) "Litigation Support" **The Lawyer** 26/6/90 pp.16-17.

Cameron, N (1990) "Computers: myths about integration blues" **Law Society's Gazette**, 14/2/90 at p.16.

Christian, C (1990) "Litigation Support Systems - one small step for Credibility" 140 **New Law Journal** 1567.

Day, J R (1989) "Technology in the Law Office" **LTC & BILETA Newsletter** Vol 2(2) pp.58-66.

Illinois Institute of Technology (1989) **Chicago-Kent Large Law Firm Survey.**

Klemens, J (1989) "The Future of Technology in Law Firms" **BAJ** July 82.

Lockwood, B B (1982) "Electronic Shock" : The Impact of Computer Technology on the Practice of Law' .7 **Dalhousie Law Journal** 743.

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1. Curiously the near universal computerisation of the back office functions in large North American firms encompasses no such unanimity as to whether attorneys should be able to access client accounting records from their desks or even to enter their time records electronically.
  2. In practice, firms which get E Mail first tend not to use voice mail and vice versa. Voicemail has the added advantage of enabling firms to reduce the level of staffing in their message centres.
  3. Patent attorneys described to me with enthusiasm how, when telephoned by a client about a new trademark or patent, they could access the relevant databases while still speaking to the client and often provide an instantaneous answer to the enquiry.
  4. The Law Institute of Victoria has created the computer communications network for Victoria known as LINK and the American Bar Association set up ABA/net to provide access for American

law firms to external databases as well as E Mail and document transfer.

5. "War stories" abound of cases which have been won only because computerisation has enabled the plaintiff to find a "smoking gun" hidden in the mounds of defence documentation.