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#### The Achievable Law Office - How Law may be Practised in 1998 and Will be Practised in 2002

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##### 1. Introduction

There is no reason why some things covered by this paper should not be in use by the end of next year; others will take another three years to come on stream - hence the time span in the title.

To try and predict now how law may be practised in 1998 and how it will be practised in 2002 requires a certain amount of crystal ball gazing and guesswork since there are a number of developing trends.

Lawyers are cautious by their very nature; some trends they will follow and develop into useful tools. Others they will dabble with then abandon, and this paper attempts to focus on those which they will successfully implement. The pity is that many good ideas will fall by the wayside simply because many lawyers lack the vision necessary to run with the technology, or they do not understand it, or they are misled by the technology vendors.

The classic example of lawyers being misled is the rapid adoption from the mid 80s onwards of fax technology instead of electronic mail which became available at the same time. The reason that fax was adopted was because lawyers were beguiled by its apparent ease of use. All they had to do was to sign a piece of paper and hand it to a secretary. If they had to use the machine themselves, it was just like using the photocopier only you had to dial a telephone number first. An incoming fax popped miraculously out of their machine *at their office*. What they did not realise was that by using E-mail they could send revisable text; they could send from their desk; their staff could easily send to a mailing list and the E-mail system, unlike a receiving fax machine, would not be engaged for hours. The workaholics did not realise that they could receive and send from anywhere in the world where they could plug their PC into a telephone socket.

Life is rarely kind enough to enable you to correct mistakes, but lawyers are being given the opportunity of correcting this one since new E-mail systems are now becoming available at very low cost. They still have the disadvantage that they are less simple than fax, but that minor problem can be easily overcome; this time round lawyers are a little less technophobic and sufficient numbers of them will be able to master the technology to enable the necessary critical mass to build up for E-mail to become viable - provided that they can cut through the hype and myth surrounding the World Wide Web and use the facilities that they need without feeling the urge to surf for hours only to discover that the information they find is available more quickly and cheaply from Lexis or from Whittaker's Almanac. To the average anorak time is the cost of his father's telephone bill. To the average lawyer it is a minimum of 50 per hour so they cannot afford to surf; they must be able to get quickly to the required information. There will still be a place for the conventional post because not all clients will have E-mail facilities, nor will all lawyers, but the few lawyers who do not are unlikely to survive for long. How long is difficult to predict. It is known that there are still in 1997 some firms of solicitors without any computer equipment of any kind.

Anyone planning for the future success of a business needs to know:

- Where their business is going
- What part they are prepared to allow Information Technology in getting them there
- How much they are prepared to spend on Information Technology
- What Information Technology they will buy

I hope that the next section of this paper which deals with what I see as the trends in Information Technology will help people answer the last of these questions.

##### 2 Current Trends in Information Technology

## **2.1 In the technology itself**

### **Cost**

The biggest factor here is self-evident. If the cost of living had gone down in the same way that the cost of technology has gone down and our income had remained static, our standards of living would have rocketed.

Computer Equipment is now so cheap and the processing power available so fantastic that there is no excuse for any law office not being computerised to the extent necessary to give a good client service at an economic cost which leaves both lawyers and clients feeling relatively happy.

There is a difficulty in that neither suppliers nor lawyers can leave a good thing alone. There will always be those pioneer lawyers who, despite the dangers of getting arrows in their backs, remain determined to move the frontiers forward. There will always be salesmen bent on convincing the lawyer that their machine or software tool is far superior to that of their competitors, and therefore they must buy it. The technology developers will always be beavering away to produce a better mousetrap for their salesmen to sell to the pioneer lawyers. As result equipment cost is being written down for accounting purposes over periods of 2 years, and there is continuous pressure on users to change and upgrade their equipment.

At the present time vendors continue to bundle software with their equipment, but the time may come when, because software costs are not falling as dramatically as hardware costs, the relative cost of software will exceed that of hardware and hardware will become the bundled item.

Reducing hardware costs mean that users can buy more processing power at the cost they paid for their existing systems, so that they will tend to have greater power available to them and the trend towards creating bigger systems on machines at the lower end of the available range will continue. Carried to its logical extent this could mean that mainframes will pass into history, and with them the buildings and computer centres necessary to house and support them. However, I suspect that there will be a reversal in the decline of mainframes.

### **Sophisticated software**

The growing level of sophistication of cheap software packages able to take advantage of the cheaper processing power is significant. The average lawyer who can grasp the spreadsheet and database potential of the current word processing packages will migrate to using spreadsheets and databases, and since these all run under Windows it is becoming far easier to create information in one application and transfer it to a different one. The lawyer who used to analyse information on a sheet of paper or on the back of an envelope now does it on his PC, and the information can be calculated and recalculated at the touch of a button. No longer can information be lost quite so easily as a piece of paper which falls behind the filing cabinet. Yet you still see lawyers with yellow stickies on the corner of their VDUs.

Lawyers are now beginning to use these cheap software tools to create for themselves what are, in effect, mini expert systems with huge potential for time saving.

Every litigation lawyer needs to create a list of documents. When I was articled we had to sort the documents first in to date order before the list was typed. Now they can be typed in any date order and the list then ordered by the software package. The initial list can be coded and annotated so that, for example, a list of all documents which would have been seen by a particular witness can be produced and gone through with the witness as a statement is being taken. More information can be added, so that what once was just a list now become a useful database as the case progresses.

### **Centralised processing**

Personal Computers are the most underutilised piece of equipment in the office because the processing power they contain is idle for long periods of the working day and most are switched off overnight. When used just as a typewriter by the average secretary (as many currently are) a PC is in use for only 25% of the working day. The average fee-earner will use it even less than this. One firm found that usage by partners increased dramatically when the menu for their dining room was put on the system. That is not to say that PCS are uneconomic, but simply that the processing power they contain could be more effectively used. Some firms are using their PCS overnight to perform tasks like converting scanned images to text, but this is a relatively cumbersome procedure to set up and is not really the answer to the problem of underutilised capital equipment. With communication costs tumbling and the speed at which data can be transmitted increasing dramatically day by day, mainframes or some other form of centralised processing system once again become a sensible proposition because their processing power can be more effectively utilised.

### **Artificial intelligence**

Artificial Intelligence/Expert Systems have been neglected by lawyers because far too little time has been invested in them in order to produce useful working systems from the tools available and because of a fundamentally flawed belief held by some Artificial Intelligence Scientists. Such scientists are used to designing their systems for pitches with fixed goalposts and not for the legal arena where goalposts can be moved. Lawyers have been rightly accused of starting from a defined point with the objective of getting to a predefined goal and zig-zagging like a WW2 convoy from the UK to a Russian port in order to get there. Scientists are used to designing systems to cover circumstances in which a clear flow chart can be laid out in advance and there are predictable "what-ifs". The way ahead must be to convince the scientists that it is worthwhile continuing to work with the lawyers - if only to produce small systems in discrete areas of law, which can eventually be expanded into larger systems which will have a major impact on the practise of law. Such an approach can produce successful results and can help avoid the major disasters caused by attempts to build complex systems covering too wide an area, that we see written up each week in the computer press.

### **Information retrieval**

Coupled with the use of Artificial Intelligence will be the use by lawyers of information which they possess, but cannot use, because they have lost sight of it. Typically lawyers re-invent the wheel because they have forgotten where they have left the solution to a problem. If they would only use the available text retrieval systems the cost to clients of legal services could tumble. The cost to lawyers of acquiring a relatively sophisticated text retrieval tool is minimal. Even this cost might be avoided if lawyers were a little more methodical about where they stored their information rather than depositing it haphazardly around their storage system and then running around like squirrels in winter looking for buried treasure.

### **Practice and Case Management**

Practice Management Systems, and their baby siblings Case Management Systems, are becoming increasingly useful tools to lawyers - particularly to the Solicitors branch of the profession, since they currently have far greater ability - though not need - to share information, than have their barrister colleagues. Barristers continue to insist that they are sole practitioners and this hampers their development of Practice and Case Management systems. Such systems enable procedures to be laid down and linked to the means of executing those procedures - typically by the production of correspondence and documents. They can be applied to any branch of law, although it is probably in the fields of repetitive low value litigation and in domestic conveyancing that they have become most prevalent. They are available off the shelf, although many have developed their own systems using the ability of most word processing packages to store key information in files, and merge that information selectively into a variety of standard - or even non-standard documents, to speed up the legal process.

### **Electronic publishing**

A very significant and growing trend is the publication of legal materials on CD-ROM. It is now possible for a lawyer, at very modest cost, to acquire on four or five CD-ROMs what would have taken up a large library crammed with shelving. CD-ROMs can be slipped into the case of a Laptop PC and the information they contain be available at home, in court, on the train, or wherever it is needed. CD-ROM publications can also be easily updated. No longer the labour intensive process of updating loose-leaf publications with the opportunities that presents for misfiling - simply a new CD is prepared and sent out to subscribers. It will be interesting to see whether this method of publication will result in comprehensive libraries being acquired by smaller firms who might then become better placed to compete with their larger rivals. What is also very important is that all the materials CD-ROMs contain are so much more accessible by the lawyers than is the case with printed materials since every word is, in effect, indexed. If only all the publishers could agree on a common text retrieval engine. At the moment the user virtually needs to know a different set of commands for each electronic publisher and that is extremely frustrating and is a real negative factor, preventing their more widespread use.

It will be interesting to see whether CD-ROMs or their technical successors retain their popularity. One of their greatest virtues is that they have a one-off cost - or at least a pre-defined one - and this is unlike on-line databases, which tend to have an on-line charge, a transaction charge and a print charge. Some of the on-line charges can mount up unnoticed as the lawyer does not tend to set a stop-watch as he delves into an interesting piece of legal research. If you are caught in a taxi in a traffic jam you can see the cost clocking up on the meter in front of you and judge when it is time to give up and walk. There is no such equivalent in the on-line systems that I use. This psychological advantage of CD-ROMs may disappear if on-line publishers decide to move to fixed charges. With telephone charges continuing to reduce, and the ability of on-line providers to update their systems around the clock, the popularity of CD-ROMs could wane, were it not for their advantage of portability. Even this advantage is being lost with the increasing use of digital cellular telephones linked to laptop computers (although these do cause problems when passing through railway tunnels). In the future it may be that CD-Rom publishers will be able to hook up to their subscribers overnight and download the latest material to them, so that each morning users will have available on their own machines a supplementary database to run alongside the CD-ROMs.

The trend towards electronic publishing has been accentuated by the introduction of the Internet and the reluctant moves by Government to publish statutory material on the World Wide Web, albeit in the unamended form as originally passed by Parliament.

### **Do-it-yourself**

There are lawyers who feel that the more information is available to the public the less their services will be required. Such an attitude is in some ways like that of chefs who feared the onset of frozen food and ignores the fact that many people will still prefer lawyers to machines. What is likely to happen is that lawyers will package their services in a different way. This might involve producing interactive disks for sale, thus enabling clients to do their own domestic conveyancing, freeing time for lawyers to concentrate on Management Buy Outs, which by their very originality complexity and time requirements, are likely to be unable to be satisfactorily dealt with by an interactive disk. It may also be that enabling clients to acquire systems to carry out routine transactions, will encourage them to come for help with their more complex issues.

Lawyers have nothing to fear from kiosk type systems which enable people to prepare divorce petitions etc, since these are nothing more than easier to use versions of the Do-It-Yourself Divorce, Conveyancing, and Will Writing systems which have been around for many years.

The great danger a lawyer faces is that clients will realise that for most kinds of events and transactions the law is not so complex, and that what they are paying for is the management skills of the lawyer in getting the right pieces of paper into place at the right time, rather than the legal knowledge which is required to produce the documents themselves. The acquisition of this knowledge will not totally stop the layman using the expert lawyer, he will simply feel less deferential in the presence of his lawyer and perhaps a little more inclined to question his bill.

### **Voice recognition**

The composition of office staff is likely to be dramatically changed in the next five years as Voice Recognition Technology becomes refined and usable by the lawyer. At the moment the systems I have seen and tested are slow and unreliable, and do not offer significant efficiency or cost savings, but they are improving. As a result of their introduction, coupled with other IT systems and techniques available, we are likely to see a real move by lawyers away from the traditional **typist**. Please note the emphasis **typist**. We will still need people to handle the 1,001 clerical tasks that are currently carried out for lawyers by their secretarial staff. The role of the secretary is likely to change since the typing element will be removed from the job. This will leave lawyers free to reduce the numbers of secretaries that they employ; it would however be far more sensible for them to train their secretaries to function more as paralegals (who are more and more found in legal offices) and effect greater cost savings by reducing the number of more expensive lawyers, since lawyers will be able to hand routine tasks to paralegals. Typically in the future, the group that today consists of 15 lawyers and 15 secretaries - total 30, may be slimmed down to 12 lawyers, four/five clerical assistants and four paralegals - a reduction in staff of nearly one third. The hardware and software cost of the most elaborate Voice Recognition System about to be launched on the market would easily be covered by saving 3 lawyers.

At the moment Voice Recognition techniques depend on the spoken word for text input. There seems no reason why in future the initial input might not be electrical impulses picked up by contacts placed on the body and linked to the computer system. There already exists a very rudimentary system for enabling the disabled to control machines by transmitting electrical energy from the human body, and it would seem possible to develop this system into Speech Recognition. Looking further ahead, text input might be triggered by thought waves and fed in to the computer system by a wireless collection method. Should this ever happen in my lifetime, I would want to ensure that it would never be possible for the client from hell to enter my office whilst I had such a system switched on. Indeed when such systems become available, it might be sensible to ensure that the text they produce is only ever visible to the author.

### **Video conferencing**

There have been rapid advances made in recent months in video conferencing systems. The systems available yesterday suffered from the disadvantage that since they needed to transmit huge amounts of data to reproduce both speech and images, and as there are limits on the amount of data that can sensibly be transmitted, they were selective about the number of images transmitted. As a result, if two rigid ventriloquists were video-conferencing there would be perfect pictures, but the moment either of them moved a muscle the images on the screen started to look like the very earliest films of World War 1 troops marching up to the front - or dancers at a disco illuminated by strobe lights. All this has changed. The picture quality is very much better now, and whilst these systems still do not enable you to have eye contact with the participants at the remote location, it is possible to have a reasonable conversation without thinking you are watching a very poorly dubbed foreign film. As data compression techniques are changed and data transmission speeds continue to rise, the picture quality and lip synchronisation must improve. I doubt whether you will ever be able to get eye contact, but at least if you understand body language you will be able to better observe it. It now only requires

a relatively few journeys saved to justify the cost of video conferencing equipment.

### **The paperless office**

The long heralded paperless office is achievable, or at least half achievable, since in most legal offices 99% of outgoing material is generated on word processors and is therefore in machine readable format. With a little planning, a high proportion of incoming material could easily be converted to machine readable format with 100% accuracy since it too will have been generated by a word processing system. All that is required is for the electronically generated material that is now delivered on paper by the General Post Office, courier or DX, to be delivered electronically. Even private clients are using their home computers to generate correspondence so that day by day the amount of incoming correspondence which is not already in machine readable format somewhere, is getting less and less.

Any material which is not in machine readable format can be scanned so that an image can be placed in the lawyers electronic file and the original placed in chronological order on a conventional file in a central repository. Information on the electronic file which is in other than scanned image format can be made fully searchable. Even the scanned images can have retrieval information tagged on to them, or made fully searchable as Optical Character Recognition software becomes 100% reliable.

Already lawyers are gaining significant time saving advantages from accessing their WP systems to look at text which is on their paper files, and as soon as this is done in a more deliberate way they will avoid the need to hunt for the always missing paper file, when they need information from it. They will be able to access the file from the nearest PC or terminal. Gone will be the days when a client query cannot be answered immediately because the paper file is with a secretary four floors away. When the benefits of electronic filing start to be realised, a lawyer may dictate into a microphone and a typist 100 miles away will be able to transcribe what has been recorded, deliver the work product to a printer adjacent to the lawyers desk, and video conference with the lawyer with the text which has just been typed in a window on the screen which both are looking at, so passages can be marked for alteration as they speak. This process of converting thought to paper and paper to file will be further speeded up when Voice recognition Systems become widely used.

In theory there are no standards agreed for the electronic transmission of documents from lawyer to lawyer, but there is no reason why lawyers cannot agree guidelines for transfer similar to those envisaged by the ORSA protocol. It is possible that external bodies like the Legal Aid Board might insist that standards for transfer are agreed in cases where cost savings to the Legal Aid fund will ensue as a result. Adherence to such standards might be made a condition of the grant of a Legal Aid franchise. Some form of legislation may be required to ensure that the non-franchised lawyer will also transfer documents electronically, to provide for situations where only one party is legally aided, and to encourage the electronic transmission of documents.

## **2.2 Increased use of technology by the Government**

### **Court Systems**

Until very recently, the court register sheets I helped to complete as a lay magistrate were typed for each court sitting. The average defendant appears in court on four occasions per case, and each and every time he appeared in court a register entry for him was typed. Now at long last, the details are typed once, and thereafter printed out for each time a defendant appears. Having established a database of defendants and offences it is probably not a great technological leap forward to keep a court availability list on a computer, so that when a defendant pleads not guilty, and time estimates for the trial have been obtained, everybody does not have to wait for 10 minutes whilst a phone call is made to check the court diary for a convenient trial date. Such systems are starting to be introduced in the courts, and as with a PC Network in my own office, once the basic technology is in, the additional cost of adding new features to it is comparatively small.

### **Computer aided transcripts**

A fairly recent introduction to the court system has been the instant availability of transcripts as a result of the introduction of computer aided transcription techniques. This, and the use of scanning techniques to image and then reproduce in court the text of documents needed at trial, have made a significant reduction in the amount of court time needed for the few cases in which they have been used.

### **The Central London parking model**

Probably at the lowest end of the quasi-judicial process, a computer system has been set up for the Central London Parking Ticket appeal system. This system enables the adjudicator to see on screen facsimiles of all the documents relevant to the appeal which is being heard. It enables the adjudicator to produce, immediately after the hearing, the

record of the adjudication and, if necessary, a direction to the parking authority to take action, such as refunding sums of money to the appellant. Systems like this must soon be introduced to assist with more complex judicial hearings. Why, for example, can magistrates courts not be linked to agencies like the DVLA at Swansea, so that a defendants licence details can be immediately available in court without the need for a long adjournment for the details to be obtained?

### **Electronic litigation**

There have also been recent innovations which have enabled documents required in litigation to be served by fax and even for writs to be issued by fax. Perhaps more dramatically there is currently underway a pilot scheme running from the 1st February to the 26th March whereby applications to Queen's Bench Masters in London may be made by Solicitors and Counsel in Manchester by Video Conference (on Tuesday afternoons only). If this experiment is successful it could well be extended - and to other forms of court hearings - with considerable cost savings if the need for all the parties in a hearing to be physically present in the same place can be avoided. It must soon be possible for the Courts to create a paperless office of their own and allow remote access to their electronic files by parties to the case - who might use it mainly for electronic delivery and service of documents. Developments such as this must be part of the systems needed to implement the Woolf reforms referred to later in this paper.

Whilst there is much hype about the Internet and the information available from it, one of the real advantages it provides is the cover for E-mail and which, if used as the standard means of communication between litigants and the courts, could well avoid the need for court appearances with consequent cost savings.

## **2.3 Client Demand**

### **Where derived?**

It is sometimes difficult to know whether it is client demand or a desire by service providers to outstrip their rivals and achieve a greater market share which leads to innovation in the provision of goods and services. A clear example of market share led innovation in the retail sector is the trend towards longer opening hours for Supermarkets. In 1970 Supermarkets closed at 4pm on Saturdays and probably 5.30pm on weekdays, but the general population had little difficulty in getting their shopping done. (At that time it was possible to ring up your local shop and get the groceries delivered - something Supermarkets have just realised their customers might like). Supermarkets now stay open as late as 9 and 10pm and one chain has started experimental round the clock opening at a few of its outlets. Unfortunately they have a maximum. No store can open for more than 24 hours. When they achieve that they will be looking for other methods of drawing more customers which might include ensuring that their shelves are fully stocked at all times.

### **Pressure for innovation**

In the Private Client field lawyers are probably being little affected by client pressure for innovation. This is not so with commercial clients who themselves increasingly make use of Information Technology and increasingly expect their solicitors to do so. Even private clients are being introduced to the idea of the electronic provision of goods (Tesco's Ealing experiment) and banking (Royal Bank of Scotland Internet Banking) so that inevitably there will be pressure for the provision of legal services in a similar manner. There is no reason in principle why lawyers should not correspond with their clients electronically, and given the achievement of the paperless office their clients could have direct access to "their" file. This will have advantages for the lawyer in that there should be fewer phone calls asking "What is happening on my matter"? Clients will be able to look at their file and see for themselves. There will be less need to pump out standard letters reporting on progress (that the clients might not even want). Standard client care letters can be reduced to a minimum because, when the client is interested, he can look at the file for himself. Such a system will also create a self disciplining procedure for the solicitor with an inherent encouragement to keep work up-to-date, since if the client can look at the file, the solicitor cannot answer any query with a bland "oh there's a letter in the post to you dealing with that very point".

## **2.4 Lawyers Use of Technology**

### **Changing workforce**

Contrary to popular belief, lawyers do retire and new entrants to the profession include some who have grown up with a keyboard in their cots. Nowadays there are fewer senior partners trying to Snowpake words on a VDU, or shredding valuable documents because what they thought was a photocopier was in fact a shredder, or resending faxes because when the original emerged from the machine they thought that their machine had failed to turn the sheet into a fine thread which could be forced along a telephone wire and reconstituted as an A4 piece of paper by the machine at the other end.

The current generation of lawyers has become accustomed to the use of Information Technology. It is now not uncommon for every fee earner in a firm to have a screen on their desks and very soon this will be the norm. But a screen is rather like a telephone. It can be used to obtain a variety of different services and once a lawyer has gone beyond word processing, diarying, and internal E-mail, he's soon into databases, external E-mail, text retrieval, the Web and litigation support, to name but part of what he is able to easily access. Increasing miniaturisation, and with it portability, means that whereas in the past a lawyer might feel comfortable leaving his office with a few papers, a bit of red tape, a notebook, a few pens and Every Man's Home Lawyer bound to look as if it were a law report, he now feels unhappy unless he has a cellular telephone, a laptop with a built in CD drive and Modem, plus a printer. All this is so portable compared with the versions available five years ago, that it can easily fit in a Pilot Box with room to spare for a few sandwiches.

## **2.5 Re-engineering the process**

### **Making changes**

In the 1980s lawyers were insisting on the provision of printers able to take brief size paper (roughly double the width of A4) because briefs and Instructions to Counsel were typed on it. They very quickly dropped that requirement and adopted standard A4 paper. There have been similar developments since then, as lawyers have realised that it is far better to re-design their method of working to produce a better manual system and computerise that, than computerise a bad method of working. In some instances, they have re-designed their manual systems in order to take advantage of facilities which computers offer.

### **Woolf**

The likelihood is that if the Woolf recommendations are implemented then lawyers who do not currently have case management systems will be better off if they acquire them and existing systems will need modification to make them "Woolf Compliant". It is true that Woolf Compliance will not inevitably drive lawyers to introducing technology, but the pressure to do so in order to gain efficiency and become more profitable is already there. Add to that the client perception of the "Quill Pen Firm", the need to meet franchise standards, and the possible imposition of minimum standards by the legal profession itself, and the urge to computerise will become irresistible.

## **3 The Effect of These Trends**

### **Offices**

The legal office as we know it could become a thing of the past particularly if expected developments in video conferencing and the introduction of video phones proceed as expected.

### **Data Transmission**

Developments in data storage and transmission are such that as the cost of disk space decreases it will become possible to hold locally all the material a user requires, and update the material rapidly from a central file server. All this will be done in the knowledge that a security copy of the data is being automatically prepared on the central system.

### **Libraries**

The conventional office library will not be required because all publications will be available in electronic format. Indeed, as the music CD has replaced the vinyl LP, so the conventionally printed work is likely to be consigned to the museum along with the printing press. This will however only happen when electronic text becomes as portable and easy to read as a paperback book.

### **Home Working**

There will be no need for lawyers to come to the office every day, but only when they choose to do so in order to be physically in the presence of colleagues or clients. For all other purposes they will be able to work efficiently from home. Office premises will therefore become much smaller and money saved on them may be employed in making them more comfortable for the few staff who need to be there on a daily basis. There will be no need for archive space since the paperless office will mean that paper copies of original documents can be held, if at all, at a remote location from where they can be retrieved automatically by robots and despatched to wherever required.

### **Out sourcing**

Offices will not need space for the main computer equipment to be located alongside the users, since screens on desks will be powered from a centralised system situated in a remote location. For the larger firms these will be directly owned facilities - although their running may be out-sourced. Smaller firms may jointly own mainframes with similar sized firms, or buy time on commercially owned mainframes - or stick to the current PC networks. Firms might run their networks around the clock with the systems being used in the day by one team of lawyers and at night perhaps by a second team serving criminal clients appearing at night courts.

### **Virtual firms**

Lawyers should ask themselves whether they need an office at all. Some may not. The existence of sets of chambers as we know them now or firms of solicitors as they operate at present, may no longer continue. There may be virtual offices wherever the lawyer is physically present with the necessary tools such as the computer terminal, electrical and telephone sockets, (although both may be available via wireless systems). There may be virtual firms or virtual sets of chambers which consist of a loose commercial arrangement for sharing work and facilities without the need to share premises - which might indeed be rented when needed, as conference or meeting rooms at airports are currently rented.

Whether lawyers will be happy to work on their own for much of the time remains to be seen. It might also be difficult to train new entrants to the profession under these kind of working arrangements.

### **Office of the future**

Lawyers can exist in a kind of legal vacuum, but I would suggest that the best lawyers operate as teams and learn from each other. If the electronic office of the future proves to be conducive to team working, then lawyers may switch from their present type of offices. If not, then despite their disadvantages, lawyers will continue to work in offices which are similar to those they work in today - but with some very significant differences. There will be fewer people employed, there will be no fax machines, less cabling since there will be wireless networks running telephone and computer systems. There will be no keyboards, screens will be larger but very different in character and printers will have changed dramatically and double up as photocopiers. There will be far less demand for photocopies. Workers in the paperless office will construct copies for electronic files by telling the system what documents are required for a particular electronic file, so that when the file is opened the system will retrieve the required images from wherever they are stored in order to assemble the file which has no "real" existence. Such physical copies as may be required - perhaps for passing to a client who lives in rural Cardiganshire out of range of cellular telephony and the national grid - will be made by printing off copies from the electronic file. Large print rooms filled with high volume copiers will cease to exist.

### **The improved product**

There is no doubt that the changes in technology will result in a better delivered service to a well informed client. Better because it will be faster, with documents having fewer errors in them, and the product will have been devised by a lawyer with sufficient time to produce a well thought out solution. Paradoxically, rather like the deliberate insertion of egg shell into dishes made from dried eggs in order to fool eaters into believing they are eating food made from real eggs, some people are inserting deliberate typing errors into system generated documents, to give clients the impression that they are receiving individual one-off letters.

### **Negligence**

As a result of the introduction of Case Management systems there should be fewer negligence claims since the systems are designed to issue warning bells if an appropriate step is not taken at the proper time. System designers will need to try and make it easier for a rogue lawyer to perform a task than cover up the fact that he has not done so, but all systems can be ignored and if, for example, there is a flaw in a Will writing system, there may be a flaw in every Will that it produces. Quite a danger - but one which has existed ever since lawyers started using precedent books.

### **Charges**

The cost paid by clients for the provision to them of legal services is dictated by a number of factors which include the real cost of providing those services, the cost of the underlying technology, what the market will bear, what the competition is charging and how much the lawyer needs the work. Technology should enable the lawyer to provide legal services at a lower cost, but this will not necessarily result in reduced client bills.

### **Disincentives**

There are some positive disincentives in the current charging arrangements which mitigate against the introduction of technology. Lawyers have been busily educating their clients to pay fees related to the time involved in carrying out the

work and clients would expect to pay less for machine provided services. As lawyers we need to ensure that, as with the price paid for a car part of the cost relates to the provision of plant necessary to produce the vehicle shell, so too part of the remuneration for defending serious and complex criminal proceedings must include the cost of creating a database of documents and witness statements and of the acquisition of the underlying hardware and software. Plus the support staff necessary to ensure that the system works for the lawyer ..... and the cost of keeping the system intact for 18 years in the event that the initial defence is not successful.

### **Other Agencies**

The same technology which will drive changes in lawyers working patterns will probably also be driving changes in the working patterns of other agencies with which lawyers interact. Already the Land Registry permits lawyers to communicate with it electronically in order to obtain a variety of services. Ultimately this must become a two way process. When the increasing literacy of the population made it possible, signatures replaced seals as a method of authenticating documents. There would seem no reason why, subject to appropriate safeguards, electronic signatures should not soon replace written ones. This would clear the way for the creation and transmission of electronic documents in land transactions and perhaps allow the automatic registration of land transactions. This type of automation of a legal process is likely to be repeated in other areas linked to the work of lawyers, and as systems are introduced into law offices to replace humans, they must also dovetail into other systems allowing a piece of information originating in one sphere to flow across system boundaries without human intervention.

### **Fraud**

All systems will, as now, be open to fraud and abuse. Society will need to ensure that, so far as possible, it keeps one step ahead of criminals. This is nothing new.

### **Solving the housing crisis**

As lawyers will not need to be in their offices every day, and will not need access to paper; staplers, paper clips and the like will be a thing of the past. We will not need drawers to house them, and we may not need desks. Desks, if they survive, will be neutral, in the sense of not being "owned" by any individual. Lawyers will simply book a desk together with any other facilities they require, for the period of time that they need them. We might find offices being converted into living accommodation in the way that docklands warehouses in Inner London have recently been transformed. Our housing crisis could be solved overnight by Information Technology and we could be left with the odd situation of people living in our inner cities not because they need to do so in order to be close to their place of work, but because it will be cheaper to live in a flat in a converted former office building in Inner London than it will be to live in a renovated farmhouse in North Yorkshire.

## **4 Drawing Together These Threads**

It is perhaps a little easier to see where these trends are taking us if we look at a two situations rather than consider the potential for change in isolation. I have selected:

### **A Bail Application**

A bench considering a bail application will know a defendants record which will be obtained direct from a central registry and that record will be identified as uniquely that of the individual. There will be no possibility of error and the record itself will have been automatically updated by any court imposing any sentence without the need for a piece of paper passing any court boundary. Indeed there will be no paper of any kind in court since every item of information which the court requires to make an informed decision will be available electronically.

An expert system will be available to the bench linked to a database of offences and specifically to the offence(s) with which the defendant is charged so that the bench will be absolutely clear of their powers and there will be no possibility of a bench getting the law wrong, or failing to exercise powers available to them. The expert system will also include the local benches normal guidelines and conditions aimed at achieving a sensible outcome of the application in the light of all circumstances, including relevant local factors.

Such an expert system would also be available to all other agencies involved in the application who would thus have a better idea of the likely result of the application and be better prepared for it. For example, those responsible for bail support schemes might be warned that a particular applicant was highly likely to be refused bail but might get conditional bail if a bail support package was available. Armed with that knowledge the bail support officer would be available to construct a specific support package and would be assisted in so doing by being able to contact those responsible for running bail hostels and work schemes, in order to quickly ensure that the elements required for the

package were available.

Having made the decision the bail notice would be automatically printed out in court and handed to the individual without the need for them to wait whilst the form was hand written. The bail announcement would be made by the Court in an appropriate form without the need for the clerk to prompt for the appropriate sections of the Bail Act applicable to the decision to be announced.

The Bail Notice would update the court records and complete a diary listing entry for the next hearing. As part of that process the system would check that there would be time available on the next selected day, or make an appropriate adjustment in the light of the courts powers and the availability of everyone concerned - which it would have automatically acquired from their declared public diaries. Should the bail notice include prohibitions on entering particular areas or reporting to police requirements or curfews, all these would be entered in the court records and passed to other relevant agencies.

#### **An application for the variation of a Contact Order**

A court hearing such an application would have available to it all the "papers" filed in the previous hearing and the courts expert system would have checked that everything necessary to be done before the days hearing had been done. There would also have been conducted an electronic pre-hearing review in order to remind the parties what would be required of them on the day of the court hearing.

An expert system would be available to those conducting the hearing to remind them of the key factors which would need to be established during the course of the hearing and which would guide them through their decision making process at the end of the proceedings. Such a system would guide the preparation of the written record of the adjudication and would check that the record was both accurate and covered all matters which the law requires it to cover.

The system would prepare and transmit the decision to the parties and would take any other action required by the decision, including informing anyone else who needed to know the outcome of the hearing.

Neither of the systems - for Bail or Contact - would provide for the cost of legal representation in Court, since advocates and clients would be "present" only via a video link.