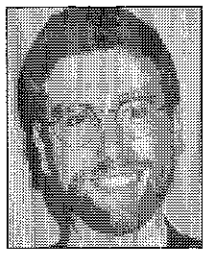
Legal Publishing in 2001



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2001 is only five years away, but it is becoming a truism that time, in terms of electronic publishing at least, is moving at a rate different to the days, months and years we are naturally familiar with Both Bill Gates and the head of IBM are now saying that there are three "Net" years for every natural year - things are moving just that fast. So on that basis 2001 is not five, but fifteen net years in the future So what I intend to do today is make some broad predictions - most of which I hope will be more science than fiction. I hope that everyone here will have the delicacy to not quote these back to me in a year's time. Because I am sure I will be embarrassed if you do.

First I would make one key prediction that will shape the rest of what I have to say. Over eighty per cent of our legal information needs in 2001 will be met by electronic means. That means that only on rare occasions will you turn to a paper publications for information. I would also predict that for you as information professionals the percentage of your needs that will be met electronically will be even higher. This key fact that electronic publishing will dominate information delivery in 2001 underlies everything I have to say today There is no question in my mind that the shape of the legal publishing industry will change due to the impact of electronic publishing.

Why do I say that eighty per cent of information needs will be met electronically in 2001 ?

First, most primary materials will be made available directly by their producers. Legislation will be made available by the various governments and cases will be made available by the courts More modern methods of authoring will ensure that online Internet access to both legislation and cases will be much, much faster than we see today. I should stress, that while I think the materials will be made available direct from source, what I am not so sure of is that either (a) it will be in a consistent format or (b) that it will have much functionality built in with it. In my daily routine I deal constantly with the courts and various governments regarding cases and legislation and, at the moment, there is absolutely no consistency in their approach to electronic delivery - or paper delivery for that matter.

Another thing I would stress is that, as I see it, the information will, and must, come direct from the courts and governments It will not be exclusively published through an intermediary such as AustLII Access to primary legal materials direct from source will not impact on the large publishers so much as on the small publishers. This is simply because the big publishers have always concentrated on value-added publishing, not the publication of primary materials. So the big three publishers will still be around and thriving - to greater or lesser extents Small publishers, to survive, will have to concentrate on becoming highly regarded specialists in niche areas Certainly the electronic provision of legislation and cases alone will not be a viable business

For the big publishers part they will have to concentrate even more and more on value adding. This added value will take three forms. First, the traditional addition of authorial and editorial value Second, electronic added value through advanced search mechanisms and interfaces. Finally, the value of bringing disparate information sources into one searchable database And this adding of value brings me rather nicely to a new subject While the changing nature of the industry is interesting, equally interesting to me at least, is the changing nature of the way in which we will publish and the way in which you will access what we publish - and of course the two are inextricably intertwined

So let us imagine we are magically moved forward in time to the year 2001.

Communicating with your computer

Talking to your computer will become the norm, there is simply no question in my mind about this one.

There is a constant pressure now for computers to get smaller and more portable. Simultaneously, the processing power of computers is growing exponentially The greatest limiting factors on the size of a computer are the keyboard and the screen - for both of these bigger is better, while for the rest of the computer smaller is better. While there have been a number of efforts to find clever ways of bypassing this problem, such as the IBM butterfly keyboard, the fundamental answer is to approach the problem differently. And so over the coming years we will see entirely new methods of communicating with our computers.

One approach would be to get rid of the keyboard and to use handwriting recognition The Apple Newton was a good first attempt at this However this still leaves us with the screen size as a problem and the fact that even when writing by hand most of us like to have a A4 page to write on

There is really only one viable solution in the long term and that is that we end up talking to our computer and telling it what to do. There are already a number of programs on the market that enable your computer to respond to voice commands. Most — mean — talking —like — this IBM has recently announced a new generation of voice recognition software that can apparently respond to natural speaking speeds, and it is well known that the military has been using voice commands effectively with computers for some time now

So we will be talking to our computers, which is by far the most effective means of us communicating our thoughts - short of some sort of direct mind link, but that will not happen in five years time. But how will the computer communicate with us? It may talk back to us, but we also need some visual response. Certainly there will be little point in your computer talking back to you for anything but the purpose of conveying trivial information - for most purposes a visual response is essential - which leaves us needing a screen of some sort.

One of the more common ideas now is that we will all wear glasses. These glasses have a tiny screen built in to them. The idea is that if you want to make the screen smaller you will need to bring it nearer to the eye.

A more distant solution lies in your computer projecting on the nearest wall or even holographically into space. This latter idea is generally considered to have the greatest appeal and has been achieved under laboratory conditions - but the set up costs about $100 million and takes twenty PhD students to put together, so it will probably not be commercially viable for some time yet.

One of the interesting side effects of talking to your computer and having it respond to you, according to all the best science fiction authors, is that your computer will have to have a personality. People think better when talking to a 'real' person than to an inanimate object. I think that there will be PhD students in psychology writing theses on people's choice of personality for their computer.

Searching

For the next couple of years the changes in searching will, I predict, centre on two concepts.

The first is natural language searching. Natural language searching, of course, involves searchers phrasing their search criteria in a natural fashion: for example 'what was the name of the case which Smith J heard in December last year'. The computer then does all the hard stuff behind the scenes and converts that into a sensible Boolean search.

This sort of technology is getting better and better and much of its current limitation lies in inadequacy of computer processing power rather than interpretative algorithms. The boom in the Internet will only further the impetus towards natural language searching. At the moment the best way to make money out of the Internet is to provide popular searching facilities and charge to place advertising on them. Which is why so many companies are investing heavily in easier and more effective search methods. It is also worth noting that clearly natural language searching ties in closely with our ability to talk to our computers.

The second, and closely related concept is how results are presented to us. At the moment we are still wedded closely to paper-base concepts of information retrieval and display. We use table of contents and lists of hits, both things far more suited to paper than to the flexibility and power of electronic delivery. I believe that over the next few years we will increasingly see information, and in particular search results, represented three dimensionally.

At a simple level this means the representation of search results in a sort of flow chart fashion. Imagine that you perform a search on a particular concept. Many search packages can already give you back the results with a ranking, so that you see the most important results at the top of the list (and in that regard I recommend the Excite search engine to anyone using the Internet). But what is presented is a simple list with percentages beside, to indicate in descending order how closely the hit fulfils your search criteria.

Imagine instead that the results are presented more like a flow chart. At the top and in the centre are those hits that most closely match your search criteria. Connected on the same level but increasingly distant are hits that convey the same information in a slightly different way. Then trickling down the page are hits which are related but less fully fulfil your search criteria. In some ways, what you get is a mini-map of the information you are interested in, showing the relationships between the various elements in that information. You can then take this to its next step and it is here that we get into the stuff of all good science fiction books and movies. In most science fiction books, and many serious books, which talk about information display in the future, information is displayed like a topographic map of the world, with various databases represented by mountains and hills in the foreground and roads showing the connections between them. It is arguable that this sort of representation of the Internet would be more intuitive to navigate that the current document-based methods we use today.

This future of data representation is best summed up in the cyberpunk books of William Gibson where various agglomerations of data such as companies, libraries, databases etc are represented by geometric shapes in the nether world of the Net. This all may seen unlikely until you consider that much information cannot be represented linearly. At the moment much of our information is simply an electronic production of paper versions. But what about when you have a choice during a search between a paper written by someone, or a radio interview, or the video of a lecture given at a university. How do you represent all these various media in a searchable and navigable format? Certainly a linear approach quickly becomes inadequate.

Who will search

So you are talking to your computer in natural language and getting results sent back to you in new formats. What's the next step? Yup, the computer will do the work for you.

This is everyone's dream about computers the fundamental life-changing moment when you can leave work at night after asking the computer to prepare a report on the new piece of legislation and come back the next morning to a completed report. In other words, the computer as a true intelligent assistant. I think it is interesting that there is a deep-rooted feeling amongst many people that computers ought to change their lives - it is this feeling which Microsoft's advertising aims at

In most cases the reality is disappointing, with current computers not being nearly smart enough to do more than help out occasionally. While fully intelligent assistants are some way off, intelligent software agents are already starting to appear under one guise or another. I can give you two simple examples that I use daily. The first is the autocorrect function on my wordprocessor. I could well be the world's worst typist, my fingers invariably hit more keys than I intend. I have now trained the autocorrect function on my word processor to correct my common typos as I make them.

Another example of low level agents is in my email system. I have a new email system which monitors my mail while I am out of the office. Right now it is monitoring and filtering my emails. Emails from certain people are automatically forwarded to others in Butterworths and messages containing certain words, especially the word 'urgent' are automatically forwarded to my secretary for her to phone me and tell me what the problem is.

Intelligent software agents will become more prevalent and searching is one of the areas that they will particularly dominate. These babies will take your search criteria and go out to the Internet and collect information which matches your criteria. There are several examples available today. The ones I have been reading a lot about recently, but have not had a chance to try yet, can be found at www.agentware.com. The best sort of software agent will learn from its user. Not only will it go out and find information based not only on a set of search terms but on related concepts, but it will learn from you that certain sorts of fits are more appropriate than others. So that over time the agent will become more and more proficient at finding information which exactly meets your criteria. Intelligent software agents will become increasingly intelligent over the next few years. There is already much talk about giving software agents delegated authority so that they can roam not only free Internet information but also commercial information. You might, for example, set your agent the task of compiling a report on road traffic laws in the UK and give it a budget of $200. Because you have trained it over time it knows where it can best spend the money.

I was talking to a few people about this at work the other day and they were horrified at the idea of this level of intelligence in a software program. I think that it is important to stress here, that as I see things at least, an intelligent software agent will always need an owner or handler. I liken the agent to a well-trained police dog. It will be able to respond quickly and accurately to complex commands, but at the end of the day is useless without its handler to make the serious decisions. A software searching agent's handler must be an information professional. I can, however, see a day when in applying for a job not only will your CV be relevant but that of your electronic agent as well. People will own their own agents and work with them and move jobs with them. Well trained agents with effective owners will become a hot commodity, with the best of them being impossible to buy, only to rent with their owner.

The medium

There is only one answer here and that is online. It is hard to conceive of a future in which in twenty years time anyone is using a CD-ROM. Paper will still be around but CD-ROMs will not. Sure, CD technology is getting better. The next generation of CD-ROMs will hold four times as much data as today's and a 16 speed CD player has just been released on to the market. But what's the point when an online system can hold unlimited amounts of information and when, very soon, mobile modems will be built into every PC.

People argue that there will still be a place for CD-ROMs. I really cannot see that. Already there is little that you can do on a CD-ROM that you cannot do online. Even the high-bandwidth things like multimedia movies are now available over the Internet at speeds approaching acceptable. For the next five years CD-ROMs will still have a place, but for 2001 onwards the decline of the CD empire will be dramatic.

The question then becomes: does online mean the Internet? Again the answers here are different looking five years ahead to looking ten years ahead. The danger facing the Internet is simply one of congestion. First, the telephone lines are getting congested. Lines designed to be used in short bursts to transmit chunks of text are suddenly being used constantly to transmit pictures, audio and video. The Internet can be slow unless you are prepared to pay for speed and may well become slower. On the other side of this coin lies high speed connections. In the US you can now rent ISDN lines for the same price as normal telephone lines. Australia's use of the Internet will remain limited until Telstra gets its finger out of the pie and drops the price of high speed lines here. And if they don't we will all be using the fibre-optic connections for our cable TV to do the job. So there is telecommunications congestion on the Net, but it is a problem that can be addressed.

But what about information congestion? I must admit that I find the Internet a frustrating place to search. There are gems of information out there but they are hidden amongst great piles of dross. The dross can range from marginally useful information, to something which just mentions the information you are interested in, to the grossly misleading. Much of the dross has no provenance and you have no way of knowing how safe it is to use. Every advance in searching capacity is matched by an advance making it easier to publish on the Internet. Right now I would say the dross is winning the war.

So where does that take us? I think the future lies with the Internet as a method of accessing information but I don't think it lies with the anarchic Internet we know today. I think that most searching will be done within the safer confines of Internet enclaves run by the big publishing companies and by concerns such as Microsoft. The information in these Internet islands will be guaranteed, you will know that what you are searching is dependable and it will be configured to make searching easier. It will also be customised for the user.

Customisation

The other big change in the way information is presented will be in customisation We can see the beginnings of this already in electronic publishing. On paper, when you make a design decision about how information will be presented, you can be sure that that is exactly how the reader will see the information. That's not true electronically.

The reader's computer may not display the font or the colour that you have chosen; the size of their display might mean that your beautifully laid out data is suddenly all squashed together. The reader often has the ability to customise the environment as well by changing toolbars and the views of things like tables of contents. From the publisher's point of view this flexibility can be a nightmare From the user's point of view it puts you much more in control of what you see and how you see it

I believe that in the future much greater levels of customisation will be the norm, some things we publishers will try to maintain as constants, when they are integral to the way we present information, but many other things such as the environment in which you are presented with information, will be your choice. One good example of this already is the Microsoft Network on the Internet There you can customise your own start page so that it, for example, always shows you the local weather (if you live anywhere in the US at least). It would be fairly easy to see a scenario where you can log onto Publisher X's site on the Internet see the law firm Y view of that site - a view which may be markedly different from that seen by your colleague in a different firm down the street, not least because it interconnects with some of law firm Y's internal data - for example the precedent bank. This customisation of access will be one of the value added areas that publishers will provide.

Conclusion

This subject is bigger than both of us I think we will see dramatic changes in the next five years in the way in which we access information and the way in which information is presented to us. These changes will centre on the way we communicate with our computers and they communicate with us - in particular in terms of natural language searching and the presentation of results. We will see far greater use of intelligent software agents to aid searching. And we will see information customised for the particular reader.

That is what we will see in 2001 Or then again maybe it is not. I do not believe that knowing what will happen is the solution to the speed of change facing us The solution lies in ensuring that as individuals and as organisations, we retain the flexibility to react to that change, whatever it may be