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INFORMATION TECHNOLOGY WEEK COMMITTEE

LAW AND TECHNOLOGY SEMINAR

25 AUGUST 1983, BRISBANE

LAW AND TECHNOLOGY : SUCCESS AND FAILURE

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The Hon Mr Justice M D Kirby CMG
Chairman of the Australian Law Reform Commission

SETTING THE SCENE

I must first explain how I developed an interest in technology. I note, at the outset, that my assigned topic is 'Law and Technology'. However, I assume that you are interested to hear of my involvement in information technology — rather than technology generally.

A common thread that has run through most of the references given by successive Attorneys-General to the Australian Law Reform Commission has been the impact of technology on the law. It is one of the four forces for change which I have identified as justifying permanent law reforming institutions. If I just mention the reports of the Commission and the current projects before us, you will understand what I mean:

* Criminal Investigation (ALRC 2). Sound recording of confessions to police. Photography and videotaping of identity parades.
* Alcohol, Drugs and Driving (ALRC 4). Modern Breathalyzers to test intoxication. Additional procedures for scientific testing of intoxication other than by alcohol.
* Human Tissue Transplants (ALRC 7). Immunology, biotechnology and the donation of organs and tissues from one person to another.
* Defamation (ALRC 11). The impact on the law of defamation of telecommunications, radio and television and telefacsimile and other means of distributing information rapidly through numerous jurisdictions throughout Australia.
* Privacy and the Census (ALRC 12). The computerisation of the Census.
* Sentencing of Federal Offenders (ALRC 15). The use of a computer in aid of sentencing guidelines to reduce disparities in sentencing by State officers of Federal offences.

* Privacy (ALRC 22). The impact on our privacy of computerisation of personal information and the impact of listening devices, facilities for telephonic interception, optical surveillance devices and other electronic means of intrusions
* Evidence Reference. The implications of computerisation of evidence tendered in court and the modification of the hearsay rule and other laws of evidence to facilitate the admission into evidence of material produced by or with the aid of technology — especially computers, microform, laser technology etc.
* Service and Execution of Process. The implications for the Federation legislation of service and execution of process of new and easier means of travel between the various jurisdictions of Australia, making some of the requirements for interstate service of court process inappropriate and unduly cumbersome.
* Contempt. The impact of the new electronic media on open discussion of matters before courts, commissions and tribunals, including the right of the community to be informed on matters of public interest, and to have legitimate criticism of the courts brought to notice.
* Admiralty Jurisdiction. The implications for Admiralty jurisdiction of new sea-borne modes of transport. For example, should hovercraft, sea planes and other such inventions now be brought within the Admiralty regime?

I could go on. But sufficient has been said to illustrate the simple proposition. We live in a time of mature science. When the history of our time is written it will be said that its most remarkable feature was the coincidence of three great scientific developments:

* The invention of the microchip
* The developments of biotechnology, and
* The discovery of nuclear fusion.

It is for this generation of lawyers to adapt the law, its personnel and techniques to the necessities of science and technology. This is a tremendous challenge. Of course, science and technology will provide many benefits for the law, for its personnel and therefore for the community. The question posed : 'Success or failure?' really requires no great elaboration. There will be success; because there must be success. Science is the great engine of our time. The law as a service industry will simply have to adapt.

There is so much that could be spoken of in a talk on my given theme. I do not propose to discuss

* the use of computers in the aid of the law;
* the modification of the substantive law to facilitate computerisation of administration;
* the development of computers to perform simple tasks of reasoning;
* the use of information technology to provide means of addressing courts, providing videotapes of testimony and so on.

These developments are just around the corner. Already:

* the Administrative Appeals Tribunal in Canberra is conducting telephone hearings.
* The Supreme Court of Canada is experimenting with teleconferencing procedures to permit leave applications to be made in Vancouver via the satellite to the Supreme Court of Canada in Ottawa.
* In the United States, criminal trials are now being conducted by putting together videotapes of evidence whose admissibility has previously been ruled upon.

These developments point the way ahead. We in Australia will not be immune from them.

I have chosen to speak about none of these matters. Instead I wish to return to a theme that has been a recurring Leitmotiv of mine. Fiftey percent of the fee incomes of lawyers in Australia are derived from land title conveyancing. This aspect of professional work is very largely the reason why we have lawyers in Ipswich and Bendigo, Bunbury and Coonabarabran. Land title conveyancing provides this talented professional group with its staple source of income. Land title conveyancing will be profoundly affected by the new information technology. That technology will change this vital and pervasive aspect of legal professional practice in Australia from an adverserial mode (as at present) to an administrative mode. Indeed, the process has already begun.

I will not address this theme at length. As may be known, it is a proposal that greatly disturbs and upsets my colleagues in the legal profession. In all truth I mention it again to alert the legal profession to the implications of the new technology for the profession. We must find other, productive, work for lawyers, suitable to their legal talents.

Instead, I propose to talk briefly about an associated question which I have also previously addressed. This is the urgent necessity, on the brink of land use data computerisation, to move towards a national plan for the transfer of land use data to compatible computer format which can be integrated and shared throughout the nation.

NOTHING NEW

There is nothing new in what I am to say. In three papers previously produced by me I expressed personal views about the need for urgent consideration of the establishment of a National Land Use Data Base. Alternatively, I proposed that urgent consideration should be given to the standardisation of land use data, as used in all Australian jurisdictions, so that, as computerisation of land use data proceeds in the various Federal, State and Local Government authorities having lawful responsibility for such data, it will do so in ways that can later be merged into compatible and integrated aggregate information.

The three papers in which this issue has been raised by me are:

* An address, 'Surveying and Law Reform' to the 22nd Australian Survey Congress, Hobart, 25 February 1980 (C.14/80)
* An address, 'Computers : Who is Concerned?' to the Annual Conference URPIS 10, The Australian and Urban Regional Information Systems Association, Sydney, 1 December 1982 (C.77/82)
* An address, 'Computerised Land Use Data — Mark II' to the NSW Registrar General's Seminar of Registrars of Title, 27 April 1983 (C.35/83).

On 11 July 1983, the Federal Minister for Science and Technology (the Hon Barry Jones MP) discussed the matter with me in Melbourne. He expressed interest and authorised discussions with his department. On 21 July 1983 the Department of Science and Technology, on the initiative of Dr John Bell, arranged a meeting in Canberra at which the author raised the issue with colleagues from relevant Commonwealth Departments and authorities.

OBJECT OF PROJECT

The object of the project I have in mind is to identify a national problem inherent in the Australian Federal system of government, as it relates to the computerisation of land use information that is proceeding rapidly in land use agencies at all levels of government in Australia. Under the Constitution, the Commonwealth Parliament does not have constitutional power to enact legislation requiring all State and Local Government authorities to submit to a single Commonwealth regime for the

computerisation of land use data. It is possible that by use of the Appropriation power, the Commonwealth could effectively achieve such a goal by offering the facility of a National Land Use Data Base to State and Local Government authorities. It is also possible that under s.96 of the Constitution the Commonwealth could impose relevant conditions upon grants in aid, relevant to standardisation of the computerisation of land use data. Commonwealth has other relevant constitutional powers, notably in relation to census and statistics (s.51 (xi)) and telecommunications (s.51(v)). However, funds are not readily available to launch a costly Commonwealth initiative. Despite the opportunity costs of ignoring the unrestricted and unco-ordinated computerisation of land use data, the costs of establishing a single National Data Base might not be warranted by the benefits thereby procured, having regard to the fact that concern with land is typically local.

Notwithstanding these points, the Commonwealth has its own legitimate concern about the present virtually completely unco-ordinated computerisation of land use data throughout Australia:

* Commonwealth authorities. A number of Commonwealth agencies have well established interests in the use of land throughout the nation. It will be inefficient and expensive if the computerisation of Federal land use data has to be developed in ways that differ significantly from State to State in order to be compatible with State and Local Government data bases.

* National responsibility. The Commonwealth has a legitimate interest to ensure the optimum use of data relevant to land throughout the nation. If the Commonwealth does not attend to this concern, local idiosyncracies will make subsequent achievement of compatability difficult, expensive or even impossible.

* Geocoding co-ordinated data. The Commonwealth already collects important land use data in the Australian Bureau of Statistics. If parcel data could be produced in standard categories (eg land use) in all States and if parcels were geo-coded to census collection districts, a great deal of beneficial use could be made by State and Local Government authorities of co-ordinated population, housing, manufacturing, retail and other data integrated with land use data. Such a co-ordination would greatly improve the development of national, State and local policy analyses. Access to such a computerised, co-ordinated, high resolution data base could possibly provide the 'bait' which could induce State and Local Government authorities in Australia to co-ordinate land use computerisation with a national standard. It might also encourage better planning of State and Local

Government activities within a national context and the better use for policy and national development purposes of information, present unco-ordinated and likely to remain so if computerisation of land use data proceeds without an appropriate national plan.

COMPUTERISED LAND INFORMATION SYSTEM

Just as the lawyers must accommodate the new information technology, so must all those involved in urban and regional development in Australia. Nothing has happened since my addresses in 1980, 1982 or 1983 to make the need for work towards a national land use data base at the least, co-ordinated standards and definitions less feasible or less urgent.

The technology does not stand in the way. Only our local obsessions, a lack of national vision and puny, parochial attitudes, limit the development of the common standards and definitions necessary to establish a land use data bank for Australia or the potential of an integrated system. A report of the Institution of Surveyors (N.S.W. Division) on the Information Needs of Surveyors in the 80's recorded that the incremental cost to land development that could be attributed to development delays as plans are put through the planning maze of multiple individual authorities, was something between $60 million and $120 million a year in New South Wales alone.[1] A national land use data bank into which was fed the relevant data and requirements of the various authorities of Commonwealth, State and Local Government, would not destroy the opportunity for local experimentation and variation. But it would inevitably reduce the mechanical costs of urban development, planning and home purchase and the delay inherent in the current checking procedures. In 1980 I pointed to our relatively small population, the widespread use of the Torrens System of land registration and technological expertise as advantages with which we start. There are, as I am aware, many practical and some legal obstacles which stand in the way of progress. They include different codes, different standards of measurement, different specific and local interests, different statutory definitions and so on. The authorities which keep land inventories are extremely numerous. And they tend to move slowly, cautiously and independently.

In 1980 I said, and in 1982 and April 1983 I repeated, that it will be a tragedy for our country if, on the brink of computerisation of the data of all of these various land authorities, they all decide to go and 'do it their way'. As long ago as 1975, when he was in Opposition, Mr Ralph Hunt called for a 'worthwhile attempt' to undertake a joint Federal/State land use survey to develop a 'national land use data bank, inventory and land use strategy'.[2] Unfortunately, when in government, Mr Hunt did not pursue this idea.

His 1975 call should be heeded. A report from New Zealand has revealed that the Government there has established a working party on computerised land information systems.[3] How much easier it is in New Zealand or England where the complexities of the Federal division of power can be ignored. That division will not go away in Australia and it must be squarely faced as a potential impediment for the early adoption of a cost saving national computerised land information system. The point I wish to repeat is that unless the initiative is taken soon, and at a Federal level, it will be extremely difficult later and much more costly to secure compatibility between the approaches taken in different States. The Commonwealth's Landsat Program would seem to offer a useful starting point for Federal leadership. Its data is consistent in scale and quality across the continent. There is repetitive coverage on a 16 day cycle permitting the data base to be regularly updated. Old data is safely archived. The next generation Landsat 1985 will permit accuracy to 10 metres. This would be adequate for a national grid suitable for domestic household lots. But whether it is Landsat, CSIRO or some other agency of the Commonwealth, a national lead is needed.

A major initiative has been taken in Western Australia in the Land Information Systems Support Centre of the Government of that State. Mr. Brian Humphries, a land information consultant directing the Computer Policy Committee said in April 1982 that his investigation had revealed that 475 man years a year was expended by government departments and the private sector in the mechanical task of retrieving information about land in Western Australia. Little wonder that the economies of computerisation are at last being recognised. The country as a whole, could take lessons from the Western Australian experience. These lessons would be:

* Institutional rivalries. Until institutional problems are resolved, rivalries settled and bureaucratic empires vacated, real progress cannot be made.

* Finding standards. There are many different types of land information systems. There is no system which of its nature could be described as 'a standard system'. The call for 'standards' applies to data exchanges between systems. To secure 'standards' it is necessary to have both the resolve and the authority to compromise and settle on what will be the 'standard'.

* Interesting politicians and key bureaucrats. To achieve this recognition, it is absolutely vital that elected officers of government address the complex institutional problems that exist. Without a commitment by the Executive Government, vested departmental interests will undoubtedly preclude rationalisation of land management systems. The problem is not to be solved, I believe, by the simple expedient of assigning the co-ordinating role to a land related department. Such departments are able to address the functional needs of a system. But of equal importance is the need for financial co-ordination (involving the Treasury), organisational co-ordination (involving the Public Service Board) and co-ordination of departmental politics (involving, normally, the Premier's officers).

* Agreeing on codes. To establish a national land use data bank of integrated systems it will be necessary to settle on a standard land use coding system. A recommendation for a coding land use system in Western Australia is now before the whole Australian community. Those who take the initiatives here will almost certainly offer leadership. Unless State Governments quickly recognise now the need to manage technological change it is likely that any technological development, regardless of how small it may be, will be a progressive constraint to national standards being possible, let alone adopted and implemented. The diversity of railway gauges in Australia which took the better part of a century to resolve and were than only resolved after much of time had passed the railways by, stand as a warning to us of what will happen if each State 'goes it alone' with its own homegrown land information system. I realise that the problems facing governments in connection with the introduction of computerised land information systems are complicated by the fact that the present manual systems have themselves never been planned as a homogenous or integrated operation. In many cases they are not even adequately described in a comprehensive single text. Accordingly, implementation of computerised land information systems require a number of steps to be taken:

  ** identification of the present manual system
  ** correction of anomalies and removal of duplications
  ** standardisation of fundamental tools such as street addresses
  ** computerisation of the data bank

Even when the decision of principle is made to move to computerisation, the problems facing governments remain problems of finance and commitment. A cost/benefit study undertaken of our present land information systems would show significant benefits to the community, in aggregate, from the move to computerisation of land use data. This study

has not been undertaken. The result is that computerised land information systems are just popping up by default in much the same way as the separate manual systems developed earlier. The same hunch that has led particular operators to move to automation, should, I believe, justify governments moving to an aggregate system. Certainly the Western Australian authorities have already reached the not too startling view that the highly labour-intensive, complex, slow, tedious system of checking land data we use at present, is, of its nature, susceptible to major cost savings by a move to computerisation.

A PROPOSAL : FINDING A 'METHODOLOGY OF COMPATIBILITY'

It is neither possible nor appropriate in a paper such as this to define finally the scope and nature of the problem nor to identify the best national ways of tackling it. Even within the Federal sphere itself, there is room for improvement. In Queensland recently I was told of two incompatible Federal land use systems which cannot be merged to provide composite land use information because one provides co-ordinates to a central point in given rectangles of land, whilst the other takes as its reference a point in the top right hand corner.

But if the problems as between Federal land use data bases are already significant, the growing problems of incompatible land use data bases at a State and Local Government level are more daunting. When I attended a seminar of Registrars of Title held in the New South Wales Registrar-General's Office in April 1983, I was informed of the Interdepartmental Committee on Computerisation established by the Government of New South Wales. However that committee is limited to Departments of State. It has no control over or representation of Local Government. And this is despite the major involvement of Local Government in land use data and the rapid computerisation of land use data in the Local Government sector.

Similar problems exist in the other States. However, in Queensland, legislation has enhanced the power of the Queensland Surveyor-General. He must now be informed before any agency of that State proceeds to computerisation of land use information. In this way, at least in Queensland, there is a single authority with adequate power to superintend and monitor developments of State agencies, department, authorities and Local Government bodies.

What is probaly needed, by agreement in co-ordination with the States, Territories and Commonwealth authorities is the establishment of a similar arrangement at a Federal level to ensure that all land use data, national, State and local is computerised according to:

* agreed definitions
* compatible systems
* compatible measurements and reference points
* compatible equipment.

The object should not be to depress or discourage computerisation or even local experimentation and difference. It should not be to impose rigid bureaucratic controls as agencies, big and small, pursue the goal of efficient information processing suitable to their own special and peculiar needs. But it should be the agreement on the methodology of compatibility, before it becomes too late or too expensive. The Commonwealth as guardian of the national interest and having its own legitimate interests in land use data, should take the lead. I hope that, under Mr Barry Jones' interested direction we will move towards developing a national approach to the computerisation of land use data in Australia. The dependence of so many lawyers on land title conveyancing indicates that there are few aspects of computerisation so important for the law in Australia as this. This fact only shows how vital it is that we should get this development right. It is happening. We should immeditely take control of events. At present events control us.

FOOTNOTES

* The views expressed are personal views only.

1. The Institution of Surveyors, Australia (NSW Division), Ad Hoc Committee investigating Information Needs of Surveyors in the 80s, 2nd major report, May 1977, 1-4.

2. R J Hunt, 'Rural Retreats' in Community, Vol 2 No 1, July 1975.

3. NZ Law Talk 161, 2 (3 November 1982).

4. Western Australia, Land Information Systems Support Centre, Land Information Systems, Management Summary, November 1982, mimeo.