

ODR – An Australian perspective on the digital divide

Dr Tania Sourdin

Professor of Law and Dispute Resolution
Director, Centre for the Study of the Professions
La Trobe University, Victoria, Australia

Introduction

Changing and emerging technologies have considerable relevance to the continuing evolution of ADR processes. At present, technology supplements and supports the operation of many dispute resolution processes. For example, videoconferencing, teleconferencing and email communication can supplement and support face-to-face ADR approaches. Also, many forms of ADR are currently carried out online using a variety of technological processes.¹ Whilst many web sites act as referral and information points² others provide online service and suggest that online ADR can have many benefits such as saving travel costs and keeping parties separate (particularly in domestic violence situations).³

However, there are issues about how participants in a dispute can access online alternatives – these are often referred to ‘digital divide’ issues – essentially the barrier separating those who can access online dispute resolution (ODR) options and those who for reasons of income, hardship, age, culture, gender, preference, geographical isolation, disability – cannot. These issues have become increasingly important in terms of a global view of ODR use, as well as when one considers ODR use in developed countries where digital divide issues can disempower whole segments of the population. This is less of an issue when ODR is used to deal with disputes relating to transactions or relationships that have been established online. However, as ODR expands to deal with or support dispute resolution in disputes that have arisen offline – the digital divide issues become more significant and problematic. This paper considers emergent digital divide issues in Australia by exploring general ODR issues before turning to specific limitations by reference to digital divide characteristics.

The impact of changing technologies

At the outset it should be noted that the digital divide is not static or fixed. It shifts as the demographics of the population change. Changing technology also may impact by making technology more affordable and more responsive to user needs. For example, in 2001 the National Alternative Dispute Resolution Advisory Council

¹. Alan C Tidwell ‘Handling disputes in cyberspace’ (1996) 7 *Australian Dispute Resolution Journal* 245. For an example of a web site offering dispute resolution services, see The Virtual Magistrate at <http://vmag.vcilp.org/>, which provides arbitration and fact-finding services for disputes involving users of on-line systems, people harmed by wrongful messages and system operators.

². For example, <<http://www.mediate.com/aba/abaout.cfm>> 23 June 2004.

³. See <<http://www.law.vill.edu/ncair/disres/granat.htm#top>> (27 January 1998).

(NADRAC) prepared a paper in respect of issues that are raised by online ADR⁴. Clearly, the utility of and access to different technologies depends in part upon the ADR processes used. As different technology forms are evolving, the advantages of technological processes are being reassessed. For example, as NADRAC has noted, sensory data – such as material relating to touch, smell and taste – can now be transmitted electronically and this can have a capacity to impact upon access to various forms of ODR as well as technologically supported ADR.

Improvements to video conferencing technology and the possibility of enhanced 3D technology mean that these forms of technology are likely to play a greater role in facilitative forms of ADR. However, flat written dialogue seems incompatible with most facilitative forms of ADR, where communication skills and the opportunity for interaction are of particular importance.⁵ Boule has also raised the possibility that one day, virtual mediation might occur – that is, software could be developed to enable a computer to listen, acknowledge, define disputes, mutually reframe and encourage settlement.⁶

Technology can also assist to support negotiation and mediation processes. One area where this has occurred is in resource disputes. A system called Siro Med creates a computerised issue focused database that can assist stakeholders and governments make decisions in a mediation context.⁷ The system is said to support mediation because it encourages a wide range of plans and therefore the development of a consensus plan. Such emergent technologies have a capacity to impact upon the digital divide by reducing some barriers or by using technology to support and extend existing processes. In contrast to the traditional rational decision-making approaches (that are discussed below), the program is designed to encourage the development and refinement of a number of alternatives (rather than producing one outcome).

Type of ADR process used

People oriented processes

Technological opportunities may also vary according to the 'type' of ADR process used. For example, many activities in facilitative (rather than advisory or determinative) ADR processes are 'people' activities.⁸ One author has noted 'nuances of expression, timing, communication, framing of persuasion often make the difference between success and failure in bargaining and mediation.'⁹ Where facilitative processes are concerned, many technological advances have been said to fail because there are real barriers in understanding another party without a face-to-face communication opportunity.

⁴ National Alternative Dispute Resolution Advisory Council, Online ADR – Background paper (Canberra, Attorney-General's Department, January 2001).

⁵ See also L Boule, Options for cyber- med, ADR Bulletin 1 (10) April 1999 at 128.

⁶ L Boule, Options for cyber- med, ADR Bulletin 1 (10) April 1999 at 128, 129.

⁷ J Ive and D Cocks, Siro Med: Bringing Information-Based Mediation Support to Natural Resource Allocation, (1999) August, *Australasian Dispute Resolution Journal*, at 166.

⁸ See S Hardy, Online Mediation: Internet Dispute Resolution, (1998) 10, *Australian Dispute Resolution Journal*, 216.

⁹ S Hardy, Online Mediation: Internet Dispute Resolution, (1998) 10, *Australian Dispute Resolution Journal*, 216 – referring to G R Shell, Computer assisted negotiation and mediation, where we are and where we are going? (1995) *Negotiation Journal*, 117.

Reframing is also an essential part of most facilitative processes and this can be difficult if technological processes that use written communication (such as email and chat room technology) are used.

Another barrier where face-to-face contact does not occur and exchanges are through written communication is that the communication styles '...may be more polemic and oppositional, as conciliatory or inclusive statements tend to be ignored. This may also reflect a more 'masculine' communication style on the Internet.'¹⁰

An issue for many ADR practitioners also relates to the emotional barriers that may arise (or not be removed) with technological processes. Technological processes vary greatly and there may be capacity for useful videoconferencing that enables non-verbal queues to be exposed. However, a lack of familiarity with technology (this could involve the third party neutral and/or all of the parties) and discomfort with technology may result in the parties being unable to adequately express their emotions and feelings. Online mediation has often been trialled as shuttle mediation where emails are shuttled backwards and forwards with comments being made by a mediator. This form of shuttle mediation has been the subject of some criticism in the United States where it has been more extensively used.¹¹ However it has been noted that improving chat room technology allows for greater experimentation in negotiation and dispute resolution. For example, it has been suggested that the online mediation program, 'Disputemanager.com', launched on 31 July 2002 in Singapore, enables further experimentation. The program was designed to use IT and E-Commerce (vital parts of the Singapore economy) to facilitate the need for long-distance mediation between disputing parties.¹²

On line advisory and determinative processes

There are many examples of online ADR advisory and determinative processes. The technology used is often email and chat room based, and bidding processes are used extensively. Settlement Online Systems (SOS)¹³ is one Australian example where the parties submit 'double blind' bids in three rounds of offers to enable settlements to occur in a range of disputes. This process utilises more secure email communication techniques.

Another example is the creation of a virtual courtroom in Sydney that hosts arbitration proceedings. The Virtual Court was launched in November 2000 and has online capacity as well as an in-house facility for evidence management.¹⁴ Extensions of the underlying principles appear at www.i-courthouse.com.

¹⁰ National Alternative Dispute Resolution Advisory Council, Online ADR – Background paper (Canberra, Attorney-- General's Department, January 2001), 6.

¹¹ D King, Internet Mediation – A Summary, (2000) August, Australasian Dispute Resolution Journal, 180.

¹² Jhuen Weng Goon, Unpublished Paper, Cultural Insights: A Brief Look at Mediation Practices in Singapore, 2004

¹³ < www.settlementonlinesystems.com.au > 2001

¹⁴ National Alternative Dispute Resolution Advisory Council, Online ADR – Background paper (Canberra, Attorney- General's Department, January 2001), 8.

The Online Ombudsman is an example in the United States that has been set up by the University of Massachusetts. Here, a confidential, disinterested third party neutral is provided online.¹⁵ Other programs are primarily directed at disputes that have arisen in online transactions. The Virtual Magistrate Project¹⁶ was another example that provided for online consensual arbitration that is governed by a range of groups.¹⁷ Parties needed to agree to be part of the arbitration and the decisions were not enforceable.¹⁸ More recent iterations include www.smartsettle.com and www.ecodir.org.

Sturzaker considers that these and other online systems have a number of advantages. These include:

- The ability to transfer large quantities of information quickly and at low cost
- Parties can communicate interactively without being physically present
- There is a reduction in delay
- Documents can be readily accessed.¹⁹

Artificial Intelligence

There are other dispute resolution schemes that are emerging in response to technological developments. Artificial Legal Intelligence (ALI) can be viewed as a form of dispute resolution or a system that has the capacity to render expert advice or decision-making. Artificial Intelligence (AI) refers to computer systems that perform tasks and/or solve problems that usually require human intelligence.²⁰ The processes have emerged over the past 50 years²¹ and have been directed at technical as well as legal analysis.²² These processes and systems have the capacity to be blended with existing adjudicatory or non-adjudicatory processes. However it is most probable that these benefits will be greatest where determinative and advisory processes are concerned.

¹⁵ R Georges Dispute Settlement in Cyberspace <www.futurelawyer.com/display.phtml?c=futurelaw0512.html> 2002

¹⁶ The Project was designed to be an online arbitration and fact-finding system for disputes involving users of online systems; those harmed by wrongful messages and system operators (to the extent to which complaints or demands for remedies are directed at the system operator). The Project accepted complaints about messages, postings and files allegedly involving copyright or trademark infringement, misappropriation of trade secrets, defamation, fraud, deceptive trade practices, inappropriate (obscene, lewd, or otherwise violate system rules) materials, invasion of privacy and other wrongful content.

¹⁷ The Cyberspace Law Institute directs policy for the Project, the American Arbitration Association administered all cases submitted to the project, the Villanova Center for Information Law and Policy operates the Virtual Magistrate service.

¹⁸ Virtual Magistrate Web Page <<http://vmag.law.vill.edu:8080/>>. 2002

¹⁹ D Sturzaker, Dispute resolution in the new millennium – international arbitration, *The ADR Bulletin* 2(6) November 1999 at 60.

²⁰ R Susskind, *The future of law: Facing the challenges of information technology* Clarendon Press Oxford 1996, 120.

²¹ For a history of the development of AI, see P Gray, *Artificial legal intelligence*, Brookfield Dartmouth United Kingdom 1997, chapter 2.

²² P Savasdisara 'Computer-assisted legal analysis systems: Part 1: the origins of computer-aided support systems' 5(2) June/July 1994, *Computers and Law*, 28.

Legal information and AI systems can use sophisticated 'branching' technology to create elaborate decision trees that can suggest outcomes to disputes. This is done by the system emulating human intelligence. Essentially, what takes place is that the system asks the user a number of questions about the dispute to enable an accurate description of it to be built up. Then, the computer forms a conclusion by applying the law to the dispute description. It does this by applying rules for a specific set of facts. Finally, the computer can perform tasks based on the description given.²³ This way may enable indicative decisions to be expressed. However there are many other factors that impact upon decision-making. The Australian Law Reform Commission has noted that such factors include induction and intuition as well as the capacity to assess the social impact of decisions.²⁴

Branching technology that is not rule based is used in one of the projects of the Intelligent Computing Systems Research at La Trobe University that is called 'Split-Up'. The project is directed at applying artificial intelligence to assist in calculating the division of property in family law proceedings.²⁵ The project has determined that there are 94 factors relevant for a percentage split decision. The system offers advice on how the property is likely to be distributed if the matter was to be determined by a court. The system has been trialled by some judges, judicial registrars and registrars of the Family Court of Australia as well as legal practitioners, mediators and counsellors.

In Victoria, in 2002 and 2003, a collaborative project by La Trobe University, Victoria University, Justsys and Legal Aid Victoria was undertaken to explore, model and build a decision-making prototype of the decisions made by magistrates when determining sentences in the Victorian Magistrates (criminal) Jurisdiction²⁶. For this project, legal knowledge was modelled into reasoning in sentencing and a model developed to predict the sentencing decision of a magistrate, taking into account all the factors used when exercising discretion. When experts were satisfied that the knowledge model was complete and correct it was implemented as a web-based application. A forthcoming paper, 'Supporting discretionary decision making with information technology: a case study in the criminal sentencing jurisdiction'²⁷, highlights some of the benefits, risks and disadvantages of the model which require acknowledgement and management. The model's benefits are its ability to support consistency in interpretation of the law, boosting public confidence in the legal system, allowing decision transparency, promoting better community understanding of the law, and providing accessible and cost effective advice as to potential outcomes. Further benefits are the model's usefulness in training judges, magistrates, legal counsel and law students²⁸. Potential

²³ P Savasdisara, 'Computer-assisted legal analysis systems: Part 1: the origins of computer-aided support systems' 5(2) June/July 1994, *Computers and Law*, 28.

²⁴ Australian Law Reform Commission, Issues Paper 23: Review of the adversarial system of litigation. Technology - What it means for federal dispute resolution (ALRC, Canberra, March 1998), 100.

²⁵ J Zeleznikow, La Trobe University School of Computer Science and Computer Engineering. <<http://www.cs.latrobe.edu.au/research/>> 24 June 2004

²⁶ Hall, M.J.J., Calabro, D., Sourdin, T., Stanierri, A., Zeleznikow, J., 'Supporting Discretionary decision making with information technology : a case study in the criminal sentencing jurisdiction', Forthcoming 2004.

²⁷ Hall, M.J.J., Calabro, D., Sourdin, T., Stanierri, A., Zeleznikow, J., 'Supporting Discretionary decision making with information technology : a case study in the criminal sentencing jurisdiction', Forthcoming 2004.

²⁸ Hall, M.J.J., Calabro, D., Sourdin, T., Stanierri, A., Zeleznikow, J., 'Supporting Discretionary decision making with information technology : a case study in the criminal sentencing jurisdiction', Forthcoming 2004.

limitations of the model are the deskilling of human staff, the threat to the independence of the decision maker, it's ability to support some users better than others, the misleading of users as to the amount of knowledge contained in the system, destroying the human element required in special circumstances, the risk of replacing ouster clauses in legislation due to automated enforcement and the undermining of the judiciary in acting as a check on the legislature²⁹. The project demonstrated that whilst some artificial intelligence support can be of benefit to society, some models are unsuitable for total automation and should remain within human control³⁰. A successful ARC grant application will extend this work.

Digital Divide issues

Digital divide issues impact upon the use and utility of all forms of new technology range of factors contribute to the digital divide phenomena around the globe. These can be grouped into a number of areas:

- Culture and preference
- Broadband issues
- Age
- Disability
- Income
- Geographical factors
- Education.

Australia, a relatively wealthy country, provides an interesting case study in relation to digital divide issues. Many issues that have been reported on in the United States are replicated here. Digitaldivide.org has noted that the global and local issues are significant. For example, in 2002 Digital Divide noted that:

‘There are an estimated 429 million people online globally, but even this staggering number is small when considered in context. For example, of those 429 million, fully 41% are in North America. Also, 429 million represents only 6% of the world’s entire population. Other facts:

- The United States has more computers than the rest of the world combined

When assessed by region, Internet use is dominated by North Americans:

- 41% of the global online population is in the United States and Canada
- 27% of the online population lives in Europe, the Middle East and Africa
- 25% of European Homes are online

²⁹ Hall, M.J.J., Calabro, D, Sourdin, T., Stanierri, A., Zeleznikow, J., ‘Supporting Discretionary decision making with information technology : a case study in the criminal sentencing jurisdiction’, Forthcoming 2004.

³⁰ Hall, M.J.J., Calabro, D, Sourdin, T., Stanierri, A., Zeleznikow, J., ‘Supporting Discretionary decision making with information technology : a case study in the criminal sentencing jurisdiction’, Forthcoming 2004.

- 20% of the online population logs on from Asia Pacific
- Only 4% of the world's online population are in South America.³¹

Digital Divide has also noted in The Pew Internet and American Life Project, published in 'Who's Not Online' that 57% of those not online have no intention of going online. The research firm [Ipsos-Reid](#),³² found the following statistics internationally:

- 33% of those people have chosen to not go online. Among the biggest reasons were lack of need (40%); no computer (33%); no interest (25%); lack of knowledge for use (25%); and general cost involved (16%).'

Aside from choice, there are also other reasons why ODR is not taken up.

Culture and preference

Culture can determine how ADR processes are used. Often ADR processes are adapted and varied by practitioners to support more culturally appropriate decision-making. For example, indigenous forms of ADR may combine cultural preferences for open community consultation with ADR practices that respect familial approaches (such as 'poison cousin' limitations).

ODR processes may not enable for this type of flexibility in process to take place. Of more immediate concern is that many may be unable to access technological processes because of cultural limitations and preferences. This inability can also be linked to factors related to wealth, health, geographical location, language and literacy. These factors have been considered more generally by the Australian Bureau of Statistics in considering IT use amongst indigenous population.

Case Study: Use of IT amongst the Indigenous population³³

The Australian Bureau of Statistics released an article focusing on the use of IT by the Indigenous population of Australia in August 2001. The 2001 census counted 410,000 indigenous persons in Australia. There were a greater proportion of Indigenous Australians under the age of 20 and lower proportion in age ranges above 40 years, a factor which should be kept in mind in this comparison. Home computer use was found for 18% of the Indigenous population and 44% of the non-Indigenous population. Home Internet use was found for 9% of the Indigenous population and 29% of the non-Indigenous population and Internet use overall was found for 16% of the Indigenous population and 39% of the non-Indigenous population.

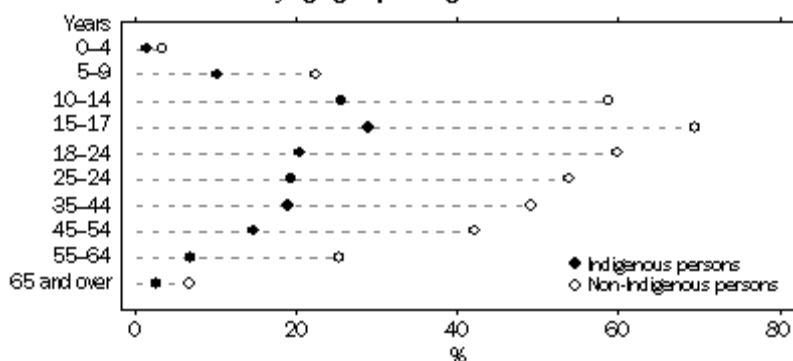
³¹ <Digitaldivide.org - basic facts> 28 May 2004 Source: First Quarter 2001 Global Internet Trends, Nielsen/Netratings

³² 'Why aren't more people online' - Ipsos-Reid, June 2001.

³³ Year Book Australia, Communications and Information Technology Article - Use of information technology by Aboriginal and Torres Strait Islander Peoples, Australian Bureau of Statistics 2004.

Within both Indigenous and non-Indigenous populations, 15-17 year-olds were most likely to use IT. However the difference in the rate of IT use amongst Indigenous and non-Indigenous youth in this age group was large. 28% of Indigenous 15-17 year-olds had a computer at home compared with 75% of non-Indigenous people in that age group. Internet use among Indigenous people of 15-17 years was 29% compared with 70% of non-Indigenous 15-17 year-olds.

**S23.1 PROPORTION OF PERSONS USING THE INTERNET(a),
By age group — August 2001**



(a) In the week preceding the 2001 census.

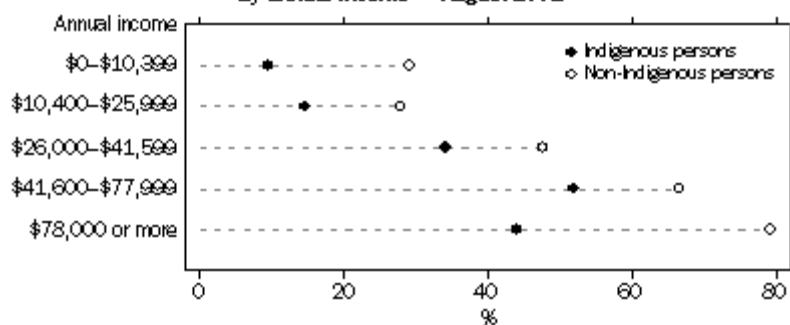
Source: ABS data available on request, 2001 Census of Population and Housing.

Generally, the proportion of persons using IT increased with the level of income earned. This was the case for both the Indigenous and non-Indigenous populations (graph S23.4). Indigenous persons with income less than \$10,400 per year were the least likely to have used IT.

Of the 82,200 Indigenous persons in this income bracket:

- 11% had used a computer at home (35% for non-Indigenous persons)
- 6% had used the Internet at home (24% for non-Indigenous persons)
- 10% had used the Internet overall (29% for non-Indigenous persons).

**S23.4 PROPORTION OF PERSONS(a) USING THE INTERNET(b),
By annual income — August 2001**



(a) All persons aged 18 years and over. (b) In the week preceding the 2001 census.

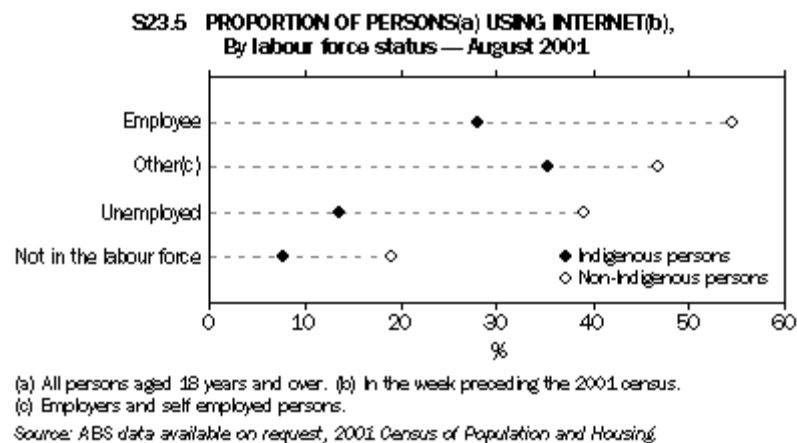
Source: ABS data available on request, 2001 Census of Population and Housing.

Within the Indigenous and non-Indigenous populations, IT use was highest for

employed persons (i.e. employees, employers, own account workers and contributing family workers), followed by unemployed persons and then persons not in the labour force (graph S23.5).

Of the 88,700 Indigenous employees:

- 25% had used a computer at home
- 15% had used the Internet at home
- 28% had used the Internet overall.



34

These figures suggest that ODR may not respond well to the needs of the Indigenous population. Whilst a proportion of this population may have access to the Internet and home computers there may be less inclination to use such technology 'at home' or to resolve disputes. This may be due to a range of factors including location (those in rural and other areas may have less ability to access broadband technology), a preference for face-to-face communication or even a preference for more flexible modes of communication that emphasise social structures and linkages.

In general, and apart from cultural preferences (that can also impact upon ADR preference more generally), those from non-English speaking backgrounds are less likely to have access to Internet due to language and literacy barriers and this can act as a significant impediment to access to ODR. In other ADR forms the response to such barriers includes the use of co-mediation models (using mediators from different cultural backgrounds) or promoting process flexibility.

However, despite this, Eugene Clark and George Cho³⁵ have suggested that given the public unfamiliarity with ODR, there was a large level of public interest in online

³⁴ Year Book Australia, Communications and Information Technology Article – Use of information technology by Aboriginal and Torres Strait Islander Peoples, Australian Bureau of Statistics 2004

³⁵ E Clark & G Cho, Law and Technology: What does the future hold for ADR? The Arbitrator and Mediator, Institute of Arbitrators and Mediators Australia Journal (Volume 20 No. 3 Dec 2001)

ADR. More than 70% of total respondents in one survey were willing to consider ODR for both general disputes and disputes with online companies. Weekly computer users and people who used banking and auction sites were more likely to use ODR. The major factors influencing choice of ADR processes were cost, speed and convenience, and dissatisfaction with current services meant that many Australians might consider online options.

There were a number of participants in the survey who, due to bad past experiences with organisations such as the Electricity Commission in relation to a bad plumber, would simply 'give up'. These participants viewed resolving the dispute (online) as a lost cause and chose either to use another method of dispute resolution or to do nothing at all. This was for reasons such as cost, speed, convenience, control of process, familiarity and access associated with ODR. (In order from most popular reason to least popular reason for avoidance of ODR.)

One participant stated that 'a major issue is allocating money to "middle class" people who can use ODR' and that 'an equal amount of money would be needed merely to help disadvantaged people know that online ODR services actually exist.'³⁶ Agency staff who were surveyed stated that unless the people who are being encouraged to use online ADR are given some sense of input into the design of it, they will not be convinced of its effectiveness. Acceptance of the use of IT in ADR processes may also be constrained by a lack of its intended audience's awareness and acceptance of new technology mixed with a lack of awareness and acceptance of ADR.³⁷ Those who refer those parties (e.g. lawyers, courts) might prefer to use an unfamiliar process such as ADR, through familiar communication forms (e.g. telephone or face-to-face). ADR practitioners may be uncomfortable with IT, which in turn may affect the consumers' confidence.³⁸

Broadband/bandwidth issues

NADRAC's Dispute Resolution and Information Technology paper³⁹ suggests that a lack of computer literacy, and lack of access to computer hardware, software and telecommunication infrastructures, are major limitations to expanding ODR use. For example those with low incomes, low levels of literacy and aged people may find it harder to access ODR or pay for ongoing technological requirements (such as continually paying for broadband access).

In particular, people living in remote and rural areas often do not have an appropriate level high bandwidth telecommunications access which is required for

³⁶ E Clark & G Cho, Law and Technology: What does the future hold for ADR? The Arbitrator and Mediator, Institute of Arbitrators and Mediators Australia Journal (Volume 20 No. 3 Dec 2001)

³⁷ E Clark & G Cho, Law and Technology: What does the future hold for ADR? The Arbitrator and Mediator, Institute of Arbitrators and Mediators Australia Journal (Volume 20 No. 3 Dec 2001)

³⁸ E Clark & G Cho, Law and Technology: What does the future hold for ADR? The Arbitrator and Mediator, Institute of Arbitrators and Mediators Australia Journal (Volume 20 No. 3 Dec 2001)

³⁹ National Alternative Dispute Resolution Advisory Council, Online ADR - Background paper (Canberra, Attorney-- General's Department, January 2001),

effective online use of these kinds of services, and they may also be more likely than those living in urban areas to experience the social barriers mentioned above.

At present broadband access is limited in Australia. This is likely to be an ongoing issue. Australia is a relatively large country which has a small population and a great diversity in terms of terrain and geography.

Age and Family Structure

A substantive digital divide issue relates to age. The division between those over 40 years of age and those under 40 years of age is one way of conceptualising this issue. Those under 40 often have 'grown' up with computer technology. Those over 40 are less likely to have learnt how to use computer-based technology. Age often determines Internet and computer use.

This is a significant issue when one considers that many online systems are developed to either supplement or supplant existing dispute resolution systems. In 2002, the author reviewed a large industry based complaints system in Australia (the Financial Industry Complaints Scheme (FICS)⁴⁰). In face-to-face consultations held around Australia, older retired Australians indicated that the provision of on line information about decisions and processes was not useful – in fact some members of this group felt disenfranchised and 'shut out' of a system that relied in large part upon the provision of web based information.

In Australia in August 2001 the Australian Bureau of Statistics found that the percentages of Australians who used the Internet were;

- 22.5% of those aged 5-9 years,
- 58.7% of those aged 10-14 years,
- 69.5% of those aged 15-17 years,
- 59.9% aged 18-24 years,
- 53.8% aged 25-34 years,
- 49.1% of those aged 35-44 years,
- 42.1% of those aged 45-54 years,
- 25.3% aged 55-64 years, and
- 6.7% of those aged 65 years and over.⁴¹

Dr Jennifer Curtin, in 'A Digital Divide in Rural and Regional Australia'⁴² noted that in 2001-02, young people were more likely to have Internet access at home compared to the 25-54 age group. Those aged over 55 years had much lower rates of access.

Family structure is also a relevant issue. Two-parent families with dependents are more likely to have home Internet access (49%) than those without dependents (28%)

⁴⁰ <<http://www.fics.asn.au/docs/finalficsreview.pdf>> 23 June 2004

⁴¹ Year Book Australia, Communications and Information Technology Article - Use of information technology by Aboriginal and Torres Strait Islander Peoples, Australian Bureau of Statistics 2004 - <<http://www.abs.gov.au/>> 21 June 2004

⁴² <<http://www.aph.gov.au/library/pubs/cib/2001-02/02cib01.htm#Major>> 21 June 2004

or sole-parent households (26%). However, in the last two years, the proportion of households with home Internet access has doubled for all family types.

Learning for Life, a project conducted by the Smith Family aimed to increase the participation of children from financially disadvantaged families in the educational process by the provision of financial and educational support. The following data from this project suggests that family structure, that is, whether the household has children, can be an important determining factor in terms of whether a household is likely to have Internet and computer access (households with children are more likely to have access). However, by far the most important factor appears to be related to income levels.

Recent Australian data on household ICT access⁴³

Study	ABS (2000a)		National Office for the Information Economy (NOIE) (2002)		Casson et al. (2002)		Ericsson (2002) as cited in Connors (2002)	
	Percent with computer	Percent with Internet	Percent with computer	Percent with Internet	Percent with computer	Percent with Internet	Percent with computer	Percent with Internet
Time of survey	November 2000		September 2001		2000-2001		May 2002	
Sample	3,200 households		500 households		1,252 households		2,000 individuals	
All households	56	37	64	52		44	76	68
With children	74	48				58		
No children	46	32				36		
Household income								
\$A0-49K	37	21				22-37		
>\$A50K	77	57				67		

Disability

People with disabilities such as sight, hearing and speech impairment, spinal injury, severe motor impairment, aphasia, psychiatric problems and Muscular Dystrophy are less likely to use computers or the internet.⁴⁴ When accessing ODR, they may also

⁴³ Jennifer McLaren and Gianni Zappala, *The Digital Divide amongst financially disadvantaged families in Australia*. First Monday Peer reviewed journal on the internet.

<http://www.firstmonday.dk/issues/issue7_11/mclaren/> 23 June 2004

⁴⁴ Australian Government Web site: Accessibility: 'Online Access for people with disabilities', Department of Communications Information Technology and the Arts, Summary of projects funded for 1998/1999. See also <

experience difficulties and may be unable to contribute in meaningful ways. These issues are also of significance in terms of ADR processes more generally, however, often such processes have standards and some flexibility to accommodate these concerns by adapting process.

Geographical isolation

The removal of government service offices from country areas, closure of banks, the introduction of national competition policy and the part privatisation of Telstra have influenced the concerns about rural and regional Australia becoming increasingly segregated from the 'Internet connected world'. Uneven distribution in access to the Internet is likely to further separate the country from the city. At present the ADR community in Australia has responded to these concerns by funding specially tailored services in such areas. Initiatives in the ODR area may also impact upon this division.

ABS data indicates that whilst there has been an increase in the amount of people in rural and regional Australia who have access to computers, there remains a gap between them and people who live in capital cities. In addition, the percentage of country people with access to the Internet has more than doubled since 1998 but has yet to reach the same level of use existing in capital cities. Metropolitan Australians have the highest access rate (40%) with other urban areas (i.e. populations greater than 2,500) showing the lowest rate of access (28%). The access rate for rural areas is approximately 33%. Predictions in relation to who is likely to remain unconnected to the Internet indicate that those unemployed in rural Australia are much less likely to have Internet access at home compared to the unemployed in metropolitan areas.

Income

The higher the income, the more likely an individual is to have Internet access at home. Growth in access to the Internet and computers has been far greatest amongst those in higher income brackets.

Unemployed people, usually on low incomes, are much less likely to have Internet access at home (27%) compared to those who work (57%) and so are dependent on other sites such as public libraries.

In an August 2001 survey reported in 2004, the ABS found that the percentages of Australians who used the Internet whose income levels were:

- \$0-\$10,399, was 29.3%,
- \$10,400-\$25,999 was 27.9%,
- \$26,000-\$41,599 was 47.7%,
- \$41,600-\$77,999 was 66.6%, and
- \$78,000 or more was 79.3%.⁴⁵

<http://e-bility.com/links/wwwaccess.php> > 21 June 2004.

⁴⁵ Year Book Australia, Communications and Information Technology Article - Use of information technology

The Smith Family found the following results in relation to financially disadvantaged families.

ICT home access and socio-economic variables⁴⁶

Characteristic	Computer (percentage)	Internet (percentage)
<i>Overall distribution</i>	59	32
<i>Level of disadvantage</i>		
Bottom 10 percent	52	27
10-25 percent	59	30
25-50 percent	59	32
50-75 percent	60	33
75-90 percent	67	40
Top 10 percent	67	35
<i>Housing type</i>		
Public rental	53	26
Private rental	58	33
Owns/purchasing	73	43
<i>Main source of income</i>		
Social security	58	31
Employment	72	44

These findings have significant implications for online ADR use. More than half of the population is unlikely to have regular at-home Internet access and this proportion increases when the less financially well-off segments of the population are considered.

by Aboriginal and Torres Strait Islander Peoples, Australian Bureau of Statistics (2004).

⁴⁶ Jennifer McLaren and Gianni Zappala, *The Digital Divide amongst financially disadvantaged families in Australia*, First Monday Peer reviewed journal on the internet.

<http://www.firstmonday.dk/issues/issue7_11/mclaren/> 23 June 2004

Education

The higher qualified the individual, the more likely the person has Internet access at home. Overall, those with lower education in blue-collar occupations, those over 55 years of age and women, were less likely to be connected online. Those without tertiary education are more likely to be in need of training and support facilities to enhance computer literacy, and IT skills and knowledge.

The Smith Family's survey found the following results in relation to the level of education of parents of disadvantaged families and their use of the computers and the internet.

ICT home access and socio-economic variables⁴⁷

<i>Parental education</i>	<i>Computer (percentage)</i>	<i>Internet (percentage)</i>
< Year 10	43	18
Year 10	58	31
Year 12	68	42
TAFE/Other post-secondary	68	38
University degree	88	57

The research indicated that while short term technical problems may limit the acceptance of technology, social, cultural and psychological barriers may be more important.

Conclusions

ODR has now been trialled in a number of programs. The benefits have included:

- Savings in costs and time where the parties are separated by distance
- Where there is a power imbalance, online processes can offer parties opportunities to have a dialogue without the fear of physical intimidation⁴⁸

⁴⁷ Jennifer McLaren and Gianni Zappala, *The Digital Divide amongst financially disadvantaged families in Australia*, First Monday Peer reviewed journal on the internet.

<http://www.firstmonday.dk/issues/issue7_11/mclaren/> 23 June 2004

⁴⁸ See S Hardy, Online Mediation: Internet Dispute Resolution, (1998) 10, *Australian Dispute Resolution Journal*, 216, 217.

- Timing – in some on line discussions parties can contemplate responses before sending them. Newer technology and the availability of digital video contact reduces the likelihood that contact will not be instantaneous
- A reduction in emotional content⁴⁹ - having a physical distance between parties may enable parties to view an argument more dispassionately. Where contact is not visual this can be a disadvantage and Hardy notes that telephone mediation has been criticised for its lack of non-verbal input.⁵⁰
- It may assist to set up a future communication process – on line communication and video conferencing may become a ‘normal’ way to meet.

However, clearly online processes are not available or accessed by the entire population. In fact there is evidence that a digital divide exists. There are concerns that conclusions relating to the efficacy of online services do not reflect the experiences of ordinary disputants. In this regard regular online users may have a preference for electronic communication, may be less likely to resort to litigation and may have a commitment to a global virtual community.⁵¹

Several programs in Australia have been designed attempt to overcome the digital divide. Reasons such as disability have been addressed by initiatives such as ‘Accessibility’⁵², a federal government program providing online access for people with disabilities. These programs consist mainly of training, provision of hardware and software, and pilot projects to assess the IT support needs of people with disabilities.

Assistive technological initiatives for people with disabilities allows those without the use of their hands to enter text by talking to a computer, a person without sight to instruct a computer to read aloud everything on the screen and a young child with no voice to communicate through a talking computer.⁵³

The BridgIT project funded by Networking the Nation was another project aimed at bridging the divide. It focused on women in rural areas but assisted men as well. It was largely a system of home visits undertaken by trainers based in the communities, however, it did branch into community-based workshops and training sessions. The project ended in June 2003 due to a lack of funding.⁵⁴

⁴⁹ S Hardy, Online Mediation: Internet Dispute Resolution, (1998) 10, *Australian Dispute Resolution Journal*, 216, 218.

⁵⁰ S Hardy, Online Mediation: Internet Dispute Resolution, (1998) 10, *Australian Dispute Resolution Journal*, 216, 219.

⁵¹ National Alternative Dispute Resolution Advisory Council, Online ADR – Background paper (Canberra, Attorney - Generals Department, January 2001), 9.

⁵² Australian Government web site: Accessibility: ‘Online Access for people with disabilities’, Department of Communications Information Technology and the Arts, Summary of projects funded for 1998/1999. See also <<http://e-bility.com/links/wwwaccess.php>> 21 June 2004

⁵³ Digital Divide Network, The Internet and People with Disabilities, Mary Lester, Russ Holland, Sue Brown and the Alliance for Technology Access.

<<http://www.digitaldividenetwork.org/content/stories/index.cfm?key=203>> 23 June 2004

⁵⁴ Dr Gerard Goggin, Rural Communities Online: Networking to Link Consumers to Providers, University of

Other non-government organisations have taken their own initiatives to put programs in place to encourage and support Internet use by citizens and businesses. For example, The Farm Wide Program, established by the National Farmers Federation in 1997 has sought to provide support for farmers online in order to encourage farmers to feel more comfortable with Internet use⁵⁵.

Jennifer McLaren and Gianni Zappala of the Smith Family Research and Social Policy Team, suggest that, in the case of economically disadvantaged families 'schools are important in closing or leveling the access gap, as most students use computers and the Internet at school. Reinforcing the role of parental education, however, the likelihood of students using the Internet at school also increased in line with the educational level of their parents. Greater research and policy attention needs to be given to the role of schools, teachers and parents in the "ABC of the digital divide".'⁵⁶

The 2001 'Building Bridges over the Digital Divide' report from the Human Rights and Equal Opportunity Commission is a result of work undertaken with the Internet Industry Association since the Commission's report on Accessible E-commerce, released in 2000, identified one of the major issues in the growing 'digital divide' was access to the Internet for people with disabilities and older Australians. The two associations have cooperated in developing an Accessible Web Action Plan which will lead to greater access to the Internet for many Australians.⁵⁷ The plan has since been regarded as a very useful structure for groups other than those with disabilities, such as rural Australians, new Australians, new users, techno-phobes and the technologically disadvantaged.⁵⁸

The report coincided with publication by the Australian Bankers' Association of a Disability Action Plan,⁵⁹ including a 16-page Draft Industry Standard on Internet Banking, and the report of the ACT Digital Divide Task Force.

There have been regulatory initiatives to encourage greater competition in the telecommunications market: grants programs to fund the development of telecommunications infrastructure, community access facilities and training, a range of educational skills development initiatives, and providing government services electronically in ways that enable access for all sectors of the community, including the disabled.

Queensland February 2003. <<http://www.qrwn.org.au/cvt/GG%20Rural%20Communities%202003.pdf>> 23 June 2004

⁵⁵ Jennifer Curtin, A Digital Divide in Rural and Regional Australia?, Information and Research Services, Department of the Parliamentary Library, August 2001. <<http://www.aph.gov.au/library/pubs/cib/2001-02/02cib01.pdf>> 23 June 2004

⁵⁶ Jennifer McLaren and Gianni Zappala, The Digital Divide amongst financially disadvantaged families in Australia, First Monday Peer reviewed journal on the internet. <http://www.firstmonday.dk/issues/issue7_11/mclaren/> 23 June 2004

⁵⁷ The Digital Divide Narrows for people with disabilities, HREOC 2002 Media Releases. <http://www.hreoc.gov.au/media%5Freleases/releases_2002.html> 24 June 2004

⁵⁸ Dr Andrew Arch, Vicion Australia Foundation 'Dispelling the myths'. <<http://ausweb.scu.edu.au/aw02/papers/refereed/arch/paper.html>> 23 June 2004

⁵⁹ Banking Industry makes long term commitment to improving financial literacy, Australian Bankers Association <<http://www.bankers.asn.au/ABA/Online/default.asp>> 23 June 2004

In line with the January 1999 Strategic Framework for the Information Economy⁶⁰ and the Digital Divide Cross Sector Working Group⁶¹ was convened by Cisco Systems to 'foster greater collaboration and shared learning around Digital Divide projects in Australia.'

At the national level those initiatives include:

- the Networking the Nation program and associated Social Bonus programs such as the New Connections⁶², with \$592 million from Telstra's sale to upgrade regional, rural and remote telecommunications
- a five-year, \$70 million rural transaction centre program of the Department of Transport and Regional Services to help small, rural communities establish 'community access centres' as gateways to basic services such as banking, post, phone, fax, the Internet, Medicare and Centrelink.
- an Education and Training Action Plan for the Information Economy with funding of up to \$5 million for an Information Technology and Telecommunications (IT&T) Skills Exchange and a Computers for Schools initiative through which 'surplus Commonwealth and State government computers are donated to government and non-government schools. To date, approximately 18,000 computers have found their way to deserving schools.' What happens to 'undeserving' ones?
- the Government Online Strategy, a whole-of-government approach, is designed to reflect the Prime Minister's 'commitment' that the Commonwealth will bring all appropriate services online via the Internet by 2001.

The Cross Sector Working Group comprises 30 corporate, community and government organisations, 'endeavouring to encourage collaboration on Digital Divide projects, and to create an ongoing forum for the exchange of ideas and by identifying new project opportunities to tackle digital exclusion in Australia' using the Digital Dividend⁶³.

NOIE's October 2000 E-Commerce Across Australia report⁶⁴, arguing that e-commerce will neutralise the tyranny of distance and result in equality in the global marketplace, may be controversial or problematic but does offer a detailed analysis of the potential impacts on regional Australia.

⁶⁰ Maximising the Benefits of the Information Economy, Australian Government Information Management Office <http://www.noie.gov.au/projects/information_economy/strategic_framework/index.htm> 24 June 2004

⁶¹ Maximising the Benefits of the Information Economy, Australian Government Information Management Office, <<http://www.noie.gov.au/Projects/access/community/digitaldivide/index.htm>> 24 June 2004

⁶² <<http://www.dcita.gov.au/telinfo/>> 24 June 2004

⁶³ World Resources Institute Digital Dividend <<http://www.digitaldividend.org>> 24 June 2004

⁶⁴ Maximising the Benefits of the Information Economy, Australian Government Information Management Office <http://www.noie.gov.au/projects/information_economy/ecommerce_analysis/eCommAust/executive.htm> 24 June 2004

In 2004 the Federal Government announced a National Broadband Strategy⁶⁵ and associated Action Plan, followed shortly thereafter by news that the National Office for the Information Economy was to become the Australian Government Information Management Office (AGIMO).

Many of these initiatives seek to improve the price and increase the availability of broadband services in regional, rural and remote Australia, with a particular focus on consumers and the health and education sectors.

In addition, public libraries and video conferencing facilities have also been used to try to transcend the divide between those who have access and familiarity with IT and those who do not. Mobile computer and Internet training organizations, targeting rural areas and aged people who have limited mobility, have also been servicing a number of communities.

Despite the existence of these initiatives, there has been no systematic, broad infrastructure put in place to address the problem of the digital divide. The high rate of illiteracy within Australia and other countries indicates that special web pages and support networks based on text will be useless in addressing the digital divide for this group of people. In fact, it seems access to new technologies will continue to depend on education, literacy and income unless the government intervenes because access and use of the Internet requires both cognitive ability and technical skills⁶⁶.

Notes

Parts of this paper have been drawn from T Sourdin 'Alternative Dispute Resolution'. Lawbook Co, Australia, 2002. The author also wishes to thank Naomi Culkin who provided some valuable research assistance.

List of Resources

Andrew Arch, Vision Australia Foundation 'Dispelling the myths'.
<<http://ausweb.scu.edu.au/aw02/papers/refereed/arch/paper.html>>

Australian Law Reform Commission, Issues Paper 23: Review of the adversarial system of litigation. Technology – what it means for federal dispute resolution (ALRC, Canberra, March 1998), 100.

Australian Government Web site: Accessibility: 'Online access for people with disabilities', Department of Communications Information Technology and the Arts, Summary of projects funded for 1998/1999.

⁶⁵ Maximising the Benefits of the Information Economy, Australian Government Information Management Office <<http://www.noie.gov.au/projects/framework/Priorities/Broadband.htm>>

⁶⁶ Jennifer Curtin, A Digital Divide in Rural and Regional Australia?, Information and Research Services, Department of the Parliamentary Library, August 2001
<<http://www.aph.gov.au/library/pubs/cib/2001-02/02cib01.pdf>>

Australian Human Rights and Equal Opportunity Commission Inquiry into Rural and Remote Education 'Recommendations, HREOC, June 2000.

Australian Bankers Association, *Banking industry makes long-term commitment to improving financial literacy*, <<http://www.bankers.asn.au/ABA/Online/default.asp>> 23 June 2004

Laurence Boule, Options for cyber-med, *ADR Bulletin* 1 (10) April 1999 at 128, 129.

Caslon Analytics Profile: the digital divides
<<http://www.caslon.com.au/dividesprofile3.htm>>

Colm Brannigan, 'Beyond E-Commerce Expanding the Potential of Online Dispute Resolution', *Online Dispute Resolution*, March 2004

Jhuen Weng Goon, Unpublished Paper, *Cultural Insights: A Brief Look at Mediation Practices in Singapore*, 2004

Jennifer Curtin, *A Digital Divide in Rural and Regional Australia?*, Information and Research Services, Department of the Parliamentary Library, August 2001.
<<http://www.aph.gov.au/library/pubs/cib/2001-02/02cib01.pdf>>

National Alternative Dispute Resolution Advisory Council, *Dispute Resolution and Information Technology*, Discussion Paper, March 2002.

Eugene Clark and George Cho, 'Law and Technology: What does the future hold for ADR?' *The Arbitrator and Mediator, IAMA Journal*, Volume 20 No. 3, December 2001.

Eugene Clark and Arthur Hoyle, 'Online Dispute Resolution: Present Realities and Future Prospects' Discussion Paper <leadr.com.au/HOYLE.pdf> Undated accessed 20 June 2004.

Melissa Conley-Tyler and Di Bretherton, 'Country Experiences of ODR: Australia'. A Report of Research Conducted for the Department of Justice, Victoria, Australia, Proceedings of the UNECE Forum on ODR, 2003.

(NB: The results of the 'Research into Online Dispute Resolution Exploration Report' by Melissa Conley Tyler and Di Bretherton 21 March 2003 and 'Research into Online Dispute Resolution Needs Assessment' by Melissa Conley-Tyler, Di Bretherton and Brock Bastian 23 May 2003 are discussed in the above document.)

Digitaldivide.org – basic facts <28 May 2004> Source: First Quarter 2001 Global Internet Trends, [Neilsen/Netratings](#)

Digital Divide Network, *The Internet and People with Disabilities*, Mary Lester, Russ Holland, Sue Brown and the Alliance for Technology Access, <<http://www.digitaldividenetwork.org/content/stories/index.cfm?key=203>> 2004

The Digital Divide Narrows for People with Disabilities, HREOC 2002 Media Releases, 6 September 2002.

<http://www.hreoc.gov.au/media_releases/2002/56_oz.html>

R Georges, *Dispute Settlement in Cyberspace*,

<<http://www.futurelawyer.com/display.phtml?c=futurelaw0512.html>> 21 June 2004

Gerard Goggin, *Rural Communities Online: Networking to Link Consumers to Providers*, University of Queensland, February 2003.

<<http://www.qrwn.org.au/cvt/GG%20Rural%20Communities%202003.pdf>>

P Gray, *Artificial legal intelligence*. Brookfield Dartmouth United Kingdom, 1997, chapter 2.

Jean Hall, Dominic Calabro, Tania Sourdin, Andrew Stranieri and John Zeleznikow, 'Supporting discretionary decision making with information technology : a case study in the criminal sentencing jurisdiction', Ottawa. Forthcoming 2004.

S Hardy, Online Mediation: Internet Dispute Resolution, (1998) 10, *Australian Dispute Resolution Journal*, 216.

S Hardy, Online Mediation: Internet Dispute Resolution, (1998) 10, *Australian Dispute Resolution Journal*, 216 – referring to G R Shell, Computer assisted negotiation and mediation, where we are and where we are going? (1995) *Negotiation Journal* 117.

J Ive and D Cocks, Siro Med: Bringing Information-Based Mediation Support to Natural Resource Allocation, (1999) August, *Australasian Dispute Resolution Journal*, at 166.

D King, Internet Mediation – A Summary, (2000) August, *Australasian Dispute Resolution Journal*, 180.

R. Lloyd and O. Hellwig, 'Barriers to the Take-Up of New Technology', Discussion Paper no. 53 NATSEM (National Centre for Social and Economic Modelling), November 2000

Maximising the Benefits of the Information Economy, Australian Government Information Management Office

http://www.noie.gov.au/projects/information_economy/strategic_framework/index.htm

<http://www.noie.gov.au/Projects/access/community/digitaldivide/index.htm>

http://www.noie.gov.au/projects/information_economy/eCommerce_analysis/eCommAust/executive.htm

<http://www.noie.gov.au/projects/framework/Priorities/Broadband.htm>

Jennifer McLaren and Gianni Zappala, *The Digital Divide among Financially Disadvantaged Families in Australia*, First Monday Peer Reviewed Journal on the Internet, <http://www.firstmonday.dk/issues/issue7_11/mclaren/

National Alternative Dispute Resolution Advisory Council, *Online ADR – Background paper*(Canberra, Attorney-General's Department, January 2001), 6.

Alan C Tidwell, 'Handling disputes in cyberspace' (1996) 7 *Australian Dispute Resolution Journal* 245. For an example of a web site offering dispute resolution services, see The Virtual Magistrate at <http://vmag.vcilp.org/>, which provides arbitration and fact-finding services for disputes involving users of on-line systems, people harmed by wrongful messages and system operators.

P Savasdisara, 'Computer-assisted legal analysis systems: Part 1: the origins of computer-aided support systems' 5(2) June/July 1994, *Computers and law* 28.

D Sturzaker, Dispute resolution in the new millennium – international arbitration, *The ADR Bulletin* 2(6) November 1999 at 60.

R Susskind, *The future of law: Facing the challenges of information technology*. Clarendon Press Oxford 1996, 120.

Summary of Public Workshop Alternative Dispute Resolution for Consumer Transactions in the Borderless Online Marketplace June 6-7, 2000 Federal Trade Commission Department of Commerce November 2000.

Trans Atlantic Consumer Dialogue 'Alternative Dispute Resolution in the Context of Electronic Commerce' February 2000

Virtual Magistrate Web Page <http://vmag.law.vill.edu:8080/>.

'Why aren't more people online' – Ipsos-Reid, June 2001.

World Resources Institute Digital Dividend, <http://www.digitaldividend.org/>

Year Book Australia, Communications and Information Technology Article – Use of information technology by Aboriginal and Torres Strait Islander Peoples, Australian Bureau of Statistics 2004

John Zeleznikow, La Trobe University School of Computer Science and Computer Engineering. <http://www.cs.latrobe.edu.au/research/>

<http://www.settlementonlinesystems.com.au>
<http://www.mediate.com/aba/abaout.cfm>
<http://www.law.vill.edu/ncair/disres/granat.htm#top>
<http://www.dcita.gov.au/telinfo/>