



# RESEARCH NOTE

Number 34, 2001-02  
ISSN 1328-8016

## Household Broadband Access in Australia

### What is Broadband?

There are a number of avenues for the transmission of data to and from Australian households. The most common of these is the public switched telephone network (PSTN). Other mediums include cable (both coaxial and fibre-optic), satellite connections and microwave transmission. The term 'broadband' can be used to describe any of these mediums when they provide a high speed connection greater than 200 kilobits per second (kbps).<sup>1</sup> Broadband thus offers Australians the opportunity to access the Internet and to obtain high volume data, such as audio or video material, at faster speeds.

In comparison to broadband, average household dial-up PSTN Internet connections in Australian metropolitan areas are around 20-30 kbps,<sup>2</sup> although there are a number of technologies that can be used to provide higher speed access over the PSTN.

The Integrated Services Digital Network (ISDN) enables digital transmission at 64kbps by installing special equipment at the customer end and at the local exchange. Digital subscriber line (DSL) technologies provide continuously available ('always on') connections. The most common of these in Australia is Asymmetric Digital Subscriber Line (ADSL), which can provide connection speeds of up to 1.5 megabits per second (mbps), although household subscribers would be more likely to have upload speeds of 512 kbps.<sup>3</sup>

### Availability of Broadband

The Telecommunications Service Inquiry found that all Australians had access to one or more high speed Internet services, namely:

- satellite connections are available Australia-wide
- 96 per cent of the population can be provided with Telstra's ISDN service (all those within 4.6 kilometres of an exchange)<sup>4</sup>
- Telstra's ADSL service will be available to around 81 per cent of the population in 2002, and
- the Telstra and Optus hybrid fibre coaxial cables pass 2.5 and 2.2 million homes respectively.

### Take Up of Broadband

Despite the availability of these services, the take-up of broadband services has been low. A survey by the Australian Competition and Consumer Commission (ACCC) found that, as at 31 July 2001, there were 122 800 broadband customers, comprising:

- 92 500 cable customers (of which 86 100 were residential)
- 26 600 ADSL customers (of which 17 600 were residential)
- 2 300 satellite customers, and
- 1 500 customers using other technologies.<sup>5</sup>

These numbers can be compared with the 3 729 000 households that subscribed to Internet services in the September quarter of 2001.<sup>6</sup>

### International Comparisons

The OECD Working Party on Telecommunication and Information Services Policies has produced comparative figures on broadband penetration per 100 inhabitants.<sup>7</sup> The Australian rate is 0.39, the same as the average for the European Union, although it is well below the OECD average of 1.27. There are a number of countries with significantly higher levels of penetration. The following table lists all those countries with higher rates than Australia.

Country	Broadband connections per 100 persons in 2000
Korea	9.20
Canada	4.54
US	2.25
Sweden	1.86
Austria	1.70
Netherlands	1.68
Belgium	1.42
Denmark	1.27
Iceland	0.70
Finland	0.58
Japan	0.50
Switzerland	0.43
Australia	0.39

Source: OECD

### Policy Responses

The development of household broadband access has been advocated by policy-makers for almost a decade. The Broadband Services Expert Group (Chair, Brian Johns) was established in December 1993 and reported one year later. It recommended that a National Strategy for New Communications Networks be implemented, with the

objective of providing broadband links to all schools, libraries, medical and community centres by 2001. This was to be funded on a dollar-for-dollar basis by the States and the Commonwealth. The Group rejected the idea of including household broadband access in the universal service obligations of telecommunications carriers because of the costs involved. It was estimated that providing cable broadband capacity across Australia could cost between \$25 and \$40 billion.<sup>8</sup>

Although the Expert Group's targets were not accepted by the Government, there have been a number of initiatives that have helped promote broadband: the Keating Government's Innovation Statement (December 1995), the Howard Government's establishment of the National Office for Information Economy (September 1997) and the Networking the Nation Program (launched in June 1997).

Most recently, on 27 February 2002, the Minister for Communications, Information Technology and the Arts, Senator Richard Alston, announced details of the establishment of a Broadband Advisory Group to advise the Government on broadband

development in Australia.<sup>9</sup> On the following day Telstra announced a \$50 million broadband stimulus package comprising:

- a broadband development fund to provide grants of up to \$250 000 to educational institutions and businesses to develop technologies and applications to enhance broadband service
- international bandwidth worth up to \$10 million for the use of grant recipients and educational bodies
- a \$5 million advertising campaign.

### Conclusion

Despite the efforts of policy-makers and governments, the residential market for broadband services remains small. The explanation for this is primarily economic: it is estimated that the cost of broadband infrastructure alone exceeds \$2000 per household.<sup>10</sup> It is difficult to construct a business plan that recoups this cost (and the cost of providing services) at a price that most households are willing to pay. This is particularly so when there is no new 'killer application' that can be offered to potential customers. Australians have been quick to

adopt new media technologies that offer new services or specific improvements over existing services. For example, video, the personal computer, CD and DVD technology. However, they appear to be reluctant to subscribe to services that simply provide 'more of the same' through a new media window: the slow take-up of pay television is a case in point. At the moment it seems that the promise of quicker and easier access to movies, music and the Internet is not attractive at the prices being asked.<sup>11</sup>

**Dr Kim Jackson**  
**Social Policy Group**  
**Information and Research**  
**Services**

**15 April 2002**

*Views expressed in this Research Note are those of the author and do not necessarily reflect those of the Information and Research Services and are not to be attributed to the Department of the Parliamentary Library. Research Notes provide concise analytical briefings on issues of interest to Senators and Members. As such they may not canvass all of the key issues. Advice on legislation or legal policy issues contained in this paper is provided for use in parliamentary debate and for related parliamentary purposes. This paper is not professional legal opinion.*

© Commonwealth of Australia

1. Definitions of broadband access can vary widely. The 200 kbps limit is that used by the ACCC.
2. *Connecting Australia Report of the Telecommunications Service Inquiry* (September 2000), pp.100–101. In ideal conditions, the transmission rate can reach 56 kbps.
3. ADSL is 'assymetric' because it has different transmission rates for data received and data sent by the subscriber. The rates used in this Note are for the former.
4. Note that ISDN services are not 'broadband' as defined here.
5. ACCC, *Snapshot of Broadband Deployment as at 31 July 2001*. See [http://www.accc.gov.au/telco/statistics/broadband\\_svcs.pdf](http://www.accc.gov.au/telco/statistics/broadband_svcs.pdf)
6. Australian Bureau of Statistics (ABS), *Internet Activity Australia September Quarter 2001* (January 2002), p. 7.
7. OECD Working Party on Telecommunication and Information Service Policies, *The Development of Broadband Access in OECD Countries* (October 2001), p. 13. This is available at <http://www.oecd.org/pdf/M00020000/M00020255.pdf>
8. *Networking Australia's Future Final Report of the Broadband Services Expert Group* (December 1994), p. 51.
9. Senator the Hon. Richard Alston, 'Broadband Advisory Group', *Media Release*, 27 February 2002.
10. Paul Budde Communication Pty Ltd, *Broadband and High-Speed Market 2001* (2001), p. 95.
11. Under Telstra's new pricing, the always-on broadband service will cost \$54.95 per month, with a maximum of 300 Mb. A 1Gb service will cost \$64.95. This is a big increase in prices for high-volume users.