



# **HOUSEHOLD USE OF INFORMATION TECHNOLOGY** *AUSTRALIA*

EMBARGO: 11:30AM (CANBERRA TIME) THURS 27 MAY 1999

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- For more information about these and related statistics, contact Joseph Di Gregorio on Canberra 02 6252 5609, or any ABS office shown on the back cover of this publication.

## NOTES

- ABOUT THIS PUBLICATION** This publication is the third of its type presenting a detailed profile on the use of information technology (IT) in private households. It also contains information on the home use of IT by persons.
- ABOUT THE SURVEY** This publication contains a selection of results based on the four quarterly surveys conducted in 1998. The surveys have been combined to increase the effective sample size to a total of approximately 13,000 households. Analysis based on the 13,000 observations has produced much more reliable results than any of the individual surveys especially where analysis is focused on small target groups. In particular, this publication contains statistics classified by State and Territory. The effect of the combination of the surveys is a 50% reduction in relative standard errors compared to each of the individual quarterly survey estimates.
- The combined estimates should be viewed as an average over all of 1998. They do not relate to any point in time during that year. When interpreting results for data items which might have changed significantly over the year, e.g. use of the Internet, users should be aware that estimates may be lower than a point-in-time value observed towards the end of the year.
- SCOPE AND COVERAGE** Households in remote and sparsely settled parts of Australia (Statistical Local Areas of fewer than 200 people) are excluded from the survey. The exclusion of these persons (approximately 175,000) will have only a minor impact on any aggregate estimates produced for individual States and Territories, with the exception of the Northern Territory where such persons account for over 20% of the population.
- ADDITIONAL DATA COLLECTED** The range of information sought in the February, May, August and November 1998 Household Use of Information Technology Surveys has increased from the four surveys conducted in 1996. Additional items of IT covered in the 1998 surveys largely centered on an expanded number of questions on Internet access and electronic commerce.
- In 1999, a further four Household Use of Information Technology Surveys will be undertaken. The 1999 surveys will collect data on use of the Internet and electronic commerce activities of adults.

W. McLennan  
Australian Statistician

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## MAIN FINDINGS

### HOUSEHOLDS WITH COMPUTERS

In 1998, 45% of Australian households (3.0 million) had a computer and 85% of these households used the computer frequently (once a week or more). At November 1998, 47% of households had a home computer. Households which frequently used a home computer comprised 38% of all households in Australia in 1998, compared with 31% of households in 1996. In 1998 the Australian Capital Territory had the highest proportion of households which frequently used a computer with 57%. Of the States, Victoria, with 40%, had the greatest proportion of households which frequently used a computer. The proportion of households in the remaining States and Territory which frequently used a computer was New South Wales 38%, Queensland, South Australia and Western Australia each 37%, Tasmania 29% and the Northern Territory 39%.

Comparing 1998 with 1996, Queensland had the highest percentage increase in the number of households which frequently used a computer with 39%, followed by New South Wales and Western Australia with 30% and 29% respectively.

The majority of household computers in both 1998 and 1996 were desktop or personal computers (82% for 1998 and 81% for 1996). Laptops or portable computers accounted for similar proportions of household computers in 1998 and 1996, 17% and 15% respectively.

### HOUSEHOLDS WITH INTERNET ACCESS

The number of households with Internet access in 1998 was nearly four times the number in 1996. It is estimated that in 1998 there had been a 279% increase in the number of Internet households since 1996. Nearly 16% of households (1.1 million) had access to the Internet in 1998 compared with 4% of households (0.3 million) in 1996. At November 1998, nearly 19% of households had home Internet access. By the end of 1999 there could be approximately 2.0 million Internet households, taking into account households intending to connect to the Internet and households intending to acquire a computer for the first time.

Queensland had the highest proportional increase in the number of households connected to the Internet with 339%, followed by New South Wales with 287% and Tasmania with 280%. For the other States and Territories the proportional increase in Internet households was, Victoria 282%, South Australia 252%, the Northern Territory 250%, Western Australia 213%, and the Australian Capital Territory 182%.

### INTERNATIONAL COMPARISONS

Australia and the United States have similar proportions of households with home computers and home Internet access. The United States Bureau of Census reported that in 1997, 37% of homes in the United States had a computer while 19% of homes had online access which can be interpreted to largely mean the Internet. By comparison, in 1998, 45% of Australian homes had a computer and nearly 16% had access to the Internet.

MAIN REASONS FOR NOT HAVING A COMPUTER OR INTERNET ACCESS

In 1998 and 1996 the two mostly frequently reported main reasons for not having a home computer were 'no use for a computer' and 'costs are too high'. In 1998, 37% of households without a home computer reported 'no use for a computer' and 27% reported 'costs are too high'. In 1996 the proportions were 40% and 30% respectively.

In 1998 households with a computer but no Internet access were asked the main reason for not having home Internet access. The survey found that of the two million households with a computer and no Internet access, 30% reported 'costs are too high' as the main reason and 28% reported 'lack of interest in Internet' as the main reason.

USE OF PERIPHERAL TECHNOLOGIES

There has been rapid adoption of peripheral technologies since 1996 by households which frequently used a computer. The proportion of households which frequently used a computer that had a printer increased from 84% in 1996 to 89% in 1998. CD-ROM drive usage was 47% in 1996 and reached 75% in 1998. Less than a third of households which frequently used a computer in 1996 had a modem; this had reached 53% by 1998.

USE OF COMMUNICATION TECHNOLOGIES

Since 1996 there has been substantial increase in the use of selected communication technologies such as mobile phones, facsimile machines and answering machines. In 1998, 45% of Australian households used a digital or analogue mobile phone compared with 30% in 1996, 17% used a facsimile machine compared with 10% in 1996 and 35% used an answering machine compared with 26% in 1996.

The increase in the use of these communication technologies since 1996 was even higher in households which had home-based businesses. In 1998, 71% of households with home-based businesses used a mobile phone compared with 55% in 1996, 50% used a facsimile machine compared with 36% in 1996 and 60% used an answering machine compared with 51% in 1996.

PERSONS FREQUENTLY USING A HOME COMPUTER

In 1998 nearly six million persons aged five years and over frequently used a computer at home—34% of the total population aged five years and over. In 1996 there were four million persons aged five years and over who frequently used a computer at home. In 1998 a slighter higher proportion of males (37%) frequently used a home computer than females (32%) while more than 50% of children aged 5–17 years of age were frequent home computer users.

Home computer activities

Playing computer games, learning or study-related activities and work-related activities remained the most frequently reported home computer activities by frequent home computer users. In 1998, 3.3 million frequent home computer users used the home computer to play games compared with 2.3 million in 1996, 3.1 million persons used the home computer for learning or studies compared with 2.2 million persons in 1996 and 2.2 million persons used the home computer for work compared with 1.4 million persons in 1996.

Home computer activities  
*continued*

Internet-related activities emerged as a significant home computer activity in 1998, with 1.6 million frequent home computer users accessing the Internet from home. In 1996 only 0.3 million frequent home computer users accessed the Internet from home.

#### ADULTS USING COMPUTERS OR ACCESSING THE INTERNET

Just over 60% of Australia's adult population (8.1 million) used a computer and 32% (4.2 million) accessed the Internet in 1998. Work and home were the most common sites from which a computer was used or the Internet accessed. Nearly 39% of adults in 1998 used a computer at home and 35% used one from work. Approximately 13% of adults accessed the Internet from home and 14% from work.

The Australian Capital Territory had the highest proportion of adults using a computer or accessing the Internet in 1998, 78% and 55% respectively. This was followed by the Northern Territory with 68% and 39% respectively. For the States, the proportion of adults who used a computer ranged from 57% (Victoria and Tasmania) to 62% (Western Australia). The proportion of adults accessing the Internet ranged from 27% (South Australia) to 34% (Western Australia).

#### ELECTRONIC COMMERCE ACTIVITIES

Internet commerce

Of the more than four million adults who had accessed the Internet in the 12-month period leading up to the survey, nearly 350,000 had used the Internet to make an estimated 1.4 million purchases for private use, which is an average of four purchases per Internet shopper. Of these Internet shoppers, 81% had paid for their Internet purchases online and 68% had purchased or ordered goods or services from overseas.

Value of Internet purchases

Of the 200,000 Internet shoppers who had purchased goods or services from overseas and who had paid for these purchases online, 21% had spent less than \$50, 20% had spent \$51-\$100, 20% had spent \$101-\$250 and 39% had spent more than \$250.

Of the 126,000 Internet shoppers who had purchased goods or services from Australia and who had paid for these purchases online, an estimated 7% had spent less than \$50, 35% had spent \$51-\$100, 12% had spent \$101-\$200 and 45% had spent more than \$250.

Electronic banking and bill payment activities In any one quarter of 1998, an average of 10 million Australian adults (77% of all adults) used some form of electronic commerce to pay their bills or withdraw or transfer funds. However, only 1% of adults had used the Internet for banking or bill payment purposes. Nearly 69% of adults had used an ATM for banking purposes, 61% had used EFTPOS and 35% had used the telephone to pay bills or conduct their banking.

Interest in accessing online services from home In both 1998 and 1996, interest in accessing certain online services from home was high amongst adult Australians. Nearly 28% of adults expressed interest in accessing online shopping services from home, compared to 26% of adults in 1996. Furthermore, 37% expressed interest in accessing online banking from home in 1998, compared to 41% of adults in 1996. More than 49% of adults in 1998 expressed interest in accessing online educational services and 44% were interested in accessing online government information services or form lodgement services from home.

#### TELEWORKING ARRANGEMENTS

Nearly 386,000 employed adults were able to access their employer's computer from home via a modem and 293,000 of these had a formal agreement with their employer to work from home. Nearly 72% of teleworkers were males and 65% of teleworkers were aged 25–39 years.



## SECTION 1

## HOUSEHOLD COMPUTER USAGE

### HOUSEHOLDS WITH COMPUTERS

In 1998 nearly 45% of households in Australia (3.0 million households) had a home computer; 2.6 million of these households used the home computer frequently (once a week or more). Households which frequently used a home computer accounted for 38% of all households.

By State, Territory and region

A higher proportion of households in capital cities used a home computer than households in other areas of Australia.

More than 48% of households in capital cities had a home computer and nearly 42% of households in capital cities had a home computer which was frequently used. For other areas, the figures were 38% having a home computer and 32% frequently using a computer.

Of the capital cities, Canberra had the highest proportion of households with a home computer (66%) and the highest proportion of households with a home computer which was frequently used (57%). Hobart had the lowest proportion of households with a home computer (41%) and the lowest proportion of households frequently using a home computer (35%).

### 1.1 HOUSEHOLDS WITH A HOME COMPUTER

	<i>Households with a home computer</i>			<i>Households frequently using a home computer (a)</i>		
	<i>Capital cities</i>	<i>Other</i>	<i>Australia</i>	<i>Capital cities</i>	<i>Other</i>	<i>Australia</i>
	NUMBER					
	'000	'000	'000	'000	'000	'000
New South Wales	670	343	1 013	585	287	872
Victoria	591	201	792	505	169	674
Queensland	282	268	550	239	228	467
South Australia	190	54	244	165	44	208
Western Australia	222	66	288	193	52	244
Tasmania	31	34	65	27	28	54
Northern Territory(b)	14	7	21	12	6	18
Australian Capital Territory	72	..	72	63	..	63
<b>Australia</b>	<b>2 072</b>	<b>973</b>	<b>3 045</b>	<b>1 787</b>	<b>814</b>	<b>2 601</b>
	PROPORTION					
	%	%	%	%	%	%
New South Wales	48.4	37.9	44.3	42.3	31.8	38.1
Victoria	48.8	41.8	46.8	41.7	35.3	39.9
Queensland	50.1	37.7	43.2	42.4	32.0	36.6
South Australia	44.9	37.2	42.9	38.9	30.0	36.6
Western Australia	44.4	39.5	43.2	38.6	30.8	36.6
Tasmania	40.9	31.6	35.5	34.8	25.6	29.4
Northern Territory(b)	44.6	44.8	44.7	39.8	37.9	39.2
Australian Capital Territory	66.1	..	66.1	57.4	..	57.4
<b>Australia</b>	<b>48.2</b>	<b>38.4</b>	<b>44.6</b>	<b>41.6</b>	<b>32.1</b>	<b>38.1</b>

(a) Frequently is defined as once a week or more.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

CHANGE IN NUMBER OF HOUSEHOLDS FREQUENTLY USING A HOME COMPUTER

In 1998, 2.6 million households frequently used a home computer, an increase of nearly 29% over the 1996 estimate.

By State and Territory

Queensland recorded the highest increase in households frequently using a home computer since 1996 (39%) and the Northern Territory the lowest (6%).

By region

The number of households frequently using a home computer in areas outside the capital cities increased by 34% since 1996. The corresponding figure for households in capital cities was 26%.

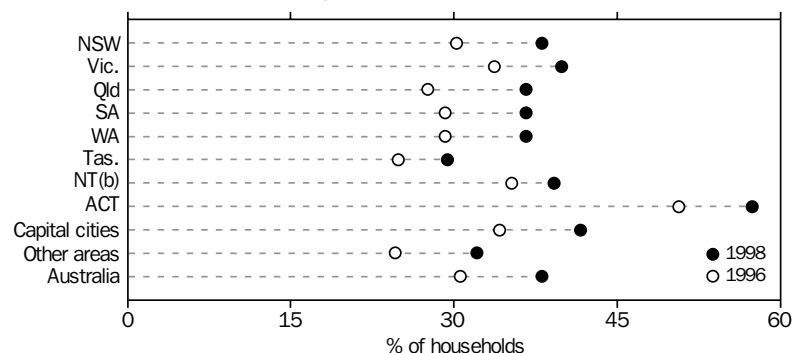
1.2 CHANGE IN HOUSEHOLDS FREQUENTLY USING A HOME COMPUTER(a)

			1998	
	1996		Proportion of all households	Change since 1996
	'000	'000	%	%
<b>State and Territory</b>				
New South Wales	669	872	38.1	30.3
Victoria	548	674	39.9	23.0
Queensland	337	467	36.6	38.6
South Australia	166	208	36.6	25.3
Western Australia	189	244	36.6	29.1
Tasmania	45	54	29.4	20.0
Northern Territory(b)	17	18	39.2	5.9
Australian Capital Territory	53	63	57.4	18.9
<b>Region</b>				
Capital cities	1 418	1 787	41.6	26.0
Other	606	814	32.1	34.3
<b>Australia</b>	<b>2 024</b>	<b>2 601</b>	<b>38.1</b>	<b>28.5</b>

(a) Defined as using a home computer once a week or more.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

1.3 HOUSEHOLDS WHICH FREQUENTLY USED A HOME COMPUTER(a)



(a) Defined as once a week or more.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

FREQUENCY OF HOME  
COMPUTER USE

Of the more than three million households which had a computer in 1998:

- 49% used a home computer daily;
- 29% used a home computer 2–6 times a week;
- 8% used a home computer once a week;
- 4% used a home computer once every two weeks;
- 4% used a home computer once every month; and
- 3% used a home computer once every three months or less.

By State and Territory

Nearly 53% of households with a home computer in Western Australia used the home computer daily compared to 44% of households with a computer in South Australia.

1.4 HOUSEHOLDS WITH A COMPUTER, BY FREQUENCY OF COMPUTER USE

	NSW	Vic.	Qld	SA	WA	Tas.	NT(a)	ACT	Aust.
NUMBER									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Daily	477	382	280	107	152	31	11	37	1 477
2–6 times a week	300	223	148	77	75	19	6	20	868
Once a week	95	69	39	24	17	5	2	6	257
Once every 2 weeks	40	31	*15	9	*7	*1	—	3	107
Once every month	38	30	28	9	10	2	1	2	120
Once every 3 months or less	25	26	21	9	12	3	—	2	98
Not at all	38	29	19	9	14	5	1	2	116
<b>Total</b>	<b>1 013</b>	<b>792</b>	<b>550</b>	<b>244</b>	<b>288</b>	<b>65</b>	<b>21</b>	<b>72</b>	<b>3 045</b>
PROPORTION									
	%	%	%	%	%	%	%	%	%
Daily	47.1	48.2	50.9	43.9	52.7	46.8	51.7	51.6	48.5
2–6 times a week	29.6	28.2	27.0	31.6	26.1	28.4	26.8	27.5	28.5
Once a week	9.4	8.8	7.0	9.8	6.0	7.7	9.2	7.7	8.4
Once every 2 weeks	3.9	4.0	*2.7	3.6	*2.5	*2.2	2.2	4.1	3.5
Once every month	3.8	3.8	5.0	3.6	3.5	3.5	3.6	3.4	3.9
Once every 3 months or less	2.5	3.3	3.8	3.6	4.1	4.3	2.8	3.0	3.3
Not at all	3.8	3.7	3.4	3.7	5.0	7.0	3.8	2.5	3.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

HOUSEHOLDS FREQUENTLY  
USING A COMPUTER BY  
FAMILY TYPE

In 1998 and 1996 households of the type 'couple with children' had the highest proportion of frequent computer users (60% and 47% respectively) while single person households had the lowest (15% and 12%). For other family types:

- 27% of households of the type 'couple with no children' frequently used a computer in 1998 compared with 22% in 1996;
- 36% of households of the type 'single parent with children' frequently used a computer in 1998 compared with 28% in 1996; and
- 43% of households of the type 'other' frequently used a computer in 1998 compared with 34% in 1996.

1.5 HOUSEHOLDS FREQUENTLY USING A HOME COMPUTER, BY FAMILY TYPE

	NSW	Vic.	Qld	SA	WA	Tas.	NT(a)	ACT	Aust.
1998									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Couple with no children	151	107	83	40	45	9	3	12	452
Couple with children	490	379	244	118	129	31	10	31	1 433
Single parent with children	53	62	40	16	19	4	1	5	201
Single person	59	63	44	19	25	6	1	7	223
Other	119	64	56	15	26	4	2	8	293
<b>Total</b>	<b>872</b>	<b>674</b>	<b>467</b>	<b>208</b>	<b>244</b>	<b>54</b>	<b>18</b>	<b>63</b>	<b>2 601</b>
	%	%	%	%	%	%	%	%	%
Couple with no children	28.2	25.7	25.4	26.1	26.1	19.9	33.2	53.3	26.8
Couple with children	59.9	60.9	59.1	60.9	59.6	49.8	59.1	75.1	60.1
Single parent with children	32.0	42.4	35.0	33.3	32.1	30.9	34.1	52.0	35.8
Single person	11.5	17.8	15.4	14.1	16.5	11.9	12.5	30.2	14.8
Other	45.7	41.3	41.1	41.1	38.4	30.1	30.2	56.7	42.6
<b>Total</b>	<b>38.1</b>	<b>39.9</b>	<b>36.6</b>	<b>36.6</b>	<b>36.6</b>	<b>29.4</b>	<b>39.2</b>	<b>57.4</b>	<b>38.1</b>
1996									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Couple with no children	96	100	51	32	32	9	4	10	334
Couple with children	364	301	189	94	104	25	9	27	1 114
Single parent with children	59	43	28	15	15	4	1	4	169
Single person	52	46	24	14	19	4	1	5	166
Other	98	58	45	11	18	3	2	7	241
<b>Total</b>	<b>669</b>	<b>548</b>	<b>337</b>	<b>166</b>	<b>189</b>	<b>45</b>	<b>17</b>	<b>53</b>	<b>2 024</b>
	%	%	%	%	%	%	%	%	%
Couple with no children	20.2	27.2	18.4	22.2	21.3	18.1	34.9	44.8	22.3
Couple with children	45.3	50.3	43.8	49.3	46.1	42.7	53.5	69.2	47.1
Single parent with children	26.5	32.8	24.6	30.5	27.4	23.9	22.8	44.9	28.1
Single person	11.7	13.1	9.3	9.7	13.0	9.0	8.8	25.3	11.7
Other	37.1	32.7	32.3	27.3	26.5	25.0	29.5	49.1	33.5
<b>Total</b>	<b>30.2</b>	<b>33.7</b>	<b>27.6</b>	<b>29.2</b>	<b>29.2</b>	<b>24.9</b>	<b>35.3</b>	<b>50.7</b>	<b>30.6</b>

(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

NUMBERS OF COMPUTERS  
IN HOUSEHOLDS

By type of computer In 1998 there were nearly 3.7 million computers in households which frequently used a home computer, an increase of 1.1 million computers since 1996.

The types of computers in Australian households had not changed significantly since 1996. In 1998 approximately 82% of the 3.7 million computers were desktop or personal computers, 17% were laptops, notebooks or other portable computers and 2% were other types of computers. In 1996 nearly 81% of the 2.6 million household computers were desktop or personal computers, 15% were laptops, notebooks or other portable computers and 4% were other types of computers.

1.6 NUMBER OF COMPUTERS IN HOUSEHOLDS WHICH FREQUENTLY USE A HOME COMPUTER, TYPE OF COMPUTER

	NSW	Vic.	Qld	SA	WA	Tas.	NT(a)	ACT	Aust.
1998									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Laptop, notebook or other portable computers	195	187	105	37	54	13	3	18	613
Desktop or personal computers	1 025	808	516	231	272	61	21	78	3 012
Other computers	20	16	*8	*7	10	1	—	2	64
<b>Total</b>	<b>1 240</b>	<b>1 010</b>	<b>630</b>	<b>275</b>	<b>336</b>	<b>75</b>	<b>24</b>	<b>98</b>	<b>3 689</b>
	%	%	%	%	%	%	%	%	%
Laptop, notebook or other portable computers	15.7	18.5	16.7	13.6	16.0	17.3	13.0	18.8	16.6
Desktop or personal computers	82.6	80.0	82.1	83.9	81.0	81.5	85.8	79.7	81.7
Other computers	1.7	1.5	*1.2	*2.5	3.0	1.2	1.2	1.6	1.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
1996									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Laptop, notebook or other portable computers	151	90	60	33	30	9	4	14	391
Desktop or personal computers	681	581	341	168	198	46	16	60	2 090
Other computers	42	25	17	9	9	3	1	3	107
<b>Total</b>	<b>874</b>	<b>696</b>	<b>418</b>	<b>208</b>	<b>238</b>	<b>57</b>	<b>21</b>	<b>77</b>	<b>2 589</b>
	%	%	%	%	%	%	%	%	%
Laptop, notebook or other portable computers	17.2	13.0	14.4	15.1	12.7	15.9	20.8	18.2	15.1
Desktop or personal computers	78.0	83.4	81.5	80.6	83.3	80.4	75.7	78.0	80.7
Other computers	4.8	3.6	4.1	4.3	4.0	4.1	3.5	3.8	4.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

By type of computer ownership

In 1998, 81% of computers in households which frequently used a home computer were owned by a member of the household. In 1996, the proportion was the same. In 1998 nearly 9% of computers in households which frequently used a computer were owned by a registered home business and a further 7% were owned by an employer. In 1996, 8% of computers in households which frequently used a computer were owned by a registered home business and 7% were owned by an employer.

1.7 NUMBER OF COMPUTERS IN HOUSEHOLDS WHICH FREQUENTLY USED A HOME COMPUTER, TYPE OF OWNERSHIP

	NSW	Vic.	Qld	SA	WA	Tas.	NT(a)	ACT	Aust.
1998									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Member of household	1 017	803	506	232	274	63	20	80	2 995
A registered home business	97	102	56	20	26	4	2	6	313
A commercial rental business	15	8	2	4	2	1	—	—	33
Relative or friend living elsewhere	11	16	10	3	5	2	—	1	48
An employer	89	70	47	15	24	5	2	10	262
Other	9	10	6	—	3	1	—	1	30
Don't know	3	1	2	1	1	—	—	—	8
<b>Total</b>	<b>1 240</b>	<b>1 010</b>	<b>630</b>	<b>275</b>	<b>336</b>	<b>75</b>	<b>24</b>	<b>98</b>	<b>3 689</b>
	%	%	%	%	%	%	%	%	%
Member of household	82.0	79.5	80.3	84.1	81.7	82.5	84.2	81.2	81.2
A registered home business	7.9	10.1	8.9	7.3	7.7	5.7	7.0	6.0	8.5
A commercial rental business	1.2	0.7	0.4	1.5	0.7	0.8	1.0	0.3	0.9
Relative or friend living elsewhere	0.9	1.6	1.6	1.1	1.4	2.0	0.6	1.5	1.3
An employer	7.1	7.0	7.5	5.6	7.2	7.2	5.7	9.9	7.1
Other	0.7	1.0	1.0	0.1	1.0	1.6	1.2	1.2	0.8
Don't know	0.2	0.1	0.3	0.3	0.4	0.3	0.2	0.0	0.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
1996									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Member of household	721	542	337	167	200	47	17	62	2 093
A registered home business	54	72	38	15	17	5	1	5	207
A commercial rental business	—	1	1	1	1	—	—	—	5
Relative or friend living elsewhere	7	20	5	3	2	1	—	1	39
An employer	77	44	28	16	13	3	2	8	192
Other	11	7	7	4	5	1	—	—	35
Don't know	5	10	2	1	—	—	—	—	18
<b>Total</b>	<b>874</b>	<b>696</b>	<b>418</b>	<b>208</b>	<b>238</b>	<b>57</b>	<b>21</b>	<b>77</b>	<b>2 589</b>
	%	%	%	%	%	%	%	%	%
Member of household	82.5	77.8	80.7	80.3	83.9	82.2	81.8	80.6	80.8
A registered home business	6.2	10.3	9.1	7.1	7.3	8.6	4.9	6.3	8.0
A commercial rental business	—	0.1	0.2	0.6	0.5	—	—	0.3	0.2
Relative or friend living elsewhere	0.8	2.9	1.2	1.7	0.7	1.5	1.1	0.9	1.5
An employer	8.8	6.4	6.7	7.8	5.5	5.9	10.9	11.0	7.4
Other	1.2	1.2	1.7	1.9	2.0	1.8	1.2	0.5	1.4
Don't know	0.6	1.4	0.4	0.7	—	—	—	0.4	0.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

## COMPUTER CAPACITY

Since 1996 household computers have gradually increased their processing and memory capacity.

### Processor capacity

Of the 2.3 million households which frequently used a home computer and also owned or paid for a computer in 1998:

- 47% reported that the processor capacity of the most powerful computer owned or paid for by the household was an IBM or IBM compatible Pentium I or II (16% in 1996);
- 22% reported having a IBM or IBM compatible 486 (37% in 1996);
- 8% reported having an IBM or IBM compatible 386 (19% in 1996);
- 4% reported having an IBM or IBM compatible 286 as the most powerful computer owned or paid for by the household (8% in 1996).
- 4% reported having an Apple Macintosh; and
- 1% reported having an Apple Power PC.

### Memory capacity

Of the 2.3 million households which frequently used a home computer and also owned or paid for a computer in 1998:

- 20% reported that the most powerful computer owned or paid for by the household had a memory capacity of 32 to less than 64 megabytes (5% in 1996);
- 20% reported that the most powerful computer owned or paid for by the household had a memory capacity of less than 16 megabytes (nearly 56% in 1996%);
- 19% reported that the most powerful computer owned or paid for by the household had a memory capacity of 16 to less than 32 megabytes (12% in 1996); and
- 13% reported that the most powerful computer owned or paid for by the household had a memory capacity of 64 megabytes or more (5% in 1996).

## 1.8

## PROCESSOR CAPACITY OF MOST POWERFUL COMPUTER OWNED OR PAID FOR BY HOUSEHOLDS(a)(b)

	NSW	Vic.	Qld	SA	WA	Tas.	NT(c)	ACT	Aust.
1998									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Apple Macintosh	42	*14	15	9	9	4	2	3	97
Apple Power PC	*11	*7	*4	*2	*5	1	—	2	32
IBM or IBM compatible 286	33	27	17	7	8	1	1	2	94
IBM or IBM compatible 386	60	53	29	15	16	5	1	5	185
IBM or IBM compatible 486	160	146	89	45	45	12	4	12	513
IBM or IBM compatible Pentium	257	208	146	60	82	15	5	19	793
IBM or IBM compatible Pentium II	125	73	54	20	28	5	2	8	315
Other	24	36	*11	13	*8	2	—	1	96
Don't know	73	43	38	19	16	4	1	5	199
<b>Total</b>	<b>784</b>	<b>606</b>	<b>404</b>	<b>190</b>	<b>217</b>	<b>50</b>	<b>17</b>	<b>56</b>	<b>2 323</b>
	%	%	%	%	%	%	%	%	%
Apple Macintosh	5.3	2.3	3.6	4.9	4.3	7.5	11	5.1	4.2
Apple Power PC	*1.4	*1.1	*1.1	*1.2	*2.1	2.4	*2.8	3.1	1.4
IBM or IBM compatible 286	4.2	4.4	4.2	3.5	3.5	2.9	3.5	3.4	4.1
IBM or IBM compatible 386	7.7	8.8	7.3	7.8	7.6	10.6	6.8	8.4	8.0
IBM or IBM compatible 486	20.4	24.2	22.0	23.6	20.6	24.6	21.7	21.5	22.1
IBM or IBM compatible Pentium	32.8	34.2	36.3	31.6	37.8	29.7	32.9	34.5	34.1
IBM or IBM compatible Pentium II	15.9	12.0	13.3	10.6	13.1	9.9	13.0	14.1	13.6
Other	3.1	5.9	*2.7	6.6	*3.9	4.9	*2.4	1.9	4.1
Don't know	9.3	7.2	9.5	10.2	7.2	7.5	5.8	8.1	8.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
1996									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Apple Macintosh	*14	*7	*2	*3	*4	1	—	1	32
Apple Power PC	55	26	*13	14	*8	4	3	6	128
IBM or IBM compatible 286	47	47	25	13	15	5	1	3	157
IBM or IBM compatible 386	122	115	49	25	28	7	2	7	354
IBM or IBM compatible 486	224	193	130	49	72	12	5	19	705
IBM or IBM compatible Pentium	98	80	56	23	26	7	2	8	302
IBM or IBM compatible Pentium II	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Other	37	31	23	18	13	5	—	3	129
Don't know	40	21	19	10	11	3	1	1	106
<b>Total</b>	<b>635</b>	<b>521</b>	<b>316</b>	<b>155</b>	<b>178</b>	<b>43</b>	<b>15</b>	<b>49</b>	<b>1 912</b>
	%	%	%	%	%	%	%	%	%
Apple Macintosh	*2.3	*1.4	*0.5	*2.1	*2.2	2.0	2.2	2.0	1.7
Apple Power PC	8.6	5.0	*4.0	*8.8	*4.6	9.5	17.4	12.0	6.7
IBM or IBM compatible 286	7.3	9.1	7.9	8.2	8.5	12.2	9.9	6.9	8.2
IBM or IBM compatible 386	19.1	22.1	15.4	16.3	16.0	15.3	11.7	14.8	18.5
IBM or IBM compatible 486	35.2	37.1	14.3	31.7	40.3	28.1	35.1	39.3	36.9
IBM or IBM compatible Pentium	15.5	15.4	17.7	15.1	14.7	16.3	15.3	17.2	15.8
IBM or IBM compatible Pentium II	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Other	5.8	5.9	7.3	11.4	7.6	10.8	*2.3	5.2	6.8
Don't know	6.3	4.1	6.0	6.4	6.3	6.0	6.2	2.7	5.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Estimates in this table do not identify the market share of each computer but the capacity of the most powerful computer owned or paid for in each household.

(b) Relates to households which frequently used a computer.

(c) refers to mainly urban areas only—see paragraph 2 of the Explanatory Notes.



## 1.9

## MEMORY CAPACITY OF MOST POWERFUL COMPUTER OWNED OR PAID FOR BY HOUSEHOLDS(a)(b)

	NSW	Vic.	Qld	SA	WA	Tas.	NT(c)	ACT	Aust.
1998									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Less than 4 Mb	26	17	*11	*6	*2	2	1	1	66
4 to less than 8 Mb	58	32	26	12	12	3	1	3	148
8 to less than 16 Mb	84	72	38	17	20	7	2	7	248
16 to less than 32 Mb	143	112	82	31	45	9	4	12	437
32 to less than 64 Mb	150	113	80	40	48	9	4	13	456
64 Mb or more	110	71	51	21	31	5	1	6	296
Don't know	212	189	115	63	60	15	4	13	671
<b>Total</b>	<b>784</b>	<b>606</b>	<b>404</b>	<b>190</b>	<b>217</b>	<b>50</b>	<b>17</b>	<b>56</b>	<b>2 323</b>
	%	%	%	%	%	%	%	%	%
Less than 4 Mb	3.4	2.8	*2.8	*2.9	*1.0	3.6	3.4	2.3	2.9
4 to less than 8 Mb	7.4	5.3	6.5	6.5	5.4	6.5	6.1	5.5	6.4
8 to less than 16 Mb	10.7	11.9	9.4	9.1	9.4	14.2	13.8	13.0	10.7
16 to less than 32 Mb	18.3	18.5	20.2	16.3	20.5	17.5	25.4	21.1	18.8
32 to less than 64 Mb	19.2	18.6	19.8	21.0	22.2	18.0	21.4	22.9	19.7
64 Mb or more	14.0	11.8	12.7	10.9	14.1	10.5	7.4	11.4	12.7
Don't know	27.1	31.2	28.5	33.3	27.5	29.7	22.4	23.7	28.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
1996									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Less than 4 Mb	55	45	26	20	14	3	1	4	168
4 to less than 8 Mb	146	116	68	28	26	8	3	11	407
8 to less than 16 Mb	151	146	86	32	48	9	4	14	489
16 to less than 32 Mb	72	59	37	21	20	5	2	8	223
32 to less than 64 Mb	24	25	16	7	10	2	1	2	86
64 Mb or more	32	21	*14	*5	9	3	1	2	87
Don't know	156	108	68	42	52	13	3	9	452
<b>Total</b>	<b>635</b>	<b>521</b>	<b>316</b>	<b>155</b>	<b>178</b>	<b>43</b>	<b>15</b>	<b>49</b>	<b>1 912</b>
	%	%	%	%	%	%	%	%	%
Less than 4 Mb	8.7	8.7	8.4	12.7	7.6	7.7	6.8	7.2	8.8
4 to less than 8 Mb	23.0	22.3	21.7	18.3	14.7	19.4	16.7	21.8	21.3
8 to less than 16 Mb	23.7	28.0	27.3	20.4	26.8	20.5	26.8	28.6	25.6
16 to less than 32 Mb	11.3	11.4	11.7	13.7	10.9	10.6	13.9	15.4	11.7
32 to less than 64 Mb	3.7	4.8	5.0	4.3	5.6	4.3	6.6	4.7	4.5
64 Mb or more	5.0	4.0	*4.5	*3.4	5.3	7.2	5.8	4.3	4.6
Don't know	24.6	20.8	21.5	27.3	29.1	30.3	23.3	18.0	23.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Estimates in this table do not identify the market share of each computer but the capacity of the most powerful computer owned or paid for in each household.

(b) Relates to households which frequently used a computer.

(c) Refers to mainly urban areas only—see paragraph 2 of the Explanatory Notes.

USE OF PERIPHERAL  
TECHNOLOGIES

Households which frequently used a home computer once a week or more had a high level of peripheral technology usage. In 1998 nearly 89% of these households had a printer, 75% had a CD-ROM drive, 53% had a modem and 19% reported having a character or image reader. In 1996 nearly 84% of households frequently using a computer had a printer, 47% had a CD-ROM drive, 26% had a modem and only 7% had a character or image reader.

1.10 USE OF COMPUTER PERIPHERALS BY HOUSEHOLDS WHICH FREQUENTLY USED A HOME COMPUTER

	NSW	Vic.	Qld	SA	WA	Tas.	NT(a)	ACT	<b>Aust.</b>
1998									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Printers	785	601	407	183	222	46	16	54	<b>2 314</b>
Character or image reader	181	126	80	31	51	7	3	9	<b>488</b>
CD-ROM	660	508	346	151	187	37	14	45	<b>1 948</b>
Modems	496	337	240	99	132	25	10	36	<b>1 373</b>
	%	%	%	%	%	%	%	%	%
Printers	90.0	89.1	87.2	87.8	90.6	85.3	89.5	86.0	<b>89.0</b>
Character or image reader	20.8	18.7	17.1	15.1	20.9	12.4	14.3	15.0	<b>18.8</b>
CD-ROM	75.7	75.3	74.1	72.7	76.3	69.1	77.5	72.5	<b>74.9</b>
Modems	56.9	49.9	51.4	47.3	53.8	45.3	54.0	58.0	<b>52.8</b>
1996									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Printers	559	467	290	134	157	36	14	44	<b>1 702</b>
Character or image reader	51	34	31	12	11	3	1	3	<b>146</b>
CD-ROM	302	252	167	70	101	19	8	26	<b>945</b>
Modems	196	128	86	36	55	8	5	17	<b>532</b>
	%	%	%	%	%	%	%	%	%
Printers	83.6	85.3	86.1	81.0	83.0	79.8	81.9	83.1	<b>84.1</b>
Character or image reader	7.7	6.1	9.2	7.1	5.8	6.4	5.2	6.2	<b>7.2</b>
CD-ROM	45.2	46.0	49.5	42.4	53.3	42.0	50.8	48.5	<b>46.7</b>
Modems	29.2	23.4	25.6	21.8	29.2	18.6	28.3	31.8	<b>26.3</b>

(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

MAIN REASON FOR NOT  
HAVING A HOME  
COMPUTER

In 1998 nearly 3.8 million households did not have a home computer compared to nearly 4.4 million households in 1996. In 1998 and 1996 the main barriers to the adoption of computers were 'no use for a computer' and 'costs are too high'. In 1998, 37% of households without a home computer reported 'no use for a computer' as the main reason for not having a computer and a further 27% reported 'costs are too high'. In 1996, 40% of households without a home computer reported 'no use for a computer' and 30% reported 'costs are too high' as the main reasons for not having a home computer.

1.11 MAIN REASON FOR HOUSEHOLDS NOT HAVING A HOME COMPUTER

	NSW	Vic.	Qld	SA	WA	Tas.	NT(a)	ACT	Aust.
1998									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Costs too high	338	198	209	89	114	35	10	10	1 004
Lack of interest in computers	241	166	153	70	69	25	4	6	733
Don't know how to use computer	90	65	54	26	25	8	1	3	272
No use for a computer	469	376	239	111	134	39	6	13	1 387
Access to computer elsewhere	90	50	39	14	20	6	3	4	226
Computers are bad influence	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Other	42	41	27	14	17	5	1	1	148
Don't know	*6	*3	*4	*2	*1	—	—	—	16
<b>Total</b>	<b>1 276</b>	<b>900</b>	<b>724</b>	<b>326</b>	<b>379</b>	<b>119</b>	<b>26</b>	<b>37</b>	<b>3 786</b>
	%	%	%	%	%	%	%	%	%
Costs too high	26.5	22.0	28.9	27.3	30.1	29.7	38.0	27.9	26.5
Lack of interest in computers	18.9	18.5	21.1	21.6	18.1	20.9	16.1	16.2	19.4
Don't know how to use computer	7.1	7.2	7.4	8.1	6.7	6.7	5.1	6.8	7.2
No use for a computer	36.8	41.8	33.0	34.0	35.4	33.3	24.6	34.1	36.6
Access to computer elsewhere	7.1	5.6	5.4	4.2	5.2	5.3	12.1	11.8	6.0
Computers are bad influence	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Other	3.3	4.6	3.7	4.3	4.4	4.0	3.8	3.1	3.9
Don't know	*0.5	*0.3	*0.5	*0.5	*0.2	*0.2	*0.4	*0.2	0.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
1996									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Costs too high	438	294	278	114	137	39	9	16	1 324
Lack of interest in computers	220	118	126	63	42	20	4	4	597
Don't know how to use computer	91	53	50	22	22	8	1	1	248
No use for a computer	577	442	320	148	189	49	9	17	1 751
Access to computer elsewhere	83	67	44	20	21	7	4	6	253
Computers are bad influence	20	*13	*11	*6	*3	2	—	1	56
Other	46	35	27	14	17	5	1	2	148
Don't know	*4	*9	*2	*3	*2	1	—	—	21
<b>Total</b>	<b>1 479</b>	<b>1 031</b>	<b>858</b>	<b>390</b>	<b>434</b>	<b>130</b>	<b>29</b>	<b>47</b>	<b>4 397</b>
	%	%	%	%	%	%	%	%	%
Costs too high	29.6	28.5	32.4	29.3	31.5	29.7	32.0	33.2	30.1
Lack of interest in computers	14.9	11.5	14.7	16.1	9.8	15.1	13.4	8.7	13.6
Don't know how to use computer	6.1	5.2	5.8	5.7	5.0	6.1	3.9	3.0	5.6
No use for a computer	39.0	42.9	37.3	38.0	43.7	37.3	31.0	35.5	39.8
Access to computer elsewhere	5.6	6.5	5.2	5.2	4.9	5.5	14.3	13.8	5.8
Computers are bad influence	1.3	*1.3	*1.3	*1.5	*0.8	1.6	*1.4	*1.4	1.3
Other	3.2	3.4	3.1	3.6	4.0	3.7	3.5	4.2	3.4
Don't know	*0.2	*0.9	*0.3	*0.7	*0.4	1.0	*0.6	*0.2	0.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

REASONS FOR NOT  
FREQUENTLY USING  
EXISTING HOME COMPUTER

Of the 336,000 households in 1998 which had a home computer which was not used frequently:

- 23% gave the reason, 'the age, capacity or condition of the computer' as a reason for not using their home computer more frequently;
- 20% gave the reason, 'use computer elsewhere';
- 15% gave the reason, 'change in household interest';
- 12% gave the reason, 'change in study commitments';
- 6% gave the reason, 'change in work commitments';
- 3% gave the reason, 'change in household structure';
- 1% gave the reason, 'change in health'; and
- 21% gave other reasons.

Of the 116,000 households which did not use their home computer at all:

- 45% reported, 'the age, capacity or condition of the computer' as a reason for not using their home at all;
- 13% gave the reason, 'change in household interest';
- 7% gave the reason, 'change in household structure';
- 6% gave the reason, 'use computer elsewhere';
- 4% gave the reason, 'change in study commitments';
- 3% gave the reason, 'change in work commitments'; and
- 28% gave other reasons.

1.12 REASONS WHY EXISTING HOME COMPUTER IS NOT USED MORE OFTEN

	'000	%
Reasons for not using existing home computer more often		
The age, capacity or condition of the computer	75	23.2
Use computer elsewhere	64	19.6
Change in household interest	47	14.5
Change in household structure	*10	*3.1
Change in work commitments	20	6.0
Change in study commitments	40	12.4
Change in health	*4	*1.1
Other	67	20.5
Don't know	*9	*2.7
Reasons for not using existing home computer at all		
The age, capacity or condition of the computer	52	45.1
Use computer elsewhere	*7	*5.9
Change in household interest	15	12.6
Change in household structure	*8	*7.0
Change in work commitments	*3	*2.9
Change in study commitments	*5	*4.0
Change in health	—	*0.4
Other	33	28.3
Don't know	*3	*2.6

INTENTIONS TO ACQUIRE OR UPGRADE A HOME COMPUTER

In 1998 nearly 1.3 million households (18.3% of all households) intended to purchase or upgrade a home computer in the next 12 months. Nearly 65% of these households already had a home computer.

Nearly 27% of households with a home computer intended to purchase a new computer or upgrade their existing home computer. In comparison, 12% of households without computers reported an intention to acquire a home computer.

If the households without home computers carry out their intentions to acquire a home computer in the next 12 months, by the end of 1999 it is estimated that nearly 3.5 million households in Australia will have a home computer.

1.13 INTENTIONS OF HOUSEHOLDS TO PURCHASE A COMPUTER IN THE NEXT 12 MONTHS

	NSW	Vic.	Qld	SA	WA	Tas.	NT(a)	ACT	Aust.
NUMBER									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Households with computers	267	221	148	58	76	15	6	22	813
Households without computers	146	114	78	34	46	12	5	6	440
<b>All households</b>	<b>413</b>	<b>334</b>	<b>226</b>	<b>92</b>	<b>122</b>	<b>27</b>	<b>11</b>	<b>27</b>	<b>1 253</b>
PROPORTION									
	%	%	%	%	%	%	%	%	%
Households with computers	26.4	27.9	26.9	23.6	26.5	23.0	30.0	30.3	26.7
Households without computers	11.5	12.6	10.7	10.5	12.1	10	19	15	11.6
<b>All households</b>	<b>18.1</b>	<b>19.8</b>	<b>17.7</b>	<b>16.1</b>	<b>18.3</b>	<b>14.5</b>	<b>23.7</b>	<b>25.1</b>	<b>18.3</b>

(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

YEARS SINCE LAST COMPUTER PURCHASED OR LEASED

Between 1996 and 1998 there was very little change in the reported period of time since households with a computer last purchased or leased a new computer.

Of the 2.6 million households which frequently used a home computer in 1998:

- 10% had never purchased a computer (12% in 1996);
- 29% purchased a computer less than one year ago (25% in 1996);
- 22% purchased a computer one to less than two years ago (20% in 1996);
- 15% two to less than three years ago (18% in 1996);
- 11% three to less than four years ago (12% in 1996); and
- 12% more than four years ago (13% in 1996).

1.14 YEARS SINCE LAST HOME COMPUTER PURCHASED OR LEASED(a)

	NSW	Vic.	Qld	SA	WA	Tas.	NT(b)	ACT	Aust.
1998									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Never	71	58	54	19	32	5	1	8	248
Less than 1 year	261	189	139	59	74	16	6	18	761
1 to less than 2 years	207	152	97	41	49	12	3	13	574
2 to less than 3 years	123	119	67	33	39	7	3	8	401
3 years to less than 4 years	102	68	43	26	24	7	2	7	277
More than 4 years	100	85	61	29	24	7	3	9	318
Don't know	*7	*4	*5	*2	*2	—	—	—	21
<b>Total</b>	<b>872</b>	<b>674</b>	<b>467</b>	<b>208</b>	<b>244</b>	<b>54</b>	<b>18</b>	<b>63</b>	<b>2 601</b>
	%	%	%	%	%	%	%	%	%
Never	8.2	8.6	11.6	8.9	13.1	9.8	7.0	12.3	9.6
Less than 1 year	30.0	28.0	29.9	28.2	30.1	28.8	30.6	29.2	29.3
1 to less than 2 years	23.8	22.5	20.9	19.8	20.2	21.5	18.9	20.0	22.1
2 to less than 3 years	14.2	17.6	14.4	16.0	16.1	13.4	18.9	12.8	15.4
3 years to less than 4 years	11.7	10.2	9.1	12.3	9.7	12.8	9.6	10.5	10.7
More than 4 years	11.5	12.6	13.0	13.8	10.0	13.4	14.3	14.9	12.2
Don't know	*0.8	*0.6	*1.1	*1.0	*0.9	*0.7	*0.8	*0.3	0.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
1996									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Never	65	71	42	25	22	8	2	7	243
Less than 1 year	158	131	96	39	48	11	4	14	500
1 to less than 2 years	139	109	61	32	36	9	3	9	398
2 to less than 3 years	120	110	59	22	32	6	3	9	360
3 years to less than 4 years	82	65	44	19	23	5	2	6	246
More than 4 years	101	59	35	28	27	6	2	8	266
Don't know	*4	*4	*2	—	*1	—	—	—	*11
<b>Total</b>	<b>669</b>	<b>548</b>	<b>337</b>	<b>166</b>	<b>189</b>	<b>45</b>	<b>17</b>	<b>53</b>	<b>2 024</b>
	%	%	%	%	%	%	%	%	%
Never	9.8	13.0	12.5	15.0	11.4	17.9	13.1	13.8	12.0
Less than 1 year	23.6	23.8	28.3	23.5	25.6	24.3	23.5	25.5	24.7
1 to less than 2 years	20.8	19.8	18.0	19.4	19.1	20.9	20.8	17.4	19.7
2 to less than 3 years	17.9	20.1	17.4	13.3	16.9	12.3	18.3	16.3	17.8
3 years to less than 4 years	12.3	11.8	13.0	11.7	12.2	11.5	9.4	11.2	12.2
More than 4 years	15.1	10.8	10.3	17.1	14.4	12.4	13.9	15.3	13.1
Don't know	*0.6	*0.7	*0.5	*0.2	*0.5	*0.8	*1.1	*0.5	*0.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Relates to households which frequently used a computer.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

## SECTION 2

## HOUSEHOLD INTERNET ACCESS

### HOUSEHOLDS WITH HOME INTERNET ACCESS

In 1998 nearly 16% of all households in Australia (1.1 million) had home Internet access compared with 4.3% of households (0.3 million) in 1996.

#### By State, Territory and region

For the States and Territories, the proportion of households with home Internet access in 1998 was:

- 28% for the Australian Capital Territory;
- 18% for New South Wales;
- 16% for the Northern Territory;
- 15% each for Victoria and Queensland;
- just under 15% for Western Australia;
- 13% for South Australia; and
- just over 10% for Tasmania.

In 1998 capital cities had a higher proportion of households with Internet access than other areas. Of the capital cities, Canberra (28%) had the highest proportion of households with home Internet access. For the other capital cities the proportion of households with home Internet access was:

- Sydney—23%;
- Brisbane—19%;
- Darwin—18%;
- Melbourne—17%;
- Perth—16%;
- Adelaide—14%; and
- Hobart—14%.

#### By household income

Households with higher incomes were more likely to have home Internet access. In 1998, 36% of households with incomes greater than \$66,000 had home Internet access, 21% of households with incomes \$44,001–\$66,000 had home Internet access, 12% of households with incomes \$27,001–\$44,000 had home Internet access, 7% of households with incomes \$14,001–\$27,000 had home Internet access and less than 4% of households with incomes below \$14,001 had home Internet access.

#### By family type

Households of the type 'couple with children' had the highest proportion of households with home Internet access (23%), followed by households of the type 'other' (22%), 'couple and with no children' (13%), 'single parent' households (11%) and 'single person' households (7%).

2.1 HOUSEHOLDS WITH HOME INTERNET ACCESS

	NSW	Vic.	Qld	SA	WA	Tas.	NT(a)	ACT	Aust.
HOUSEHOLD INCOME									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
0-\$14 000	18	*7	*10	*2	*7	2	—	—	<b>46</b>
\$14 001-\$27 000	32	17	21	*6	8	2	1	1	<b>88</b>
\$27 001-\$44 000	37	39	29	15	13	3	1	3	<b>140</b>
\$44 001-\$66 000	91	47	43	16	22	5	2	6	<b>232</b>
\$66 001 and over	170	95	56	20	36	5	3	16	<b>400</b>
Not stated	58	51	33	16	12	2	1	4	<b>177</b>
	%	%	%	%	%	%	%	%	%
0-\$14 000	4.0	*2.5	*4.2	*1.8	*5.8	3.5	*2.8	*4.8	<b>3.7</b>
\$14 001-\$27 000	7.7	6.1	8.5	*5.5	7.2	6.1	9.3	10.2	<b>7.3</b>
\$27 001-\$44 000	10.9	12.5	13.3	14.9	11.7	9.4	9.6	19.7	<b>12.3</b>
\$44 001-\$66 000	25.2	18.2	19.4	19.6	18.2	16.4	19.7	27.9	<b>21.0</b>
\$66 001 and over	39.5	35.0	32.5	29.7	30.9	29.4	26.7	46.5	<b>35.8</b>
Not stated	19.5	17.8	19.8	15.7	12.9	10.5	11.5	28.0	<b>17.9</b>
HOUSEHOLD FAMILY TYPE									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Couple with no children	84	49	35	14	20	4	2	7	<b>215</b>
Couple with children	215	127	95	38	46	10	4	15	<b>551</b>
Single parent	17	17	17	4	4	1	—	2	<b>62</b>
Single person	23	31	19	11	14	3	—	3	<b>105</b>
Other	67	32	26	7	14	1	1	3	<b>151</b>
	%	%	%	%	%	%	%	%	%
Couple with no children	15.6	11.7	10.9	9.4	11.3	8.8	17.7	32.0	<b>12.8</b>
Couple with children	26.3	20.4	23.0	19.6	21.4	16.6	24.0	35.3	<b>23.1</b>
Single parent	10.0	11.9	14.6	8.0	5.9	5.5	*10.3	25.9	<b>11.0</b>
Single person	4.6	8.8	6.8	7.6	9.5	5.6	*4.9	14.4	<b>6.9</b>
Other	25.7	21.0	19.1	21.1	20.0	10.6	9.5	24.0	<b>22.0</b>
REGION									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Capital cities	314	207	107	61	81	11	6	31	<b>816</b>
Other	92	49	86	14	16	9	2	—	<b>268</b>
Total	406	256	193	74	97	19	7	31	<b>1 084</b>
	%	%	%	%	%	%	%	%	%
Capital cities	22.7	17.1	18.9	14.3	16.3	13.9	18.3	28.2	<b>19.0</b>
Other	10.2	10.3	12.1	9.3	9.6	8.0	12.0	0.0	<b>10.6</b>
Total	17.7	15.1	15.1	13.1	14.6	10.4	16.1	28.2	<b>15.9</b>

(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.



CHANGE IN THE NUMBER OF HOUSEHOLDS WITH HOME INTERNET ACCESS

In 1998 nearly 1.1 million households had home Internet access, an increase of nearly 280% over the 1996 estimate.

By State and Territory Queensland recorded the highest increase in households with home Internet access (339%).

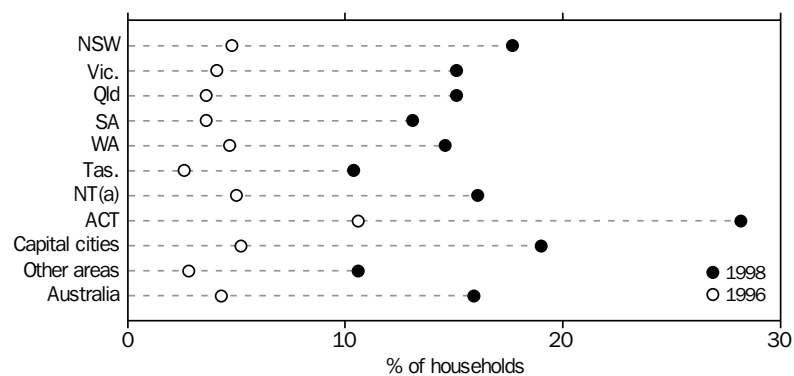
By region The number of households with home Internet access in areas outside the capital cities increased by 283% since 1996. The corresponding figure for households in capital cities was 278%.

2.2 CHANGE IN HOUSEHOLDS WITH HOME INTERNET ACCESS

	1996		1998	
	'000	'000	Proportion of all households %	Change since 1996 %
STATE AND TERRITORY				
New South Wales	105	406	17.7	286.7
Victoria	67	256	15.1	282.1
Queensland	44	193	15.1	338.6
South Australia	21	74	13.1	252.4
Western Australia	31	97	14.6	212.9
Tasmania	5	19	10.4	280.0
Northern Territory(a)	2	7	16.1	250.0
Australian Capital Territory	11	31	28.2	181.8
REGION				
Capital cities	216	816	19.0	277.8
Other	70	268	10.6	282.9
<b>Australia</b>	<b>286</b>	<b>1084</b>	<b>15.9</b>	<b>279.0</b>

(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

2.3 HOUSEHOLDS WITH HOME INTERNET ACCESS



(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

MAIN REASON FOR HOUSEHOLDS WITH COMPUTERS NOT HAVING HOME INTERNET ACCESS

Of the nearly two million households which had a home computer but no Internet access in 1998:

- 30% reported 'costs are too high' as the main barrier to acquiring home Internet access;
- 28% reported 'lack of interest in Internet';
- 11% reported that their existing home computer had 'insufficient capacity/need to upgrade computer';
- 8% reported 'adequate access outside home';
- just over 3% reported 'lack of confidence/skill with a computer';
- a further 3% reported 'poor opinion of the Internet' as the main reason for not having home Internet access; and
- nearly 14% reported other reasons.

2.4 MAIN REASON FOR HOUSEHOLDS NOT HAVING INTERNET ACCESS(a)

	NSW	Vic.	Qld	SA	WA	Tas.	NT(b)	ACT	Aust.
	NUMBER								
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Costs are too high	170	172	100	55	59	14	4	12	587
Insufficient capacity/need to upgrade computer	79	40	37	18	21	6	2	5	207
Lack of confidence/skill with a computer	22	*12	*13	*5	8	1	—	1	63
Lack of interest in Internet	171	154	101	49	48	9	3	9	544
Poor opinion of the Internet	24	*11	*6	*4	*4	2	—	1	54
Lack of access to ISP/inadequate telecommunications infrastructures	17	*13	*9	*5	*6	1	—	1	52
Adequate access outside home	36	47	29	11	*13	6	2	7	150
Other	82	76	51	19	29	5	2	5	268
Don't know	*5	*12	*9	*3	*3	1	—	—	33
<b>Total</b>	<b>606</b>	<b>536</b>	<b>355</b>	<b>170</b>	<b>190</b>	<b>46</b>	<b>13</b>	<b>41</b>	<b>1 957</b>
	PROPORTION								
	%	%	%	%	%	%	%	%	%
Costs are too high	28.1	32.1	28.3	32.4	31.2	31.5	28.9	28.6	30.0
Insufficient capacity/need to upgrade computer	13.1	7.4	10.4	10.6	10.8	12.9	15.1	11.4	10.6
Lack of confidence/skill with a computer	3.6	*2.2	*3.7	*3.2	4.2	3.0	*1.6	2.8	3.2
Lack of interest in Internet	28.2	28.7	28.4	28.6	25.3	19.9	23.2	22.5	27.8
Poor opinion of Internet	4.0	*2.1	*1.7	*2.6	*2.4	4.5	*0.3	2.7	2.7
Lack of access to ISP/inadequate telecommunications infrastructure	2.9	*2.4	*2.5	*3.1	*3.1	1.9	*2.9	1.5	2.6
Adequate access outside home	5.9	8.8	8.1	*6.5	*6.7	12.5	11.7	17.3	7.7
Other	13.5	14.2	14.3	11.2	15.2	11.1	15.0	13.0	13.7
Don't know	*0.9	*2.2	*2.6	*1.9	*1.3	2.7	*1.3	*0.3	1.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Relates to households with a home computer and no home Internet access only.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

INTENTIONS TO ACQUIRE  
HOME INTERNET ACCESS

In 1998 nearly 28% of households (0.5 million) with a home computer and no home Internet access reported an intention to connect to the Internet in the next 12 months. If households currently with Internet access are added to households with a computer intending to connect to the Internet in the next 12 months, and assume that all households intending to acquire a computer for the first time will also connect to the Internet, then we can conclude that by the end of 1999 there could be approximately 2.0 million Internet households.

Of those households which currently do not have a home computer, an estimated 440,000 households reported an intention to acquire a computer in the next 12 months.

2.5 INTENTIONS OF HOUSEHOLDS WITH A HOME COMPUTER TO  
CONNECT TO THE INTERNET IN NEXT 12 MONTHS

	'000	%
New South Wales	162	26.7
Victoria	156	29.2
Queensland	104	29.2
South Australia	39	23.1
Western Australia	50	26.0
Tasmania	10	21.7
Northern Territory(a)	4	33.0
Australian Capital Territory	13	31.0
<b>Australia</b>	<b>537</b>	<b>27.5</b>

(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

## SECTION 3

## HOUSEHOLD EXPENDITURE ON INFORMATION TECHNOLOGY

### EXPENDITURE ON INFORMATION TECHNOLOGY

Expenditure on computer hardware or software

Of the more than three million households which had a computer in 1998, 33% had no expenditure on computer hardware or software in the 12 months prior to the survey. Nearly 21% of households with a computer spent less than \$251, 8% had spent \$501–\$1,000 and nearly 25% had spent more than \$1,000 on computer hardware or software in the 12 months prior to the survey.

Expenditure on computer-related services

In 1998, 79% of the more than three million households with a home computer had no expenditure on computer-related services such as training or repairs (excluding Internet services) in the 12 months to the survey. Nearly 13% of households with a computer spent less than \$251, 4% spent \$251–\$500, 2% spent \$501–\$1,000 and 1% spent more than \$1,000.

Expenditure on Internet services

In 1998 of the 821,000 households with home Internet access which incurred the cost of the Internet connection:

- 6% had no expenditure on Internet services;
- 26% had spent \$1–\$100 on Internet services;
- 31% had spent \$101–\$250;
- 23% had spent \$251–\$500;
- 6% had spent \$501–\$1,000; and
- 2% had spent more than \$1,000 on Internet services in a 12-month period.

Of the 109,000 households with home Internet access where the home-based business incurred the cost of the Internet connection:

- 5% had no expenditure on Internet services;
- 16% had spent \$1–\$100;
- 30% had spent \$101–\$250;
- 24% had spent \$251–\$500;
- 8% had spent \$501–\$1,000; and
- 7% had spent more than \$1,000.

3.1 EXPENDITURE ON INFORMATION TECHNOLOGY BY HOUSEHOLDS AND HOME-BASED BUSINESSES(a)

	<i>Nil</i>	<i>\$1– \$100</i>	<i>\$101– \$250</i>	<i>\$251– \$500</i>	<i>\$501– \$1 000</i>	<i>More than \$1 000</i>	<i>Don't know</i>	<b>Total</b>
	NUMBER							
	'000	'000	'000	'000	'000	'000	'000	'000
Computer equipment or software	1 011	313	309	324	251	754	83	<b>3 045</b>
Computer-related services, such as training or repairs(b)	2419	211	172	112	52	22	58	<b>3 045</b>
Expenditure on Internet services by households	48	211	251	188	49	13	61	<b>821</b>
Expenditure on Internet services by home-based businesses	*5	17	33	26	9	*8	11	<b>109</b>
	PROPORTION							
	%	%	%	%	%	%	%	%
Computer equipment or software	33.2	10.3	10.2	10.6	8.2	24.8	2.7	<b>100.0</b>
Computer-related services, such as training or repairs(b)	79.4	6.9	5.6	3.7	1.7	0.7	1.9	<b>100.0</b>
Expenditure on Internet services by households	5.8	25.7	30.6	22.9	6.0	1.5	7.4	<b>100.0</b>
Expenditure on Internet services by home-based businesses	*4.8	15.7	30.4	23.5	8.3	*7.0	10.2	<b>100.0</b>

(a) Relates to expenditure undertaken over a 12-month period by households with a home computer.

(b) Excludes expenditure on Internet services.

Source of payment of Internet services Of the nearly 1.1 million households which had home Internet access in 1998:

- Nearly 76% reported that the cost of the home Internet service was incurred by a member of the household;
- 10% reported that the cost of the home Internet service was incurred by a home-based business;
- 11% reported that the cost of the home Internet service was incurred by an employer;
- 2% an educational institution; and
- 2% a relative or friend living elsewhere.

3.2 SOURCE OF PAYMENTS OF INTERNET SERVICE COSTS INCURRED BY HOUSEHOLDS

	'000	%
Member of household	821	75.7
Home-based business	109	10.0
Employer		
Private sector employer	83	7.7
Government employer	15	1.3
Educational institution	23	2.2
Educational institution	21	1.9
Relative or friend living elsewhere	17	1.6
Other	19	1.7
Don't know	*3	*0.3

Reasons for not incurring Internet costs

In 1998 nearly 48,000 households with home Internet access reported that they had not paid any Internet costs to date. Of these 48,000 households:

- 70% reported that they were new users and that their Internet payments were now due;
- 15% reported that their Internet costs were included with a computer purchase as part of a package deal;
- 5% reported that their Internet costs were incurred by work; and
- 3% reported that their Internet costs were incurred by a tertiary institution.

3.3 REASONS WHY HOUSEHOLDS HAVE NOT PAID ANY INTERNET SERVICE COSTS

	'000	%
New user (payment now due)	34	70.0
Internet costs included with computer purchase (package deal)	*7	*15.2
Paid for by work	*3	*5.4
Paid for by university	*2	*3.2
Don't know	*3	*6.2
<b>Total</b>	<b>48</b>	<b>100.0</b>

## SECTION 4

### USE OF COMMUNICATION TECHNOLOGIES

## HOUSEHOLD USE OF OTHER COMMUNICATION TECHNOLOGIES

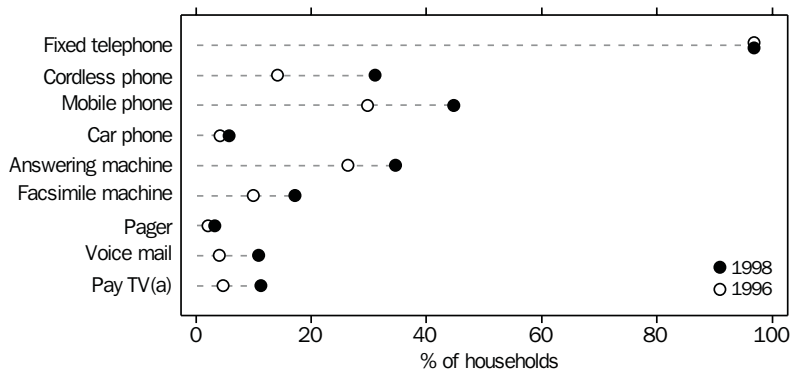
In 1998 and 1996, 97% of households used a fixed telephone line service. Of the other selected communication technologies identified, in 1998:

- 45% of households used a mobile phone (30% in 1996);
- 35% used an answering machine (26% in 1996);
- 34% used a digital mobile phone;
- 31% used a cordless phone (14% in 1996);
- 17% used a facsimile machine (10% in 1996);
- 15% used an analogue mobile phone;
- 11% used voice mail (4% in 1996);
- 6% used a car phone (4% in 1996); and
- 3% used a pager (2% in 1996).

Just over 11% of households in 1998 had pay TV services compared with 5% of households in 1996.

In 1998, 1% of households (84,000) reported using a mobile phone only and a further 2% of households (134,000) reported not using a fixed telephone line or mobile phone service.

#### 4.1 HOUSEHOLDS USING SELECTED COMMUNICATION TECHNOLOGIES



(a) Pay TV services are not widely available in all areas of Australia.

## 4.2

## HOUSEHOLDS USING SELECTED COMMUNICATIONS TECHNOLOGIES

	NSW	Vic.	Qld	SA	WA	Tas.	NT(a)	ACT	Aust.
1998									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Fixed telephone	2 215	1 649	1 223	556	643	177	42	106	<b>6 612</b>
Cordless phone	715	548	346	194	226	50	10	38	<b>2 127</b>
Digital mobile phone	790	602	422	160	246	46	18	44	<b>2 328</b>
Analogue mobile phone	321	274	226	66	69	19	5	15	<b>995</b>
Any mobile phone	1 017	804	585	213	294	61	22	55	<b>3 052</b>
Car phone	146	111	74	22	30	6	2	6	<b>398</b>
Answering machine	794	646	376	189	250	45	13	51	<b>2 365</b>
Facsimile machine	431	269	224	77	121	18	8	22	<b>1 170</b>
Pager	66	60	39	19	22	6	2	5	<b>218</b>
Voice mail	253	182	146	54	70	11	5	16	<b>738</b>
Pay TV(b)	242	232	193	58	33	2	6	4	<b>771</b>
	%	%	%	%	%	%	%	%	%
Fixed telephone	96.8	97.5	96.0	97.6	96.4	96.0	91.4	97.5	<b>96.8</b>
Cordless phone	31.2	32.4	27.2	34.1	33.8	27.4	22.2	34.6	<b>31.1</b>
Digital mobile phone	34.5	35.6	33.1	28.1	36.9	24.8	39.0	40.8	<b>34.1</b>
Analogue mobile phone	14.0	16.2	17.8	11.6	10.3	10.4	11.2	13.6	<b>14.6</b>
Any mobile phone	44.5	47.5	45.9	37.3	44.1	33.0	48.2	50.8	<b>44.7</b>
Car phone	6.4	6.6	5.9	3.9	4.5	3.0	3.8	5.6	<b>5.8</b>
Answering machine	34.7	38.2	29.5	33.2	37.5	24.3	28.6	47.0	<b>34.6</b>
Facsimile machine	18.8	15.9	17.6	13.4	18.2	9.8	18.2	20.4	<b>17.1</b>
Pager	2.9	3.5	3.1	3.3	3.3	3.0	4.5	4.4	<b>3.2</b>
Voice mail	11.1	10.7	11.5	9.5	10.6	6.2	11.5	14.7	<b>10.8</b>
Pay TV(b)	10.6	13.7	15.2	10.1	5.0	1.2	13.0	3.8	<b>11.3</b>
1996									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Fixed telephone	2 153	1 586	1 165	553	624	171	44	103	<b>6 398</b>
Cordless phone	321	241	142	86	100	24	6	19	<b>940</b>
Digital mobile phone	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<b>n.a.</b>
Analogue mobile phone	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<b>n.a.</b>
Any mobile phone	677	503	403	124	170	36	13	34	<b>1 960</b>
Car phone	121	56	68	12	16	3	1	3	<b>280</b>
Answering machine	614	491	252	134	167	32	11	36	<b>1 737</b>
Facsimile machine	237	153	121	41	79	11	5	15	<b>663</b>
Pager	57	36	*14	11	15	3	1	2	<b>141</b>
Voice mail	87	80	51	15	24	2	2	6	<b>267</b>
Pay TV(b)	118	98	64	12	14	1	—	4	<b>312</b>
	%	%	%	%	%	%	%	%	%
Fixed telephone	97.2	97.5	95.3	97.6	96.4	94.7	93.7	98.3	<b>96.8</b>
Cordless phone	14.5	14.8	11.6	15.2	15.5	13.1	12.8	18.2	<b>14.2</b>
Digital mobile phone	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<b>n.a.</b>
Analogue mobile phone	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<b>n.a.</b>
Any mobile phone	30.6	30.9	33.0	21.9	26.3	19.9	28.1	32.3	<b>29.7</b>
Car phone	5.5	3.4	5.5	2.1	2.5	1.7	1.7	3.3	<b>4.2</b>
Answering machine	27.7	30.2	20.6	23.7	25.8	17.8	23.0	34.2	<b>26.3</b>
Facsimile machine	10.7	9.4	9.9	7.3	12.2	6.0	11.4	14.1	<b>10.0</b>
Pager	2.6	2.2	*1.2	2.0	2.4	1.9	2.3	1.9	<b>2.1</b>
Voice mail	4.0	4.9	4.2	2.6	3.8	1.3	3.5	5.3	<b>4.0</b>
Pay TV(b)	5.3	6.0	5.2	2.1	2.2	0.7	—	4.2	<b>4.7</b>

(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

(b) Pay TV services are not widely available in all areas of Australia.

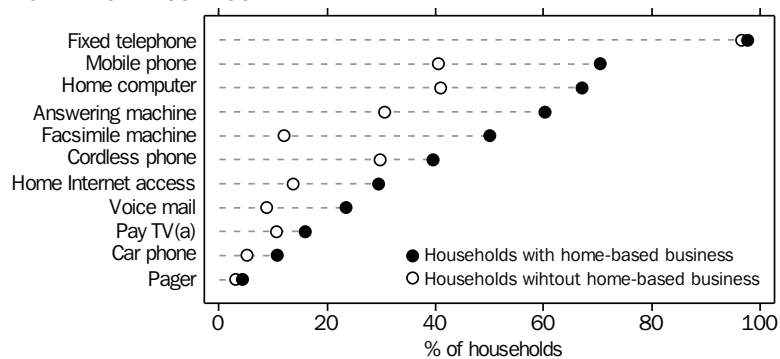


USE OF COMMUNICATION  
AND INFORMATION  
TECHNOLOGIES BY  
HOUSEHOLDS WITH A  
HOME-BASED BUSINESS

In 1998 households with a home-based business were more likely to utilise selected technologies than households without home-based businesses:

- 71% of households with a home-based business used a mobile phone, compared to 41% of households without a home-based business;
- 67% of households with a home-based business had a home computer, compared to 41% of households without a home-based business;
- 60% of households with a home-based business used an answering machine, compared to 31% of households without a home-based business;
- 50% of households with a home-based business used a facsimile machine, compared to 12% of households without a home-based business; and
- 30% of households with a home-based business had home Internet access, compared to 14% of households without a home-based business.

4.3 USE OF INFORMATION TECHNOLOGY BY HOUSEHOLDS WITH A HOME-BASED BUSINESS



(a) Pay TV services are not widely available in all areas of Australia.

Of the 580,000 households in 1998 with a home-based business and a computer which was frequently used:

- 95% used printers;
- 79% used CD-ROM equipment;
- 47% had access to the Internet; and
- 29% used a character or image reader.

4.4 USE OF SELECTED COMMUNICATION AND INFORMATION TECHNOLOGIES BY HOUSEHOLDS WITH A HOME-BASED BUSINESS

	NSW	Vic.	Qld	SA	WA	Tas.	NT(a)	ACT	Aust.
SELECTED INFORMATION TECHNOLOGY									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Have a home computer	227	161	99	46	66	12	4	13	628
Have home Internet access	104	70	44	17	28	5	2	7	275
Fixed telephone	296	242	166	70	98	22	6	15	914
Cordless phone	128	97	58	30	41	7	2	7	371
Digital mobile phone	160	120	97	34	57	10	3	10	490
Analogue mobile phone	78	72	52	20	19	5	1	4	251
Any mobile phone	212	174	130	48	66	14	4	12	659
Car phone	35	28	20	*5	8	1	—	1	100
Answering machine	196	155	92	38	57	11	3	11	563
Facsimile machine	160	116	86	33	49	8	3	9	463
Pager	*14	*8	*9	*3	*5	1	—	1	40
Voice mail	74	58	38	15	24	4	1	5	220
Pay TV(b)	47	47	33	10	10	1	1	—	148
<b>Total number of households with a home-based business</b>	<b>304</b>	<b>250</b>	<b>167</b>	<b>70</b>	<b>99</b>	<b>23</b>	<b>6</b>	<b>16</b>	<b>935</b>
	%	%	%	%	%	%	%	%	%
Have a home computer	74.7	64.6	59.4	64.7	66.2	51.8	60.7	83.8	67.1
Have home Internet access	34.1	28.2	26.3	24.0	27.9	*20.1	*25.9	*44.1	29.5
Fixed telephone	97.3	96.7	99.0	99.4	98.4	98.0	97.8	96.8	97.7
Cordless phone	42.1	38.8	34.6	42.8	41.7	32.0	28.4	45.5	39.6
Digital mobile phone	52.6	48.1	58.0	47.7	57.1	45.1	55.1	61.4	52.5
Analogue mobile phone	25.8	28.7	31.1	28.1	19.6	22.8	22.4	22.5	26.9
Any mobile phone	69.6	69.8	77.6	67.8	66.5	60.5	72.0	75.0	70.5
Car phone	11.6	11.3	11.7	*7.7	8.5	4.8	7.3	7.5	10.7
Answering machine	64.5	61.9	55.0	54.6	57.6	50.1	46.7	68.9	60.3
Facsimile machine	52.5	46.4	51.7	46.9	49.6	33.6	55.3	55.2	49.6
Pager	*4.6	*3.4	*5.1	*3.7	*5.0	4.6	*5.3	4.2	4.3
Voice mail	24.5	23.4	22.8	21.1	23.9	17.7	24.8	30.9	23.5
Pay TV(b)	15.5	18.8	19.5	14.4	9.8	3.5	10.4	*2.3	15.9
USE OF COMPUTER PERIPHERALS(c)									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Printer	203	138	85	42	57	10	3	12	550
Character or image readers	57	51	24	8	20	2	1	3	165
CD-ROM equipment	168	123	66	34	48	8	2	9	459
Internet access	104	70	42	17	28	4	2	7	274
<b>Total number of households with a home-based business and a frequently used computer</b>	<b>214</b>	<b>147</b>	<b>90</b>	<b>43</b>	<b>60</b>	<b>10</b>	<b>3</b>	<b>12</b>	<b>578</b>
	%	%	%	%	%	%	%	%	%
Printer	94.9	94.1	94.7	99.1	96.0	92.0	90.2	95.4	95.0
Character or image readers	26.7	34.4	26.5	19.3	33.7	18.0	24.8	23.6	28.6
CD-ROM equipment	78.7	84.0	74.0	78.1	80.4	79.0	80.6	76.9	79.4
Internet access	48.5	47.9	47.2	39.4	46.2	42.6	50.2	56.9	47.3

(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

(b) Pay TV services are not widely available in all areas of Australia.

(c) Relates to households with a home-based business and a frequently used home computer.

## SECTION 5

## FREQUENT HOME COMPUTER USERS AGED 5 YEARS AND OVER

### FREQUENT COMPUTER USERS

In 1998, 34% of persons five years and over, nearly 5.7 million persons, used a home computer frequently (once a week or more). In 1996, 24% of persons five years and over (nearly 4.0 million persons) frequently used a home computer once a week or more.

#### By State and Territory

The Australian Capital Territory had the highest proportion of persons five years and over frequently using a home computer with 51%. In 1996, 40% of persons five years and over in the Australian Capital Territory were frequent home computer users. For the other States and Territory, the proportion of frequent home computer users in 1998 was:

- 35% for Victoria (26% in 1996);
- 35% for Western Australia (24% in 1996);
- 34% for the Northern Territory (30% in 1996);
- 34% for New South Wales (23% in 1996);
- 33% for Queensland (23% in 1996);
- 33% for South Australia (24% in 1996); and
- 29% for Tasmania (21% in 1996).

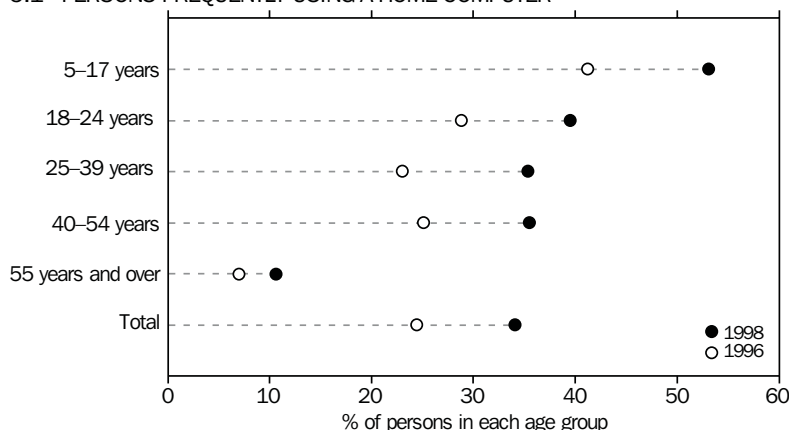
#### By sex

In 1998, 37% of males aged five years and over (3.1 million) frequently used a home computer compared to 32% of females aged five years and over (2.7 million). In 1996, 27% of males aged five years and over (2.2 million) and 22% of females aged five years and over (1.8 million) frequently used a home computer.

#### By age

The proportion of frequent home computer users in 1998 and 1996, by age group is shown by graph 5.1.

5.1 PERSONS FREQUENTLY USING A HOME COMPUTER



5.2 PERSONS FREQUENTLY USING A HOME COMPUTER(a)

Age group (years)	NSW	Vic.	Qld	SA	WA	Tas.	NT(b)	ACT	Aust.
MALES									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
5-17	328	250	158	69	98	21	8	20	953
18-24	125	111	62	29	28	7	1	10	373
25-39	262	191	143	57	78	15	6	18	769
40-54	237	182	139	61	77	15	6	19	735
55+	82	53	42	17	20	5	1	7	228
<b>Total</b>	<b>1 035</b>	<b>786</b>	<b>544</b>	<b>233</b>	<b>301</b>	<b>63</b>	<b>21</b>	<b>74</b>	<b>3 058</b>
	%	%	%	%	%	%	%	%	%
5-17	56.3	59.2	47.3	51.8	54.7	45.7	40.7	68.1	54.5
18-24	41.4	47.3	35.3	42.5	31.6	32.5	21.7	56.2	40.8
25-39	37.0	35.9	37.1	34.0	37.9	29.4	31.0	50.2	36.6
40-54	37.1	39.0	39.2	40.0	40.7	31.0	37.2	61.1	38.8
55+	13.8	12.5	13.6	11.7	13.7	10.4	10.3	32.4	13.3
<b>Total</b>	<b>36.6</b>	<b>37.8</b>	<b>34.9</b>	<b>34.9</b>	<b>37.1</b>	<b>29.4</b>	<b>32.4</b>	<b>54.7</b>	<b>36.5</b>
FEMALES									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
5-17	277	229	154	65	85	21	7	19	857
18-24	123	90	55	24	30	7	2	9	340
25-39	231	196	141	54	67	15	6	18	729
40-54	188	150	112	52	72	14	6	17	611
55+	62	33	24	12	12	4	1	4	151
<b>Total</b>	<b>881</b>	<b>698</b>	<b>486</b>	<b>208</b>	<b>265</b>	<b>61</b>	<b>22</b>	<b>66</b>	<b>2 688</b>
	%	%	%	%	%	%	%	%	%
5-17	49.8	57.0	48.7	51.4	49.9	48.0	39.6	66.9	51.6
18-24	41.7	40.1	32.6	36.9	32.5	34.8	27.7	48.9	38.1
25-39	32.0	35.5	36.5	33.4	33.0	28.4	33.3	47.4	34.1
40-54	29.5	32.2	31.2	34.1	37.6	30.3	41.1	51.2	32.2
55+	9.3	6.8	7.4	6.9	7.7	6.7	12.3	20.0	8.0
<b>Total</b>	<b>30.6</b>	<b>32.8</b>	<b>31.2</b>	<b>30.7</b>	<b>32.8</b>	<b>28.2</b>	<b>34.8</b>	<b>48.0</b>	<b>31.7</b>
PERSONS									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
5-17	605	479	313	135	183	42	15	38	1 810
18-24	248	202	117	53	58	14	3	19	714
25-39	493	387	284	111	144	30	12	36	1 498
40-54	426	331	250	113	149	29	12	36	1 345
55+	144	86	66	29	32	8	1	11	378
<b>Total</b>	<b>1 917</b>	<b>1 485</b>	<b>1 030</b>	<b>441</b>	<b>565</b>	<b>124</b>	<b>44</b>	<b>140</b>	<b>5 745</b>
	%	%	%	%	%	%	%	%	%
5-17	53.1	58.1	48.0	51.6	52.3	46.8	40.2	67.5	53.1
18-24	41.5	43.8	34.0	39.8	32.1	33.6	24.8	52.5	39.5
25-39	34.5	35.7	36.8	33.7	35.4	28.8	32.2	48.8	35.3
40-54	33.3	35.6	35.2	37.0	39.2	30.7	39.1	56.1	35.5
55+	11.4	9.4	10.4	9.2	10.6	8.5	11.2	26.0	10.6
<b>Total</b>	<b>33.6</b>	<b>35.3</b>	<b>33.0</b>	<b>32.8</b>	<b>35.0</b>	<b>28.8</b>	<b>33.6</b>	<b>51.3</b>	<b>34.1</b>

(a) Frequently is defined as once a week or more.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

## HOME COMPUTER ACTIVITIES

In 1998 and 1996 playing computer games, undertaking work related to studies and undertaking work-related activities were the most frequently reported home computer activities. However, in 1998 Internet-related activities emerged as a significant new home computer activity.

Of the 5.7 million persons aged five years and over who frequently used a home computer in 1998:

- 57% (3.3 million persons) used the home computer to play games, compared with 2.3 million persons in 1996;
- 54% (3.1 million persons) used the home computer to do work relevant to studies, compared with 2.2 million persons in 1996;
- 39% (2.2 million persons) used the home computer for work-related activities, compared with 1.4 million persons in 1996;
- 35% (2.0 million persons) used the home computer to keep personal or family records, compared with 0.9 million persons in 1996;
- 27% (1.6 million persons) used the home computer for Internet-related activities, compared with only 0.4 million persons in 1996;
- 7% (0.4 million persons) used the home computer to access other online services/databases apart from the Internet, compared with only 0.1 million persons in 1996; and
- 3% (0.2 million persons) used the home computer for other activities, compared with 0.3 million persons in 1996.

By sex In 1998 and 1996 playing computer games, undertaking work related to studies and undertaking work-related activities remained the most commonly reported home computer activities by males and females aged five years and over who were frequent home computer users. In 1998 Internet-related activities also became a significant home computer activity for males and females. However, there were significant differences in the proportion of male and female frequent home computer users undertaking certain activities:

- In 1998, 63% of male frequent home computer users used a home computer to play games compared with 50% of female frequent home computer users. In 1996 the proportions were 63% for males and 53% for females.
- In 1998, 42% of male frequent home computer users used a home computer for work-related activities compared with 35% for females. In 1996 the proportions were 40% for males and 31% for females.
- In 1998, 32% of male frequent home computer users used the home computer for Internet-related activities compared with 22% for females. In 1996 the proportions were 12% for males and 6% for females.

## 5.3

## HOME COMPUTER ACTIVITIES OF PERSONS AGED FIVE YEARS AND OVER(a)(b)

	NSW	Vic.	Qld	SA	WA	Tas.	NT(c)	ACT	Aust.
MALES									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Playing computer games	628	507	344	143	200	39	15	43	<b>1 918</b>
Learning/study activities	553	434	276	120	156	34	11	38	<b>1 622</b>
Work-related activities	427	344	231	97	122	25	8	36	<b>1 290</b>
Keeping personal or family records/ correspondence	325	243	183	77	98	24	7	29	<b>986</b>
Internet-based activities	349	231	184	66	95	17	7	29	<b>979</b>
Accessing other online services/databases/ bulletin(b)	126	63	40	18	30	6	2	8	<b>293</b>
Other	32	20	21	5	10	3	1	3	<b>94</b>
	%	%	%	%	%	%	%	%	%
Playing computer games	60.7	64.4	63.3	61.2	66.4	62.2	68.1	58.0	<b>62.7</b>
Learning/study activities	53.4	55.1	50.8	51.3	52.0	53.8	51.8	51.9	<b>53.0</b>
Work-related activities	41.2	43.7	42.5	41.5	40.7	40.4	38.1	48.8	<b>42.2</b>
Keeping personal or family records/ correspondence	31.4	31.0	33.7	32.9	32.7	38.5	34.8	38.5	<b>32.3</b>
Internet-based activities	33.7	29.4	33.8	28.5	31.8	26.6	34.9	39.3	<b>32.0</b>
Accessing other online services/databases/ bulletin boards(b)	12.1	8.1	7.4	7.8	9.8	9.6	9.2	10.9	<b>9.6</b>
Other	3.1	2.6	3.8	2.1	3.4	4.1	2.4	4.3	<b>3.1</b>
FEMALES									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Playing computer games	437	363	232	108	123	32	11	33	<b>1 340</b>
Learning/study activities	492	395	268	115	148	37	13	35	<b>1 502</b>
Work-related activities	309	237	165	73	95	21	9	27	<b>934</b>
Keeping personal or family records/ correspondence	305	265	199	78	108	23	11	29	<b>1 018</b>
Internet-based activities	211	127	110	34	60	13	5	21	<b>581</b>
Accessing other online services/databases/ bulletin boards(b)	35	23	15	7	13	3	1	4	<b>101</b>
Other	26	25	21	5	10	2	—	2	<b>91</b>
	%	%	%	%	%	%	%	%	%
Playing computer games	49.6	52.0	47.8	51.9	46.5	52.7	51.2	49.9	<b>49.9</b>
Learning/study activities	55.8	56.6	55.0	55.6	55.8	60.8	56.8	52.8	<b>55.9</b>
Work-related activities	35.0	34.0	33.8	35.0	35.9	34.1	38.4	40.2	<b>34.7</b>
Keeping personal or family records/ correspondence	34.6	37.9	40.9	37.8	40.8	38.4	48.1	43.7	<b>37.9</b>
Internet-based activities	23.9	18.3	22.6	16.3	22.8	20.7	22.7	31.4	<b>21.6</b>
Accessing other online services/databases/ bulletin boards(b)	4.0	3.3	3.1	3.5	4.9	5.0	5.9	5.7	<b>3.8</b>
Other	2.9	3.6	4.3	2.2	3.7	3.2	1.7	3.4	<b>3.4</b>

For footnotes see end of table.

...continued

## 5.3

## HOME COMPUTER ACTIVITIES OF PERSONS AGED FIVE YEARS AND OVER(a)(b)—continued

	NSW	Vic.	Qld	SA	WA	Tas.	NT(c)	ACT	Aust.
PERSONS									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Playing computer games	1 065	870	576	251	323	71	26	76	<b>3 258</b>
Learning/study activities	1 045	829	544	235	304	71	24	73	<b>3 124</b>
Work-related activities	735	581	396	169	217	46	17	63	<b>2 224</b>
Keeping personal or family records/ correspondence	630	508	382	155	206	48	18	58	<b>2 004</b>
Internet-based activities	560	359	294	100	156	29	13	50	<b>1 560</b>
Accessing other online services/databases/ bulletin boards(b)	160	86	55	25	43	9	3	12	<b>394</b>
Other	57	46	41	10	20	5	1	5	<b>185</b>
	%	%	%	%	%	%	%	%	%
Playing computer games	55.6	58.6	56.0	56.8	57.1	57.5	59.5	54.2	<b>56.7</b>
Learning/study activities	54.5	55.8	52.8	53.3	53.8	57.3	54.4	52.3	<b>54.4</b>
Work related activities	38.4	39.1	38.4	38.4	38.5	37.2	38.3	44.7	<b>38.7</b>
Keeping personal or family records/ correspondence	32.9	34.2	37.1	35.2	36.5	38.5	41.6	41.0	<b>34.9</b>
Internet-based activities	29.2	24.2	28.5	22.7	27.6	23.7	28.7	35.6	<b>27.2</b>
Accessing other online services/databases/ bulletin boards(b)	8.4	5.8	5.4	5.8	7.6	7.3	7.5	8.4	<b>6.9</b>
Other	3.0	3.1	4.0	2.2	3.5	3.7	2.1	3.9	<b>3.2</b>

(a) Relates to persons frequently using a home computer.

(b) Persons can nominate more than one activity.

(c) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

## SOURCES OF COMPUTER TRAINING

In 1998 and 1996 frequent computer users aged five years and over were asked about their source of computer training. The proportion of frequent home computer users obtaining computer training from any of the specified sources did not change significantly in the two years to 1998:

- 37% (2.1 million persons) of frequent home computer users obtained computer training from primary or secondary schools (35% in 1996);
- 26% (1.5 million persons) obtained computer training from an employer;
- 13% (0.8 million persons) obtained computer training from TAFE (13% in 1996);
- 13% (0.7 million persons) obtained computer training from a university (13% in 1996);
- 9% (0.5 million persons) obtained computer training from an equipment supplier (7% in 1996);
- 8% (0.4 million persons) obtained computer training from a commercial organisation (7% in 1996); and
- 4% (0.3 million persons) from a adult community education course (5% in 1996).

5.4 SOURCES OF COMPUTER TRAINING FOR PERSONS WHO USED A HOME COMPUTER(a)

	NSW	Vic.	Qld	SA	WA	Tas.	NT(b)	ACT	Aust.
MALES									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
The equipment supplier	97	85	65	27	28	6	2	7	<b>317</b>
An employer	258	201	150	61	74	18	7	29	<b>798</b>
A commercial organisation	94	76	40	19	18	6	2	10	<b>266</b>
Primary or secondary school	341	326	189	90	114	25	8	24	<b>1 117</b>
TAFE	112	92	74	28	37	7	2	8	<b>360</b>
University	140	112	91	23	32	7	3	14	<b>422</b>
Adult community education course	40	26	11	11	6	3	1	2	<b>100</b>
	%	%	%	%	%	%	%	%	%
The equipment supplier	9.4	10.8	12.0	11.5	9.4	9.0	8.5	9.8	<b>10.4</b>
An employer	25.0	25.6	27.6	26.1	24.5	28.1	31.4	39.5	<b>26.1</b>
A commercial organisation	9.1	9.7	7.4	8.0	6.1	9.9	10.1	13.7	<b>8.7</b>
Primary or secondary school	32.9	41.4	34.7	38.8	38.1	40.0	37.3	32.2	<b>36.5</b>
TAFE	10.8	11.8	13.7	12.1	12.3	10.6	9.5	11.0	<b>11.8</b>
University	13.5	14.3	16.7	9.8	10.7	10.9	12.6	18.9	<b>13.8</b>
Adult community education course	3.8	3.3	2.0	4.6	2.1	5.2	3.3	3.3	<b>3.3</b>
FEMALES									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
The equipment supplier	52	35	32	20	19	4	2	5	<b>168</b>
An employer	220	175	133	56	66	16	8	26	<b>700</b>
A commercial organisation	53	38	37	16	18	5	2	7	<b>177</b>
Primary or secondary school	293	307	184	85	100	28	8	24	<b>1 028</b>
TAFE	125	92	76	39	38	9	3	8	<b>390</b>
University	93	81	62	20	34	7	4	9	<b>310</b>
Adult community education course	62	42	16	10	7	5	1	4	<b>148</b>
	%	%	%	%	%	%	%	%	%
The equipment supplier	5.9	5.1	6.6	9.6	7.2	5.9	7.1	7.5	<b>6.3</b>
An employer	24.9	25.1	27.4	27.0	24.9	25.7	35.8	39.5	<b>26.0</b>
A commercial organisation	6.0	5.5	7.7	7.9	6.8	7.7	9.1	10.8	<b>6.6</b>
Primary or secondary school	33.2	44.0	37.8	40.8	37.9	45.2	37.6	35.9	<b>38.3</b>
TAFE	14.2	13.2	15.7	18.8	14.3	14.7	13.5	12.3	<b>14.5</b>
University	10.6	11.7	12.7	9.5	13.0	10.9	17.1	13.4	<b>11.5</b>
Adult community education course	7.0	6.1	3.3	5.0	2.7	8.6	5.3	6.0	<b>5.5</b>
PERSONS									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
The equipment supplier	149	120	97	47	47	9	3	12	<b>485</b>
An employer	478	377	283	117	139	33	15	55	<b>1 498</b>
A commercial organisation	147	115	78	35	36	11	4	17	<b>443</b>
Primary or secondary school	634	633	373	175	215	53	16	48	<b>2 145</b>
TAFE	237	185	151	67	75	16	5	16	<b>751</b>
University	233	194	152	43	67	13	6	23	<b>732</b>
Adult community education course	102	68	27	21	14	9	2	6	<b>248</b>
	%	%	%	%	%	%	%	%	%
The equipment supplier	7.8	8.1	9.4	10.6	8.4	7.5	7.8	8.7	<b>8.5</b>
An employer	24.9	25.4	27.5	26.5	24.7	26.9	33.6	39.5	<b>26.1</b>
A commercial organisation	7.7	7.7	7.5	7.9	6.4	8.8	9.6	12.3	<b>7.7</b>
Primary or secondary school	33.1	42.6	36.2	39.7	38.0	42.6	37.5	33.9	<b>37.3</b>
TAFE	12.4	12.4	14.6	15.2	13.2	12.7	11.6	11.6	<b>13.1</b>
University	12.2	13.1	14.8	9.7	11.8	10.9	14.9	16.3	<b>12.7</b>
Adult community education course	5.3	4.6	2.6	4.7	2.4	6.9	4.3	4.6	<b>4.3</b>

(a) Relates to persons frequently using a home computer.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.



## SECTION 6

## ADULTS USING COMPUTERS OR ACCESSING THE INTERNET

### ACCESSING COMPUTERS

In 1998, 60% of adults (8.1 million) used a computer in the 12-month period prior to the survey. The most frequently reported sites where a computer was used included:

- home, 39% of all adults;
- work, 35% of all adults;
- a neighbour or friend's house, 16% of all adults;
- public libraries, 12% of all adults; and
- TAFE or tertiary institutions, 11% of all adults.

#### By State and Territory

Nearly 78% of the Australian Capital Territory's adult population in 1998 used a computer in the 12-month period prior to the survey, the highest level of computer usage in Australia. The Australian Capital Territory was followed by the Northern Territory with 68%. For the States:

- 62% of adults in Western Australia used a computer;
- 61% of adults in New South Wales used a computer;
- 60% of adults in Queensland used a computer;
- 59% of adults in South Australia used a computer; and
- 57% of adults in Victoria and Tasmania used a computer.

#### Sites of access

With the exception of the Northern Territory, home was the most frequently reported site where adults had used a computer. In the Northern Territory 51% of adults had used a computer at work while only 37% had used a computer at home. For the other States and the Australian Capital Territory a similar proportion of adults used a computer at home or work:

- In the Australian Capital Territory 57% of adults used a computer at home and 52% at work.
- In Victoria 39% of adults used a computer at home and 37% at work.
- In Western Australia 39% of adults used a computer at home and 37% at work.
- In New South Wales 39% of adults used a computer at home and 35% at work.
- In South Australia 38% of adults used a computer at home and 32% at work.
- In Queensland 37% of adults used a computer at home and 34% at work.
- In Tasmania 33% used a computer at home and 34% at work.

## ACCESSING THE INTERNET

In 1998 nearly 32% of adults (4.2 million) accessed the Internet in the 12-month period prior to the survey. The most frequently reported sites to access the Internet were:

- work, 14% of all adults;
- home, 13% of adults;
- a neighbour or friend's house, 8% of adults;
- TAFE or tertiary institutions, 6% of all adults; and
- public libraries, 3% of all adults.

### By State and Territory

Nearly 55% of the Australian Capital Territory's adult population (119,000) accessed the Internet in the 12-month period prior to the survey, the highest level in Australia. The Australian Capital Territory was followed by the Northern Territory with 39%. For the States:

- 34% of adults in Western Australia accessed the Internet;
- 32% of adults in Victoria and Tasmania accessed the Internet;
- 31% of adults in Queensland and New South Wales accessed the Internet; and
- 27% of adults in South Australia accessed the Internet.

### Sites of access

For all States and Territories, work and home were the most frequently reported sites from which to access the Internet:

- In the Australian Capital Territory 30% of adults accessed the Internet from work and 23% from home.
- In the Northern Territory 22% of adults accessed the Internet from work and 15% from home.
- In Tasmania 16% of adults accessed the Internet from work and 11% from home.
- In Western Australia 15% of adults accessed the Internet from work and 14% from home.
- In New South Wales 14% of adults accessed the Internet from work and 14% from home.
- In Queensland 14% of adults accessed the Internet from work and 13% from home.
- In Victoria 13% of adults accessed the Internet from work and 12% from home.
- In South Australia 11% of adults accessed the Internet from work and 11% from home.

6.1 ADULTS ACCESSING A COMPUTER OR INTERNET(a)

	NSW	Vic.	Qld	SA	WA	Tas.	NT(b)	ACT	Aust.
ACCESSING A COMPUTER									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Home	1 776	1 315	901	406	497	111	34	124	5 165
Work	1 604	1 242	830	341	465	114	46	114	4 756
Neighbour or friend's house	745	512	391	183	230	54	14	52	2 181
Public library	573	393	290	140	142	39	10	31	1 617
TAFE/tertiary institution	481	381	281	137	166	39	11	35	1 530
Government agency/department/shopfront	207	82	100	47	49	16	7	17	525
Shops/stores/telecafes	118	133	92	42	37	13	4	8	445
School	120	72	65	20	29	11	2	7	327
Community or voluntary organisation	60	48	*14	17	26	4	*1	4	175
Telecentre or similar access centres	*10	*6	26	*5	*9	*1	*1	3	60
Other	43	35	40	*3	18	3	*1	4	145
<b>Any site</b>	<b>2 808</b>	<b>1 946</b>	<b>1 481</b>	<b>640</b>	<b>785</b>	<b>193</b>	<b>63</b>	<b>169</b>	<b>8 085</b>
	%	%	%	%	%	%	%	%	%
Home	38.8	38.8	36.5	37.5	39.2	32.9	37.4	57.0	38.5
Work	35.1	36.7	33.6	31.5	36.6	33.7	50.6	52.4	35.4
Neighbour or friend's house	16.3	15.1	15.9	16.9	18.1	15.9	15.0	24.0	16.2
Public library	12.5	11.6	11.8	12.9	11.2	11.6	10.5	14.3	12.0
TAFE/tertiary institution	10.5	11.2	11.4	12.6	13.1	11.5	11.6	16.0	11.4
Government agency/department/shopfront	4.5	2.4	4.0	4.4	3.9	4.8	7.2	7.9	3.9
Shops/stores/telecafes	2.6	3.9	3.7	3.9	2.9	3.8	4.1	3.5	3.3
School	2.6	2.1	2.7	1.9	2.3	3.1	2.4	3.4	2.4
Community or voluntary organisation	1.3	1.4	*0.6	1.6	2.1	1.3	*1.3	1.8	1.3
Telecentre or similar access centres	*0.2	*0.2	1.1	*0.4	*0.7	*0.3	*1.1	1.2	0.5
Other	0.9	1.0	1.6	*0.2	1.4	0.8	*0.6	1.8	1.1
<b>Any site</b>	<b>61.4</b>	<b>57.4</b>	<b>60.1</b>	<b>59.0</b>	<b>61.9</b>	<b>57.1</b>	<b>68.4</b>	<b>78.1</b>	<b>60.2</b>
ACCESSING THE INTERNET									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Home	635	418	317	116	182	36	14	50	1 769
Work	657	448	356	119	184	53	20	66	1 902
Neighbour or friend's house	315	244	207	90	124	23	7	31	1 042
TAFE/tertiary institution	257	255	148	58	87	22	4	22	854
Public library	102	159	46	31	51	19	2	11	421
Shops/stores/telecafes	40	71	27	15	*8	*2	2	3	169
School	47	26	*18	*4	*12	3	—	2	111
Government agency/department/shopfront	*12	*12	*17	*5	*12	3	*1	3	65
Telecentre or similar access centres	*12	*2	*8	—	*3	—	—	*1	25
Community or voluntary organisation	*11	*19	*2	*5	*1	*2	—	*1	41
Other	*17	*12	*12	*1	*11	—	—	3	57
<b>Any site</b>	<b>1 397</b>	<b>1 068</b>	<b>771</b>	<b>297</b>	<b>436</b>	<b>107</b>	<b>36</b>	<b>119</b>	<b>4 230</b>
	%	%	%	%	%	%	%	%	%
Home	13.9	12.3	12.8	10.7	14.4	10.7	15.0	23.3	13.2
Work	14.4	13.2	14.4	11.0	14.5	15.7	22.0	30.3	14.2
Neighbour or friend's house	6.9	7.2	8.4	8.3	9.8	7.0	7.5	14.4	7.8
TAFE/tertiary institution	5.6	7.5	6.0	5.4	6.9	6.6	4.7	10.0	6.4
Public library	2.2	4.7	1.9	2.9	4.0	5.7	2.5	5.1	3.1
Shops/stores/telecafes	0.9	2.1	1.1	1.4	*0.7	*0.7	2.3	1.5	1.3
School	1.0	0.8	*0.7	*0.3	*0.9	0.9	—	0.9	0.8
Government agency/department/shopfront	*0.3	*0.4	*0.7	*0.5	*1.0	0.8	0.9	1.6	0.5
Telecentre or similar access centres	*0.3	*0.1	*0.3	0.0	*0.2	*0.1	0.4	*0.4	*0.2
Community or voluntary organisation	*0.2	*0.6	*0.1	*0.5	*0.1	*0.5	—	*0.5	0.3
Other	*0.4	*0.4	*0.5	*0.1	*0.9	*0.1	—	*1.2	0.4
<b>Any site</b>	<b>30.5</b>	<b>31.5</b>	<b>31.3</b>	<b>27.4</b>	<b>34.3</b>	<b>31.6</b>	<b>38.8</b>	<b>55.0</b>	<b>31.5</b>

(a) Proportions are of all adults.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

## FREQUENCY OF ADULT COMPUTER USE

- At home Of the 5.2 million adults who used a computer at home in 1998:
- 29% used a home computer daily;
  - 36% 2–6 times a week; and
  - 14% once a week, giving a total of 78% who used a home computer frequently.
- Away from home Of the 6.9 million adults who used a computer at sites away from home in 1998:
- 44% used a computer daily at these sites;
  - 17% 2–6 times a week; and
  - 8% once a week, giving a total of 69% who frequently used a computer at sites outside the home.
- By State and Territory Just over 84% of adults in Western Australia who used a home computer did so frequently.
- Western Australia was followed closely by the Australian Capital Territory with 83%. For the other States and the Northern Territory:
- 80% of adults in Queensland who used a home computer did so frequently;
  - 78% of adults in Victoria, South Australia, Tasmania and the Northern Territory who used a home computer did so frequently; and
  - 76% of adults in New South Wales who used a home computer did so frequently.
- Nearly 81% of adults in the Northern Territory who used a computer away from home did so frequently. Nearly 79% of adults in the Australian Capital Territory who used a computer away from home did so frequently. For the States:
- 70% of adults in Tasmania who used a computer away from home did so frequently;
  - 69% of adults in New South Wales, Queensland and Western Australia who used a computer away from home did so frequently;
  - 68% of adults in Victoria who used a computer away from home did so frequently; and
  - 67% of adults in South Australia who used a computer away from home did so frequently.

6.2 FREQUENCY OF COMPUTER USE BY ADULTS(a)

	NSW	Vic.	Qld	SA	WA	Tas.	NT(b)	ACT	Aust.
USAGE AT HOME									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Daily	506	350	276	102	177	28	8	38	1 486
2-6 times a week	607	534	286	151	163	41	14	46	1 841
Once a week	234	142	159	65	77	18	5	17	718
Once every 2 weeks	136	121	57	40	18	9	2	9	392
Once every month	224	138	87	34	46	8	4	7	548
Once every 3 months or less	70	29	35	14	16	8	*1	6	180
<b>Total</b>	<b>1 776</b>	<b>1 315</b>	<b>901</b>	<b>406</b>	<b>497</b>	<b>111</b>	<b>34</b>	<b>124</b>	<b>5 165</b>
	%	%	%	%	%	%	%	%	%
Daily	28.5	26.6	30.7	25.1	35.6	25.3	24.6	31.1	28.8
2-6 times a week	34.2	40.6	31.7	37.2	32.9	36.6	39.7	37.6	35.7
Once a week	13.2	10.8	17.6	16.0	15.6	16.4	13.7	*14.1	13.9
Once every 2 weeks	7.6	9.2	6.4	9.9	3.5	8.2	7.3	*6.9	7.6
Once every month	12.6	10.5	9.7	8.4	9.2	7.3	11.4	*5.6	10.6
Once every 3 months or less	3.9	2.3	3.9	3.5	3.3	6.3	*3.3	*4.8	3.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
USAGE AWAY FROM HOME									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Daily	1 079	726	527	223	287	70	33	57	3 000
2-6 times a week	329	330	224	77	130	35	10	50	1 185
Once a week	188	113	123	62	47	11	2	9	556
Once every 2 weeks	71	71	37	18	20	*2	*1	4	224
Once every month	155	130	111	36	56	12	3	9	512
Once every 3 months or less	425	303	214	112	123	29	5	16	1 226
Don't know	75	49	27	14	15	6	—	2	190
<b>Total</b>	<b>2 321</b>	<b>1 720</b>	<b>1 264</b>	<b>542</b>	<b>676</b>	<b>166</b>	<b>55</b>	<b>148</b>	<b>6 892</b>
	%	%	%	%	%	%	%	%	%
Daily	46.5	42.2	41.7	41.1	42.4	42.0	58.7	38.8	43.5
2-6 times a week	14.2	19.2	17.8	14.3	19.2	21.0	17.7	33.7	17.2
Once a week	8.1	6.6	9.7	11.4	6.9	6.9	4.1	6.2	8.1
Once every 2 weeks	3.1	4.1	2.9	3.3	2.9	1.2	*1.5	3.0	3.3
Once every month	6.7	7.5	8.8	6.6	8.2	7.4	6.1	6.1	7.4
Once every 3 months or less	18.3	17.6	16.9	20.7	18.1	17.6	11.1	10.7	17.8
Don't know	3.3	2.8	2.2	2.6	2.3	*3.9	*0.8	1.5	2.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Proportions are of all adults accessing a computer from each site.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

## FREQUENCY OF ADULT INTERNET ACCESS

- At work Of the 1.9 million adults who used the Internet at work in 1998, nearly 34% accessed the Internet daily at work, 27% accessed the Internet at work 2–6 times a week and just over 15% accessed the Internet at work once a week, giving a total of 76% who frequently accessed the Internet at work.
- Away from work Of the 3.3 million adults who accessed the Internet from sites away from work in 1998, 13% accessed the Internet daily away from work, just over 24% accessed the Internet 2–6 times a week and nearly 18% accessed the Internet once a week, giving a total of 55% who frequently accessed the Internet away from work.
- By State and Territory Nearly 79% of adults in the Australian Capital Territory who accessed the Internet at work did so frequently. The Australian Capital Territory was closely followed by Queensland where 78% of adults who accessed the Internet at work did so frequently. For the other States and the Northern Territory:
- 77% of adults in New South Wales who accessed the Internet at work did so frequently;
  - 76% of adults in Victoria who accessed the Internet at work did so frequently;
  - 73% of adults in South Australia who accessed the Internet at work did so frequently;
  - 71% of adults in Tasmania who accessed the Internet at work did so frequently; and
  - 70% of adults in Western Australia and the Northern Territory who accessed the Internet at work did so frequently.
- Nearly 62% of adults in the Australian Capital Territory who accessed the Internet away from work did so frequently. The Australian Capital Territory was followed closely by Queensland and the Northern Territory where 61% of adults who accessed the Internet away from work did so frequently. For the other States:
- 57% of adults in New South Wales who accessed the Internet away from work did so frequently;
  - 53% of adults in Victoria who accessed the Internet away from work did so frequently;
  - 51% of adults in Western Australia who accessed the Internet away from work did so frequently;
  - 50% of adults in South Australia who accessed the Internet away from work did so frequently; and
  - 44% of adults in Tasmania who accessed the Internet away from work did so frequently.

6.3 FREQUENCY OF INTERNET USE BY ADULTS(a)

	NSW	Vic.	Qld	SA	WA	Tas.	NT(b)	ACT	Aust.
USAGE AT WORK									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Daily	209	155	126	43	68	12	7	18	638
2-6 times a week	183	121	94	30	40	18	4	23	513
Once a week	113	62	57	14	21	7	4	11	290
Once every 2 weeks	35	*10	*14	*9	21	*3	2	4	98
Once every month	70	61	38	*8	21	6	3	3	210
Once every 3 months or less	38	39	25	16	*10	5	*1	6	139
Don't know	*10	—	—	—	*3	*1	—	—	*14
<b>Total</b>	<b>657</b>	<b>448</b>	<b>356</b>	<b>119</b>	<b>184</b>	<b>53</b>	<b>*20</b>	<b>66</b>	<b>1 902</b>
	%	%	%	%	%	%	%	%	%
Daily	31.8	34.7	35.5	36.4	36.9	23.2	33.7	27.1	33.6
2-6 times a week	27.9	26.9	26.5	25.5	21.8	33.8	18.4	34.3	27.0
Once a week	17.3	14.0	16.1	11.3	11.4	13.7	17.4	17.2	15.2
Once every 2 weeks	5.3	*2.2	*4.0	*7.4	11.4	*5.6	8.9	6.0	5.1
Once every month	10.6	13.6	10.8	*6.5	11.5	11.9	12.6	4.9	11.0
Once every 3 months or less	5.7	8.7	7.1	12.8	*5.3	10.2	*8.5	10.1	7.4
Don't know	*1.5	—	—	—	*1.6	*1.6	*0.5	0.5	*0.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
USAGE AWAY FROM WORK									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Daily	117	104	101	28	57	8	2	15	431
2-6 times a week	282	180	156	57	72	17	8	25	796
Once a week	198	171	102	36	45	10	4	13	579
Once every 2 weeks	87	88	33	22	21	7	*1	7	267
Once every month	81	76	88	18	30	10	2	6	311
Once every 3 months or less	222	186	86	61	95	20	5	13	688
Don't know	64	58	20	19	21	7	*1	6	196
<b>Total</b>	<b>1 050</b>	<b>865</b>	<b>586</b>	<b>239</b>	<b>340</b>	<b>79</b>	<b>23</b>	<b>86</b>	<b>3 268</b>
	%	%	%	%	%	%	%	%	%
Daily	11.1	12.0	17.2	11.5	16.7	10.3	9.0	17.7	13.2
2-6 times a week	26.8	20.9	26.6	23.8	21.2	21.4	33.2	28.8	24.4
Once a week	18.8	19.8	17.5	15.0	13.1	12.2	18.9	15.2	17.7
Once every 2 weeks	8.3	10.2	5.7	9.0	6.2	9.4	*4.3	7.9	8.2
Once every month	7.8	8.8	15.0	7.4	8.9	12.1	8.3	7.5	9.5
Once every 3 months or less	21.1	21.6	14.7	25.6	27.9	25.3	20.3	15.4	21.1
Don't know	6.1	6.7	3.4	7.8	6.1	9.2	*6.1	7.5	6.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Proportions are of all adults who accessed the Internet from each site.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

ADULTS NOT USING  
EXISTING HOME COMPUTER

In 1998 just over 1.6 million adults did not use existing household computer facilities. Of these adults:

- 48% reported 'no interest' as the main reason for not using the existing home computer;
- 24% reported 'lack of confidence/skill with a computer' as the main reason;
- 13% reported 'no time'; and
- 8% reported 'adequate access outside home' as the main reason for not using the existing home computer facilities.

6.4 MAIN REASON FOR ADULTS NOT USING EXISTING HOME COMPUTER(a)

	NSW	Vic.	Qld	SA	WA	Tas.	NT(b)	ACT	Aust.
NUMBER									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Not interested	320	185	133	66	37	16	3	15	775
Lack of confidence/skill with a computer	116	142	58	38	22	5	*1	4	386
No time	64	70	30	18	18	3	2	*1	206
Have access elsewhere	50	31	20	11	*8	4	*1	5	129
Not permitted	*5	*9	*4	—	—	—	—	—	*18
Other	32	27	*8	*4	*9	*1	*1	*1	84
Don't know	*7	—	—	*3	*1	—	—	—	*11
<b>Total</b>	<b>595</b>	<b>463</b>	<b>252</b>	<b>141</b>	<b>97</b>	<b>28</b>	<b>8</b>	<b>26</b>	<b>1 610</b>
PROPORTION									
	%	%	%	%	%	%	%	%	%
Not interested	53.8	39.9	52.6	47.0	38.8	55.8	43.8	56.7	48.2
Lack of confidence/skill with a computer	19.5	30.6	22.9	27.3	23.2	18.0	*12.1	*14.4	24.0
No time	10.8	15.0	12.0	13.1	*18.7	11.6	20.4	*3.7	12.8
Have access elsewhere	8.5	6.6	7.8	8.1	*8.2	12.5	*6.6	19.9	8.0
Not permitted	*0.9	*1.9	*1.4	—	—	—	*4.1	—	*1.1
Other	5.4	5.9	*3.3	2.6	9.7	*2.1	*13.1	*4.4	5.2
Don't know	*1.1	—	—	*1.9	*1.3	—	—	*0.9	*0.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Proportions are of all adults not using existing home computer.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.



YEARS OF COMPUTER USE      The majority of adults who frequently used a computer from any site had used computers for a considerable period of time and assessed themselves as adequate or competent computer users.

Of the 6.3 million adults who frequently used a computer from any site in 1998:

- 66% had used a computer for five years or more;
- 22% had used a computer for two to less than five years;
- 6% had used a computer for one to less than two years; and
- 5% had used a computer for less than one year.

By State and Territory      Just over 76% of adults in the Australian Capital Territory who frequently used a computer had used computers for five years or more, the highest proportion in Australia. For the States and the Northern Territory:

- 73% of adults in Victoria who frequently used a computer had used computers for five years or more;
- 69% of adults in Tasmania who frequently used a computer had used computers for five years or more;
- 64% of adults in South Australia who frequently used a computer had used computers for five years or more;
- 63% of adults in New South Wales, Western Australia and the Northern Territory who frequently used a computer had used computers for five years or more; and
- 62% of adults in Queensland who frequently used a computer had used computers for five years or more.

COMPUTER COMPETENCY      Of the 6.3 million adults who frequently used a computer from any site in 1998:

- 40% assessed their computer skills as competent or better;
- 30% assessed their computer skills as adequate; and
- 27% assessed their computer skills as basic.

By State and Territory The Australian Capital Territory (48%) had the highest proportion of adult frequent computer users who assessed their computer skills as competent or better. For the States and the Northern Territory the proportion of adult frequent computer users who assessed their computer skills as competent or better was:

- 43% in Western Australia;
- 41% in New South Wales and Queensland;
- 40% in Victoria;
- 38% in the Northern Territory;
- 37% in Tasmania; and
- 35% in South Australia.

#### 6.5 ADULTS FREQUENTLY USING A COMPUTER, YEARS OF COMPUTER USE AND LEVEL OF COMPETENCY

	NSW	Vic.	Qld	SA	WA	Tas.	NT(a)	ACT	Aust.
YEARS OF USE									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Less than 1 year	123	37	96	31	36	12	2	5	343
1 to less than 2 years	146	47	64	30	43	8	5	4	345
2 to less than 5 years	486	309	264	113	139	23	11	24	1 368
5 years or more	1 338	1 135	704	321	389	103	33	112	4 137
Don't know	45	36	*17	*10	*11	*3	2	3	126
<b>Total</b>	<b>2 138</b>	<b>1 564</b>	<b>1 145</b>	<b>506</b>	<b>618</b>	<b>149</b>	<b>53</b>	<b>147</b>	<b>6 319</b>
	%	%	%	%	%	%	%	%	%
Less than 1 year	5.8	2.4	8.4	6.2	5.9	8.2	4.1	3.1	5.4
1 to less than 2 years	6.8	3.0	5.6	5.9	6.9	5.4	8.5	2.6	5.5
2 to less than 5 years	22.7	19.8	23.1	22.4	22.4	15.2	20.7	16.2	21.7
5 years or more	62.6	72.6	61.5	63.5	63.0	69.2	62.8	76.4	65.5
Don't know	2.1	2.3	*1.5	*2	*1.8	*2.0	3.9	1.7	2.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
COMPETENCY									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Basic	576	396	346	160	161	46	14	24	1 722
Adequate	644	511	313	162	180	45	17	51	1 923
Competent or better	873	624	469	175	267	55	20	70	2 552
Don't know	45	33	*17	*9	*11	3	2	2	122
<b>Total</b>	<b>2 138</b>	<b>1 564</b>	<b>1 145</b>	<b>506</b>	<b>619</b>	<b>149</b>	<b>53</b>	<b>147</b>	<b>6 319</b>
	%	%	%	%	%	%	%	%	%
Basic	27.0	25.3	30.2	31.6	26.0	30.6	26.0	16.6	27.3
Adequate	30.1	32.7	27.3	32.1	29.1	30.2	32.6	34.4	30.4
Competent or better	40.8	39.9	41.0	34.7	43.2	37.2	37.9	47.5	40.4
Don't know	2.1	2.1	*1.5	*1.7	*1.8	2.0	3.5	1.6	1.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

## SECTION 7

## ELECTRONIC COMMERCE AND TELEWORKING

### ADULTS ACCESSING ELECTRONIC INFORMATION BOOTHES

In 1998, 15% of adults in Australia (2.0 million) accessed an electronic information booth in the 12-month period prior to the survey. Sites from which electronic information booths were accessed included:

- shopping malls, 8% of all adults;
- museums/exhibitions/tourist attractions, 5% of adults;
- government agencies, department stores and government shopfronts, 4% of adults; and
- public libraries, 4% of adults.

#### By State and Territory

Nearly 21% of adults (45,000) in the Australian Capital Territory had accessed an electronic information booth, the highest proportion in Australia. Approximately 17% of adults in the Northern Territory (16,000) and Tasmania (57,000) had accessed an electronic information booth in a 12-month period. For the other States:

- 16% of adults in Victoria had accessed an electronic information booth;
- 16% of adults in Western Australia had accessed an electronic information booth;
- 14% of adults in New South Wales had accessed an electronic information booth;
- 14% of adults in Queensland had accessed an electronic information booth; and
- 13% of adults in South Australia had accessed an electronic information booth.

#### 7.1 USE OF ELECTRONIC INFORMATION BOOTHS BY ADULTS(a)

	NSW	Vic.	Qld	SA	WA	Tas.	NT(b)	ACT	<b>Aust.</b>
	NUMBER								
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Public library	206	114	73	46	52	17	4	7	<b>518</b>
Government agency/department/shopfront	210	119	78	58	65	25	7	17	<b>579</b>
Shopping mall	264	301	213	74	105	23	7	28	<b>1 014</b>
Museums/exhibitions/tourist attractions	225	197	100	31	46	17	7	19	<b>641</b>
Other	67	57	36	*1	21	7	*1	4	<b>195</b>
Any site	653	534	348	135	199	57	16	45	<b>1 989</b>
	PROPORTION								
	%	%	%	%	%	%	%	%	%
Public library	4.5	3.4	3.0	4.2	4.1	4.9	4.7	3.4	<b>3.9</b>
Government agency/department/shopfront	4.6	3.5	3.2	5.3	5.1	7.5	7.6	8.0	<b>4.3</b>
Shopping mall	5.8	8.9	8.6	6.8	8.3	6.7	7.3	12.8	<b>7.6</b>
Museums/exhibitions/tourist attractions	4.9	5.8	4.1	2.8	3.6	5.0	7.3	8.8	<b>4.8</b>
Other	1.5	1.7	1.5	*0.1	1.7	2.1	*1.1	1.8	<b>1.5</b>
Any site	14.3	15.9	14.1	12.5	15.7	16.7	17.3	20.6	<b>14.8</b>

(a) Refers to use in the 12-month period to the survey.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

## ACTIVITIES UNDERTAKEN VIA THE INTERNET

At work Of the 1.9 million adults who accessed the Internet at work:

- 88% (1.7 million adults) reported using the Internet to find information relating to work;
- 56% (1.1 million adults) reported using the Internet for general browsing/surfing the web;
- 47% (0.9 million adults) reported using the Internet to find information on goods and services;
- 23% (0.4 million adults) reported using the Internet to find information relating to studies; and
- 6% (0.1 million adults) reported undertaking other activities via the Internet at work.

Away from work Of the 3.3 million adults who accessed the Internet from sites away from work:

- 76% (2.5 million adults) reported using the Internet for general browsing/surfing the web;
- 40% (1.3 million adults) reported using the Internet to find information on goods and services;
- 37% (1.2 million adults) reported using the Internet to find information relating to studies;
- 31% (1.0 million adults) reported using the Internet to find information relating to work; and
- 11% (0.4 million adults) reported using the Internet for other activities.

7.2 INTERNET ACTIVITIES UNDERTAKEN BY ADULTS(a)

	NSW	Vic.	Qld	SA	WA	Tas.	NT(b)	ACT	Aust.
ACTIVITIES UNDERTAKEN AT WORK									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Finding information relating to studies	168	101	60	29	44	13	5	17	<b>436</b>
Finding information relating to work	590	393	318	100	159	42	18	60	<b>1 680</b>
General browsing/surfing the net/web	347	250	211	67	107	32	11	36	<b>1 061</b>
Finding information about goods & services	344	185	167	45	88	26	8	28	<b>893</b>
Other	62	*19	*12	*9	*9	4	*1	2	<b>119</b>
	%	%	%	%	%	%	%	%	%
Finding information relating to studies	25.5	22.6	16.7	24.0	23.7	24.7	24.4	26.4	<b>22.9</b>
Finding information relating to work	89.8	87.7	89.4	84.1	86.9	80.0	86.8	90.9	<b>88.3</b>
General browsing/surfing the net/web	52.8	55.9	59.4	56.1	58.3	60.1	52.0	55.1	<b>55.8</b>
Finding information about goods & services	52.4	41.3	47.1	37.9	48.1	48.4	40.0	43.3	<b>46.9</b>
Other	9.4	*4.2	*3.3	*7.7	*5.1	7.0	*7.2	3.5	<b>6.2</b>
ACTIVITIES UNDERTAKEN AWAY FROM WORK									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Finding information relating to studies	375	344	200	92	130	30	7	35	<b>1 212</b>
Finding information relating to work	375	241	182	62	96	25	7	32	<b>1 019</b>
General browsing/surfing the net/web	779	623	495	205	286	60	19	69	<b>2 535</b>
Finding information about goods & services	453	322	231	90	157	34	12	33	<b>1 333</b>
Other	146	95	47	15	31	8	2	8	<b>352</b>
	%	%	%	%	%	%	%	%	%
Finding information relating to studies	34.4	39.4	34.1	38.0	37.8	38.5	27.6	40.5	<b>36.5</b>
Finding information relating to work	34.4	27.6	31.0	25.3	28.0	31.4	29.2	37.0	<b>30.6</b>
General browsing/surfing the net/web	71.5	71.4	84.3	85.2	82.9	76.4	77.2	79.8	<b>76.3</b>
Finding information about goods & services	41.5	36.9	39.4	37.5	45.5	43.4	47.7	38.7	<b>40.1</b>
Other	13.4	10.9	8.0	6.2	9.1	10.1	6.3	9.0	<b>10.6</b>

(a) Proportions are of all adults accessing the Internet from specified site.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

ADULTS USING THE INTERNET TO MAKE PRIVATE PURCHASES OR ORDERS

In 1998 nearly 347,000 adults used the Internet to purchase or order goods and services via the Internet for their own private use (2.6% of all adults).

Locations from which Internet purchases/orders were made

Just over 75% of adult Internet shoppers made Internet purchases or orders from home, 12% from work and 13% from other sites.

As age increased, a higher proportion of Internet shoppers made their Internet purchases from home (starting off at 58% for 18–24 and reaching 96% for persons aged 55 years and over) while the proportion of Internet shoppers undertaking Internet purchases from sites other than home or work fell from 41% for 18–24 year olds to just over 1% for persons aged 55 years and over.

Source of purchased/ordered goods

The majority of adults using the Internet to make purchases or orders for their own private use had made them from overseas. This was consistent across all age groups.

Nearly 68% of adult Internet shoppers reported obtaining purchases or orders from overseas sources. Nearly 48% of adult Internet shoppers obtained Internet purchases or orders from Australia.

Number of Internet purchases/orders made

An estimated 1.4 million purchases or orders were made by adults in a 12-month period. Nearly 35% of adult Internet shoppers reported making only one Internet purchase or order in a 12-month period, 24% reported making two, and 39% reported making three or more.

By age

Internet shoppers made an average of four purchases or orders per person in a 12-month period. By age:

- Internet shoppers aged 18–24 years of age made an average of one per person.
- Internet shoppers aged 25–39 years of age made an average of five per person.
- Internet shoppers aged 40–54 years of age made an average of four per person.
- Internet shoppers aged 55 years and over made an average of four per person.

Period when Internet purchases/orders made

Approximately 48% of adult Internet shoppers reported making an Internet purchase or order in the last 2 months of the survey period, 39% reported making an Internet purchase or order in the last 3–5 months, 40% made a purchase or order in the last 6–8 months and 30% made an Internet purchase or order in the last 9–12 months.

7.3 ADULTS MAKING PURCHASES OR ORDERS VIA THE INTERNET(a)

	18–24 years		25–39 years		40–54 years		55 years and over		Total	
	'000	%	'000	%	'000	%	'000	%	'000	%
Purchased or ordered goods/services(b)	50	2.8	158	3.7	117	3.1	*22	*0.6	<b>347</b>	2.6
Location from which purchase/ order made(c)										
Home	29	58.1	114	72.1	97	82.7	21	95.6	<b>260</b>	75.1
At work	—	*0.7	28	17.6	*12	*10.1	*1	*3.1	<b>41</b>	11.7
Other	21	41.3	*16	10.3	*9	7.3	—	*1.3	<b>46</b>	13.2
Source of purchases/orders(c)										
Australia	*16	*31.5	53	33.3	38	32.2	*6	*28.6	<b>112</b>	32.4
Overseas	31	62.0	88	55.7	50	42.8	*12	*55.2	<b>181</b>	52.2
Both	*3	*6.6	*17	*10.9	29	25.1	*4	*16.2	<b>53</b>	15.4
Goods purchased and paid for online(c)	38	74.8	134	85.3	85	72.8	22	100.0	<b>279</b>	80.5
Number of purchases/orders(c)										
One	41	80.9	43	27.6	29	24.6	*7	*31.7	<b>120</b>	34.5
Two	*5	*10.0	27	17.3	47	39.9	*5	*22.3	<b>84</b>	24.2
Three or more	*5	*9.1	80	50.5	42	35.6	*10	*46.0	<b>136</b>	39.2
Don't know	—	—	*7	*4.7	—	—	—	—	<b>*7</b>	*2.1
Period when purchases/orders made(c)										
2 months ago	33	65.4	79	50.0	51	43.2	*6	*25.9	<b>168</b>	48.4
3–5 months ago	*6	*12.0	69	43.7	51	43.2	*10	*47.8	<b>136</b>	39.2
6–8 months ago	*14	*27.0	68	43.5	48	41.1	*8	*36.2	<b>138</b>	39.8
9–12 months ago	*5	*10.5	54	34.5	41	34.7	*3	*13.8	<b>103</b>	29.8

(a) Period covers 12 months.

(b) Proportions are of all adults.

(c) Proportions are of all adults making purchases or orders via the Internet.

Expenditure on Internet purchases from overseas

Of the 200,000 adults who used the Internet to purchase goods or services for their own private use from overseas and who paid for these purchases online:

- 21% spent less than \$50 on Internet purchases;
- 20% spent \$51–\$100;
- 20% spent \$101–\$250;
- 20% spent \$251–\$500; and
- 19% spent more than \$500.

Expenditure on Internet purchases from Australia

Of the 126,000 adults who used the Internet to purchase goods or services for their own private use from Australia and who paid for these purchases online:

- 7% spent less than \$50 on Internet purchases;
- 35% spent \$51–\$100;
- 12% spent \$101–\$250;
- 18% spent \$251–\$500; and
- 26% spent more than \$500.

7.4 EXPENDITURE ON INTERNET PURCHASES/ORDERS BY ADULTS(a)(b)

<i>Expenditure</i>	<i>Expenditure on Internet purchases from overseas</i>		<i>Expenditure on Internet purchases from Australia</i>	
	'000	%	'000	%
\$1-\$50	42	20.9	*8	*6.5
\$51-\$100	40	20.2	44	34.9
\$101-\$250	39	19.5	*15	*11.7
\$251-\$500	40	19.9	23	18.2
More than \$500	39	19.4	33	26.3
Don't know	—	—	*3	*2.4
<b>Total</b>	<b>200</b>	<b>100.0</b>	<b>126</b>	<b>100.0</b>

(a) Relates to Internet purchases paid for online in a 12-month period.

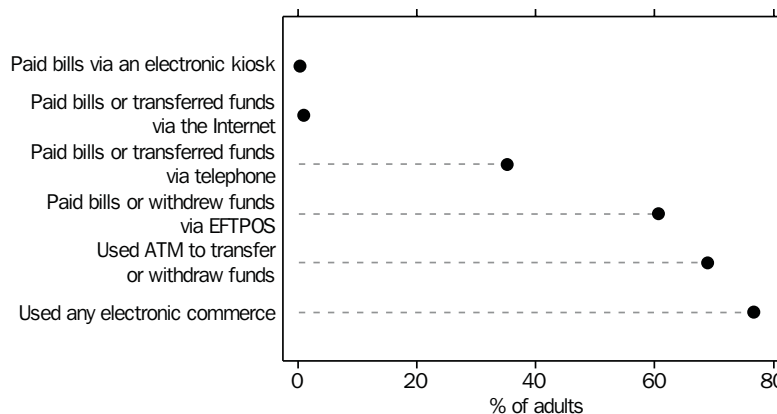
(b) Proportions are of all adults paying for Internet purchases online.

ELECTRONIC BANKING AND BILL PAYMENT TRANSACTIONS

In 1998 an average of 10.3 million adult Australians (77% of all adults) used some form of electronic commerce to pay bills or withdraw or transfer funds in the three months to the survey. During any one quarter:

- 9.3 million adults used an ATM (69% of adults);
- 8.1 million adults used EFTPOS (61% of adults);
- 4.7 million adults used a telephone to pay bills or transfer funds (35% of adults); and
- only 1% of all adults (136,000 persons) used the Internet to pay bills or transfer funds.

7.5 USE OF SELECTED ELECTRONIC COMMERCE BY ADULTS





	NSW	Vic.	Qld	SA	WA	Tas.	NT(c)	ACT	Aust.
NUMBER									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Used an information kiosk to pay bills	*20	*4	*12	*2	*10	*1	—	3	<b>52</b>
Used the Internet to pay bills or transfer funds	45	43	*16	*8	16	*2	—	4	<b>136</b>
Used the telephone to pay bills or transfer funds	1 740	1 015	927	297	497	117	35	95	<b>4 722</b>
Used EFTPOS to pay bills or withdraw funds	2 637	1 996	1 644	629	816	193	72	156	<b>8 144</b>
Used an ATM to transfer or withdraw funds	3 130	2 225	1 785	741	901	221	74	181	<b>9 258</b>
Used any of the above	3 478	2 488	1 974	826	1 019	246	81	192	<b>10 304</b>
PROPORTION									
	%	%	%	%	%	%	%	%	%
Used an information kiosk to pay bills	*0.4	*0.1	*0.5	*0.2	*0.8	*0.4	*0.4	1.2	<b>0.4</b>
Used the Internet to pay bills or transfer funds	1.0	1.3	*0.7	*0.8	1.3	*0.7	*0.5	1.9	<b>1.0</b>
Used the telephone to pay bills or transfer funds	38.0	30.0	37.6	27.4	39.2	34.5	38.6	44.0	<b>35.2</b>
Used EFTPOS to pay bills or withdraw funds	57.7	58.9	66.6	58.0	64.3	57.2	78.3	72.1	<b>60.6</b>
Used an ATM to transfer or withdraw funds	68.4	65.7	72.4	68.3	71.0	65.2	80.6	83.6	<b>68.9</b>
Used any of the above	76.1	73.4	80.0	76.1	80.3	72.9	89.0	88.5	<b>76.7</b>

(a) Period covers three months.

(b) Proportions are of all adults.

(c) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

#### ADULTS WILLING TO ACCESS SELECTED ONLINE SERVICES FROM HOME

While the actual number of adults using the Internet to make purchases or orders in 1998 was very low, a high proportion of Australia's adult population expressed interest in accessing online services such as shopping and banking from home. Of Australia's adult population in 1998:

- 37% expressed interest in online banking from home (29% in 1996); and
- 28% expressed interest in online shopping from home (21% in 1996).

In the 1998 Household Use of Information Technology Surveys, questions on the willingness of adults to access online educational services and online government information, or form lodgement services were asked. The 1998 surveys found that 49% of adult Australians were interested in accessing online education services from home and 44% expressed interest in accessing online government information services or online form lodgement services.

Across the State and Territories there was a high level of interest in accessing online services such as shopping, banking, educational and government information or form lodgment from home.

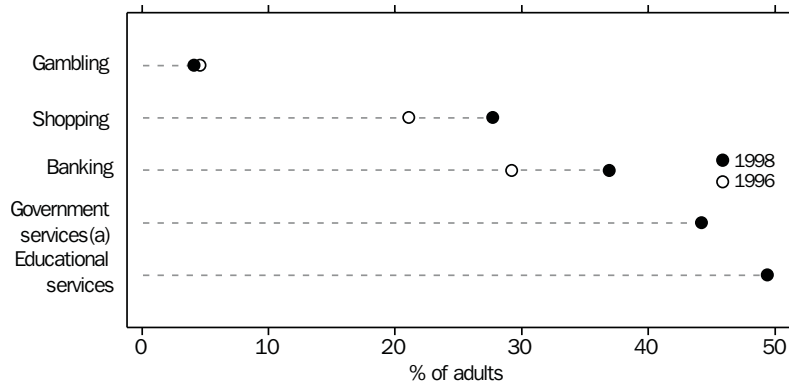
7.7 ADULTS WILLING TO ACCESS ONLINE SERVICES FROM HOME(a)

	NSW	Vic.	Qld	SA	WA	Tas.	NT(b)	ACT	Aust.
1998									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Shopping from home	1 298	886	732	247	360	84	29	82	<b>3 717</b>
Banking from home	1 649	1 218	1 019	319	499	113	37	103	<b>4 958</b>
Gambling from home	182	123	144	43	45	7	3	8	<b>554</b>
Online educational services	2 273	1 584	1 313	496	620	161	56	130	<b>6 637</b>
Accessing government information, or form lodgment	2 039	1 422	1 163	427	552	157	47	132	<b>5 938</b>
	%	%	%	%	%	%	%	%	%
Shopping from home	28.4	26.2	29.7	22.7	28.3	24.8	31.6	37.8	<b>27.7</b>
Banking from home	36.1	35.9	41.3	29.4	39.4	33.6	40.1	47.5	<b>36.9</b>
Gambling from home	4.0	3.6	5.8	3.9	3.5	2.0	3.4	3.5	<b>4.1</b>
Online educational services	49.7	46.8	53.2	45.7	48.9	47.7	61.1	60.1	<b>49.4</b>
Accessing government information, or form lodgment	44.6	42.0	47.1	39.4	43.5	46.3	51.1	61.0	<b>44.2</b>
1996									
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Shopping from home	942	704	462	231	261	73	26	54	<b>2 754</b>
Banking from home	1 288	963	675	292	382	90	34	85	<b>3 810</b>
Gambling from home	200	154	114	44	49	19	4	10	<b>594</b>
Online educational services	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<b>n.a.</b>
Accessing government information, or form lodgment	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<b>n.a.</b>
	%	%	%	%	%	%	%	%	%
Shopping from home	21.1	21.5	19.5	21.5	21.2	22.0	28.0	25.7	<b>21.1</b>
Banking from home	28.9	29.4	28.6	27.2	30.9	27.0	36.7	40.9	<b>29.2</b>
Gambling from home	4.5	4.7	4.8	4.1	4.0	5.7	4.6	5.0	<b>4.6</b>
Online educational services	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<b>n.a.</b>
Accessing government information, or form lodgment	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<b>n.a.</b>

(a) Proportions are of all adults.

(b) Refers to mainly urban areas only—see paragraph 2 in the Explanatory Notes.

7.8 ADULTS WILLING TO ACCESS ONLINE SERVICES FROM HOME



(a) Relates to government information and form lodgment services.

## TELEWORKING

In 1998, 386,000 employed adults (4.6% of all employed adults) were able to access their employer's computer from home via a modem. Of these, 293,000 (nearly 76%) had a formal teleworking agreement in place, that is, a contractual arrangement between an employer and an employee to work from home.

By age and sex Of the 386,000 employed adults who were able to access their employer's computer from home:

- 43% were men aged 25–39 years;
- 19% were women aged 25–39 years;
- 17% were men aged 40–54 years;
- 10% were women aged 40–54 years;
- 8% were persons aged 55 years and over; and
- 3% were persons aged 18–24 years of age.

Of the 293,000 employed adults with a formal teleworking agreement in place:

- 47% were males aged 25–39 years;
- 18% were females aged 25–39 years;
- 17% were males aged 40–54 years;
- 6% were females aged 40–54 years;
- 6% were males aged 55 years and over; and
- 3% were females aged 55 years and over.

### 7.9 TELEWORKING ARRANGEMENTS(a)

	Males		Females		Persons	
	'000	%	'000	%	'000	%
Were able to access an employer's computer from home through a modem						
18–24 years of age	*9	*1.2	*4	*0.7	*13	*1.0
25–39 years of age	167	8.8	73	5.1	240	7.2
40–54 years of age	67	4.2	37	2.7	104	3.5
55 years and over	22	3.8	*8	*2.2	30	3.2
Total	265	5.6	121	3.3	386	4.6
Had teleworking agreement						
18–24 years of age	*5	*0.8	*2	*0.4	*8	*0.6
25–39 years of age	137	7.2	53	3.7	189	5.7
40–54 years of age	49	3.1	*19	*1.4	69	2.3
55 years and over	*19	*3.3	*8	*2.2	27	2.9
Total	210	4.4	82	2.2	293	3.5

(a) Proportions are of all employed adults.

## EXPLANATORY NOTES

### POPULATION SURVEY MONITOR

**1** During 1996 and 1998, the Population Survey Monitor carried questions on the household use of information technology (IT) in its February, May, August and November surveys. From the fully responding households, details on the home use of information technology were obtained from each household. Statistics presented in this publication are estimates averaged over the four quarters of 1996 and 1998.

### SCOPE AND COVERAGE

**2** Households in remote and sparsely settled parts of Australia (Statistical Local Areas of fewer than 200 people) are excluded from the survey. The exclusion of these persons (approximately 175,000) will have only a minor impact on any aggregate estimates produced for individual States and Territories, with the exception of the Northern Territory where such persons account for over 20% of the population.

### DATA COLLECTED

**3** For the 1996 and 1998 surveys, data were collected on a number of topics relating to the use and ownership of IT in the home. For the 1998 surveys, data were also collected on use of selected IT (computers, Internet and electronic commerce) outside of the home for adults (persons 18 years and over).

### Information technology data

**4** In this publication data are presented on the following:

For households:

- presence of a computer in the home;
- frequency of home computer use;
- use of peripheral IT (modems, printers, etc.);
- use of selected communication technologies, i.e. facsimile machines, mobile phones, car phones, cordless phones, answering machines, pagers, voice mail and pay TV;
- processor and memory capacity of the most powerful home computer;
- home Internet access;
- barriers to computer use and Internet use (1998 only for Internet);
- intentions to purchase computers;
- intentions to acquire Internet access (1998 only); and
- expenditure on selected IT goods and services over a 12-month period.

Information technology data  
*continued*

For persons:

- frequent use of computers in the home;
- home computer activities;
- source of computer training;
- years of computer use and level of computer competency;
- use of computers outside the home (1998 only);
- use of the Internet outside the home (1998 only);
- frequency of computer use and Internet use (1998 only);
- activities undertaken via the Internet (1998 only);
- barriers to the use of the existing home computer (1998 only);
- use of the Internet to purchase goods or services (1998 only);
- expenditure on goods and services purchased via the Internet (1998 only);
- use of electronic banking and bill payment mechanisms (1998 only);
- use of electronic information kiosks (1998 only);
- teleworking (1998 only); and
- willingness to access selected online services from home.

Household data

**5** In addition to gathering data on the use of IT, the surveys collected data on the characteristics of the household. These characteristics are:

- number of persons aged 18 years and over in household;
- household income;
- household family classification;
- dwelling structure;
- occupancy;
- region; and
- State or Territory.

Personal data

**6** The surveys also provide population statistics classified by:

- age;
- sex;
- marital status;
- birthplace;
- highest educational qualification;

Personal data *continued*

- income;
- labour force status;
- occupation; and
- major activity of those people not in the labour force.

#### DEFINITION OF HOUSEHOLD

**7** A group of one or more persons in a private dwelling who consider themselves to be separate from other persons in the dwelling, and who make regular provision to take meals separately from other persons. Lodgers who receive accommodation and meals are not treated as separate households. A household may consist of any number of family and non-family members.

#### ACCURACY OF DATA

**8** As the estimates in this publication are based on information obtained from a sample drawn from households in the surveyed population, the estimates are subject to sampling variability, that is, they may differ from the figures that would have been produced if all households in Australia had been included in the survey. One measure of the likely differences is given by the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of households was included. There are about two chances in three that a sample estimate will differ by less than one SE from the figure that would have been obtained if all households had been included in the survey, and about 19 chances in 20 that the difference will be less than two SEs.

**9** The SEs for some statistics are relatively high and users are advised to exercise caution in interpreting these statistics. Estimates with SEs of 25% or more have been marked with an asterisk. The following table of SEs is for data on the number of households and persons using selected IT.

#### STANDARD ERROR OF ESTIMATES FOR HOUSEHOLDS—1996 AND 1998

<i>Size of estimate</i>										
	'000	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
2	..	..	..	900	1 000	500	300	300	1 200	
5	2 500	2 200	2 100	1 400	1 500	800	500	500	1 800	
10	3 400	3 100	2 900	1 900	200	1 000	600	700	2 600	
20	4 700	4 300	3 900	2 500	2 800	1 400	800	900	3 700	
50	7 000	6 500	5 600	3 700	4 000	1 900	1 100	1 200	5 700	
100	9 300	8 700	7 200	4 700	5 300	2 400	1 300	1 400	7 800	
200	12 300	11 300	9 200	6 000	6 800	3 100	1 500	1 700	10 500	
500	17 600	15 500	12 400	8 100	9 400	4 000	..	2 000	15 100	
800	20 400	17 300	13 600	8 900	10 500	4 400	..	..	17 500	
1 000	22 900	19 300	15 200	9 900	11 800	4 900	..	..	19 600	
1 500	25 400	20 400	15 900	10 400	12 700	5 100	..	..	21 700	
2 000	29 400	23 500	18 300	12 000	14 600	5 800	..	..	25 100	

## STANDARD ERROR OF ESTIMATES FOR ADULTS—1996 AND 1998

Size of estimate	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
'000									
5	3 100	2 900	2 400	1 800	2 000	1 000	800	900	2 500
10	4 300	4 100	3 400	2 500	2 800	1 400	1 100	1 200	3 500
20	5 900	5 500	4 800	3 400	3 700	1 700	1 500	1 600	4 900
50	8 700	10 800	7 000	5 000	5 500	2 300	2 300	2 200	7 600
100	11 700	14 300	9 200	6 400	7 200	2 800	3 200	2 900	10 400
200	15 300	19 900	12 200	8 300	9 400	3 300	4 400	3 600	13 900
500	21 700	23 700	17 200	11 500	13 100	4 000	..	..	20 200
800	25 800	25 600	20 400	13 500	15 500	..	..	..	24 200
1 000	27 800	29 600	21 900	14 500	16 700	..	..	..	36 500
1 500	32 300	29 600	25 500	16 700	19 400	..	..	..	30 000
2 000	35 200	32 300	27 800	18 100	21 200	..	..	..	34 100
5 000	47 500	43 300	37 700	..	..	..	..	..	47 100

Example using the standard error table

**10** Consider the estimate of 814,000 households outside the capital cities frequently using a home computer (from table 1.1). An estimate of 814,000 households has a SE of around 17,500. This means there are about two chances in three that the true value (i.e. the value that would have been obtained from a complete census) is within the range 796,500 to 831,500 households and about 19 chances in 20 that the true value is in the range 779,000 to 849,000 households.

**11** Particular care should be taken when comparing figures over time. It is not correct to assume that an apparent difference between figures is actually significant. Such an estimate is subject to sampling error. An approximate SE of the difference between two estimates ( $x-y$ ) may be calculated by the following formula:

$$SE(x - y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

**12** The increase in the number of households with home Internet access since 1996 is 798,000. The SE on this movement is about 26,476. Therefore there are two chances in three that the true value is within the range 771,524 to 824,746 and 19 chances in 20 that the true value is in the range 745,048 to 850,952.

## ACKNOWLEDGMENT

**13** Australian Bureau of Statistics (ABS) publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated: without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the *Census and Statistics Act 1905*.

## RELATED PUBLICATIONS

**14** Other ABS publications on the production and use of information technology, and telecommunication goods and services in Australia are:

*Business Use of Information Technology, 1993–94* (Cat. no. 8129.0)

*Government Use of Information Technology, 1993–94* (Cat. no. 8119.0)

*Household Use of Information Technology, Australia, 1996*  
(Cat. no. 8146.0)

*Household Use of Information Technology, Australia 1998*  
(Cat. no. 8146.0)

*Household Use of Information Technology, Australia, February 1998*  
(Cat. no. 8128.0)

*Information Technology in Australia, 1995–96* (Cat. no. 8126.0)

*Information Technology, Australia, Preliminary, 1995–96*  
(Cat. no. 8143.0)

*Telecommunications Services, Australia, Preliminary, 1996–97*  
(Cat. no. 8148.0)

*Telecommunications Services, Australia, 1996–97*  
(Cat. no. 8145.0)

*Use of the Internet by Householders, Australia, February 1998*  
(Cat. no. 8147.0)

*Use of the Internet by Householders, Australia, May 1998*  
(Cat. no. 8147.0)

*Use of the Internet by Householders, Australia, August 1998*  
(Cat. no. 8147.0)

*Use of the Internet by Householders, Australia, November 1998*  
(Cat. no. 8147.0)

## AVAILABILITY OF UNPUBLISHED STATISTICS

**15** As well as statistics included in this publication, the ABS has a range of data on the use of selected information technologies in households. Inquiries about these statistics should be made by telephoning Joseph Di Gregorio on Canberra 02 6252 5609 or email [joseph.digregorio@abs.gov.au](mailto:joseph.digregorio@abs.gov.au), or Tim Power on Canberra 02 6252 7895 or email [tim.power@abs.gov.au](mailto:tim.power@abs.gov.au).



SYMBOLS AND OTHER  
USAGES

ABS	Australian Bureau of Statistics
ATM	Automatic Teller Machine
CD-ROM	Compact Disk Read Only Memory
EFTPOS	Electronic Funds Transfer at Point of Sale
ISP	Internet Service Provider
IT	Information Technology
Mb	megabytes
n.a.	not available
PC	Personal Computer
SE	Standard Error
SLA	Statistical Local Areas
TAFE	Technical and Further Education
*	estimates have a relative standard error of greater than 25%
—	nil or rounded to zero
..	not applicable





## SELF-HELP ACCESS TO STATISTICS

*DIAL-A-STATISTIC* For current and historical Consumer Price Index data, call 1902 981 074.  
For the latest figures for National Accounts, Balance of Payments, Labour Force, Average Weekly Earnings, Estimated Resident Population and the Consumer Price Index call 1900 986 400.  
These calls cost 75c per minute.

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2814600001989  
ISSN 1329-4067

RRP \$21.00