



Embargoed until 10:45am – 27 April 2007

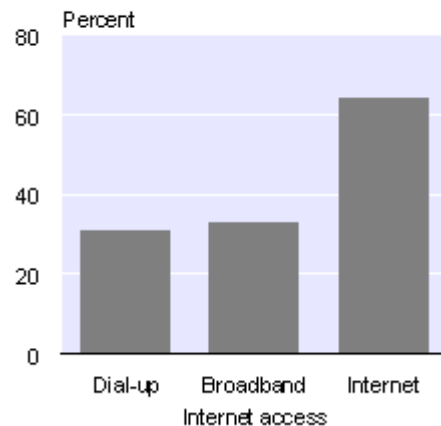
## Household Use of Information and Communication Technology

### 2006

#### Highlights

- **1.011 million households had access to the Internet at home** in the December 2006 quarter.
- **33.2 percent of New Zealand households had broadband access** to the Internet, while 30.9 percent had dial-up access.
- **69.0 percent of individuals used the Internet in the previous 12 months;** 28.6 percent made an online purchase.
- **Almost 2.6 million New Zealanders (80.0 percent) had personal use of a mobile phone** in the previous 12 months.

Household Access to Internet  
December 2006 quarter



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There is a companion Media Release published – [Household Use of Information and Communication Technology: 2006](#).

# Commentary

## Household Use of Information and Communication Technology Survey: 2006

The Household Use of Information and Communication Technology (ICT) Survey: 2006 provides information on household access to and individual use of ICT. This core set of official statistics will assist individuals, communities, businesses and government to understand how ICT is changing New Zealand's economy and society.

The Household Use of ICT Survey for 2006 is the first survey of its type to be conducted in New Zealand and will be repeated every two years. Results will be made available to the Organisation for Economic Co-operation and Development (OECD) for inclusion in the OECD Science, Technology and Industry Scoreboard 2007 to be updated in mid 2007.

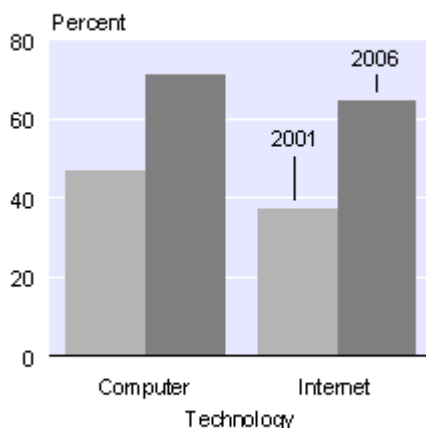
### Household computer and Internet access

In the December 2006 quarter, 71.6 percent (1.1 million) of households in New Zealand had access to a computer at home. Although not directly comparable, data from Statistics New Zealand's Household Economic Survey (HES), from the period ending 30 June 2001, showed that 47 percent of households had access to a computer.

Nearly two-thirds of households (64.5 percent or 1 million) had access to the Internet at home. Data from the 2001 Census indicated that 37 percent of households had access to the Internet in 2001.

#### Household Access to Computers and Internet

*2001 and 2006*

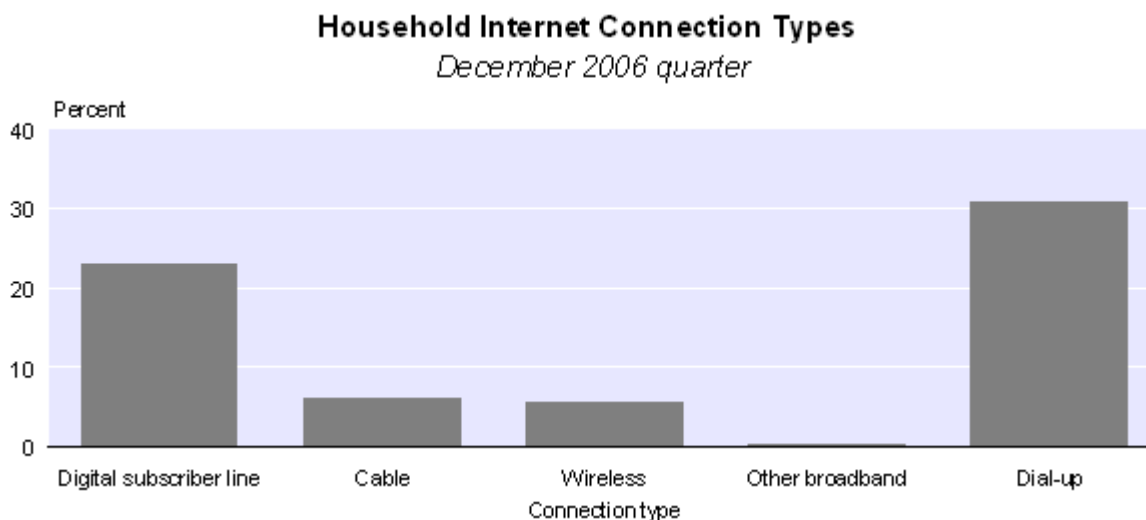


**Note:**

2001 data sourced from the 2001 Census and Household Economic Survey 2001.

## Internet access connection types

In the December 2006 quarter, nearly one-third (33.2 percent) of New Zealand households had a broadband connection to the Internet, while 30.9 percent had a dial-up connection. The most common type of broadband connection was digital subscriber line (DSL) with 23 percent of households. Cable was next most prevalent with 6.1 percent, followed by wireless (5.6 percent), and other broadband connections at 0.3 percent of households.



## Regional and rural/urban Internet access

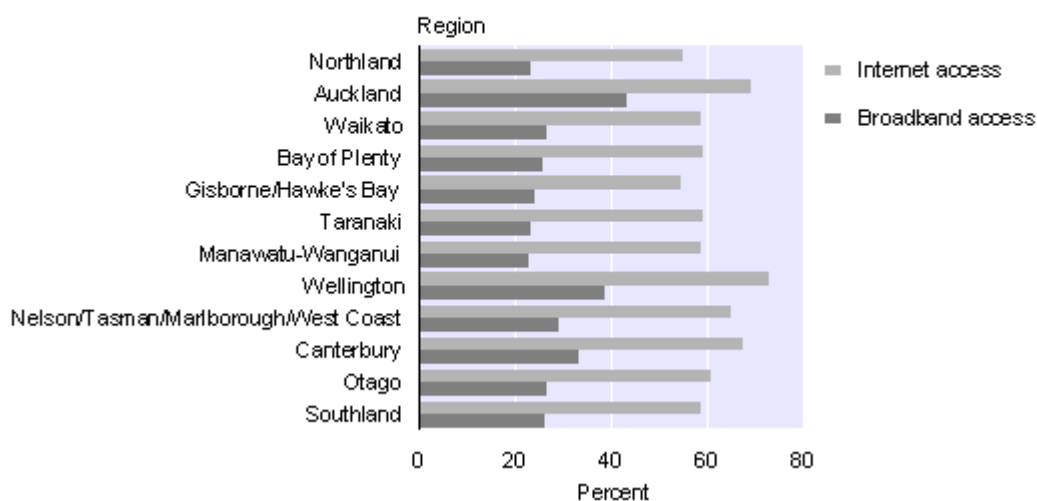
In the December 2006 quarter the Wellington region had the highest proportion of households with access to the Internet at 72.7 percent. Auckland region had 68.9 percent, and Canterbury had 67.2 percent. Northland and the Gisborne/Hawkes Bay regions shared the lowest proportion of households with Internet access, at 54.7 percent and 54.1, respectively.

The Auckland region had the highest penetration of broadband access, with 43.1 percent of all households having access. Wellington and Canterbury followed with 38.3 and 33.2 percent broadband Internet access, respectively. The Manawatu-Wanganui area had the lowest proportion of households with broadband access, at 22.7 percent.

## Household Access to the Internet

*By region*

December 2006 quarter



In the December quarter, the proportions of households with Internet access were almost identical for the 'all rural' (64.2 percent) and 'all urban' (64.6 percent) areas. When the all urban areas group was separated into main urban, secondary urban and minor urban groups, there were significant differences between the three areas. Sixty-seven percent of households in main urban areas had Internet access, in secondary urban areas it was 56.2 percent, while only 48.1 percent of households had access in minor urban areas.

A significant difference was also seen between rural centres and smaller rural areas with 56 and 65.9 percent of households reporting access to the Internet, respectively.

The definition of urban and rural areas is available in the technical notes section of this release.

## Reasons households do not have broadband

In the December 2006 quarter, over half (50.8 percent) of all households with only dial-up access to the Internet reported that cost was a reason for not having broadband access. In rural areas, 35.1 percent of households identified that lack of availability of broadband services was a reason they did not have broadband, while only 3.7 percent of urban areas reported this reason.

Urban areas also reported that dial-up access was sufficient for household use in 34.9 percent of households, while only 21.8 percent of rural households identified this reason.

Only 2.2 percent of all households indicated that they had concerns about the service of broadband suppliers.

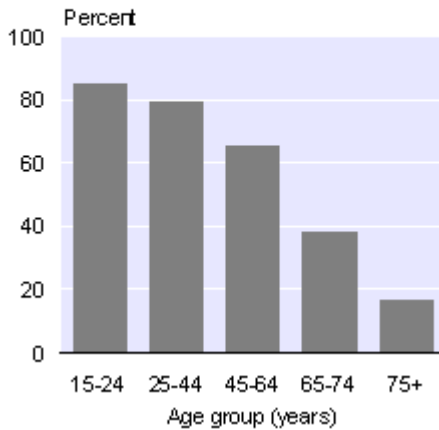
## Household Internet security

Of households that had access to the Internet at home during the December 2006 quarter, 16.8 percent reported that they had experienced loss of data, time, and/or had damage to their household computer as a result of a virus or something of a similar nature.

## Individual Internet use

The proportion of individuals aged 15 years and over using the Internet in the previous 12 months from any location was 69.0 percent in the December 2006 quarter. Of those aged between 15 and 24 years, 85.5 percent had used the Internet in the previous 12 months, while only 17.3 percent of people in the 75 years and older age group had done so.

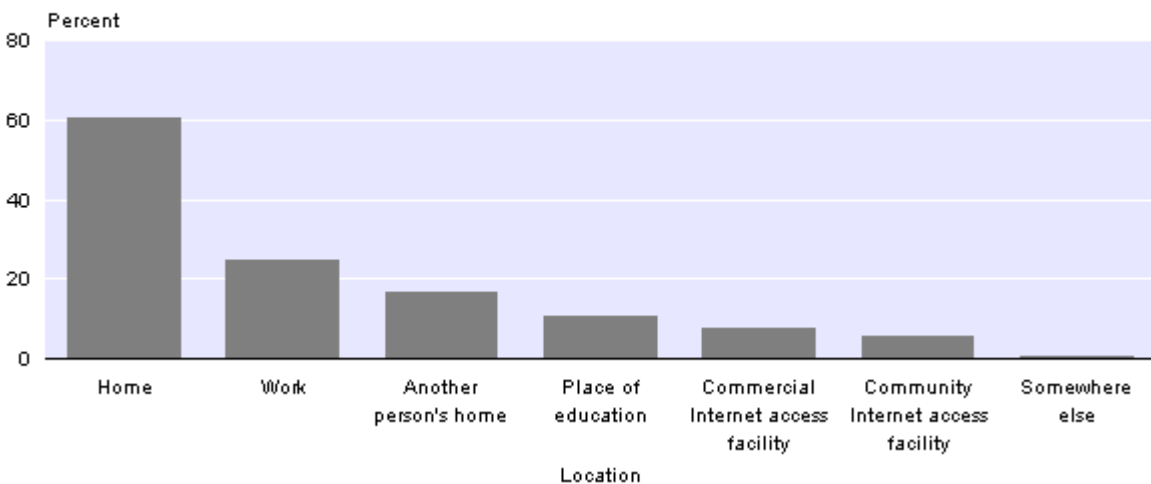
**Individual Internet Use**  
*Aged 15 years and over, last 12 months*  
December 2006 quarter



A total of 79.8 percent of people with a tertiary-level qualification had used the Internet in the previous 12 months, compared with 58.4 percent of those without a tertiary qualification.

The proportion of all individuals 15 years and over who used the Internet from home in the previous 12 months was 60.4 percent. One-quarter (25.1 percent) used the Internet from work. Only 6 percent of individuals reported using the Internet from a community Internet access facility in the previous 12 months.

**Location of Individual Internet Use**  
*Aged 15 years and over, last 12 months*  
December 2006 quarter



## Individual Internet purchases

Just over one-quarter (28.6 percent) of all individuals made at least one online purchase in the previous 12 months, to the December quarter 2006. The 25 to 44 year age group were the most likely to make an online purchase, with 38.9 percent of individuals in this age group doing so.

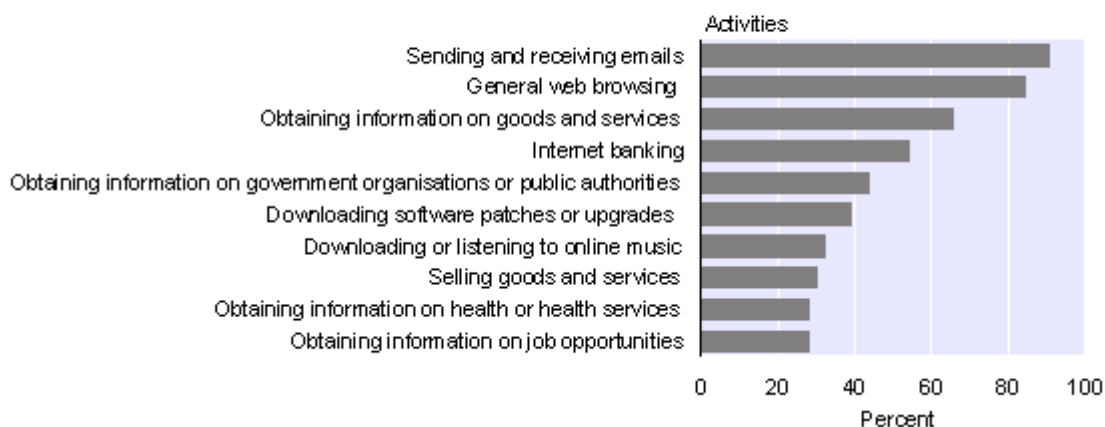
## Individual Internet activities

Sending or receiving emails was the most common personal activity (90.3 percent) for individuals who used the Internet in the 12 months to the December 2006 quarter. General web browsing was the next most popular activity (84.4 percent) followed by obtaining information on goods and services (64.8 percent of individuals). Over half of all individuals (53.9 percent) indicated they had used Internet banking, while 32.2 percent had downloaded or listened to online music.

### Top 10 Internet Activities

*Individuals aged 15 years and over, last 12 months*

December 2006 quarter



## Mobile phones use

In the 12 months to the December 2006 quarter, 86.2 percent of households reported they had personal use of at least one mobile phone.

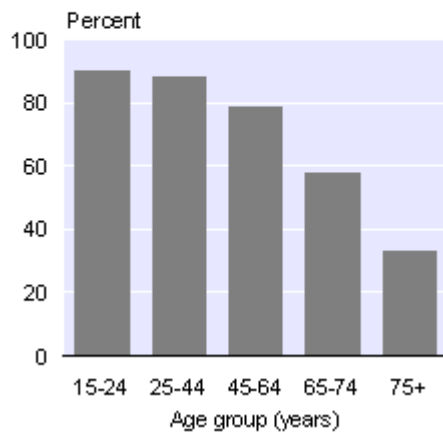
The proportion of individuals (rather than households) with personal use of a mobile phone in the previous 12 months was 80 percent (almost 2.6 million individuals). In the 15 to 24 years age group, 90.6 percent had personal use of a mobile phone. This contrasted with the 75 years and over age group where just over one-third (33.9 percent) had personal use of a mobile phone.

Of all individuals, 3.7 percent reported they had received harassing or threatening messages while using a mobile phone in the previous 12 months.

### Personal Use of Mobile Phones

*Individuals aged 15 years and over,  
last 12 months*

December 2006 quarter



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# Technical notes

## Survey background

The Household Use of Information and Communication Technology (ICT) Survey measures New Zealand households and individuals that have access to, and use of, computers, the Internet and mobile phones.

The survey produces official statistics on New Zealand household access and use of ICT and is used to gain a better understanding of how these technologies are influencing New Zealand's economy and society.

## Data collection

The Household Use of ICT Survey: 2006 was a supplement to the Household Labour Force Survey (HLFS) during the December 2006 quarter. The supplement was asked of all households and people eligible to take part in the HLFS. Two questionnaires were used. A household ICT questionnaire asked about that household's access to computers and to the Internet. An individual ICT questionnaire was then asked of all eligible individuals within the HLFS sample. Proxy responses were not accepted for the ICT questionnaires.

The survey was carried out from 8 October 2006 to 6 January 2007 (the December 2006 quarter) via personal and telephone interviews.

## Target population

The target population for the Household Use of ICT Survey is the same as the HLFS target population. This is the civilian, usually resident, non-institutionalised population aged 15 years and over. This means that the statistics in this release do not cover long-term residents of homes for older people, hospitals and psychiatric institutions; inmates of penal institutions; members of the permanent armed forces; members of the non-New Zealand armed forces; overseas diplomats; overseas visitors who expect to be resident in New Zealand for less than 12 months; and those aged under 15 years.

The target population for the household portion of the survey is all households from the scope outlined above with at least one eligible individual.

The HLFS sample contains about 15,000 private households and about 30,000 individuals each quarter. Households are sampled on a statistically representative basis from rural and urban areas throughout New Zealand, and information is obtained for each member of the household.

## Response rate

The target response rate for the Household Use of ICT Survey 2006 was 75 percent. The achieved response rate for households was 94 percent of those households which completed the HLFS (13,757 households). The achieved rate for individuals was 89 percent, or 24,855 of those individuals who completed the HLFS personal questionnaire.

## **Non-response and imputation**

### **Unit non-response**

Unit (or complete) non-response occurs when units in the sample do not complete a questionnaire. The initial selection weight of the remaining units was adjusted to account for the unit non-response.

### **Item non-response**

Item (or partial) non-response is when units complete the questionnaire but some questions are not complete (eg refused). Item non-response imputation was carried out for the questions that required derivations of household data – including personal mobile phone use and personal income.

### **Imputation methodology**

Nearest neighbour imputation was used to impute answers for unanswered categorical questions.

## **Measurement errors**

Statistics New Zealand endeavours to minimise the impact of measurement errors through the application of best survey practices and monitoring of known indicators (eg non-response). However, the Household Use of ICT Survey results are subject to measurement errors, including both non-sample and sample errors. These errors should be considered when analysing the results from the survey.

### **Sample errors**

Sampling error can be measured, and quantifies the variability that occurs by chance because a sample rather than an entire population is surveyed.

Sampling errors are calculated for each cell in the published tables. For example, the estimated total number of households with access to the Internet in the December 2006 quarter was 1,011,000. This estimate is subject to a sampling error of plus or minus 15,000 or 1 percent (measured at the 95 percent confidence level). This means that we can be 95 percent confident that the true number of households with access to the Internet lies between 996,000 and 1,026,000.

Smaller estimates, such as the total number of rural centre households with access to the Internet in the December 2006 quarter (20,000), are subject to larger relative sampling errors than larger estimates. This estimate is subject to a sampling error of plus or minus 7,000 or 8 percent (measured at the 95 percent confidence level). This means that we are 95 percent confident that the true value of rural centre households with access to the Internet lies between 13,000 and 27,000.

In general, the sampling errors associated with subnational estimates (eg breakdowns by regional council area) are larger than those associated with national estimates.

## **Non-sampling errors**

Non-sampling errors are all errors that are not sampling error. It is present in both sample surveys and censuses. It can not be directly numerically measured. There are many potential sources of non-sampling error.

Statistics NZ adopts procedures to minimise these types of error, but they may still occur and are not quantifiable. Non-sampling errors include unintentional mistakes by respondents when completing questionnaires, variation in the respondents' and interviewers' interpretation of the questions asked, and errors made during the processing of the data. In addition, the survey applied imputation methodologies to cope with non-respondents.

Given the nature of the data collected, there are limitations on the level of accuracy that can be expected from the survey. Even though detailed descriptions of technical terms was given, there may still be differences in respondent and interviewer interpretation.

## **Rounding**

Due to rounding procedures, table totals may differ from the sum of individual cells. All counts have been rounded to the nearest thousand.

## **Comparisons with 2006 Census data**

Due to a number of factors, some data outputs (such as household Internet access) that were produced from New Zealand's 2006 Census of Population and Dwellings differ from comparative outputs that were produced by the Household Use of ICT Survey: 2006. Further information is available on request.

## **Definitions**

### **Broadband**

Broadband is a high-speed connection to the Internet and is also referred to as non-analogue. For the purposes of the Household use of ICT questionnaires, broadband was self-identified by the respondent, and then the specific connection technology type was requested, eg DSL, cable.

### **Cable**

A broadband transmission technology using coaxial cable or fibre-optic lines that were first used for TV and are now being used for Internet access. Includes fibre optic, ethernet, coaxial, and hybrid fibre coaxial.

### **Dial-up**

Dial-up access is a way of connecting a computer to the Internet using a modem and the telephone line.

### **DSL**

Digital subscriber line (DSL) is a type of high-speed broadband Internet connection that transmits data over regular copper wires (phone line). DSL allows for simultaneous voice and data transmission.

## **Information and communication technology (ICT)**

This refers to the electronic technologies for collecting, processing or transmitting information which can be in the form of voice, images or data. Examples include computers, the Internet, and telecommunications.

## **Online purchase**

Those purchases which are paid for online eg by credit card or web based Internet transaction systems. This does not include online banking, or when the payment for the purchase is made by cash or cheque.

## **Personal use of a mobile phone**

The phone need not be owned or paid for by the person but should be reasonably available through work or family. Excludes occasional use, for instance, borrowing a mobile phone to make a call.

## **Regional council areas**

Regional council areas are defined at meshblock and area unit level. Regional councils cover every territorial authority in New Zealand with the exception of the Chatham Islands Territory. The seaward boundary of the regions is the 12-mile (19.3km) New Zealand territorial limit. Generally regional council areas contain complete territorial authorities. Where territorial authorities straddle regional council boundaries, the affected area has been statistically defined in complete area units. There are 16 regional council areas in New Zealand. To allow publication of smaller areas, these categories have been combined into 12 regions for this release.

## **Sharing files via peer to peer exchanges**

Directly accessing other computers' files through Internet networks, and software programs.

## **Urban and rural areas**

### **All urban areas**

Statistically defined areas with no administrative or legal basis. There is a three-part hierarchical sub-division of urban areas. The urban population is defined internationally as towns with 1,000 people or more.

### **Main urban area**

Very large urban area centred on a city or major urban centre. Main urban areas have a minimum population of 30,000.

### **Secondary urban area**

Urban area with a population between 10,000 and 29,999 and centred on the larger regional centres.

### **Minor urban area**

These are urbanised settlements (outside main and secondary urban areas), centred around smaller towns with a population between 1,000 and 9,999.

**All rural areas**

Statistically defined areas with no administrative or legal basis. Two-part hierarchical sub-division of rural areas. They have a population of less than 1,000.

**Rural centre**

Centres with a population between 300 and 999.

**Rural**

Rural dwellers living in a true rural area. Rural areas have a population of under 300.

**Web radio and web television**

Radio and television stations which can be accessed through the Internet, also called 'webcasting'.

**Wireless**

Access to the Internet via wireless networks (other than cellular technology).

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## **Timing**

Timed statistical releases are delivered using postal and electronic services provided by third parties. Delivery of these releases may be delayed by circumstances outside the control of Statistics NZ. Statistics NZ accepts no responsibility for any such delays.

### **Next release**

*Household Use of Information and Communication Technology: 2008* will be published in 2009.

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## Tables

The following tables can be downloaded from the Statistics New Zealand website in Excel 97 format. If you do not have access to Excel 97 or higher, you may use the [Excel file viewer](#) to view, print and export the content of the file.

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