More than a million New Zealand homes had broadband.
1 in 2 rural homes had broadband, compared with 1 in 5 in 2006.
12 percent of homes had a dial-up connection.
The most common reason for not switching to broadband was cost.

Household access to Internet
December 2006 and 2009 quarters

Note: Households may have both broadband and dial-up access.
Source: Statistics New Zealand
Commentary

The Household Use of Information and Communication Technology (ICT) Survey: 2009 provides information on household access to and individual use of ICT. Information from this survey is used to understand how ICT is changing New Zealand’s economy and society.

The information was collected as a supplement to the Household Labour Force Survey (HLFS) December 2009 quarter. The Household Use of ICT Survey was run once before, in the December 2006 quarter.

This is the first release of data from the Household Use of ICT Survey: 2009. Further information from the survey will be released in July 2010.

Information in this release is for 2009, and is compared with data for 2006.

Household Internet access

In 2009, 75 percent of New Zealand households had access to the Internet at home, compared with 65 percent in 2006. Before the first Household Use of ICT Survey was run in 2006, data from the Census of Population and Dwellings was used to show household Internet access. The 2001 Census showed that 37 percent of households had an Internet connection.

More than a million New Zealand households had a broadband connection in 2009. This means that 63 percent of households had broadband, compared with one-third of all households in 2006.

The number of dial-up connections had decreased over the last three years. Only 12 percent of households had a dial-up connection in 2009 compared with 31 percent in 2006.

Rural/urban broadband access

Compared with households in rural areas, those in urban areas were more likely to have broadband. Sixty-four percent of households in ‘all urban’ areas had broadband access, compared with 55 percent of ‘all rural’ households. In 2006, only 35 percent of all urban households had broadband, compared with 22 percent of all rural households.

Each region had close to, or over 50 percent, broadband access, with Auckland leading at 72 percent. This was followed by Wellington and Canterbury at 69 percent and 64 percent, respectively.

For definitions of urban and rural areas see ‘Technical notes’ in this release.
Reasons households with dial-up only do not have broadband

Of households with a dial-up connection only, about 50 percent said they did not have broadband because costs were too high. This was the most common reason in both 2006 and 2009. Around one-quarter of households indicated that dial-up access was sufficient, compared with 33 percent in 2006.

Compared with 2006, the proportion of households living in urban areas who reported that broadband was not available remained the same in 2009 (4 percent). However, for households living in rural areas, this proportion rose in 2009 by 14 percentage points, to 49 percent.

Source: Statistics New Zealand
Individual Internet use

In the December 2009 quarter, 80 percent of individuals aged 15 years and over had used the Internet in the last 12 months, up from 69 percent. In both 2006 and 2009 the proportions of females and males who used the Internet in the last 12 months were the same (69 percent in 2006 and 80 percent in 2009). In 2009, of those aged between 65 and 74 years, 54 percent had used the Internet in the last 12 months. The largest increase in Internet usage was for this age group, up 15 percentage points from 2006.

Sending or receiving emails was the most common Internet activity, which is consistent with the past trend (62 percent in 2006 and 72 percent in 2009). Thirty-seven percent reported that they used the Internet for social networking (on websites such as Facebook or Twitter). Use of social networking sites was not asked in 2006.

In the December 2009 quarter, over 40 percent of individuals aged 15 years and over made at least one online purchase in the last 12 months. This proportion is an increase of 14 percentage points when compared with 2006. Those in the 25–44-year age group were still the most likely to make an online purchase, with 56 percent of individuals in this age group doing so in 2009.

![Online purchases in last 12 months](chart)

Source: Statistics New Zealand

Data security and safety issues

In 2009, the proportion of households with Internet access that reported that they had experienced loss of data, time, and/or suffered damage as a result of a virus decreased to 13 percent, from 17 percent in 2006.

The incidence of Internet fraud has remained the same, with 2 percent of Internet users experiencing loss as a result of Internet fraud in both 2006 and 2009. Mobile phone users were asked if they had received any harassing or threatening messages while using a mobile phone, with proportions almost identical in 2006 and 2009, at 5 percent and 3 percent, respectively.

Household digital television connection

In 2009, more than 60 percent of all households had a digital television connection such as SKY satellite or Freeview. The most common type of connection was SKY satellite. Only 9 percent of
households reported having more than one type of digital connection. Information on digital connections was not collected in 2006.

**Mobile phone use**

Mobile phone use has increased over the last three years, from 80 percent in 2006 to 85 percent in 2009. The largest percentage point increase in mobile phone use was seen in individuals aged between 65 and 74, with a 9 percentage point increase to 67 percent.

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**Next release ...**

*Household Use of Information and Communication Technology: 2009 – Additional tables will be released on 22 July 2010.*
Technical notes

Survey background

The Household Use of Information and Communication Technology (ICT) Survey collected information from New Zealand households and individuals about 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: 2009 was a supplement to the Household Labour Force Survey (HLFS) during the December 2009 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 4 October 2009 to 11 January 2010 (the December 2009 quarter) via personal and telephone interviews.

Target population

The target population for the Household Use of ICT Survey is the civilian, usually resident, non-institutionalised population aged 15 years and over living in private dwellings. The survey population did not include:

- 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.

The HLFS target population includes non-private dwellings whereas the Household Use of ICT Survey does not.

The target population for the household portion of the Household Use of ICT 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 Household Use of ICT Survey: 2009 targeted a 75 percent response rate. The survey achieved an actual response rate of 80 percent, which represented 13,713 households.

Non-response and imputation

Unit non-response

Unit (household or individual) 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 two variables – personal mobile phone use and personal income. Nearest neighbour imputation was the method used for this imputation.

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

The estimates in this release are based on a sample of households. Somewhat different figures might have been obtained if a complete census of the entire population had been taken using the same questionnaire and processing methods. Because the estimates are based on a sample of households, all estimates have a sampling error associated with them. The variability of a survey estimate, due to the random nature of the sample selection process, is measured by its sampling error.

The absolute sampling errors estimates for the overall New Zealand household population are presented in tables 1.01 and 1.02. These errors should be used as a guide for judging the reliability of figures contained in the tables.

Table 1.01

<table>
<thead>
<tr>
<th>Variable</th>
<th>All households</th>
<th>Sampling error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (000)</td>
<td></td>
</tr>
<tr>
<td>Mobile phone</td>
<td>1,451</td>
<td>8</td>
</tr>
<tr>
<td>Internet</td>
<td>1,220</td>
<td>11</td>
</tr>
<tr>
<td>Broadband access</td>
<td>1,023</td>
<td>13</td>
</tr>
<tr>
<td>Dial-up access</td>
<td>202</td>
<td>2</td>
</tr>
</tbody>
</table>
Table 1.02

<table>
<thead>
<tr>
<th>Variable</th>
<th>All individuals</th>
<th>Sampling error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (000)</td>
<td></td>
</tr>
<tr>
<td>Mobile phone</td>
<td>2,854</td>
<td>17</td>
</tr>
<tr>
<td>Internet</td>
<td>2,677</td>
<td>19</td>
</tr>
<tr>
<td>Online purchases</td>
<td>1,430</td>
<td>17</td>
</tr>
<tr>
<td>Used Internet at home</td>
<td>2,450</td>
<td>98</td>
</tr>
</tbody>
</table>

The sampling errors provided above are estimated at the 95 percent confidence level.

How to use the sampling errors:

For example, the estimated number of households with Internet in 2009 is 1,220,000. This estimate is subject to a relative sampling error estimate of approximately 11,000. This means that 95 percent of the possible samples of the same size will produce an estimate between 1,209,000 and 1,231,000.

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 were 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.

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 way the broadband was provided was asked, for example, via a satellite dish.
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.

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, for example, 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. This excludes occasional use, for instance, borrowing a mobile phone to make a call.

Regional council areas
Regional councils cover every territorial authority in New Zealand with the exception of the Chatham Islands Territory. There are 16 regional council areas in New Zealand. To allow publication of smaller areas, these areas 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 subdivision of urban areas. The urban population is defined internationally as towns with 1,000 people or more.

Main urban area

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

Secondary urban area

Urban areas 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. They have a population of less than 1,000.

Rural centre

Centres with a population between 300 and 999.

Rural

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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Tables
The following tables are printed with this Hot Off the Press and can also be downloaded from the Statistics New Zealand website in Excel format. If you do not have access to Excel, you may use the Excel file viewer to view, print, and export the contents of the file.

1. Household access to information and communication technology, December 2006 and 2009 quarters
2. Household access to Internet, by area and connection type
3. Household Internet connection type, December 2009 quarter
4. Reasons for not having broadband, households with dial-up access only, by area
5. Loss or damage caused by virus or similar over last 12 months, for households with Internet access
6. Individuals who used Internet over last 12 months, aged 15 years and over
7. Individuals who made online purchases over last 12 months, aged 15 years and over
8. Internet activities over last 12 months, by individuals aged 15 years and over
9. Location of Internet use over last 12 months, for individuals aged 15 years and over
10. Victims of Internet fraud over last 12 months, individuals aged 15 years and over
11. Household access to digital connection, December 2009 quarter
12. Mobile phone use over last 12 months, by individuals aged 15 years and over