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Statistics New Zealand
TATAURANGA AOTEAROA

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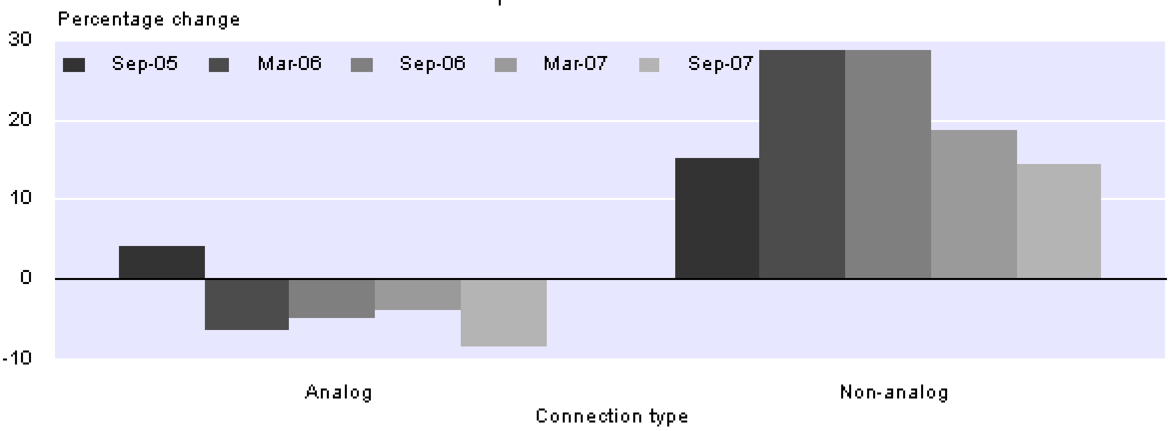
Internet Service Provider Survey: September 2007

Highlights

In the six months ended 30 September 2007:

- The number of non-analog (broadband) subscribers overtook the number of analog (dial-up) subscribers and became the dominant connection technology for the first time ever.
- Broadband subscribers increased 14.4 percent, to 829,300. However, the growth rate has slowed.
- Of the additional 10.6 broadband subscribers per 100 inhabitants in the two years to September 2007, 5.3 subscribers switched from dial-up and 5.3 were new subscribers.
- There was a 47 percent increase in the number of Internet service providers (ISPs) reporting that the cost of international bandwidth had been a barrier to their growth in the past two years.

Internet Subscriber Growth Rate
By connection type
September 2005–07



Note: Analog includes ISDN. Non-analog includes DSL, cellular, wireless, cable, satellite and other.

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Government Statistician

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There is a companion Media Release published – *Internet Service Provider Survey: September 2007*.

Commentary

Internet Service Provider Survey

The Internet Service Provider Survey provides information on the total number and nature of subscribers who use New Zealand-based Internet service providers (ISPs) to connect either permanently or regularly to the Internet. This information allows a measurement of the global connectivity of New Zealanders, which is regarded as an important determinant in accelerating economic growth. A core set of official statistics on Internet service provision results from this survey. This will help individuals, communities, businesses and government to understand how information and communication technology is changing the economy and society.

The Internet Service Provider Survey is carried out every six months by Statistics New Zealand.

Internet service provision in New Zealand

For the six months ended 30 September 2007, there were 57 ISPs operating in New Zealand, with 1,505,100 subscribers. The number of subscribers increased 2.8 percent from 31 March 2007, the lowest growth rate in the two years to September 2007.

Residential subscribers totalled 1,251,100 at the end of September 2007. They accounted for 83.1 percent of all subscribers and provided 73.9 percent of total revenue. Business and government subscribers totalled 254,000, accounting for 16.9 percent of all subscribers and providing 26.1 percent of total revenue.

Size of Internet service providers

Percentiles are a useful method for comparing ISP size over time. Percentiles are determined by sorting ISPs (by number of subscribers) from smallest to largest. The average number of subscribers within a percentile range is then calculated. At 30 September 2007, the smallest ISPs (0th–20th percentile) had 50 subscribers on average, while the largest ISPs (81st–100th) had 122,180 subscribers. The average number of subscribers in ISPs above the 80th percentile has increased 34 percent since September 2005.

Size of Internet Service Providers
By percentile range
September 2005–07

Percentile range*	Average number of subscribers				
	Sep 2005	**Mar 2006**	**Sep 2006**	**Mar 2007**	**Sep 2007**
0th–20th (small ISPs)	40	45	45	45	50
21st–40th	190	190	120	140	130
41st–60th	840	700	530	570	500
61st–80th	3,630	4,150	3,380	3,340	2,800
81st–100th (large ISPs)	90,890	102,650	111,460	118,260	122,180

*Percentile is calculated by sorting ISPs (by number of subscribers) from smallest to largest, then the average number of subscribers within a percentile range is calculated.

Note: All cells in this table have been randomly graduated rounded.

ISP revenue from business and government subscribers

The proportion of revenue ISPs received from business and government subscribers at 30 September 2007 was similar to that at 31 March 2007. Twenty-six percent of ISPs received up to 20 percent of their revenue from business and government subscribers, while 32 percent received between 81 and 100 percent.

Other business activities of Internet service providers

In the six months to September 2007, 26 percent of ISPs provided wholesale of bandwidth to other ISPs, while 26 percent of ISPs sold Internet packages to other ISPs for resale. Sixty-three percent undertook none of the activities above, an increase from 56 percent at the end of September 2005.

Internet subscriber connection type

At 30 September 2007, the number of subscribers using analog (dial-up) connection technology was 675,800, down 8.6 percent since March 2007.

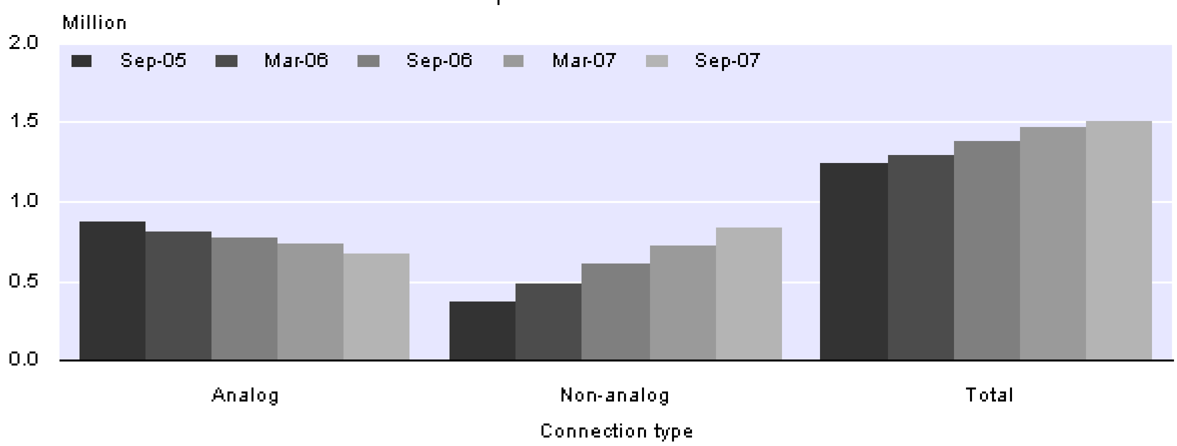
Non-analog became the dominant connection technology for the first time ever in the six months to September 2007. The number of non-analog (broadband) subscribers has increased by 14.4 percent from 31 March 2007, to reach 829,300 subscribers. However, this growth rate has slowed down from the previous year's growth of 28.6 percent. Of the non-analog connections, digital subscriber line (DSL) continued to be the most common connection technology, with 646,700 subscribers. The next most common non-analog connection technologies (in descending order) were: cellular, cable, wireless, satellite, and other.

There were 35.5 Internet subscribers per 100 inhabitants in New Zealand at the end of September 2007, compared with 35.1 per 100 six months earlier.

The number of broadband subscribers has doubled, to 19.6 per 100 inhabitants in the past two years ended September 2007, while the number of dial-up subscribers fell from 21.2 per 100 inhabitants to 15.9. Out of the additional 10.6 broadband subscribers per 100 inhabitants, 5.3 switched from dial-up and 5.3 were new subscribers.

Of the 19.6 non-analog subscribers per 100 inhabitants, 15.3 were using a DSL connection type and 4.3 were using other connection technologies.

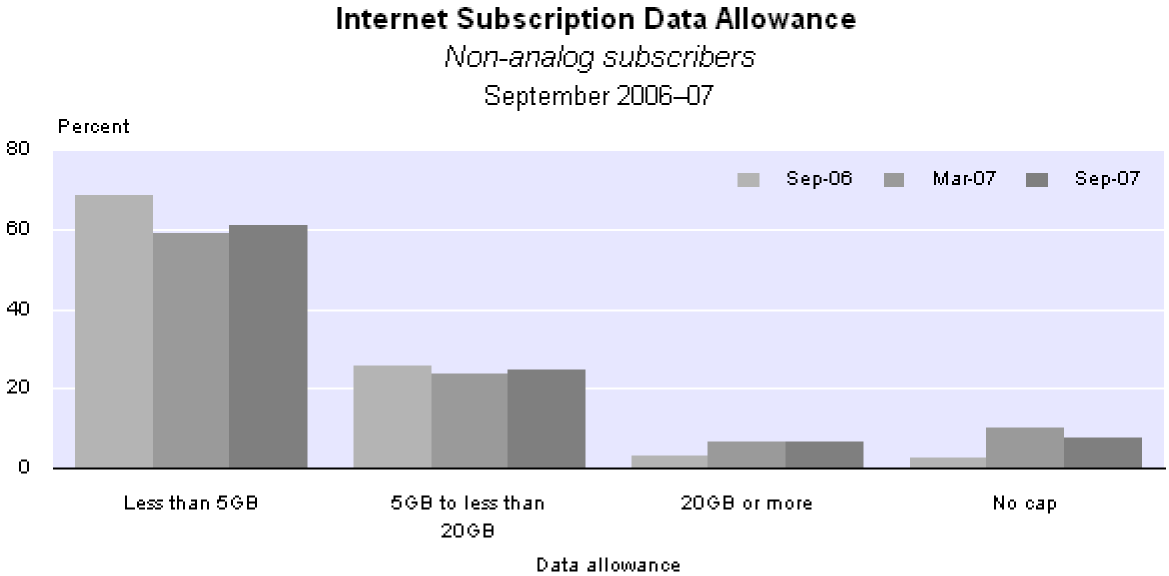
Internet Subscribers by Connection Type
September 2005–07



Note: Analog includes ISDN. Non-analog includes DSL, cellular, wireless, cable, satellite and other.

Internet subscription data allowances

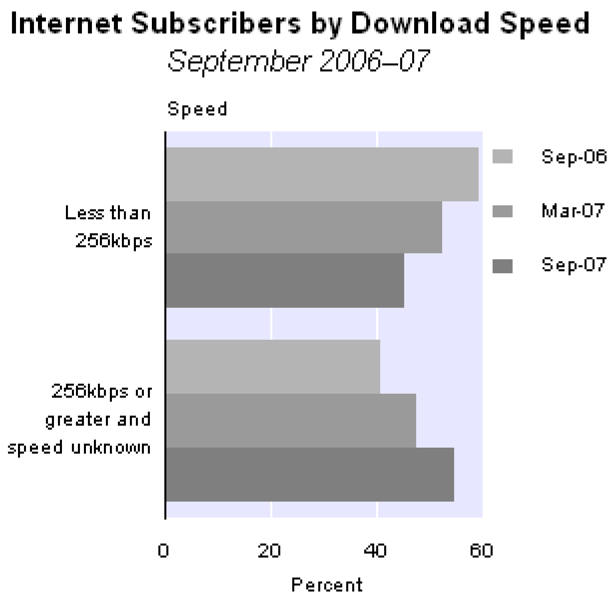
Of the 829,300 non-analog subscribers at 30 September 2007, 7.5 percent (62,600) had no data allowance cap (or data cap) on their subscription plan. Of subscribers who had a data cap, 61.2 percent (507,600) used plans with a data cap of less than 5GB, 24.6 percent (204,400) had a data cap between 5GB and less than 20GB, and 6.6 percent (54,700) had a data cap of 20GB or more.

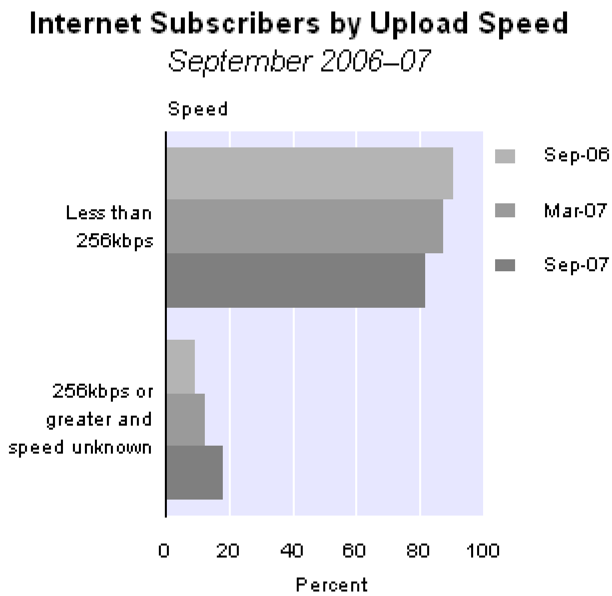


Internet subscriber speeds

At 30 September 2007, 45.2 percent of all subscribers (679,900) had subscription-plan download speeds of less than 256kbps, 4.0 percent (60,600) had download speeds of 256kbps to less than 512kbps, and 50.8 percent (764,600) had download speeds of 512kbps or greater and speed unknown.

There were 81.7 percent of subscribers who had upload speeds of less than 256kbps at the end of September 2007, down from 87.5 percent six months earlier.





The download speed category of less than 64kbps remained the dominant speed in the six months to September 2007. The second most common download speed category was between 2Mbps and 10Mbps, with the number of subscribers increasing between 11 percent and 20 percent. The next most common download speed categories for non-analog subscribers (in descending order) were: 512kbps to 2Mbps, 256kbps to 512kbps, 10Mbps or greater, 128kbps to 256kbps, unknown download speed, and 64kbps to 128kbps.

During the same period, upload speeds of less than 64kbps was the most common category. The next most common upload speeds (in descending order) were: 128kbps and 256kbps, 256kbps to 512kbps, 512kbps to 2Mbps, 2Mbps to 10Mbps, 10Mbps or greater, unknown upload speed, and 64kbps to 128kbps.

Filtering services supplied by ISPs

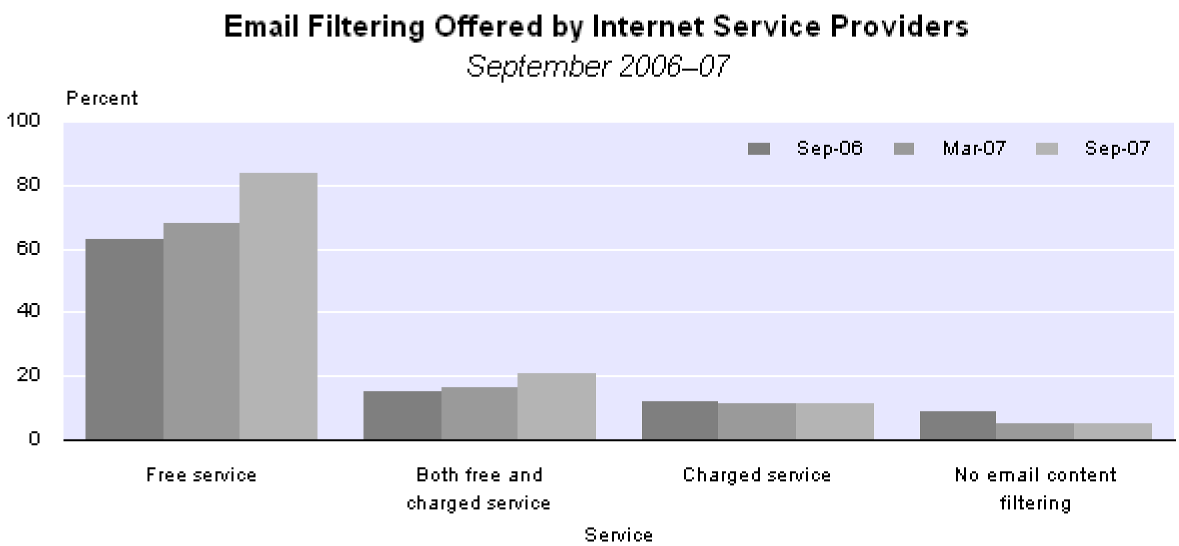
The Internet Service Provider Survey: September 2007 measures only the uptake of filtering services which are supplied by the ISPs. There are many other alternatives available to subscribers, including purchasing and downloading software, which are outside the scope of this survey.

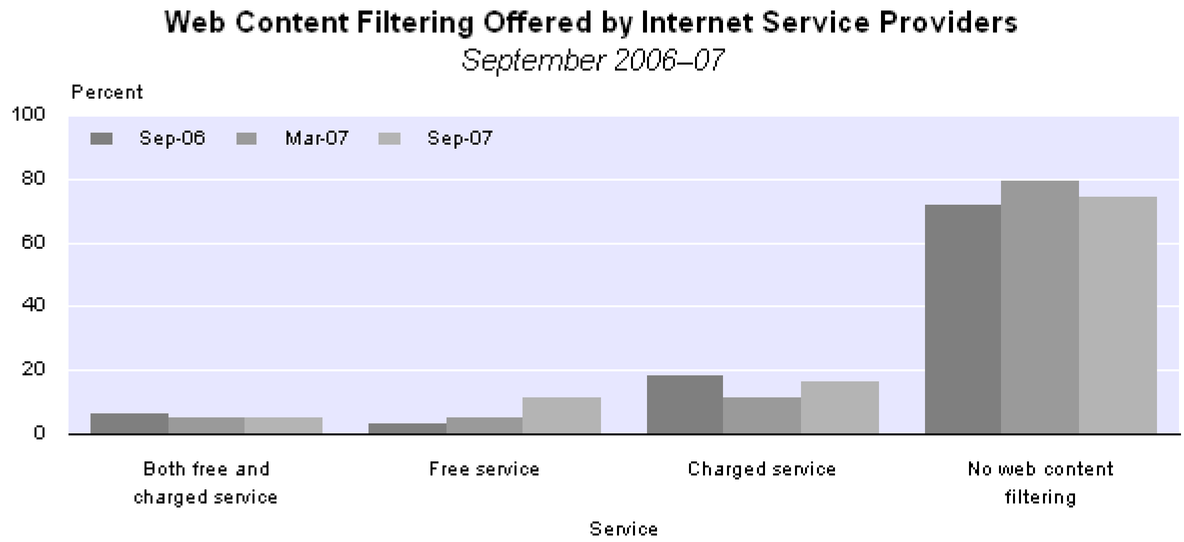
Email filtering

At 30 September 2007, 98.8 percent of Internet subscribers (1,487,200) had adopted an email filtering product offered by their ISPs. Eighty-four percent of ISPs provided a free email filtering service to their subscribers, 21 percent provided a charged service and 11 percent of ISPs provided both a free and charged service.

Web filtering

At 30 September 2007, 11 percent of ISPs offered their subscribers a free web filtering service, 16 percent provided a charged service and 5 percent provided both a free and charged service. Seventy-four percent of ISPs did not offer web filtering services.





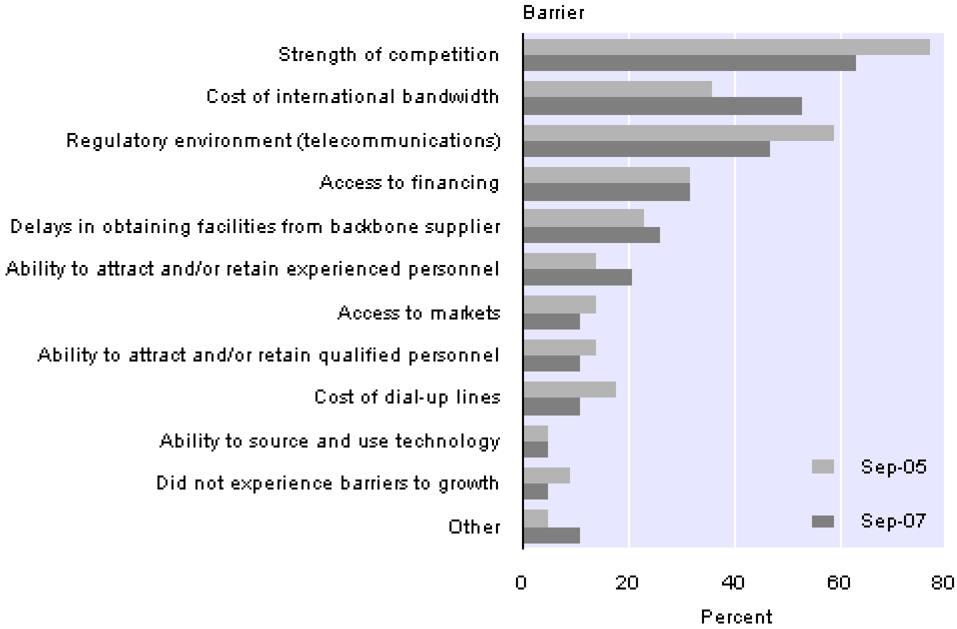
Internet service provider barriers to growth

For the six months ended 30 September 2007, 63 percent of ISPs identified strength of competition as the greatest barrier to the growth of their operations. This figure remained the same as at the end of March 2007. Other common barriers recognised were the cost of international bandwidth (53 percent), the regulatory environment relating to telecommunications (47 percent), and access to financing (32 percent). Five percent of ISPs reported that there were no barriers to growth.

The proportion of ISPs citing the regulatory environment as a barrier to growth has decreased every period since September 2005 except during the last six months ended September 2007 where it increased to 47 percent from 42 percent from the previous period.

There was a 47 percent increase in the number of ISPs reporting that the cost of international bandwidth had been a barrier to growth in the past two years.

Barriers to Internet Service Provider Growth
September 2005 and September 2007



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Technical notes

Survey background

The Internet Service Provider Survey provides information on the total number and nature of subscribers who use New Zealand-based Internet service providers (ISPs) to connect either permanently or regularly to the Internet. This information allows a measurement of the global connectivity of New Zealanders, which is regarded as an important determinant in accelerating economic growth. A core set of official statistics on Internet service provision results from this survey and this will help individuals, communities, businesses and government to understand how information and communication technology is changing the economy and society.

Data collection

The Internet Service Provider Survey: September 2007 was a postal survey of all organisations meeting the population selection criteria. The population was constructed by combining ISP industry lists with names of ISP organisations from the Statistics New Zealand Business Frame, according to the Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006 category J591000.

- J591000 Internet Service Providers and Web Search Portals. This class consists of units mainly engaged in providing Internet access services. Also included are units which provide web-search portals used to search the Internet. Primary activities are Internet access provision, Internet access service (online), and Internet service provision.

The questionnaire used a six-monthly reference period ending 30 September 2007. No financial information was requested from respondents. The survey was posted out in October 2007.

Target population

The target population was defined as: 'All resident New Zealand Internet service providers', where Internet service providers were defined as economically significant businesses that supply permanent or regular Internet connectivity services to individuals, households, businesses and other organisations in New Zealand.

A business is considered economically significant if it is found on the Statistics NZ Business Frame and meets one or more of the following criteria:

- has greater than $30,000 annual GST expenses or sales
- had more than two employees over the last year
- is in a GST-exempt industry (except for residential property leasing and rental)
- is part of a group of enterprises.

For the purposes of this survey, the population included all resident ISPs, regardless of their RME (rolling mean employee) measurement, found on the Statistics NZ Business Frame or other employment measures.

Exclusions

Enterprises that provided other Internet services such as web and domain hosting, but who did not provide ISP services, were excluded from the population. This was because the above enterprises were not strictly classified as ISPs. Web-hosting units did not interact directly with the public. Since the public access their website through an ISP, their activity was already covered by the survey. Including them would have resulted in double counting.

Businesses that provided occasional or unmetered access (including Internet cafes, kiosks, libraries, universities) were also excluded. The activity of this group was covered by the ISP each subscribed to, so they did not need to be surveyed separately.

Connections to the Internet via mobile phone were also excluded as this is neither a permanent nor regular Internet connection and thus is beyond the scope of this survey. However mobile (cellular) data-card-only subscriptions to the Internet are included.

The selection unit for inclusion in the population was set at the enterprise level.

Response rate

The target response rate for the Internet Service Provider Survey: September 2007 was 85 percent for units in the population list, with 100 percent collection required of identified key respondents. The actual overall response rate achieved was 86 percent overall and 95 percent for key respondents. The non-response key enterprise was manually imputed with historical data.

The population for the survey was 77 enterprises.

Imputations

Where data was missing or required clarification respondents were contacted in the first instance. When necessary, missing data was imputed based on historical data collected.

Reliability of the data

Given that the Internet Service Provider Survey: September 2007 is a census rather than a sample, the data is not subject to sample variability. However, other inaccuracies, such as non-sampling errors, may affect the data. These non-sampling errors may arise from sources such as:

- errors in the reporting of data by respondents
- errors in capturing or processing of data
- lack of imputation for missing or misreported data
- definition and classification errors.

Every effort has been made to reduce non-sampling error to a minimum by careful design and thorough testing of questionnaires, efficient operating systems and procedures, and appropriate methodology.

Definitions

Internet service providers (ISPs)

Businesses that supply Internet connectivity services to individuals, households, businesses and other organisations.

Active subscriber

This is a customer who within the last 90 days has accessed the Internet or paid for access to the Internet through an ISP. Under this definition the following inclusions and exclusions are made:

includes:

- all subscribers who obtain access to the Internet through an ISP
- both dial-up and non-dial-up connection subscribers.

excludes:

- web-hosting-only subscribers
- email-only subscribers
- connections to the Internet via mobile phone.

Mbps and kbps

Mbps and kbps are measures of download and upload speed. Mbps stands for megabits per second (1,000,000 bits per second) and kbps stands for kilobits per second (1,000 bits per second).

Internet subscription data allowance

An Internet subscription data allowance is a method employed by ISPs to limit the volume of data downloaded and/or uploaded by subscribers during a fixed period, normally a month. Once a fixed data cap has been reached, lower speed or extra access charges may apply.

Email filtering

Email filtering is a service offered by ISPs that monitors email messages. It will either pass the message through unchanged for delivery to the user's mailbox, redirect the message for delivery elsewhere, or delete or edit the message. Common uses for email filters include removal of spam and computer viruses.

Web filtering

Web filtering is a service offered by ISPs that filters by keyword or blocks by URL what a web browser will display, usually for the benefit of children.

Business Frame

A register maintained by Statistics NZ of all economically significant businesses operating in New Zealand.

Enterprise

A business or service entity operating in New Zealand. It can be a company, partnership, trust, estate, incorporated society, producer board, local or central government organisation, voluntary organisation or self-employed individual.

Rolling mean employment (RME)

This is the 12-month moving average of the monthly employment count, derived from employer monthly schedule data.

More information

For more information, follow the link from the technical notes of this release on the Statistics New Zealand website.

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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...

Internet Service Provider Survey: March 2008 will be released on 1 August 2008.

Statistics New Zealand: The first source of independent information for your key decisions.

Tables

The following tables can 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.

List of tables