

Embargoed until 10:45am – 27 October 2009

## Internet Service Provider Survey: June 2009

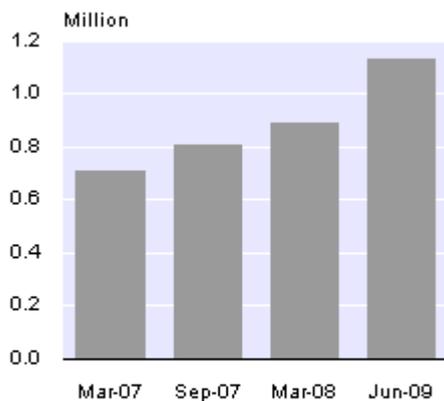
### Highlights

At 30 June 2009:

- The total number of broadband subscribers exceeded 1 million.
- Broadband users made up nearly three-quarters of all Internet subscribers.
- There were 126,000 subscribers with a data cap of at least 20GB, three times as many as 15 months ago.
- The number of subscribers with an Internet connection using mobile data cards, cable, or satellite technology grew by 53 percent to 220,000.

### Total Broadband Subscribers

March 2007 to June 2009



**Note:** The survey was changed to align with the OECD timeframes and is now run once a year. Therefore there is a 15-month gap between the June 2009 survey and the previous survey.

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## **Commentary**

### **Internet Service Provider Survey**

The Internet service provider (ISP) Survey provides information on the total number and nature of subscribers who use New Zealand-based 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 and social wellbeing. This survey provides a core set of official statistics on Internet service provision. This will help individuals, communities, businesses, and government understand the role of information and communication technology in the economy and society.

This is the first release of the ISP Survey that aligns with the OECD timeframe. The survey refers to the 12 months ended June 2009. The data was previously collected in March and September each year, covering a 6-month reference period. Hence there is a 15-month gap between the previous ISP Survey and the June 2009 survey.

The number of analog subscribers should be treated with caution, as respondents have difficulty excluding inactive analog subscribers from the total amount of analog subscribers. The survey asks about the number of active subscribers. An active subscriber is a customer who accessed the Internet within 90 days before the survey was filled out, or who had paid for access to the Internet. An example of an inactive analog subscriber, is a broadband customer who has a dial-up connection as a back up.

Information is for June 2009, and for June 2009 compared with March 2008, unless otherwise stated.

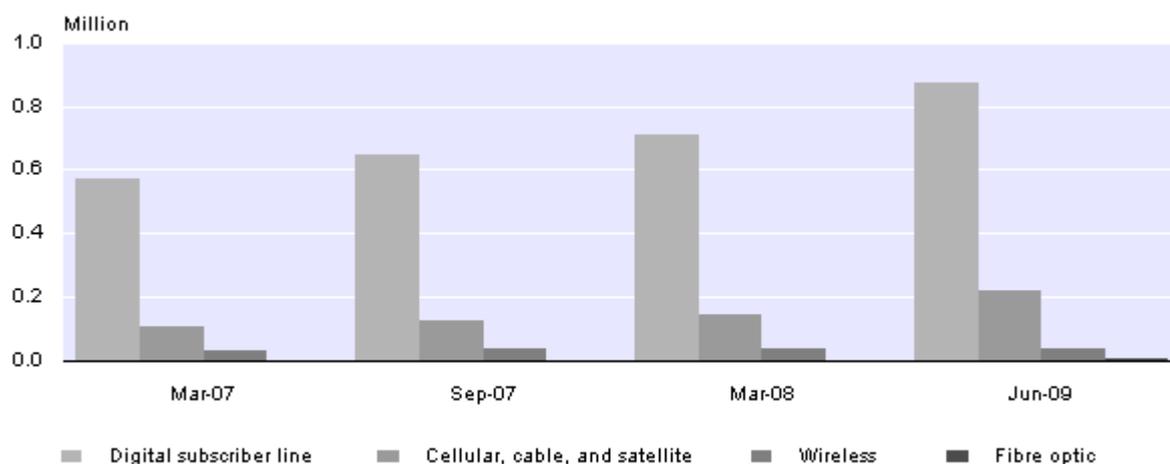
### **Broadband subscribers and connection type**

The number of broadband (non-analog) subscribers continued to grow, and exceeded 1.1 million. The growth rate had picked up since March 2008. The number of broadband subscribers made up nearly three-quarters of all subscribers (72 percent).

The digital subscriber line (DSL) was the most common broadband connection type, which is consistent with the past trend, and accounted for 77 percent of all broadband subscribers. However, the biggest proportional growth in subscribers was the connection by mobile data cards (cellular), cable or satellite, which increased by 53 percent to 220,000 subscribers. The June 2009 ISP Survey was the first time respondents were asked about fibre optic connections, and it was the least common connection type.

## Broadband Subscribers by Connection Type

March 2007 to June 2009



**Note:** The survey was changed to align with the OECD timeframes and is now run once a year. Therefore there is a 15-month gap between the June 2009 survey and the previous survey.

## Data cap

The number of subscribers with a data cap continued to increase. A bigger data cap means subscribers can upload and download large amounts of data for a fixed price. There were three times as many subscribers with a data cap exceeding 20GB than 15 months ago.

The number of broadband subscribers with a data cap between 5GB and 20GB had grown over the last two years. More than one-third of all broadband subscribers had a data cap between 5GB and 20GB.

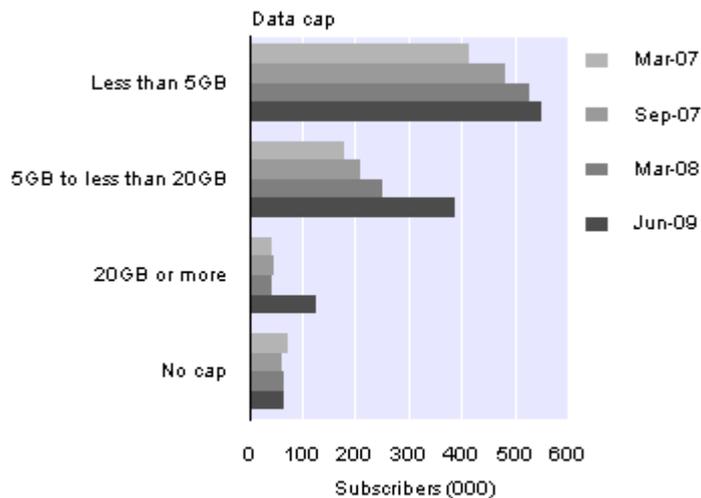
Forty-nine percent of all broadband users still had a cap of less than 5GB, compared with around 60 percent in previous years.

Six percent had no data cap, compared with 8 percent in March 2008.

## Internet Subscription Data Cap

Broadband subscribers

March 2007 to June 2009



**Note:** The survey was changed to align with the OECD timeframes and is now run once a year. Therefore there is a 15-month gap between the June 2009 survey and the previous survey.

## Internet subscriber speed

Download speeds of faster than 512kbps attracted over 980,000 subscribers. The majority of subscribers were able to download at speeds of between 1.5Mbps and 24Mbps, which accounted for four out of five broadband users.

The number of subscribers with an upload speed of at least 512kbps more than doubled to 430,000.

## Web filtering service supplied by Internet service providers

The Internet Service Provider Survey measures only the uptake of web 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.

Twenty-one percent of ISPs offered web content filtering as a free service, up from 15 percent. ISPs offering no web filter service, whether free or charged, decreased from 75 to 63 percent. The proportions of ISPs offering a charged service (16 percent), and both a free and charged service (5 percent) were largely unchanged.

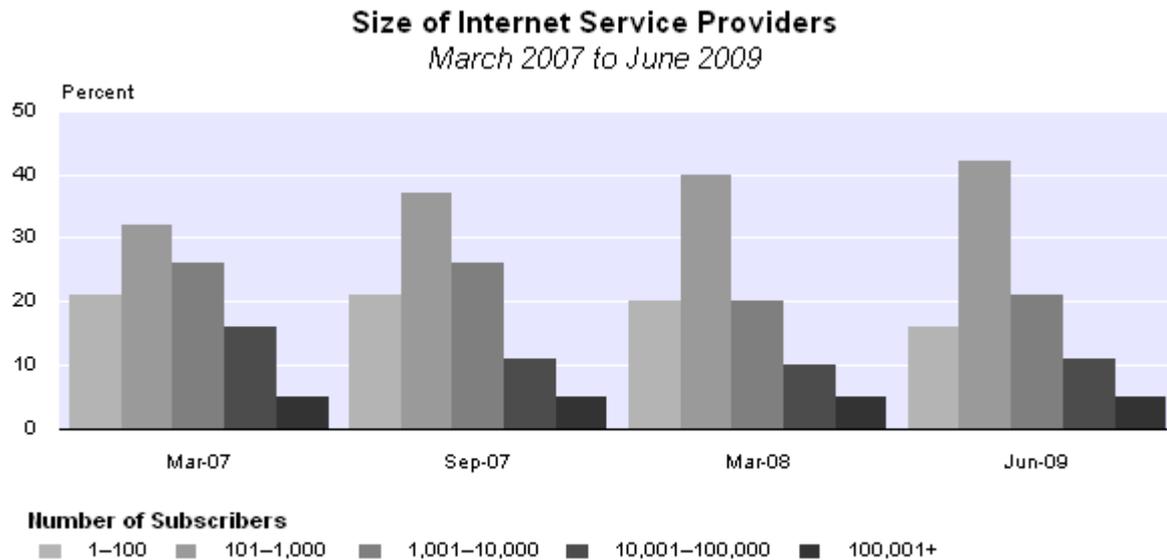
## Other business activities of Internet service providers

Previously, the percentage of ISPs providing wholesale of bandwidth to other ISPs decreased. However, in the 15 months to June 2009, ISPs providing wholesale of bandwidth climbed from 20 to 32 percent.

ISPs selling packages to other ISPs for resale increased to 37 percent. Twenty-one percent of ISPs were active in both providing wholesale of bandwidth to other ISPs, and the sale of packages to other ISPs for resale. Fifty-three percent of ISPs did neither, down from 70 percent.

## Size of Internet service providers

The majority of ISPs (58 percent) had up to 1,000 subscribers. A marginal proportion of ISPs (5 percent) had more than 100,000 subscribers.



**Note:** The survey was changed to align with the OECD timeframes and is now run once a year. Therefore there is a 15-month gap between the June 2009 survey and the previous survey.

## Internet Protocol version 6

This is the first time respondents were asked about plans to install Internet Protocol version 6 (IPv6), and possible barriers for installation. Every computer system and device connected to the Internet is assigned an IP address. The current process of distributing IP addresses is called IPv4. Over the next few years IPv4 will be gradually replaced by IPv6, a newer version of Internet Protocol that greatly expands the available address space.

One-quarter of all ISPs had already installed IPv6, or would do so before the end of 2009. However, more than one-third of ISPs reported they had no plans to install IPv6.

The most commonly reported barrier for businesses to install IPv6 was a lack of resources, indicated by 42 percent of ISPs. This was followed by lack of user demand and other business priorities, each reported by 37 percent of ISPs.

### Next release...

Internet Service Provider Survey: June 2010 will be released in October 2010.

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## **Technical notes**

### **Survey background**

The Internet service provider (ISP) Survey provides information on the total number and nature of subscribers who use New Zealand-based 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 and social wellbeing. This survey provides a core set of official statistics on Internet service provision. This will help individuals, communities, businesses, and government understand the role of information and communication technology in the economy and society.

The number of analog subscribers should be treated with caution, as respondents have difficulty excluding inactive analog subscribers from the total amount of analog subscribers. The survey asks about the number of active subscribers. An active subscriber is a customer who accessed the Internet within 90 days before the survey was filled out, or who had paid for access to the Internet. An example of an inactive analog subscriber is a broadband customer, who has a dial up connection as a back up.

### **Reference period**

This survey refers to the 12 months ended June 2009, which aligns with the OECD timeframe. The data was previously collected in March and September each year, covering a 6-month reference period. Hence there is a 15-month gap between the previous ISP Survey and the June 2009 survey.

Information is for June 2009, and for June 2009 compared with March 2008, unless otherwise stated.

### **Data collection**

The Internet Service Provider Survey: June 2009 was a postal survey of all organisations meeting the population selection criteria. The survey population was selected by targeting one Australian New Zealand Standard Industrial Classification (ANZSIC) code on the Statistics New Zealand Business Frame, supplemented by a key word search of three ANZSIC codes.

This is the first publication of the ISP survey using a new population selection method. Previous ISP surveys were supplemented using industry lists rather than a key word search. The lists are no longer available. The impact of this change has been analysed and is negligible.

No financial information was requested from respondents. The survey was posted out in July 2009.

## **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.

All units classified on the Statistics NZ Business Frame to the following ANZSIC 2006 code, are included in the survey.

### **J5910 Internet service providers and web search portals**

Units mainly engaged in providing Internet access services. Also included are units which provide web search portals used to search the Internet.

A keyword search was used on the Statistics NZ Business Frame to find ISPs from the following three ANZSIC 2006 codes.

### **J5802 Other telecommunications network operations**

Units mainly engaged in operating and maintaining switching and transmission facilities that provide omni-directional or point-to-point communications via wireless telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies, including communications via airwaves and through satellite systems.

### **J5809 Other telecommunications services**

Units mainly engaged in providing a range of other telecommunication services, such as paging services and other specialised telecommunications applications. Also included in this class are units of telecommunications resellers purchasing access and network capacity from telecommunication carriers.

### **J5921 Data processing and web hosting services**

Units mainly engaged in providing electronic data processing or hosting services. These units provide specialised hosting activities, such as web hosting, streaming services or application hosting, application service provisioning, or general timesharing mainframe facilities to customers. These units provide complete processing and specialised reports from data supplied by customers, or provide automated data processing and data entry services.

## **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: June 2009 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 100 percent for key respondents.

The population for the survey was 66 enterprises.

## **Imputation**

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: June 2009 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**

### **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 analog and non-analog connection subscribers.

#### **excludes:**

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

### **Business Frame**

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

### **Data cap**

An Internet subscription data cap 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. Also referred to as a data allowance.

### **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.

### **Gigabyte**

A gigabyte is a measure of the volume of data.

### **Internet Protocol version 6 (IPv6)**

IPv6 is the next generation Internet protocol which greatly expands the IP number space and is the approved standard to replace IPv4.

### **Internet service providers (ISPs)**

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

## **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).

## **Rolling mean employment (RME)**

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

## **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.

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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.

## 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.

1. Broadband connection type, March 2007–June 2009
2. Internet subscription data cap, March 2007–June 2009
3. Internet subscriber download and upload speeds, March 2007–June 2009
4. Size of Internet service providers, March 2007–June 2009
5. Installation of Internet Protocol version 6, June 2009
6. Barriers to installation of Internet Protocol version 6, June 2009
7. Other business activities of Internet service providers, March 2007–June 2009
8. Filtering service offered by Internet service providers, March 2007–June 2009
9. Internet subscriber type, analog and broadband subscribers, June 2009

**Internet Service Provider Survey: June 2009**

Table 1

**Non-analog Connection Type**  
*March 2007–June 2009*

Connection type	Mar 2007	Sep 2007	Mar 2008	Jun 2009 <sup>(1)</sup>
<b>Number of subscribers<sup>(2)</sup></b>				
Digital subscriber line	573,900	646,700	711,900	873,500
Cellular, cable, and satellite <sup>(3)</sup>	103,600	125,000	143,200	219,500
Wireless	31,300	33,200	36,000	36,000
Fibre optic	...	...	...	2,200
<b>Total non-analog subscribers</b>	<b>709,000</b>	<b>804,900</b>	<b>891,000</b>	<b>1,131,100</b>
<b>Percent of non-analog subscribers</b>				
Digital subscriber line	81	80	80	77
Cellular, cable, and satellite <sup>(3)</sup>	15	16	16	19
Wireless	4	4	4	3
Fibre optic	...	...	...	0
<b>Total non-analog subscribers</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

(1) For June 2009, the questionnaire used a 12-month reference period ending 30 June 2009 to align with the OECD timeframe. Therefore, there is a 15-month gap between the previous survey and the June 2009 survey.

(2) The number of subscribers includes business and residential subscribers and has been rounded to the nearest 100.

(3) The cellular connection type includes all connections via data cards, but not mobile phone connections to the Internet.

**Note:** Due to rounding, figures may not add to the stated totals.

**Symbol:**

... not applicable

**Internet Service Provider Survey: June 2009**

Table 2

**Internet Subscription Data Cap**

*Non-analog subscribers(1)*

March 2007–June 2009

Data cap <sup>(2)</sup>	Mar 2007	Sep 2007	Mar 2008	Jun 2009 <sup>(3)</sup>
<b>Number of subscribers<sup>(4)</sup></b>				
Data cap	635,500	741,300	823,700	1,064,600
Less than 5GB	413,200	481,500	528,600	551,800
5GB to less than 20GB	179,600	210,900	253,200	387,300
20GB or more	42,700	48,900	42,000	125,500
20GB to less than 50	...	...	...	117,700
50GB or more	...	...	...	7,800
No cap	73,500	63,600	67,400	66,500
<b>Total non-analog subscribers</b>	<b>709,000</b>	<b>804,900</b>	<b>891,000</b>	<b>1,131,100</b>
<b>Percent of non-analog subscribers</b>				
Data cap	90	92	92	94
Less than 5GB	58	60	59	49
5GB to less than 20GB	25	26	28	34
20GB or more	6	6	5	11
20GB to less than 50	...	...	...	10
50GB or more	...	...	...	1
No cap	10	8	8	6
<b>Percent change from previous period</b>				
Data cap	8	17	11	29
Less than 5GB	1	17	10	4
5GB to less than 20GB	13	17	20	53
20GB or more	128	15	-14	199
20GB to less than 50	...	...	...	...
50GB or more	...	...	...	...
No cap	403	-14	6	-1

(1) Includes digital subscriber line, cellular, wireless, cable, satellite, and fibre optic.

(2) Data cap (or data allowance) is the volume of data allowed before restrictions apply.

(3) For June 2009, the questionnaire used a 12-month reference period ending 30 June 2009 to align with the OECD timeframe. Therefore, there is a 15-month gap between the previous survey and the June 2009 survey.

(4) The number of subscribers includes business and residential subscribers and has been rounded to the nearest 100.

**Note:** Due to rounding, figures may not add to the stated totals.

**Symbol:**

... not applicable

**Internet Service Provider Survey: June 2009**

Table 3

**Internet Subscriber Download and Upload Speeds**  
*Analog and non-analog subscribers*  
*March 2007–June 2009*

Speed	Number of subscribers <sup>(1)</sup>			
	Mar 2007	Sep 2007	Mar 2008	Jun 2009 <sup>(2)</sup>
<b>Download speed</b>				
Less than 256kbps <sup>(3)</sup>	765,500	679,900	620,400	434,100
256kbps to 512kbps	42,600	60,000	67,900	88,500
512kbps or greater	637,400	739,500	814,000	986,900
512kbps to less than 1.5Mbps	...	...	...	C
1.5Mbps to less than 24Mbps	...	...	...	910,800
24Mbps to less than 100Mbps	...	...	...	C
100Mbps or greater	...	...	...	700
Download speed unknown	3,200	1,400	1,700	S
<b>Upload speed</b>				
Less than 256kbps <sup>(3)</sup>	1,272,300	1,214,800	1,259,400	956,100
256kbps to 512kbps	C	105,400	35,600	C
512kbps or greater	C	158,400	207,500	429,600
512kbps to less than 24Mbps	...	...	...	427,800
24Mbps or greater	...	...	...	1,800
Upload speed unknown	2,600	2,000	1,500	S

(1) The number of subscribers includes business and residential subscribers and has been rounded to the nearest 100.

(2) For June 2009, the questionnaire used a 12-month reference period ending 30 June 2009 to align with the OECD timeframe. Therefore, there is a 15-month gap between the previous survey and the June 2009 survey.

(3) The results for less than 256kbps should be treated with caution due to respondents having difficulty excluding inactive analog subscribers from the total amount of analog subscribers.

**Note:** Due to rounding, figures may not add to the stated totals.

**Symbols:**

C confidential

S suppressed

... not applicable

*Internet service provider survey: June 2009*

Table 4

**Size of Internet Service Providers**  
*March 2007–June 2009*

Size	Percent of ISPs			
	Mar 2007	Sep 2007	Mar 2008	Jun 2009 <sup>(1)</sup>
Very small <sup>(2)</sup>	21	21	20	16
Small <sup>(3)</sup>	32	37	40	42
Medium <sup>(4)</sup>	26	26	20	21
Large <sup>(5)</sup>	16	11	10	11
Very large <sup>(6)</sup>	5	5	5	5

(1) For June 2009, the questionnaire used a 12-month reference period ending 30 June 2009 to align with the OECD timeframe. Therefore, there is a 15-month gap between the previous survey and the June 2009 survey.

(2) Very small ISPs have between 1 and 100 subscribers.

(3) Small ISPs have between 101 and 1,000 subscribers.

(4) Medium ISPs have between 1,001 and 10,000 subscribers.

(5) Large ISPs have between 10,001 and 100,000 subscribers. Results should be treated with caution due to a small number of ISPs in this category.

(6) Very large ISPs have 100,001 or more subscribers. Results should be treated with caution due to a small number of ISPs in this category.

**Note:** All percentages are based on randomly rounded to base 3 figures, therefore the figures may not add to 100 percent.

**Internet Service Provider Survey: June 2009**

Table 5

**Installation of Internet Protocol version 6**  
*June 2009*

Time frame	Percent of ISPs
	Jun 2009 <sup>(1)</sup>
Already installed	21
Within the next 6 months	5
Between 6 months to a year	5
Between 1 to 2 years	21
Between 2 to 4 years	11
More than 4 years	0
No plans to install	37
Did not respond	5

(1) For June 2009, the questionnaire used a 12-month reference period ending 30 June 2009 to align with the OECD timeframe. Data for this table was not collected before June 2009.

**Note:** All percentages are based on randomly rounded to base 3 figures, therefore the figures may not add to 100 percent.

Table 6

**Barriers to installation of Internet Protocol version 6**  
*June 2009*

Barrier	Percent of ISPs
	Jun 2009 <sup>(1)</sup>
Lack of resources (cost / time)	42
Other business needs taking priority	37
A lack of user demand	37
Interoperability (equipment not compatible)	21
A lack of knowledge, education, training, and skills	16
Upstream transit (ie, lack of capability with your connection provider)	16
A lack of vendor support	11
Restrictive IPv6 allocation policy	5
Other	11
Did not respond	11

(1) For June 2009, the questionnaire used a 12-month reference period ending 30 June 2009 to align with the OECD timeframe. Data for this table was not collected before June 2009.

**Note:** All percentages are based on randomly rounded to base 3 figures. Percentages may add to more than 100 percent as respondents may reported more than one barrier.

*Internet Service Provider Survey: June 2009*

Table 7

**Other Business Activities of Internet Service Providers**  
*March 2007–June 2009*

Business activity	Percent of ISPs <sup>(1)</sup>			
	Mar 2007	Sep 2007	Mar 2008	Jun 2009 <sup>(2)</sup>
Provide wholesale of bandwidth to other ISPs	26	26	20	32
Sale of packages to other ISPs for resale	26	26	25	37
Provide both wholesale of bandwidth to other ISPs, and sale of packages to other ISPs for resale	16	16	15	21
Do not provide wholesale of bandwidth to other ISPs or sale of packages to other ISPs for resale	63	63	70	53

(1) All percentages are based on randomly rounded to base 3 figures, therefore the figures may not add to stated total.

(2) For June 2009, the questionnaire used a 12-month reference period ending 30 June 2009 to align with the OECD timeframe. Therefore, there is a 15-month gap between the previous survey and the June 2009 survey.

*Internet Service Provider Survey: June 2009*

Table 8

**Filtering Service Offered by Internet Service Providers**  
*March 2007–June 2009*

Web content filtering	Percent of ISPs <sup>(1)</sup>			
	Mar 2007	Sep 2007	Mar 2008	Jun 2009 <sup>(2)</sup>
Free service	5	11	15	21
Charged service	11	16	15	16
Both free and charged service	5	5	5	5
None	79	74	75	63

(1) All percentages are based on randomly rounded to base 3 figures, therefore the figures may not add to stated total.

(2) For June 2009, the questionnaire used a 12-month reference period ending 30 June 2009 to align with the OECD timeframe. Therefore, there is a 15-month gap between the previous survey and the June 2009 survey.

Table 9

**Internet Subscriber Type**  
*Analog and non-analog subscribers*  
 June 2009

	Number of subscribers <sup>(1)</sup>	Percent
	Jun 2009 <sup>(2)</sup>	
Residential	1,235,800	79
Business/government	329,400	21
<b>Total</b>	<b>1,565,100</b>	<b>100</b>

(1) The number of subscribers includes business and residential subscribers and has been rounded to the nearest 100.

(2) For June 2009, the questionnaire used a 12-month reference period ending 30 June 2009 to align with the OECD timeframe.

**Note:** The results for June 2009 should not be compared to previous years due to respondents having difficulty excluding inactive analog subscribers from the total amount of analog subscribers.