#### **Communications Usage Trend Survey in 2008 Compiled**

The Ministry of Internal Affairs and Communications (MIC) has compiled its Communications Usage Trend Survey as a result of the survey on the use of telecommunications services and the ownership of telecommunications devices in households and enterprises as of January 2009.

Highlights of the survey are provided below. For the survey summary, please see the attachment.

#### [Highlights of the Survey Results]

#### Diffusion of the Internet and Other Networks

- The number of Internet users reached 90.91 million, with a 75.3% diffusion rate (relative to population).

The number of Internet users increased by 2.8 million from the previous year, reaching 90.91 million, with a 75.3% diffusion rate (relative to population) (an increase of 2.3% from the previous year).

The percentage of households using broadband lines increased by 5.8% from the previous year, to 73.4%. The rate of optical lines grew significantly by 7.7% from the previous year, to 39.0%, indicating that optical fiber-based broadband connections are spreading. [p.1 and p.5]

#### Trends in the Use of ICT in Households

 Digital content topped (49.0%) the merchandise and services purchased or traded via the Internet. More than half (52.7%) of total households own terrestrial digital TV sets.

The percentage of people who purchased merchandise or services via the Internet was 53.6%, an increase of 0.9% from the previous year. In respect to the merchandise or services they purchased, digital content was the highest (49.2% for men and 48.8% for women).

The ownership rate of terrestrial digital TV sets was 52.7% and the rate of households able to receive terrestrial digital TV broadcasting was 48.3%. [p.11 and p.13]

#### Trends in the Use of ICT in Businesses

- One in ten businesses operates a business blog or SNS. About 30% of businesses are using the Internet to advertise.

The percentage of businesses that operate a business blog or SNS increased by 3.7% over the previous year, to 10.5%.

The percentage of businesses using the Internet to advertise increased by 3.4% from the previous year, to 31.0%, indicating steady growth in Internet advertisement. [p.14 and p16]

#### State of Coping with Safety and Security Issues

- Use of filtering software/services has risen significantly.

The number of households with children aged below 18 using filtering software on a PC increased by 7.4% from the previous year, to 20.3%, and those using a filtering service on a mobile phone increased by 28.2% to 49.8%. [p.20]

#### **Survey Outline**

Since 1990, the Communications Usage Trend Survey has been conducted annually with households (households and household members), enterprises, and business establishments in accordance with the Statistical Report Coordination Law. (The survey of enterprises has been conducted since 1993, except for 1994. The survey of household members started in 2001.)

	Households	Enterprises					
Survey period	January 2009						
Survey area	Nationwide						
Scope of	Households headed by someone aged 20 or	Enterprises with 100 or more regular					
attributes/	older (as of April 1, 2008) and household	employees (excluding the agriculture, forestry,					
Level of survey	members	fisheries, mining and public services industries)					
Number of	6,256	2,870					
samples							
Effective	4,515 households	2,012 enterprises					
	(13,680 persons)	(70.1%)					
responses (%)	(72.2%)						
Survey items	Use of telecommunication services, ownership of telecommunication devices, etc.						
Compling	Random sampling (Stratified two-stage	Random sampling (Systematic sampling					
Sampling	sampling based on size of city, town or village)	based on number of regular employees for					
method		each industry)					
Survey method	Mail survey						

# Results of Telecommunications Usage Trend Survey 2008 (Outline)

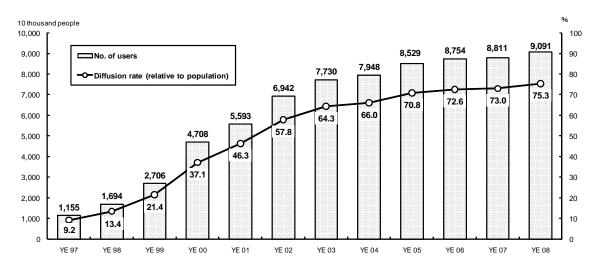
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#### 1. Diffusion of the Internet and Other Networks

(1) Number of Internet Users and Diffusion Rate (relative to population) (Individuals) The number of people who used the Internet during the preceding 12 months increased modestly by 2.8 million from the previous year, and is now estimated to be 90.91 million. The diffusion rate (relative to population) was 75.3%. In terms of types of terminals that individuals used to access the Internet (PCs, mobile phones, personal handy-phone system (PHS) devices, game consoles, TV sets, etc.), the number of users of each terminal type increased from the previous year. The number of users accessing the Internet via game consoles and TV sets, in particular, jumped by 2.09 million (58.4%) from the previous year.

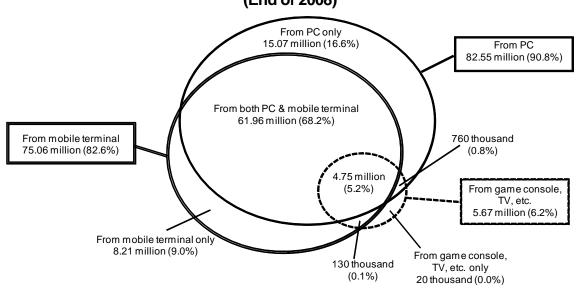
## Trends in the Number of Internet Users & Diffusion Rate (relative to population) (Individuals)



Notes: 1. The numbers for YE 1997 through YE 2000 are taken from the Telecommunications White Paper.

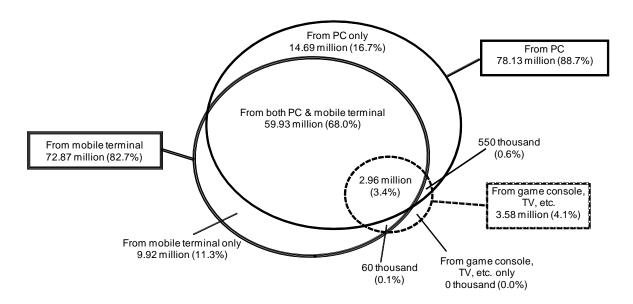
- 2. The number of Internet users (estimated) refers to the number of users estimated from the results of this survey of people aged six and up who had used the Internet during the preceding 12 months. All types of devices are assumed for connecting to the Internet, including PCs, mobile phones, personal handy-phone system (PHS) devices, personal digital assistants (PDAs), and game consoles (regardless of ownership); all purposes are assumed, including personal use, use for work, and use at school.
- 3. The number of Internet users from YE 2001 and beyond is calculated by multiplying the estimated population aged six and up each year (estimated from census returns and life tables) by the Internet usage rate for people aged six and up obtained from this survey. (The numbers for YE 2002 through YE 2007 are calculated by age group).
- 4. The diffusion rate (relative to population) (estimated) for YE 2001 and beyond is calculated by dividing the number of Internet users (see point number 3) by the population aged six and up estimated from census returns and life tables.
- 5. The range of ages subject to this survey was 15–69 until 1999; it was expanded to 15–79 for 2000, and then to six and up for 2001.

## Types of Internet Terminals (Individuals) (End of 2008)



<sup>\*</sup> Mobile Terminal: A mobile phone, PHS, or personal digital assistant (PDA)

#### Reference: Types of Internet Terminals (Individuals) in Telecommunications Usage Trend Survey 2007



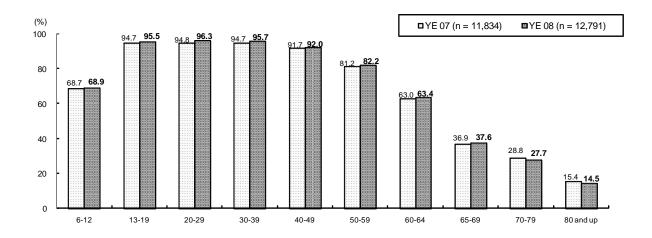
(2) Internet Usage Rate (Individuals)

By age group, the Internet usage rate for individuals was over 90% for people aged 13 to 49. For those aged 60 and up, the usage rate declined with age.

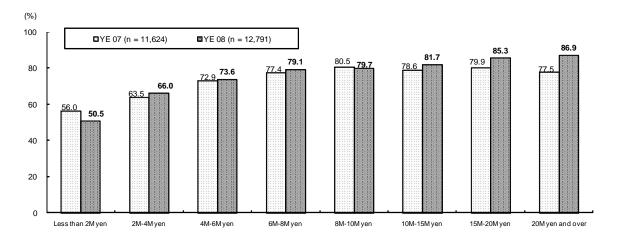
By annual household income, the usage rate declined with income.

#### **Internet Usage Rate by Attribute (Individuals)**

#### O By age group



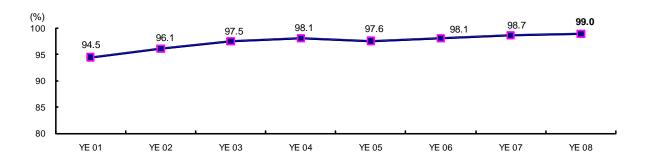
#### O By annual household income



#### (3) Internet Usage Rate (Businesses)

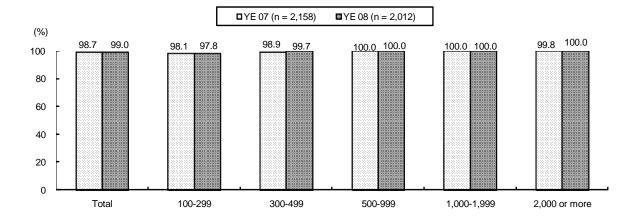
The rate of Internet usage by businesses as a whole was 99.0%. By scale in terms of number of employees, the usage rate was 100% in businesses with 500 or more employees, and lower than the rate as a whole in businesses with 300 or fewer employees.

#### **Trends in Internet Usage Rate (Business)**



Internet Usage Rate by Attribute (Business)

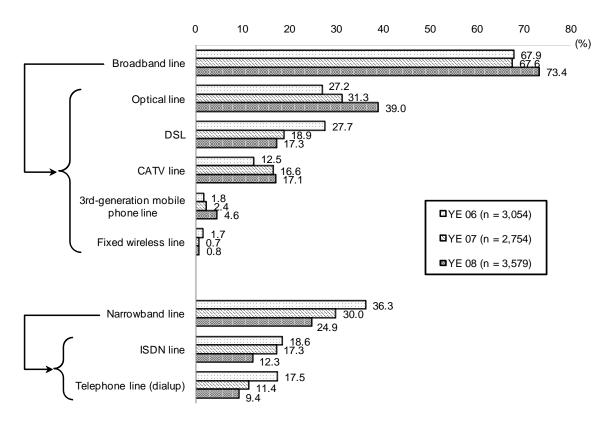
#### O By scale in terms of number of employees



#### (4) Types of Internet Connection (Households)

The percentage of households using broadband lines increased by 5.8% from the previous year, to 73.4%. In terms of broadband lines, the rate of optical line usage increased by 7.7 %, from 31.3% in the previous year to 39.0%, indicating that the diffusion of broadband connection is progressing.

## Types of Internet Connection Used for Home PCs (Households) (Multiple choices allowed)



Notes: 1. The households subject to this survey were those using a home PC to access the Internet.

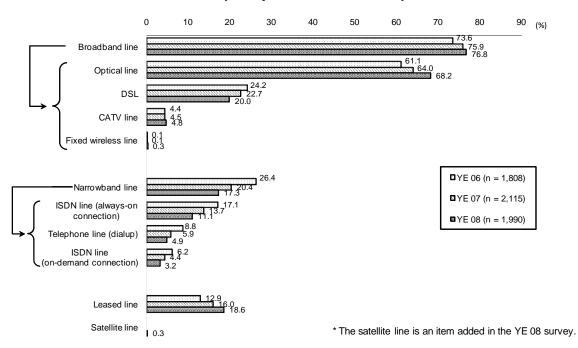
3. In addition to the types of narrow-band lines shown above, there are types using mobile phone line and PHS line.

<sup>2.</sup> Broadband lines consist of DSL, CATV lines, optical lines, 3rd-generation mobile phone lines (limited to cases in which a PC is connected to a mobile phone), and fixed wireless lines.

(5) Types of Internet Connection (Businesses)

The percentage of businesses using broadband lines increased by 0.9% from the previous year, to 76.8%. The use of optical lines increased by 4.2%, to 68.2%, indicating that the diffusion of optical broadband connection is progressing steadily.

## Types of Internet Connection (Businesses) (Multiple choices allowed)

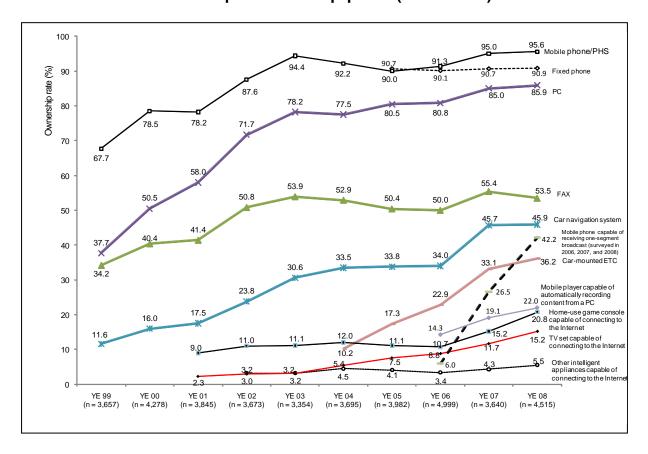


#### (6) Diffusion of ICT Equipment (Households)

The diffusion of ICT equipment by equipment type in households was 95.6% for mobile phones or PHS devices and 85.9% for PCs. Mobile phones capable of receiving one-segment broadcasts, in particular, showed a significant increase of 15.7% from the previous year, to 42.2%.

The usage rate of home-use game consoles capable of connecting to the Internet was 20.8%, up 5.6 percent from the previous year, and they were found in about 20% of the total households.

#### Ownership rate of ICT Equipment (Households)



Note: "Home-use game console capable of connecting to the Internet" and "TV set capable of connecting to the Internet" were added to the survey in 2001; "Other intelligent appliances capable of connecting to the Internet" in 2002; "Car-mounted ETC" in 2004; "Fixed phone" in 2005; and "Mobile player capable of automatically recording content from a PC" and "Mobile phone capable of receiving one-segment broadcast (surveyed in 2006, 2007, and 2008)" in 2006.

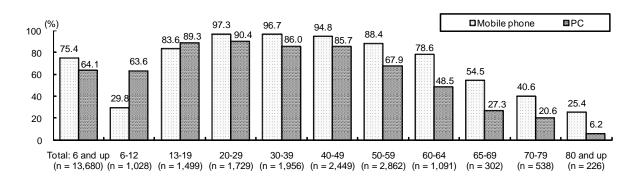
(7) Usage Rates of Mobile Phones and PCs (Individuals)

In terms of usage rates of mobile phones and PCs for individuals, the rate of mobile phone usage (75.4%) was 11.3 percent higher than that of PCs (64.1%). By age group, the rate of mobile phone usage was above 90% for the age groups of 20-29, 30-39, and 40-49; and it was more than 50% for the age group of 65-69. The rate of PC usage was over 80% for people aged 13 to 49, while it dropped to 27.3% for those aged 65-69. The PC generation gap is wider than the mobile phone generation gap, presumably because PCs are more expensive and their use requires a fair amount of knowledge.

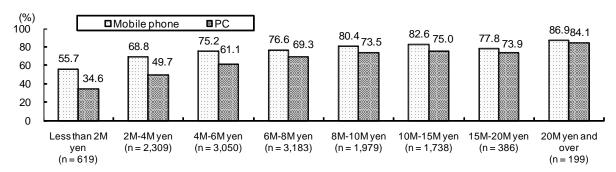
By annual household income, lower-income households showed a greater gap in usage rate between mobile phones and PCs.

#### Usage Rate of Mobile Phones and PCs (Individuals)

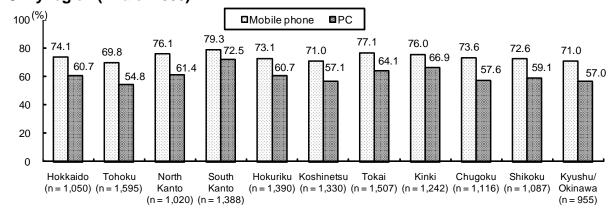
#### O By age group (End of 2008)



#### O By annual household income (End of 2008)



#### O By region (End of 2008)

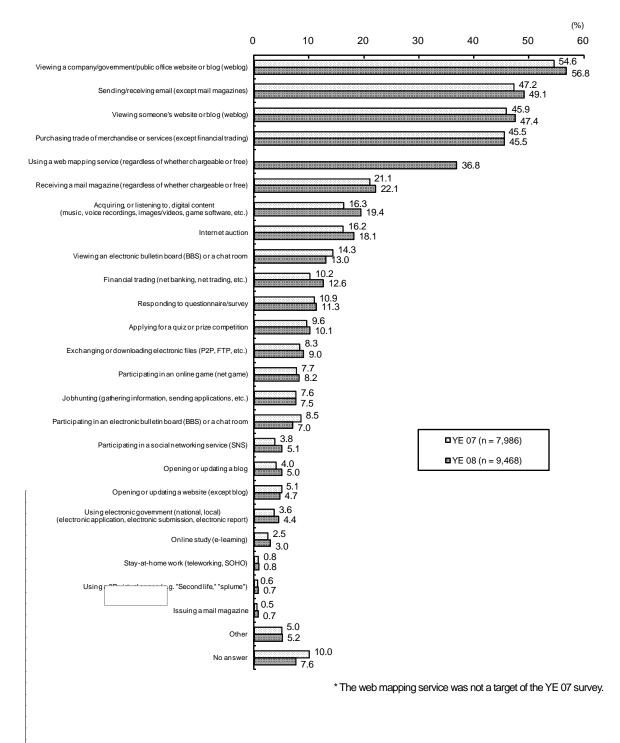


Note: North Kanto comprises Ibaraki, Tochigi, and Gunma. South Kanto comprises Saitama, Chiba, Tokyo, and Kanagawa. Hokuriku comprises Toyama, Ishikawa, and Fukui. Koshinetsu comprises Niigata, Nagano, and Yamanashi. Tokai comprises Shizuoka, Aichi, Gifu, and Mie. Kinki covers Shiga, Kyoto, Osaka, Nara, Hyogo and Wakayama.

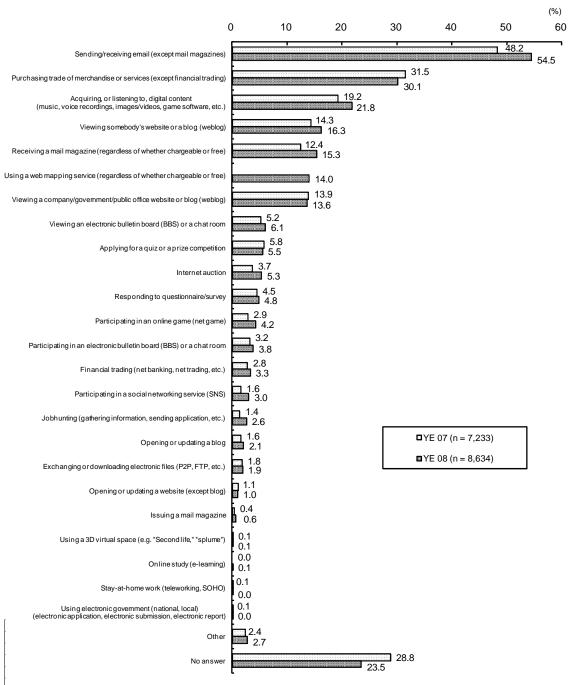
#### 2. Trends in the Use of ICT in Households

(1) Purposes of Internet Usage (Individuals)
In terms of reasons for using the Internet via a PC, "Viewing a
company/government/public office website or blog (weblog)" was the most
common at 56.8%. Regarding mobile phones, "Sending/receiving e-mail" was the
most common at 54.5%, indicating that people use equipment depending on their
characteristics.

### Purposes of Internet Usage via a PC (Individuals) (Multiple choices allowed)



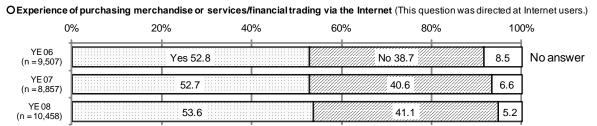
### Purposes of Internet Usage via a Mobile Phone (Individuals) (Multiple choices allowed)



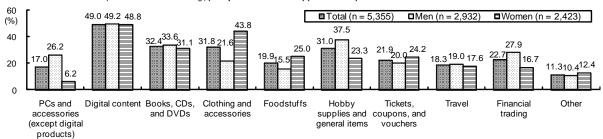
<sup>\*</sup> The web mapping service was not a target of the YE 07 survey.

(2) Purchase of Merchandise and Services via the Internet (Individuals)
The number of people who purchased merchandise or services via the Internet
amounted to 53.6% of all users, an increase of 0.9% from the previous year. In terms
of the merchandise or services they purchased, about half of both men and women
bought digital content. Other than digital content, the purchase of hobby supplies
and general items (37.5%) was highest for men and clothing and accessories
(43.8%) was highest for women.

#### Purchase of Merchandise and Services via the Internet (Individuals)

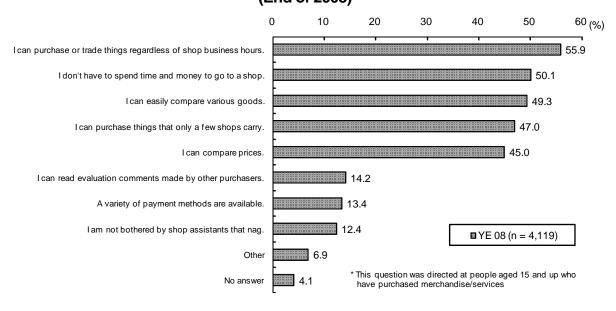


O Merchandise/services purchased or traded via the Internet (This question was directed at people aged 15 and up who purchased merchandise/services or performed financial trading.) (Multiple choices allowed) (End of 2008)



(3) Reasons for Shopping via the Internet (Individuals)
Regarding reasons for shopping via the Internet, "I can purchase or trade things regardless of shop business hours" and "I don't have to spend time and money to go to a shop" scored 55.9% and 50.1%, respectively. Users found the greatest advantage of e-commerce to be that there are no time or convenience constraints.

## Reasons for Shopping via the Internet (Individuals) (Multiple choices allowed) (End of 2008)

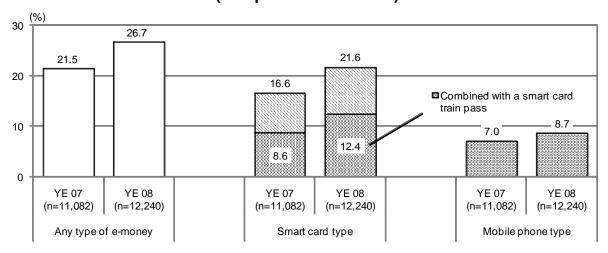


#### (4) Use of Contactless E-money (Individuals)

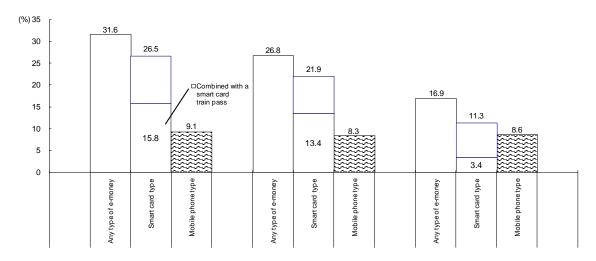
The ownership rate of contactless e-money was 26.7%, roughly one in four. Regarding types of contactless e-money, the smart card type accounted for 21.6%, and the mobile phone type, 8.7%. More than half of the smart card type was e-money combined with a smart card train pass.

By size of municipality, the ownership rate of smart card type e-money increased with municipality size, but the mobile phone type did not. In terms of region, South Kanto, where public transportation is widespread, stood out with nearly 40% of contactless e-money ownership.

### Ownership Rate of Contactless E-money (Individuals) (Multiple choices allowed)



## Ownership Rate of Contactless E-money by Size of Municipality (Individuals) (End of 2008) (Multiple choices allowed)



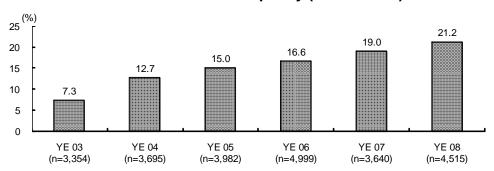
#### Reference: Ownership Rate of Contactless E-money by Municipality

Ownership rate of contactless e-money (%)		Hokkaido (n=920)	Tohoku (n=1,416)	North Kanto (n=929)	South Kanto (n=1,207)		Koshinetsu (n=1,208)	Tokai (n=1,359)	Kinki (n=1,132)	Chugoku (n=1,011)	Shikoku (n=958)	Kyushu/ Okinawa (n=864)	
Tot	Total		20.5	14.4	25.1	47.4	18.0	14.7	18.8	23.1	14.1	15.8	18.2
	Mobile phone type		11.3	6.8	9.7	9.6	9.5	6.6	8.7	7.8	6.4	8.2	9.3
	Smart card type		12.7	10.0	19.0	43.8	10.6	11.2	12.6	18.1	9.1	10.0	11.5
		Combined with a smart card train pass	4.3	3.6	8.8	30.7	2.5	3.3	4.9	11.8	1.8	2.5	1.8

#### (5) Diffusion of IP Telephony (Households)

The diffusion rate of IP telephony in households increased by 2.2 percentage points from the previous year, to 21.2%. IP telephony was used by more than 20% of all households.

#### Diffusion Rate of IP Telephony (Households)

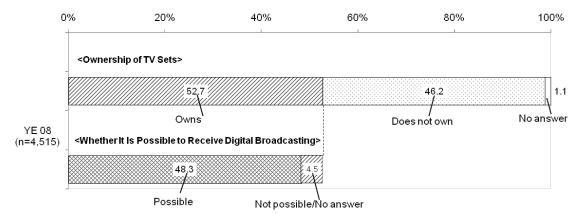


#### (6) Ownership of Terrestrial Digital TV Sets

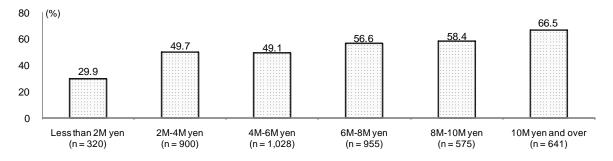
The ownership rate of terrestrial digital TV sets was 52.7%, more than half of all households. The percentage of households able to receive terrestrial digital TV broadcasts amounted to 48.3%.

By annual household income, more than 60% of households with an annual income of 10 million yen or more owned terrestrial digital TV sets. However, for households earning less than 2 million yen, the rate dropped to approximately 30%.

## Ownership of Terrestrial Digital TV Sets and Access to Digital Broadcasting (Households) (End of 2008)



## Ownership of Terrestrial Digital TV Sets by Annual Household Income (Households) (End of 2008)



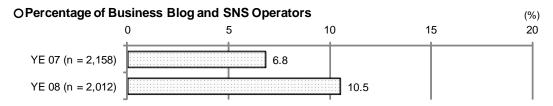
#### 3. Trends in the Use of ICT in Businesses

#### (1) Percentage of Business Blog and SNS Operators

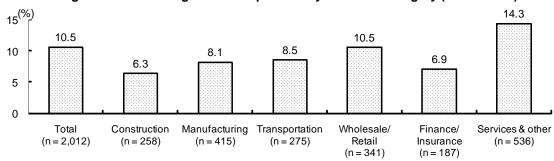
The percentage of businesses operating a business blog or SNS increased by 3.7% over the previous year, to 10.5%, or one in ten businesses.

The percentage is particularly higher in the services and other business categories.

#### Percentage of Businesses Operating a Blog or SNS (Businesses)



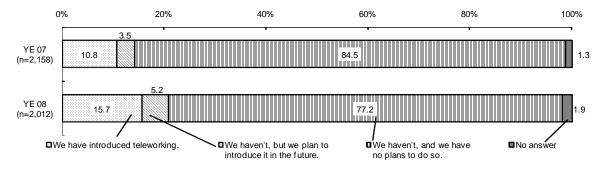
#### OPercentage of Business Blog and SNS Operators by Business Category (End of 2008)



#### (2) Teleworking

The percentage of businesses that have introduced teleworking increased by 4.9% from the previous year, to 15.7%. The number of businesses that plan to introduce it also increased by 1.7%, to 5.2%. It seems that teleworking is becoming a growing trend in businesses.

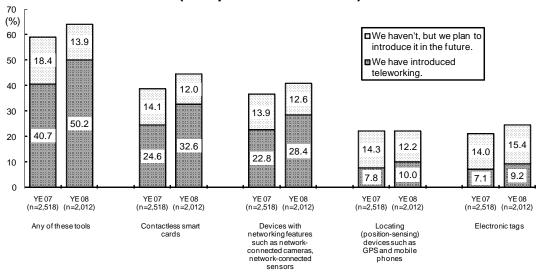
#### Introduction Rate of Teleworking (Businesses)



(3) Introduction Rate of Service Systems Using Ubiquitous-related Tools\*

Businesses that have implemented service systems using ubiquitous-related tools increased by 9.5% from the previous year, to 50.2%, or one in two businesses. With over 10% of businesses answering. "Not using any, but plan to introduce one," for all types of tools, such tools are likely to be used more widely.

### Introduction Rate of Service Systems Using Ubiquitous-related Tools (Businesses) (Multiple choices allowed)



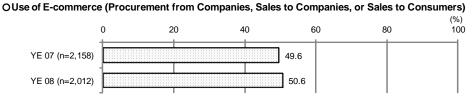
\* In this survey, the term "ubiquitous-related tools" generically means business tools equipped with next-generation telecommunication features such as electronic tags (RFID tags), contactless smart cards, devices with networking features (e.g., network-connected cameras, network-connected sensors), and locating (position-sensing) devices (e.g., GPS).

#### (4) Use of E-commerce

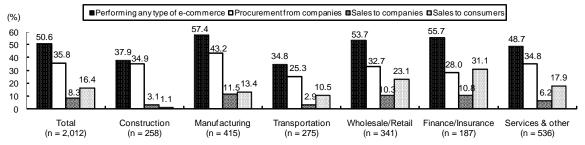
The percentage of businesses using e-commerce (procurement/sales via the Internet) was 50.6%, or one in two companies. By business category, the usage rate in manufacturing was the highest at 57.4%, and finance and insurance was second with 55.7%.

In terms of type of e-commerce by business category, manufacturing was highest in both procurement and sales to companies, respectively with 43.2% and 11.5%. Finance and insurance was highest in sales to consumers with 31.1%.

#### **Use of E-commerce (Businesses)**



OUse of E-commerce by Business Categories (End of 2008) (Multiple choices allowed)

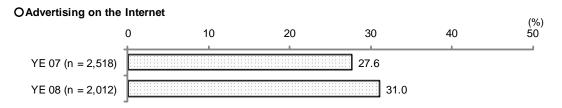


#### (5) Advertising on the Internet (Businesses)

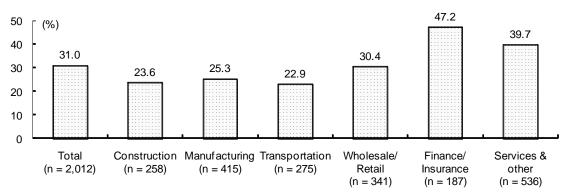
The percentage of businesses using the Internet to advertise increased by 3.4% from the previous year, to 31.0%. By business category, the usage rate was highest with 47.2% in finance and insurance.

Regarding types of advertising, banner ads scored highest with 45.1%, but decreased by 7.6% from the previous year. Text ads, with a 5.3% increase, rose from 26.7% in the previous year to 32.0%.

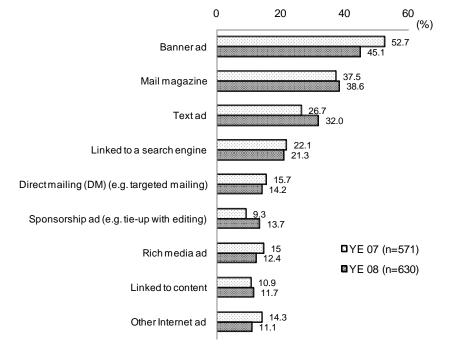
#### Advertising on the Internet by Business Category (Businesses)



#### OAdvertising on the Internet by Business Category



#### Types of Advertising on the Internet (Businesses) (Multiple choices allowed)



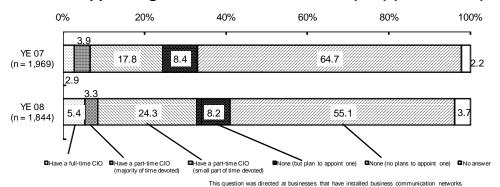
Rich media ads: An advertising technique with displays that change with the motion of the mouse, or with moving images and sound using streaming technology.

Linked to content: An advertising technique that analyzes Web content and distributes material related to the content.

#### (6) Appointment of Chief Information Officer (CIO\*)

The number of businesses having a full-time CIO increased by 2.5% from the previous year, to 5.4%. When including those with a part-time CIO, the number rose by 33.0% (an increase of 8.4% from the previous year), about a third of all businesses.

#### Trends in Appointing a Chief Information Officer (CIO) (Businesses)

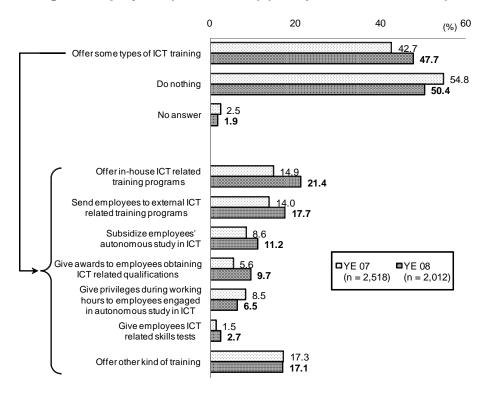


\* CIO stands for Chief Information Officer, an executive who oversees the company's information and telecommunications strategy and aligns it with the management strategy.

#### (7) ICT Training for Employees

The number of businesses that provide ICT training to their employees increased by 5.0% from the previous year, to 47.7%. Regarding details of training programs, "Offering in-house ICT related training programs" scored highest (21.4%), followed by "Sending employees to external ICT related training programs" (17.7%). On the other hand, more than 50% of businesses responded "Do nothing," indicating that ICT training in businesses is not necessarily adequate.

#### ICT Training for Employees (Businesses) (Multiple choices allowed)

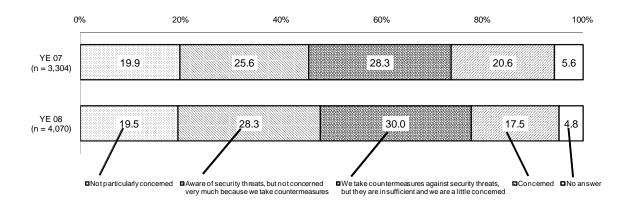


#### 4. State of Coping with Safety and Security Issues

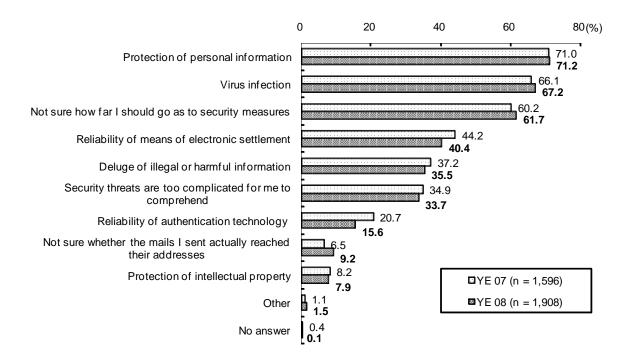
#### (1) Concerns about Internet Usage (Households)

Of households using the Internet, those "concerned" and those "a little concerned" amounted to 47.5%, while those "not particularly concerned" and those "not very much concerned" amounted to 47.8%, indicating mixed feelings regarding security. As for details of their concerns, about 70% of all respondents are concerned with "protection of personal information" (71.2%) and "virus infection" (67.2%).

#### Concerned or Not Concerned about Internet Usage (Households)



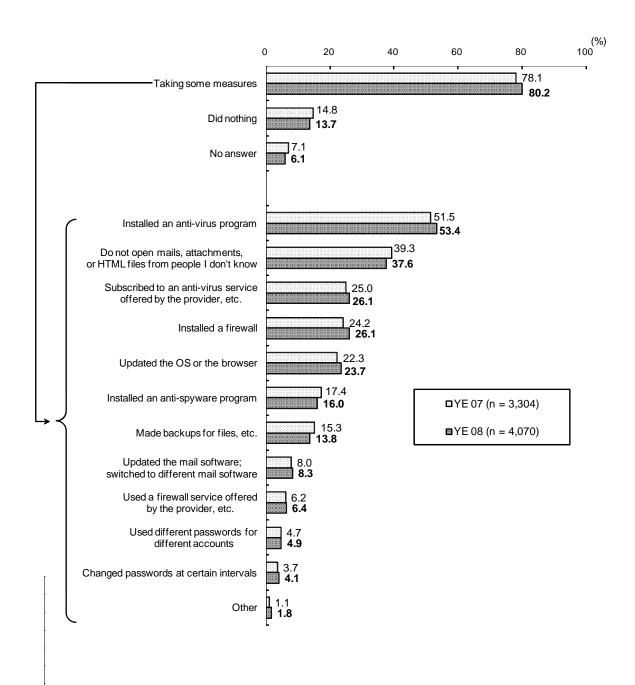
#### Concerns about Internet Usage (Households) (Multiple choices allowed)



(2) Implementation of Security Measures (Households)

The percentage of households taking security measures amounted to 80.2%. As for details of measures, more than 50% of all households have "Installed an anti-virus program" (53.4%). Another popular measure was "Do not open mails, attachments, or HTML files from people I don't know" (37.6%).

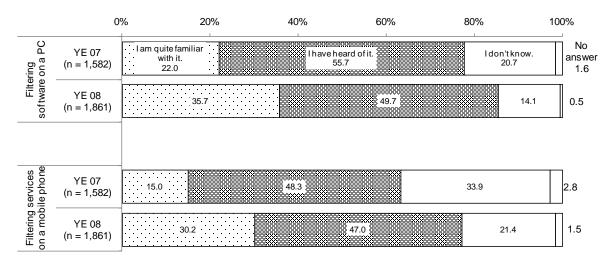
#### Implementation of Security Measures (Households) (Multiple choices allowed)



(3) Recognition and Use of Filtering Software/Services (Households)
Of all households having children aged below 18, those recognizing filtering
software/services, which is the combined total of those responding "quite familiar
with it" and "have heard of it," amounted to almost 85.4% (an increase of 7.7% from
the previous year) for PCs and 77.2% for mobile phones (an increase of 13.9% from
the previous year), indicating that the recognition of filtering software/services has
been rising.

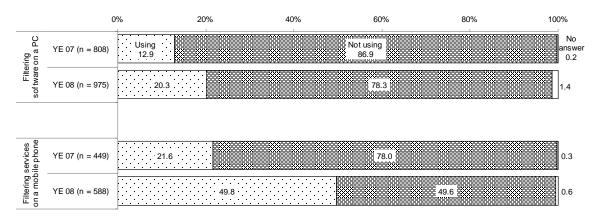
Regarding the use of filtering software/services, such use on mobile phones surged by 28.2% from the previous year, to 49.8%, whereas such use on PCs increased by 7.4%, to 20.3%.

#### Recognition of Filtering Software/Services (Households)



(Note: Responded to only by households with children under 18.)

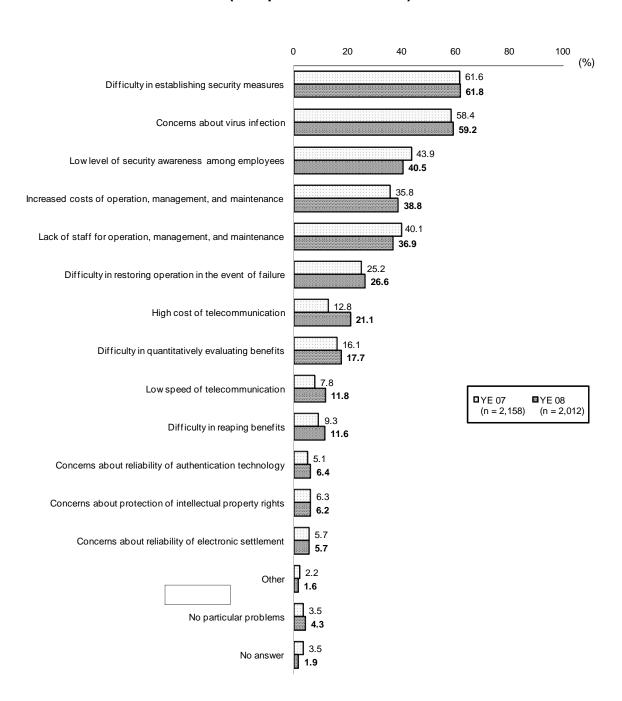
#### **Use of Filtering Software/Services (Households)**



(Note: Households subject to this survey item were limited to those with children under 18 who access the Internet by using a PC or a mobile phone.)

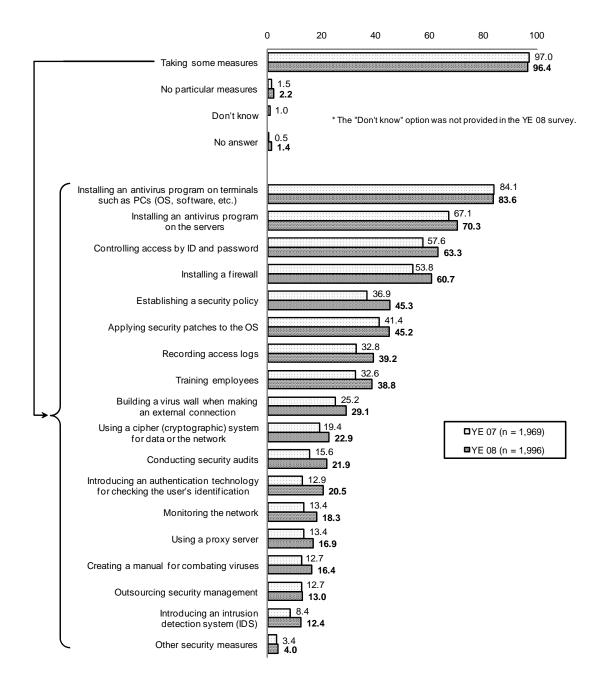
(4) Problems in Using the Internet and In-house LANs (Businesses)
Regarding problems in using the Internet and in-house LANs, "Difficulty in establishing security measures" was most common, at 61.8%, followed by "Concern about virus infection" (59.2%) and "Low level of security awareness among employees," (40.5%) indicating that security issues were the top three cited. Human resource issues such as "Increased costs of operation, management, and maintenance" (38.8%) and "Lack of staff for operation, management, and maintenance" (36.9%) were also cited by many businesses.

## Problems in Using the Internet and In-house LANs (Businesses) (Multiple choices allowed)



(5) Implementation of Security Measures (Businesses)
The percentage of businesses using the Internet or in-house LANS that took some security measures amounted to 96.4%.
In terms of measures taken, over 80% of businesses cited "Installing an antivirus program on terminals (OS, software, etc.)" (83.6%).

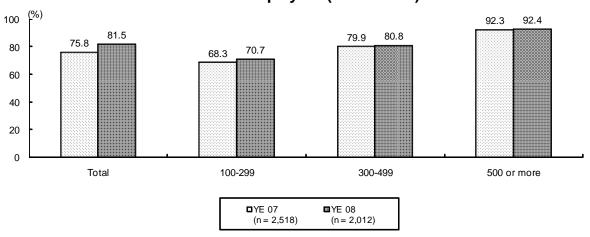
#### Implementation of Security Measures (Businesses) (Multiple choices allowed)



(6) Implementation of Measures to Protect Personal Information (Businesses) Of all businesses using the Internet or in-house LANs, the percentage taking some measures to protect personal information increased by 5.7% from the previous year, to 81.5%. The implementation rate rose with the scale in terms of the number of employees.

In terms of measures taken, more than 50% of all businesses cited "Provide training" (50.5%). "Appoint an officer for personal information protection" increased by 5.6% from the previous year, to 44.8%, indicating that more and more businesses are appointing an officer for personal information protection.

## Implementation of Measures to Protect Personal Information by Scale in Terms of the Number of Employees (Businesses)



## Implementation of Measures to Protect Personal Information (Businesses) (Multiple choices allowed)

