

Statistical Report on Internet Development in China

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Abstract of Report

- ◇ Up to June, 2010, the number of net citizens in China has reached 420 million, exceeding the point of 400 million, with an increase of 36 million compared to the end of 2009. The popularity rate of internet has climbed up to 31.8%, with an increase of 2.9% compared to the end of 2009.
- ◇ The number of broadband net citizens has reached 363,810,000, and the popularity rate of broadband for users who surf the internet using computer has arrived at 98.1%.
- ◇ The number of mobile net citizens in China has reached 277 million. The number of newly added mobile net citizens in the first half year of 2010 was 43,340,000, with an increase of 18.6%. The ones who surf the internet only using mobile have increased to 11.7% of the overall net citizens.
- ◇ The number of rural net citizens has reached 115,080,000, 27.4% of all net citizens. The increase rate in the first half year was 7.7%, which was lower than that of urban net citizens.
- ◇ The age structure of net citizens has continued to develop towards maturity. The ratio of net citizens above 30 has increased from 38.6% in the end of 2009 to 41% in the middle of 2010 in the whole. Meanwhile the structure of education background of net citizens tended to change towards the lower end. The increase rate of net citizens who receive education below primary school and junior middle school was beyond that of the overall net citizens.
- ◇ The number of IPv4 addresses in China has reached 250 million, with an increase of 7.7% in the first half year. As the “house number” of internet, IPv4 addresses are becoming exhausted. It’s inevitable and necessary for the transition from internet to IPv6.
- ◇ The total number of domain names in China has fallen to 11.21 million, including 7.25 million .CN domain names. The proportion of .CN out of all domain names has decreased from 80% to 64.7%; the number of websites has decreased to 2.79 million and the websites under .CN has covered 73.7% of the overall websites.

- ◇ The proportion of net citizens who surf the internet in their houses or units has continued to increase. In the first half year of 2010, there were 88.4% net citizens surfing the internet at home and 33.2% in their units.
- ◇ In the first half year of 2010, the diversification of devices used for surfing the internet has tended to become strengthened. The desktop computer remained to rank the top (73.6%) among devices for surfing the internet; the proportion of mobile phones to surf the internet increased to 65.9% and the ratio of laptop computers to surf the internet arrived at 36.8%.
- ◇ The weekly online time of net citizens has continued to increase and the average online time of them has arrived at 19.8h. 77.3% of mobile net citizens only surf the internet using mobile in their spare time and 68.9% of computer net citizens only surf the internet using computer in their spare time.
- ◇ The application of internet among net citizens in our country is characterized in that the commercial content rapidly increases; the entertainment tendency remains to be the same; the value of communication and information devices is deepened. In the first half year of 2010, the application of most networks has tended to become more popular and the scale of users in the application of varieties of networks has continued to be expanded. The commercial application appeared more distinguished. The growth rate of users for online payment, web shopping and e-banking was about 30% on average, far beyond other network applications. The users of social exchange websites, network literature and search engine also increased rapidly.
- ◇ The application of mobile network among net citizens in our country obtains a stable development. The utilization rate of information acquisition, exchange and communication applications are much higher among net citizens. Up to June, 2010, the utilization rate of mobile instant messaging has ranked the top (61.5%) and mobile search ranked the second place with the utilization rate of 48.4%.

Chapter I Introduction to Investigation

I . Background of Investigation

The information concerning scale and structure of net citizens, basic resources of internet, online conditions and web applications in China is of great significance to the State and enterprises to master the development trend and make decisions. In 1997, studied and decided by the competent authorities of China, China Internet Network Information Center (CNNIC), in combination with four internet network units, carried out this statistical work and published the first *Statistical Report on Internet Development in China* in November of the same year. In order to make such work become normalized and institutionalized, CNNIC has issued *Statistical Report on Internet Development in China* in January and July each year since 1998. Since the publication of statistical reports, they have been paid much attention from all aspects and been widely quoted both at home and abroad. This report is the 26th investigation.

This work has won the great support from national competent authorities like Ministry of Industry and Information Technology. Meanwhile, internet units, investigation support websites as well as media, etc. have also offered support and cooperation to such investigation conducted by CNNIC so to guarantee the successful investigation work. Hereby, we extend our sincere gratitude for their support.

II. Definition of Terminology in this Report

◇ **Net citizen**

The Chinese citizen at the age of 6 or above who has used the internet in the first half year

◇ **Broadband net citizen**

It includes but not limited to the net citizen who has used broadband to access the internet in the first half year. The access modes of broadband include: xDSL, CABLE MODEM, optical access, power line communication, Ethernet, etc.

◇ **Mobile net citizen**

It includes but not limited to the net citizen who has used mobile to connect and access the internet in the first half year.

◇ **Computer net citizen**

It includes but not limited to the net citizen who has computer to connect and access the internet in the first half year.

◇ **Rural net citizen**

It includes the net citizen who mainly lives in the rural area in the first half year.

◇ **Urban net citizen**

It includes the net citizen who mainly lives in the urban area in the first half year.

◇ **Juvenile net citizen**

It includes the Chinese net citizen¹ below 25.

◇ **IP address**

The IP address is the basic resource of internet which is used to identify the computers on the internet, servers or other devices on the internet. Internet can be only connected only by acquiring an IP address (no matter how the IP address exists).

◇ **Domain name**

The domain name in this report only refers to English domain name, which is a character string composed only by numbers, English letters or hyphens and divided by points (.) and a hierarchical sequential internet address mark corresponding to the IP address. The

¹ According to *Youth towards the Year 2000 and Beyond* passed by the 50th UN conference on December 14, 1995, the youth is classified to be age group from 15 to 24. The group aged 6 to 24 herein is called juvenile group.

common domain names include two types: one is country code top-level domain (ccTLD), e.g. using the domains ending with .CN to indicate China; the other one is generic top-level domain (gTLD), e.g. domains ending with .COM, .NET and .ORG.

◇ **Website**

It refers to the web site with the domain name itself or “www.+ domain name” as website, which includes the web site under China national top-level domain .CN and generic top-level domains (gTLD). The register of such domain name is located in the territory of China. For the domain name cnnic.cn, it has only one website and its corresponding website is cnnic.cn or www.cnnic.cn. In addition, websites with such domain name as suffix such as whois.cnnic.cn, mail.cnnic.cn can only be seen as different channels of the website.

◇ **Scope of investigation**

Unless otherwise indicated, the data in this report only refers to that of China Mainland, excluding Hong Kong, Macaw and Taiwan.

◇ **Deadline of investigation data**

The deadline for data of this statistical investigation is June 30, 2010.

III. Investigation Means

(I) Telephone investigation

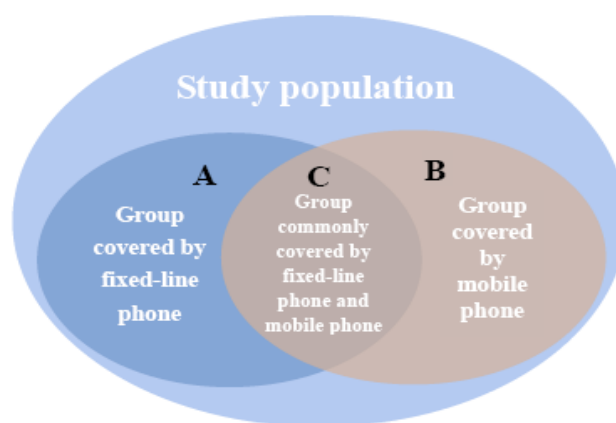
3.1 Investigation populations

Permanent residents at the age of 6 or above who have fixed-line telephones (including home phones, personal handy phones and dormitory phones) or cell phones

3.1.1 Scale of samples

The total number of samples for investigation is 30,000, in which the number of fixed-line telephone and cell phone users is 15,000 and 15,000 separately. The samples cover 31 provinces, autonomous regions and municipalities directly under the Central Government.

3.1.2 Segmentation of investigation populations



The investigation populations are divided as follows:

Sub-population A: population covered by fixed-line telephone (residents covered by home phone, personal handy phone users, dormitory phone users and other dormitory phone users);

Sub-population B: population covered by cell phone;

Sub-population C: population covered by cell phone and fixed-line telephone (the house phone users and cell phone users are overlapped to some extent and the overlapped part is called Sub-population C), $C = A \cap B$.

3.2 Content of investigation

The investigation mainly concentrates on acquaintance with the quantity and structural feature of net citizens, online conditions, web applications, attitudes of net citizens towards internet and non-net citizen conditions in China. The content of investigation

includes whether interviewees surf the internet, their background, internet access behavior of net citizens, online depth and online experience, etc.

3.3 Investigation means

Carry out investigation through the system of Computer Assisted Telephone Interview (CATI).

3.4 Difference between investigation populations and target populations

CNNIC made research on the population that phones failed to cover in the end of 2005 when the number of net citizens among this group was small. With the development of telecom industry in China, the scale of such group has been reduced at present (the number of phone users of our country in the end of 2005 was 740 million, while the total number exceeded 1.1 billion, with 1101.837 million households in May 2010). Thus, there is a hypothesis for such investigation research, i.e. the net citizens that phones fail to cover in the statistics can be omitted for such research.

(II) Online investigation

Online investigation focuses on the acquaintance of utilization of typical internet applications. China Internet Network Information Center (CNNIC) conducted an online investigation from June 8 to June 30, 2010. A questionnaire was placed on the website of CNNIC and questionnaire linkage was set on the websites of government media, larger national ICP/ISP websites and information ports of all provinces to ask net citizens to be actively involved in the filling of questionnaire. After the recollection of such questionnaire, validity testing of questionnaire was carried out by technical means to screen off invalid questionnaires. There were 110,000 copies of valid questionnaires received for such online investigation.

(III) Online automatic search and statistical data reporting

Online automatic search mainly refers to technical statistics conducted on indexes such as domain names, quantity of websites and territory distribution, etc, while statistical data for reporting mainly include number of IP addresses and international network bandwidth.

1. Total Number of IP Addresses

The statistical data for IP address sub-province derive from IP address databases of Asia-Pacific Network Information Center (APNIC) and China Internet Network Information

Center (CNNIC). Sub-provincial data are obtained by adding data that have been registered in both databases and could be judged what provinces the addresses belong to according to relevant provinces. As the utilization of address allocation is a dynamic process, the statistical data are only for reference. Meanwhile, Ministry of Industry and Information Technology, the competent authority of IP addresses, also orders Chinese IP address allocation units (such as China Telecom) to report the number of IP addresses owned by them for each half year. To ensure the accuracy of IP addresses, China Internet Network Information Center (CNNIC) will make comparison and verification on the statistical data and reporting data from APNIC.

2. Total number of domain names and websites in China

The number of domain names and websites in China are obtained by the sum of the following parts of data:

The first part is the number of domain names and websites under .CN, which can be obtained by online automatic search using computer by China Internet Network Information Center (CNNIC); the second part is the number of generic top-level domains (gTLD) and websites in China, which is assisted and provided by registrars of all types of generic top-level domains. These data include: number of all types of generic top-level domains (gTLD) and websites under domains; number of generic top-level domains (gTLD) and websites classified according to .COM, .NET and .ORG; number of generic top-level domains (gTLD) and websites classified by the province of the registrar.

3. Number of international network bandwidth

Ministry of Industry and Information Technology, through the report system, obtains timely the number of international network bandwidth connecting all operators and other countries or regions. These reporting data are incorporated in the *Statistical Report on Internet Development in China*.

Chapter II Net Citizen Scale and Structural Feature

I. Net Citizen Scale

(I) Overall net citizen scale

In the first half of 2010, the number of net citizens in China has continued to keep a trend of increase. Up to June 2010, the number of net citizens has reached 420 million, exceeding the point of 400 million, with an increase of 36 million compared to the end of 2009. The popularity rate of internet has climbed to 31.8%, with an increase of 2.9% compared to the end of 2009.

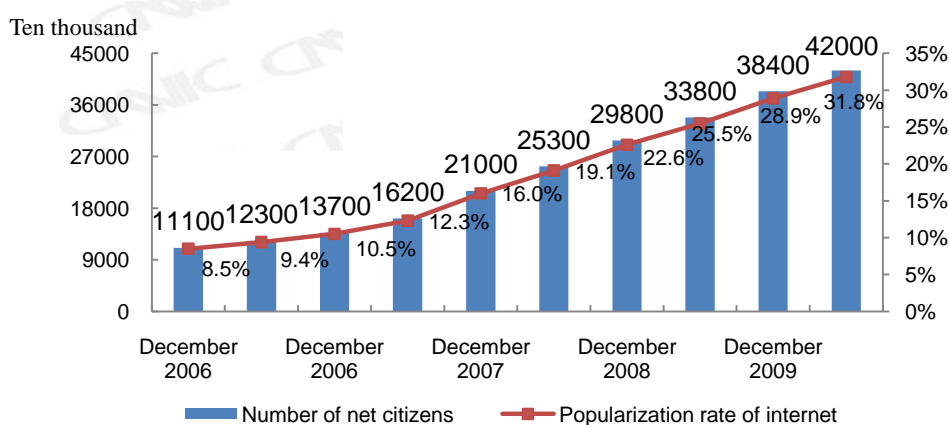


Fig. 1 Net citizen scale and popularization rate in China

The consistent expansion of net citizen scale has relation to the good internet development environment. In recent years, governments at all levels have issued a series of policies and regulations which are beneficial for the development of internet, continuously enhanced the construction of fundamental facilities of internet and actively nourished the subject of internet service market, constantly optimized the outer environment of internet industry development. Since 2010, the active and stable development of internet, consistently fine macro economic situations and speeding application of new internet technology have promoted the consistent growth of net citizen scale.

1. National economy keeps a fast and stable development. In the first half year of 2010, the economy of China has obtained a stable development. GDP in the first quarter has increased by 11.9%² compared to the same period of the last year. From January to May,

the business amount of national telecom has been accumulated to 1,227.65 billion yuan, with an increase of 21.6% compared to the same period of the previous year. The prime operating revenue of telecom has been accumulated to 359.51 billion yuan, with an increase of 5.9%³ compared to the same period of the previous year. Macro economy and communication industry have kept a consistently fine trend and provided basic guarantee for the internet infrastructure construction, network technology development and product application.

2. The demand on various circles of society increases. Since 2010, network media has tended to be popular in the social spreading; the advantages of internet applications such as micro-blog has appeared to be obvious and attracted all kinds of social groups to get involved; the penetration of internet towards circles of society has been speeded. Meanwhile, after the international financial crisis, traditional enterprises have paid more attention to network marketing, speeded the pace of internet utilization for sales, negotiation and cooperation, gradually intensified the internet applications of enterprises and raised the constantly increased demand on the internet.

3. The policy speeds up the step for applications of other relevant technologies. In January 2009, the government issued 3G license for mobile communication of the third generation. At present, 3G network has basically covered the whole nation and the mobile internet has taken on a trend of flourish development. In January 2010, the State Council decided to speed up the integration of telecommunications networks, cable TV networks

² http://www.stats.gov.cn/tjsj/jdsj/t20100415_402634984.htm

³ <http://www.miit.gov.cn/n11293472/n11293832/n11294132/n12858447/13286334.html>

and the internet. With the determination of such integration methods and pilot cities, it will be helpful to the popularization of rural internet in the future. The issuing of relevant policies has quicken the application pace of new technologies in China, gradually lowered the threshold for using internet and promote the internet to penetrate towards different groups.

(II) Broadband net citizen scale

In the first half year of 2010, the number of broadband net citizens has continued to increase. According to the statistics of Ministry of Industry and Information Technology, there were 9.792 million households of internet added in fundamental telecom enterprises, to 113.017 million households, while the internet dial users reduced by 1.688 million households. The constant expansion of coverage for basic services of broadband has helped the growth of broadband user scale. Until June 2010, among groups using cable (permanent network) to access internet, the popularization of broadband has reached 98.1% and the number of broadband net citizens⁴ has reached 363.81 million.

Although the absolute number of broadband net citizens in China is increasing, the proportion among the overall net citizens is falling to some extent, which is caused by the rapid growth of groups who only use mobile to surf the internet. Until June 2010, the number of net citizens surfing the internet only using mobile has increased to 49.14 million, with an increase of 18.42 million compared to the end of 2009 and the proportion out of all net citizens has increased to 11.7%.

Meanwhile, the issue of “named ‘wide’ but not wide in fact” still exists. Calculated according to the report data of Akamai⁵, the average access speed in China is only 857kbps, which is far behind the developed countries of internet like US, Japan and Korea.

⁴ The broadband net citizen refers to the net citizen who has used the broadband service to access the internet, which is different from the statistics method of “number of broadband access users” of Ministry of Industry and Information Technology.

⁵ The State of the Internet, 4th Quarter, 2009 (Akamai)

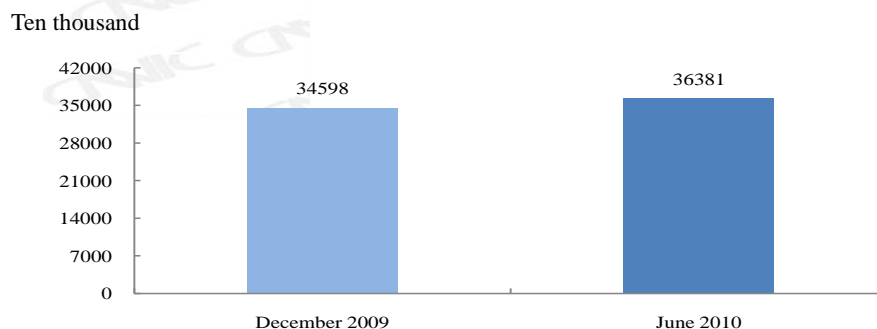
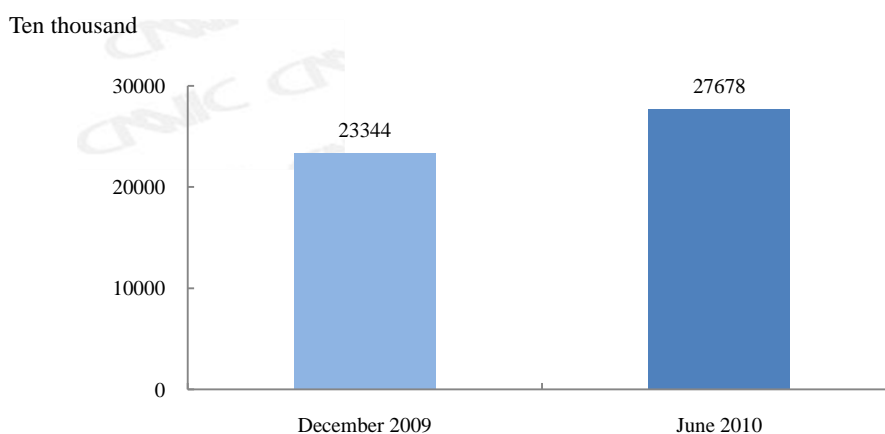


Fig.2 Broadband net citizen scale in China**(III) Mobile net citizen scale**

The mobile net citizen scale in China continues to expand. Until June 2010, the number of mobile net citizens has reached 277 million, with an increase of 43.34 million and the proportion of mobile net citizens among mobile users and general net citizens has been further increased. In the first half year of 2010, the mobile net citizens have increased larger than internet net citizens and they have become the main driving force for the rising of general net citizen scale in China. The mobile internet has shown a tremendous development potential.

**Fig. 3 Comparison on mobile net citizen scale**

Compared to the last year and the year before last, the number of mobile net citizens in the first half year of 2010 continued to rise in a stable manner; however, compared to the second half of last year, there has been some drop in the increase rate of mobile net citizens. There are two main reasons.

First, seasonal drop; according to the data of previous years, the increase rate of mobile net citizens in the second half is normally higher than the first half year. It is estimated that there is some relationship with the marketing strategies of telecom operators. All larger telecom operators will intensively promote all types of promotional activities in the second half year, including policies such as internet access fees using mobile, terminal subsidies, etc. Such beneficial policies will greatly promote the popularization of internet access using mobile.

Second, there is some relationship with commercial use of 3G. Although 3G was declared

to be commercially used in the early of 2009, in fact, the intensive promotion of operators took place in the second half year of 2009, which greatly promoted the growth trend of super express of mobile net citizens in China in the second half year of 2009. The commercial use of 3G on the popularization of internet access using mobile only stays the level of marketing. Affected by terminal, network, fees, etc, 3G net citizen haven't become the main driving force for the growth of mobile access net citizens. In 2010, with the gradual weakening of 3G concept and decreased publicity of 3G and mobile internet, the increase of net citizens has return to normal.

Fig. 4 Comparison on net mobile net citizens added in half year

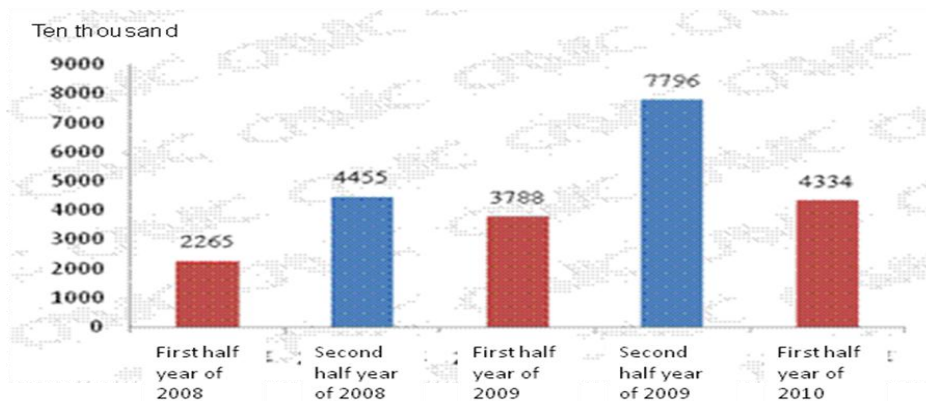


Fig. 4 Comparison on net mobile net citizens added in half year

II. Structural Feature of Net Citizens

(I) Gender structure

At present, the proportion of male to female among net citizens in China is 54.8: 45.2. The percentage of male net citizens is nearly 10% larger than the female and the popularization of internet for female is relatively low.

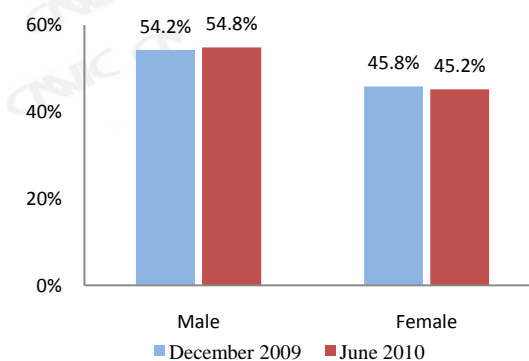


Fig. 5 Comparison on gender structure of net citizens from December 2009 to June 2010

(II) Age structure

The age structure of net citizens continues to develop towards maturity. The proportion of net citizens at the age of 30 or above has increased from 38.6% in the end of 2009 to 41% in 2010 in general. It is mainly because the threshold of internet is lowered and the focus of network penetration has been transited from low aged groups to high and middle aged groups.

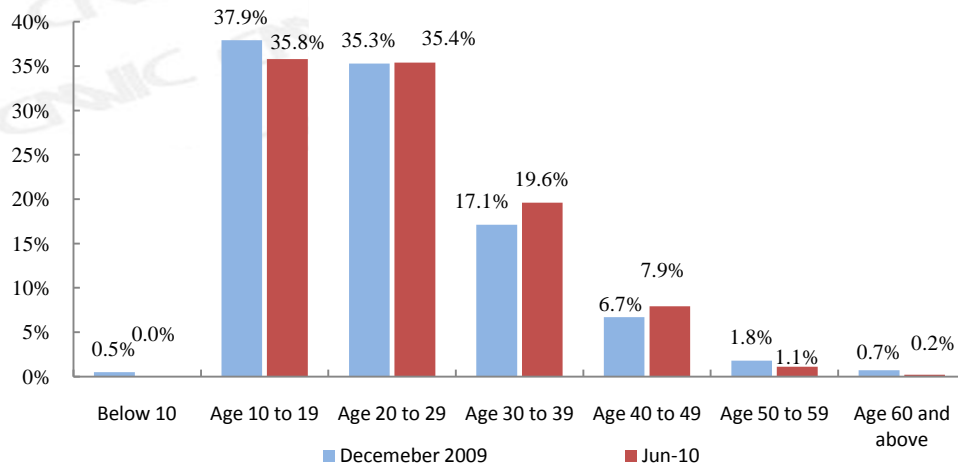


Fig. 6 Comparison on age structure of net citizens from December 2009 to June 2010

(III) Structure of education background

The structure of education background tends to change towards lower end. Until June 2010, the net citizens with the background below primary school and junior middle school have amounted to 27.5% and 9.2% of the overall net citizens and their increase rate has exceeded the overall net citizens. The proportion of net citizens with the background of professional training college and the above has remained to be decreased to 23.3%.

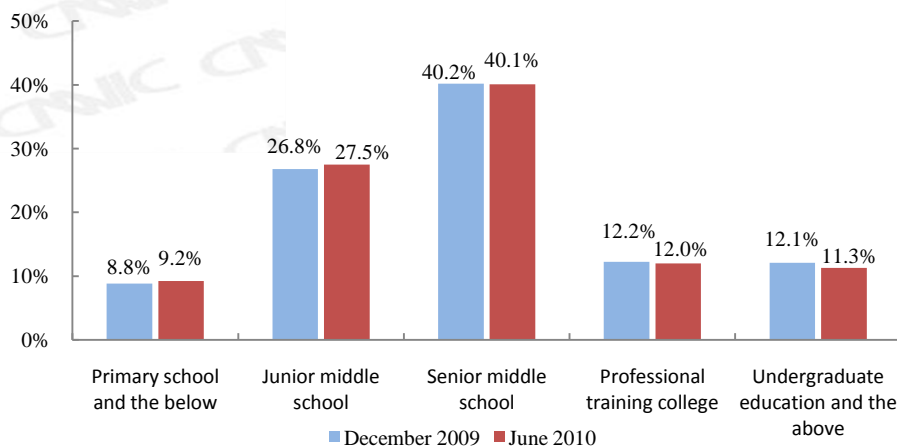
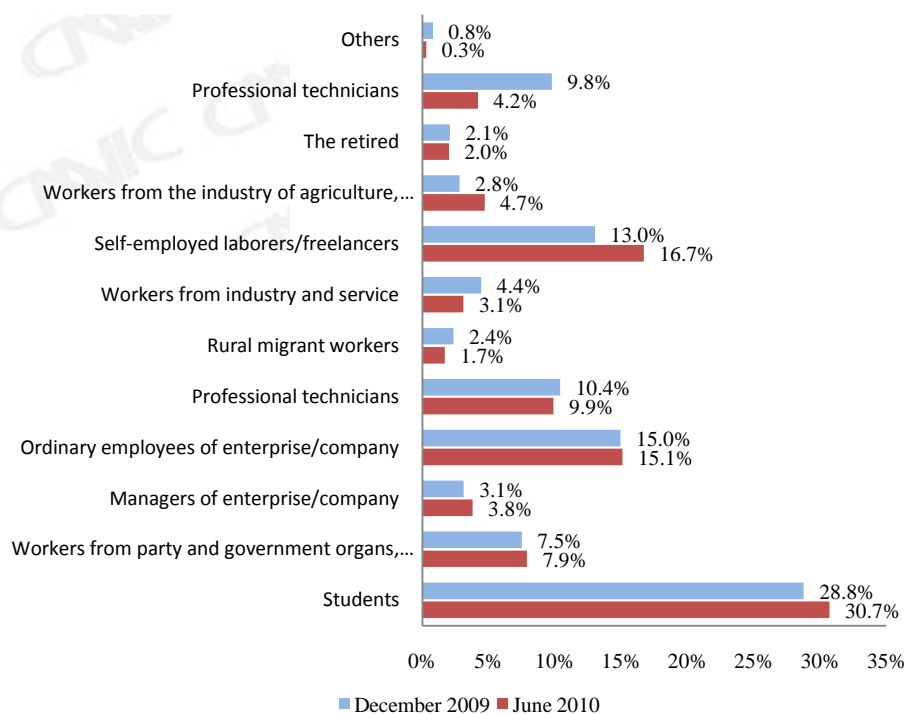


Fig.7 Comparison on education background of net citizens from December 2009 to June 2010**(IV) Occupational structure**

Seen from occupation, among net citizens, the proportion of middle school students, self-employed laborers and workers from the industry of agriculture, forestry, animal husbandry or fishery increases much faster and that of the jobless/laid off workers/unemployed and workers of industry and service decreases. The proportion of student groups remains to be far higher than other groups and nearly one third of net citizens are students.

**Fig.8 Comparison on occupational structure of net citizens from December 2009 to June 2010****(V) Income structure**

Internet continues to cover persons with low income. Compared to the end of 2009, the proportion of net citizens with individual monthly income below 500 yuan has been increased from 18% to 20.5% and the proportion below 1,501 to 2,000 has also increased. The proportion of net citizens without any income has decreased.

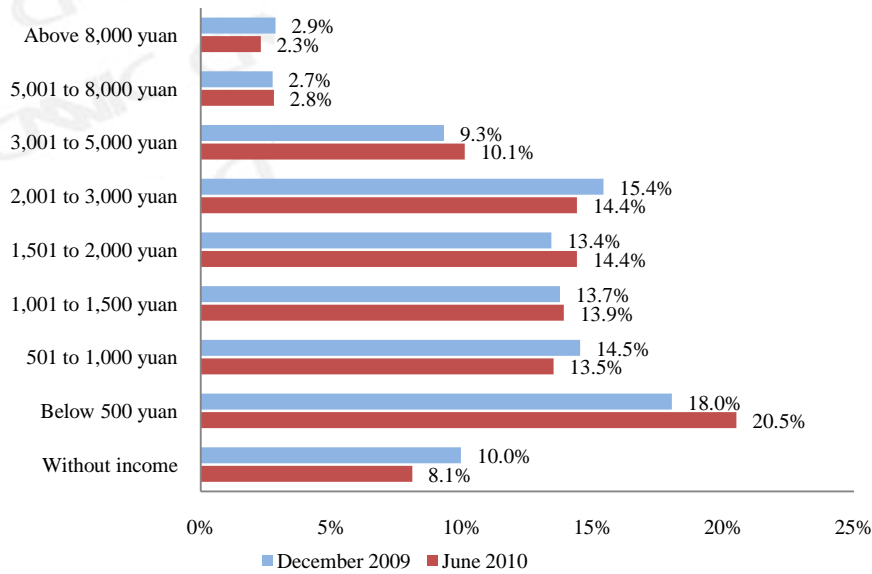


Fig. 9 Comparison on Individual monthly income of net citizens from December 2009 to June 2010

(VI) Rural and Urban Structure

Until June 2010, the number of rural net citizens has reached 115.08 million, 27.4% of the overall net citizens, with an increase of 7.7% in the half year; and the number of urban net citizens has reached 304.92 million, 72.6% of the overall net citizens, with an increase of 10% in the half year. Limited by backward economic and social development, inefficient internet access conditions and poor hardware equipments, the growth of net citizens in rural areas still appears slower than the urban areas. It is worth expecting that the integration methods of three networks have been passed and began to be tentatively promoted in parts of rural areas, which will bring a qualitative change to the development of rural internet development. It is hoped that the number of rural net citizens in the future will speed up its growth.

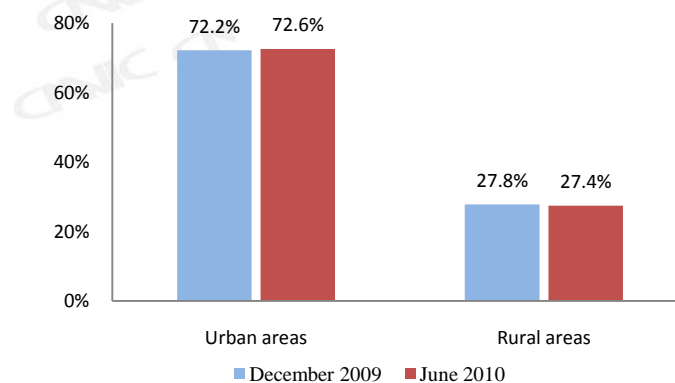


Fig. 10 Comparison on rural and urban structure of net citizens from December 2009 to June 2010

Chapter III Basic Resources of Internet

I . Overview of Basic Resources

Until June, 2010, the number of IPv4 addresses has reached 250 million, with an increase of 7.7% in a half year. As a “house number” of internet, the IP address is getting exhausted. It is inevitable and necessary for the transition from internet to IPv6 network.

The total number of domain names in China has decreased to 11.21 million, including 7.25 million .CN domain names. The ratio of .CN among all domain names has declined from 80% to 64.7%. Meanwhile, the number of .COM domain names has increased to 535,000, with the ratio increase from 16.6% to 29.6%.

The number of websites has decreased to 2.79 million. The number of websites under .CN is 2.05 million, 73.7% of the overall websites.

The international bandwidth has reached 998,217Mbps, with an increase of 15.2% in a half year.

Table 1 Comparison on Basic Resources of China Internet from December 2009 to June 2010

	December 2009	June 2010	Growth in the half year	Growth in the half year
IPv4	232,446,464	250,452,480	18,006,016	7.7%
Domain name	16,818,401	11,205,585	-5,612,816	-33.4%
CN domain name included	13,459,133	7,246,686	-6,212,447	-46.2%
Website	3,231,838	2,787,480	-444,358	-13.7%
Website under CN	2,501,308	2,054,735	-446,573	-17.9%
International bandwidth (Mbps)	866,367.20	998,217.45	131,850	15.2%

II . IP Address

Until June 2010, the number of IPv4 addresses has reached 250 million, which is lower than the requirements of 420 million net citizens. At present, the number of IPv6 addresses has arrived at 395/32⁶ and increased to 332/32 compared to the end of last

year, ranking the 13th place in the globe.

⁶/32 in IPv6 address is an address expression method of IPv6 and the corresponding address quantity is

$$2^{(128-32)}=2^{96}.$$

It is estimated that the IPv4 addresses in the globe will be exhausted in August, 2010 with the fastest speed. It will be an irresistible general trend for transition towards IPv6 addresses and it will be inevitable and necessary for China to perform a large scale of IPv6 network deployment.

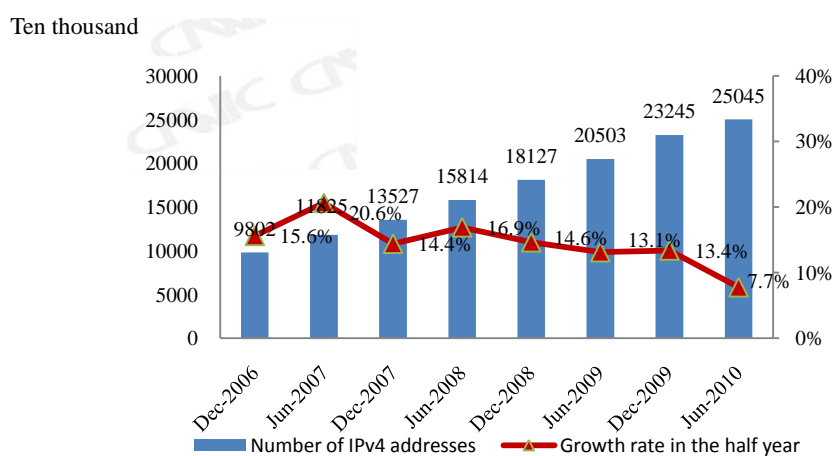


Fig.11 Change of IPv4 address resources in China from December 2006 to June 2010

III. Domain name

The total number of domain names in China has decreased to 11.21 million, including 7.25 million .CN domain names. The proportion of .CN in all domain names has been reduced from 80% to 64.7%. Meanwhile, the number of .COM has increased to 535,000, with the ratio increase from 16.6% to 29.6%.

Table 2 Number of Classified Domain Names in China

	Number	Proportion among All Domain Names
CN	7,246,686	64.7%
COM	3,318,655	29.6%
NET	477,117	4.3%
ORG	147,220	1.3%

Others	15,907	0.1%
Total	11,205,585	100%

At present, among CN domain names, the second-level domain names ending with .CN still have the largest proportion, 63.2% of total CN domain names and the next is .COM.CN domain names (29%).

Table 3 Number of Classified CN Domain Names in China

	Number	Proportion among all CN Domain Names
cn	4,581,082	63.2%
com.cn	2,103,626	29.0%
net.cn	283,228	3.9%
adm.cn	108,222	1.5%
org.cn	107,486	1.5%
gov.cn	51,997	0.7%
ac.cn	7,347	0.1%
edu.cn	3,685	0.1%
mil.cn	13	0.0%
Total	7,246,686	100%

IV. Website

Until June 2010, the number of websites in China, or website number owned by registrars within the territory of China (including domestic access and foreign access), has been deduced to 2.79 million, with a drop of 13.7%.

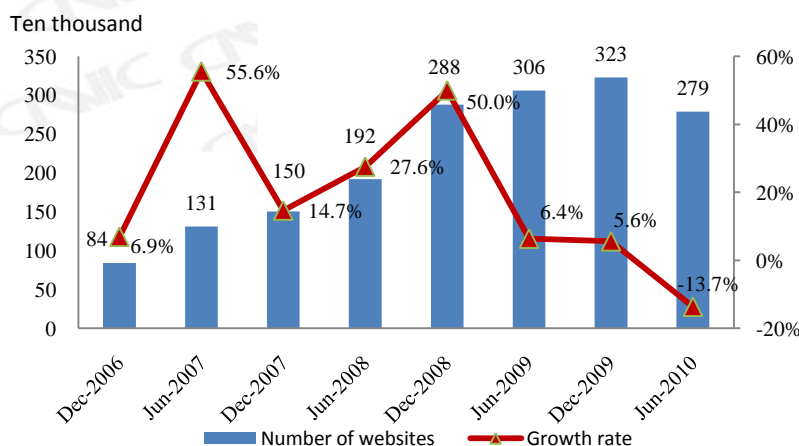


Fig.12 Change of website scale in China from December 12 to June 2010

Note: The above data exclude the websites under .EDU.CN.

In the first half year of 2010, the number of internet sites in the globe has fallen and that in China has declined synchronously. According to the statistics of Netcraft, in the first half year of 2010, the number of internet sites in the world has been decreased by 27 million⁷, with a drop of 11.5%. An important reason for the drop of total sites is the expiration of web hosting services.

V. International Network Bandwidth

⁷ The statistical method of Netcraft site differs from that of CNNIC website. Please refer to <http://news.netcraft.com/hosting-provider-server-count/>.

The international network bandwidth in China continues to develop, which has reached 998,217Mbps in the middle of 2010, with an increase rate of 15.2% in the first half year.

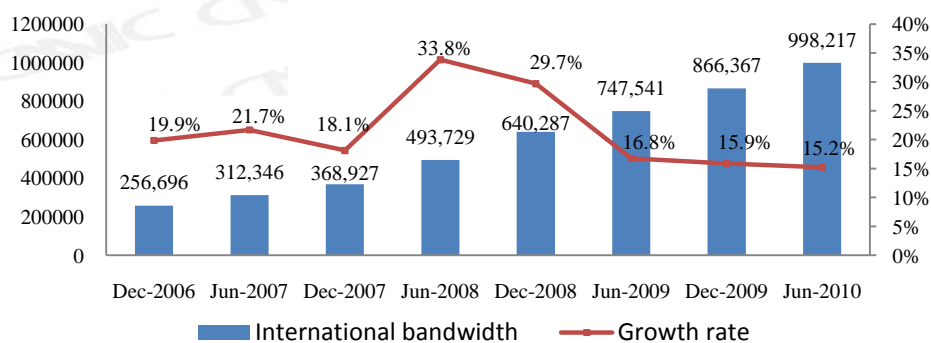


Fig. 13 Change of international bandwidth in China from December 2006 to June 2010

Table 4 Number of international bandwidth for main backbone networks

	Number of international bandwidth(Mbps)
China Telecom	616703.45
China Unicom	330599
CSTNet	10422
CERNET	9932
China Mobile Internet	30559
China International Economy and Trade Net	2
Total	998217.45

Chapter IV Network Access

I . Device

In the first half year of 2010, the diversification of devices used for surfing the internet has been strengthened. The desktop computer remained to rank the top (73.6%) among devices for surfing the internet; the proportion of mobile phones to surf the internet increased to 65.9% and the ratio of laptop computers to surf the internet arrived at 36.8%. And the ratio of net citizens who use other devices to surf the internet also increased by 0.3%.

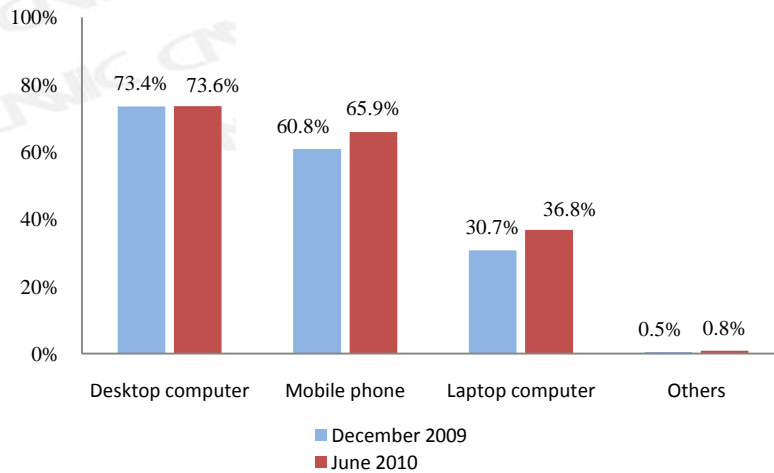


Fig. 14 Internet access devices of net citizens

II. Location

With the constant improvement of the family to access the internet using computer, the proportion of net citizens who surf the internet using computer at home has continued to increase, to 88.4%, with an increase of 5.2% compared to the end of 2009. The proportion of surfing the internet in the unit increased to 33.2% and the ratio in the net bar decreased to 33.6%.

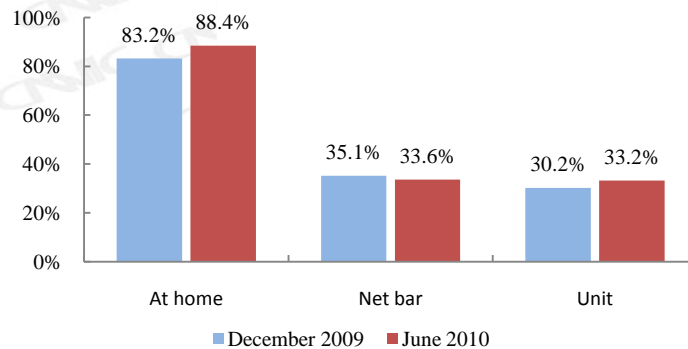


Fig. 15 Internet access location of net citizens

Note: Such investigation focuses on the location of net citizens to surf the internet using computer.

III. Duration

In the first half year of 2010, the average online hours of net citizens in China has continued to increase and the average weekly online hours reached 19.8h, with an increase of 1.1h. The extension of online time shows an increased network application

depth of net citizens in our country.

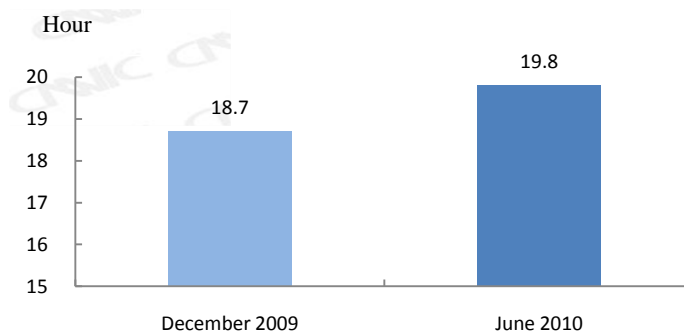
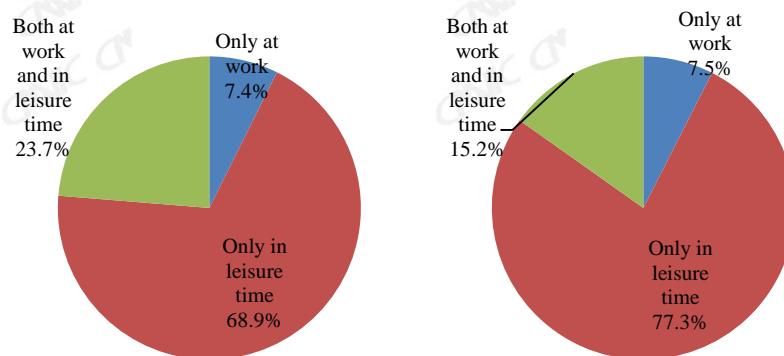


Fig. 16 Average Weekly Online Hours of Net Citizens

Seen from internet access terminals, mobile appears more casual than computer. Among mobile net citizens, there is only 77.3% who have spent their spare time in surfing the internet using mobile. The relevant proportion of computer net citizens is 68.9%.



Note: The samples here are only personnel on duty.

Fig. 17 Net Citizens' surfing the internet at work/in leisure time

Chapter V Network Application Behavior

I . Network Application Behavior of Net Citizens

The application of internet among net citizens in our country is characterized in that the commercial content rapidly increases; the entertainment tendency remains to the same; the value of communication and information devices is deepened. In the first half year of 2010, the application of most networks tended to become more popular and the scale of users in the application of varieties of networks continued to be expanded. The commercial application appeared more distinguished. The growth rate of users for online payment, web shopping and e-banking was about 30% on average, far beyond other network applications. The users of social exchange website, network literature and search engine also increased rapidly.

The rapid development of e-commerce application and faster growth of entertainment and social exchange applications have something to do with the development characters of China Internet. In China, the popularity of broadband for computer net citizens near 100% and youth net citizens amount to nearly a half of overall net citizens. The e-commerce application of small and medium enterprises takes on a trend of popularization. Internet, as an overall platform, has become a regular source for information acquisition of people, important means of leisure and entertainment and convenient channel for commercial exchange.

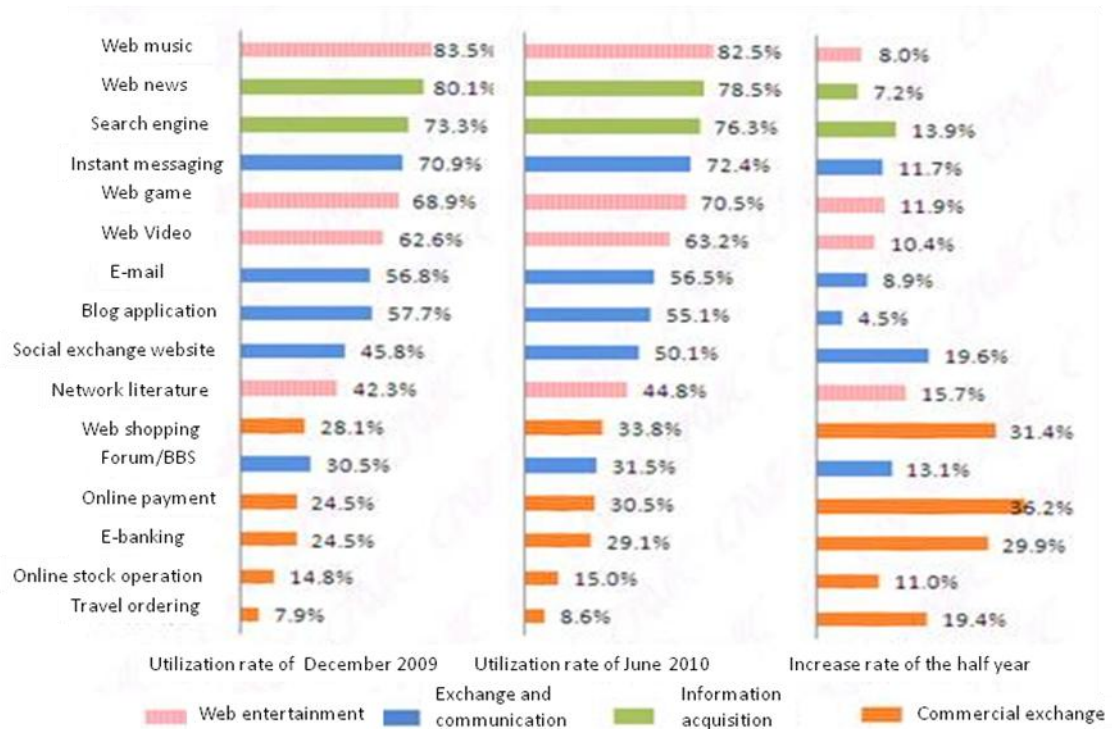


Fig. 18 Utilization and growth rate of all types of networks from December 2009 to June 2010

Seen from four types of network applications including web entertainment, exchange and communication, information acquisition as well as commercial exchange, commercial application obtains the most distinguished development. Until June 2010, the utilization rate of web shopping, online payment and e-banking is 33.8%, 30.5% and 29.1% respectively and the increase of their users in the first half is 31.4%, 36.2% and 29.5% individually. Their growth in all types of applications ranks Top 3. Web shopping ranks the top in main network applications and its utilization rate exceeds that of forum/BBS.

There is no change as for the utilization rate of exchange and communication application. The utilization rate of social exchange websites and instant messaging increase much quicker and users in the first half year increase by 19.6% and 11.7% respectively. Although the absolute scale of users for e-mail and blog applications increases, the utilization rate slightly decreases.

The web entertainment application continues to develop, in which the utilization rate of web music still ranks the top among all applications. With the falling of utilization rate nearly one year after the end of web video, it is the first time for the rate to increase, to 63.2%. The number of network literature and web game users continues to increase,

with an increase of 15.7% and 11.9% respectively.

Table 5 Change of utilization rate and ranking of all types of web applications from December 2009 to June 2010

Type	Application	Utilization of December 2009	Utilization of June 2010	Ranking in December 2009	Ranking in June 2010	Change of Ranking
Web entertainment	Web music	83.5%	82.5%	1	1	→
Information acquisition	Web news	80.1%	78.5%	2	2	→
Information acquisition	Search engine	73.3%	76.3%	3	3	→
Exchange and communication	Instant messaging	70.9%	72.4%	4	4	→
Web entertainment	Web game	68.9%	70.5%	5	5	→
Web entertainment	Web video	62.6%	63.2%	6	6	→
Exchange and communication	E-mail	56.8%	56.5%	8	7	↑
Exchange and communication	Blog application	57.7%	55.1%	7	8	↓

Exchange and communication	Social exchange website	45.8%	50.1%	9	9	→
Web entertainment	Network literature	42.3%	44.8%	10	10	→
Commercial exchange	Web shopping	28.1%	33.8%	12	11	↑
Exchange and communication	Forum/BBS	30.5%	31.5%	11	12	↓
Commercial exchange	Online payment	24.5%	30.5%	13	13	→
Commercial exchange	E-banking	24.5%	29.1%	14	14	→
Commercial exchange	Online stock operation	14.8%	15.0%	15	15	→
Commercial exchange	Travel ordering	7.9%	8.6%	16	16	→

(I) Information acquisition

1. Search engine

In the first half year of 2010, the utilization rate of search engine among all net citizens has increased by 3%, to 76.3%; the number of users for search engine has reached 320 million and increased by 39.12 million in the half year, with an increase of 13.9%.

Since 2009, search engine had entered into a period of rapid development of new cycle. In the first half year of 2010, on the one hand, the number and penetration rate of search engine users have continued to increase; on the other hand, users have applied search engine more frequently and turned to internet and search engine as to the acquisition of all information in life more.

To meet the diversified demands of users and promote the search engine's position as an

inlet of internet, all search engine manufacturers at home promote more pluralistic services and give more input of various areas such as browser, input methods, web club, web video, e-commerce, etc; meanwhile, the rapid development of newly rising web applications like micro-blog assists in the research, development and application of domestic real-time search technology.

Based on the rapid growth of search engine users and constant promotion of search engine capabilities, the development of search engine in the accuracy of web marketing and marketing effect evaluation has greatly promoted the marketing value of web media.

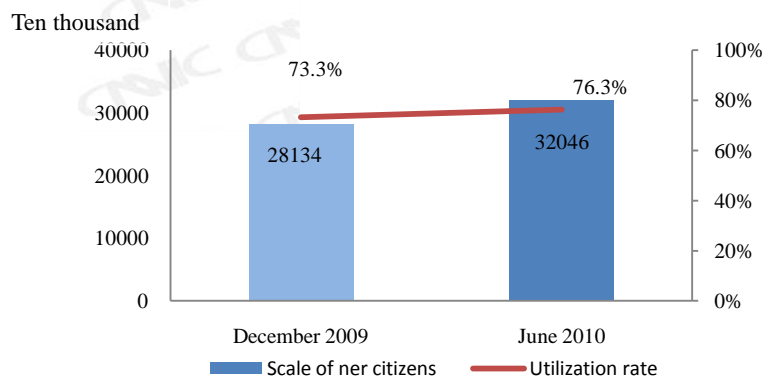


Fig.19 Comparison on search engine users from December 2009 to June 2010

2. Web news

Until June 2010, the utilization rate of web news is 78.5%; the number of users has reached 330 million and increased by 22.01 million, with an increase of 7.2%.

The rapid popularization and penetration of internet make the scope of groups covered by web media more extensive. With the constant increase of net citizens' duration to surf the internet, the cohesiveness of internet continuously increases. Web has become one of the main media for people to acquire news information and the impact of web media has rapidly increased. The existence and development of traditional media such as news, magazine and TV, etc. are confronted with challenges and the pace of digital media transition is speeded due to the rapid development of web media.

Meanwhile, with the gradual maturity and optimization of age structure of net citizens in China, the main groups of net citizens have become the main production and consumption subject of politics, economy and culture and the function of internet in public

opinion, economic development and cultural creation has become obvious. The value of web media has been experiencing a process from quantity increase to quality promotion.

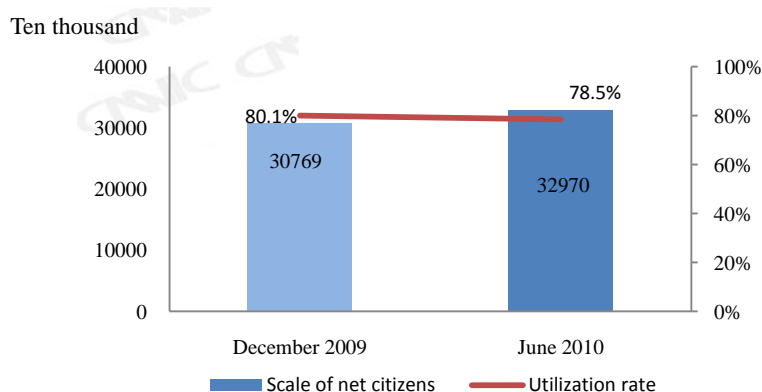


Fig. 20 Comparison on web news users from December 2009 to June 2010

(II) Commercial exchange

1. Web shopping

Until June 2010, the number of web shopping users has reached 142 million; the utilization rate has been raised to 33.8%, by 5.7%, and the increase rate of users in the half year has reached 31.4%.

The quicker growth of web shopping users has shown a strong development trend of e-commerce market in China. As the application of e-commerce of small and medium enterprises tends to be normal, the retail sales business of network become routine and the subject of web shopping market increasingly gets stronger. Meanwhile, in the first half year of 2010, some new styles and opportunities have emerged in the web shopping market. Firstly, the rise of bulk purchase model takes on a development trend of regional e-commerce services; secondly, shopping websites shift towards mobile platform and mobile e-commerce is closely arranged; thirdly, B2C develops towards mainstream and web shopping pays more attention to user experience and safety guarantee, etc.; fourthly, web shopping sites speed up their pace of self-constructing logistics or providing of logistics through cooperation and actively enhance the service foundation under the line. In addition, as the fight for free transportation expenses is started again, web shopping is increasing its speed to penetrate towards the social public through media publicity and promotion activities.

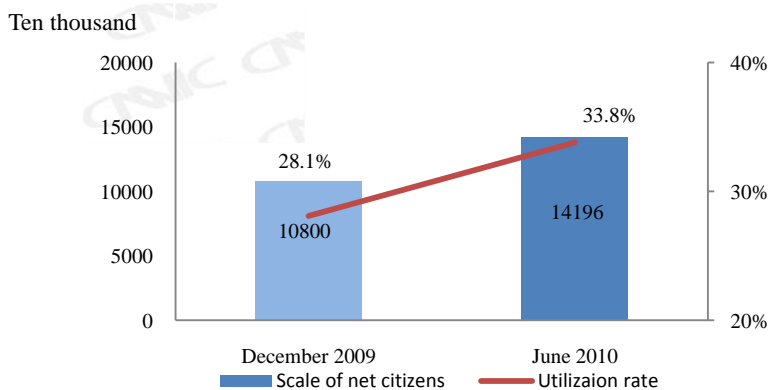


Fig. 21 Comparison on web shopping users from December 2009 to June 2010

2. Online payment

At present, the utilization rate of online payment in China is 30.5% and the number of users is 128.1 million, with an increase of 36.2% in the half year. It remains the web application with the fastest growth of users.

The reasons for rapid growth of online payment mainly include: firstly, web shopping rapidly increase and promotes the fast growth of online payment. Secondly, the support scope of online payment becomes extensive. In variety, more and more enterprises opened the services of online payment of water, electricity and gas fees, etc. In area, not only first tier cities but a large number of second/third tier cities expand their online payment methods. Thirdly, the online applications between enterprises become more extensive. The much deeper extent of enterprise informatization and upgrading of hardware and software facilities all speeds up the upgrading of enterprise information flow; the capital flowing between more and more enterprises tend to be conducted by way of online payment.

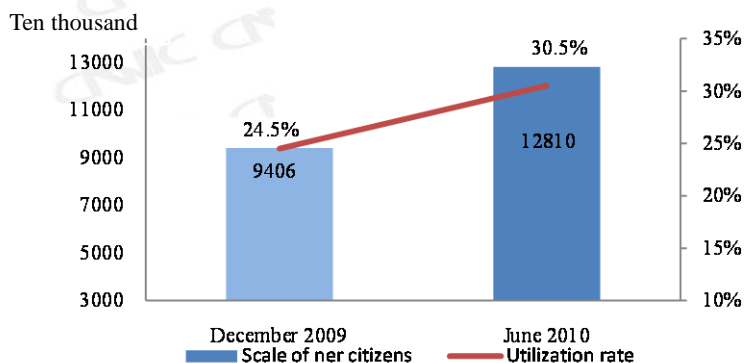


Fig. 22

Comparison on

online payment users from December 2009 to June 2010

3. Travel ordering

The travel ordering in China occupies a relatively small proportion, but takes on a trend of faster growth. Until June, 2010, the utilization rate of travel ordering has reached 8.6% and the number of users has reached 36.12 million, with an increase of 19.4% in the half year.

The user group to make travel ordering through the internet constantly increases; meanwhile, mobile e-commerce in China speeds up its step towards online travel ordering industry. In the first half year of 2010, travel ordering websites in China have started, one by one, to establish mobile terminal and promoted mobile ordering function, opened mobile websites to realize hotel and air ticket ordering services. Seen from the user end of travel ordering, potential user group enjoys a huge user group. The coverage rate of travel ordering users among mobile net citizens is high and the standardization of travel ordering mobile products is suitable for mobile platform exhibition, therefore, the future travel ordering will also embrace a quicker growth.

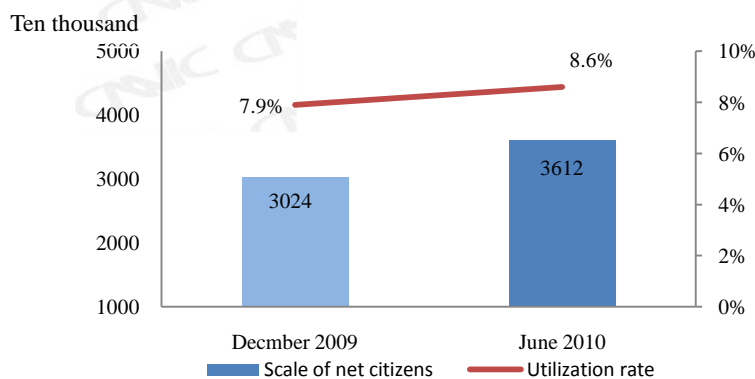


Fig. 23 Comparison on travel ordering users from December 2009 to June 2010

(III) Exchange and Communication

1. Instant messaging

Until June 2010, the number of instant messaging users in China has reached 304 million, with an increase of 72.4%. Compared to the end of 2009, the utilization rate of instant messaging obtains a slight recovery, which has a close relationship with the promotion of mobile instant messaging. At preset, the users of instant messaging only using mobile

accounts to 8.5% and their number has reached 25.85 million.

By analyzing reasons, on the one hand, the development of mobile internet lays a foundation to the application of mobile instant messaging. Especially in some areas and populations with poorer internet access conditions, the role becomes more obvious; on the other hand, as a kind of “free” communication service, the integration between price advantage of instant messaging and convenience for utilization of mobile communication devices will surely improve user’s willing to use mobile instant messaging. Therefore, with the popularization of mobile internet, the mobile instant messaging will also keep growth; however, it still face the threatening from friend making websites as for instant messaging of PC end.

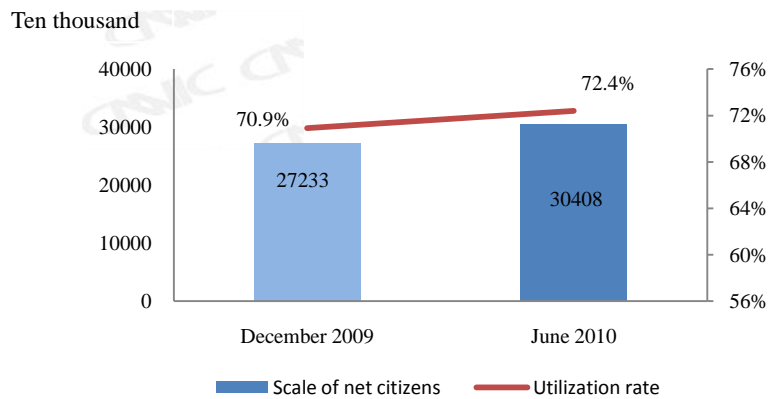


Fig. 24 Comparison on instant messaging users from December 2009 to June 2010

At present, there are 47.5% overlapped users, who use instant messaging by both computer and mobile terminals, in all instant messaging users. The users of instant messaging using mobile account to 50% of all instant messaging users; the users only using computer account to 44%; and the users only using mobile account to 8.5%.

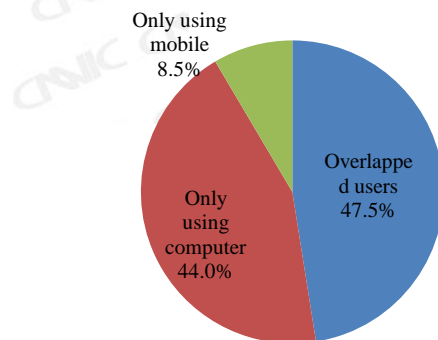


Fig. 25 Comparison on terminals utilized by instant messaging users

2. Blog

Until June 2010, the scale of users to use blog has been enlarged to be 231 million, with an increase of 4.5%. Compared with other internet services, it obtains a smaller increase, which is mainly determined by the nature of blog. As for new net citizens, blog is an information acquisition channel more, the function of which on internet inlet is not obvious. Besides, social exchange websites and blogs are functionally overlapped. Therefore, the rapid growth of social exchange websites also impacts the utilization of blogs.

Seen from development situations, the media value of blogs will be furthered promoted. In the early development period of blog in China, people mainly focused on personal exhibition. However, with the increasingly greater impact of blogs of mechanism and celebrity, the information transmission of blog will also transit from the previous personal information shared among a few people to that shared among a large population, which make it be of scale. It can be predicted that the trend of we media will be more obvious and blog and micro blog will also become the main driving force for the development of we media.

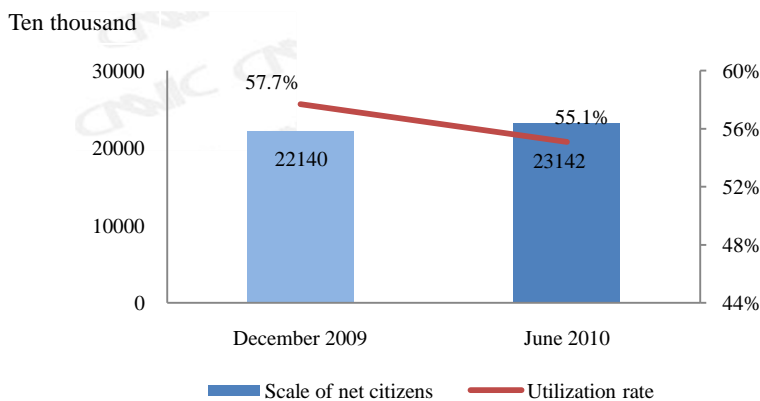


Fig. 26 Comparison on blog users from December 2009 to June 2010

3. Social Exchange Website

Until June 2010, the number of net citizens who use social exchange websites has reached 210 million, with the utilization of 50.1%. There have been 34.55 million newly-added users in the half year, with an increase of 19.6%.

The rapid development of social exchange website has much relationship with its

characteristics. Firstly, the social exchange website can be thought to be a combination of internet services, which can provide multiple of internet services such as blog, forum, video and game, etc.; in addition, most of the information is through “filtering of second time”, or information screening of good friends, thus the information is of high quality and improves users’ utilization experience. Secondly, most of the information from social exchange websites is provided among friends and the attention on friends enlarges users’ utilization cohesion on social exchange websites. Finally, social exchange websites base on the concept of SNS social personal exchange and the demand of such social exchange helps it to spread among extensive groups, with a fine user foundation. It can be estimated that the application and width of social exchange websites will be further promoted with the development of mobile internet.

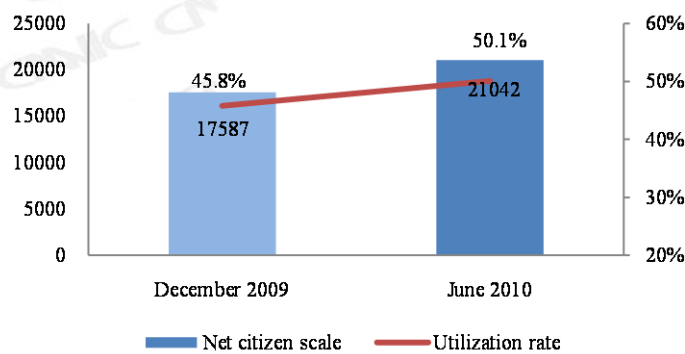


Fig. 27 Comparison on social exchange website users from December 2009 to June 2010

Among social exchange website users, the overlapped users using both computer and mobile have reached 39.1%. Due to the immanency and portability of surfing the internet using mobile, there are 98.27 million users who log on social exchange websites, 46.7% of the total social exchange website users.

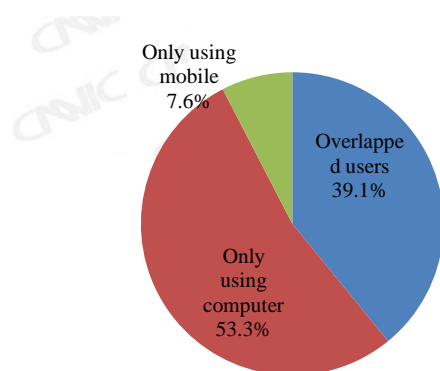


Fig. 28 Comparison on terminals utilized by social exchange uses

(IV) Web Entertainment

1. Web game

The web game users continue to increase to 296 million, with an increase of 31.56 million and 11.9% compared to the end of 2009. The web game has been keeping the trend of rising in the web entertainment applications and its utilization rate has increased from 68.9% in the end of 2009 to 70.5% at present.

The increase of China web game users has continued to ease and the game type segmentation and production quality lifting has become the focus of industry. Analyzed from the increase rate of game users, it is only 11.9% for a half year, which is the lowest in the recent five years. A lower user increase rate means that the scale of China web game users has tended to be saturated, which will promote the transformation of overall web game industry.

Firstly, segmentation of China web game market: on the one hand, it is a segmentation of game products; it is to operate products and improve the pertinence of products according to the demands of different groups; on the other hand, it is a segmentation of regional market; In the situation where first tier cities obtain a higher internet popularity rate, the second and third tier cities own much broader development space. Secondly, China web game products transits towards the level of quality competition and web game tends to be deep in the selection and utilization of games, thus promoting the lifting of China web games from quantity to quality. Finally, slow user growth, tightening supervision and management policy as well as similar product property lead to more serious development

situations of small and medium manufacturers. In the future, China web game market will be further centralized and the eliminating situations facing such manufacturers will become more serious.

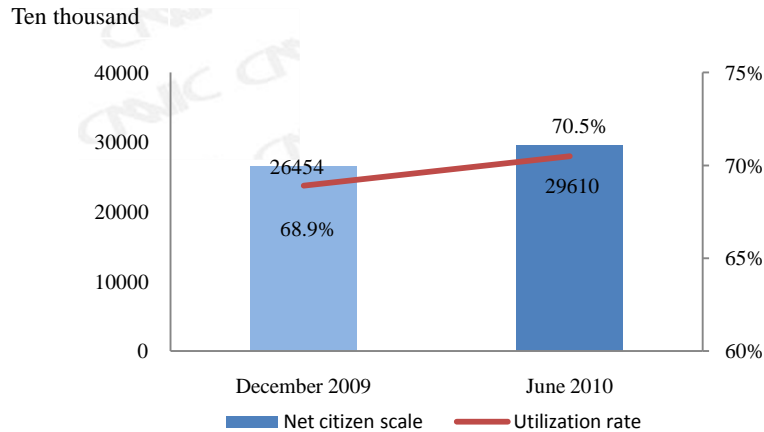


Fig. 29 Comparison on web game users from December 2009 to June 2010

2. Network literature

Until June 2010, the utilization rate of online culture users has reached 44.8% and the number of them has reached 188 million, with an increase of 15.7% compared to the end of 2009. The online culture is the one with the largest user scale increase among entertainment applications of internet.

Firstly, the commercial promotion of network literature is the main driving force to urge the rapid growth of network literature users. In 2010, the pace for network literature commerce has been speeded up and the literature website has taken steps such as adding investment value, intensifying publicity strength and attacking infringement and piracy so to motivate the writers' enthusiasm for creation and enrich the content of cultural works, thus attracting users to be widely engaged; meanwhile, the telecom and terminal operators have started to get involved in network literature market and develop new spreading channel for network literature so to network literature cover more users. Secondly, the growth of mobile net citizens in the 3G Age and huge demand of users on wireless content improve the utilization rate of mobile online and produce a role of promotion to the growth of network literature users. Thirdly, the technical upgrading and constant popularization of e-book reader, PSP, etc enrich the spreading carrier of network

literature and promote the network literature to a user group of a larger scope.

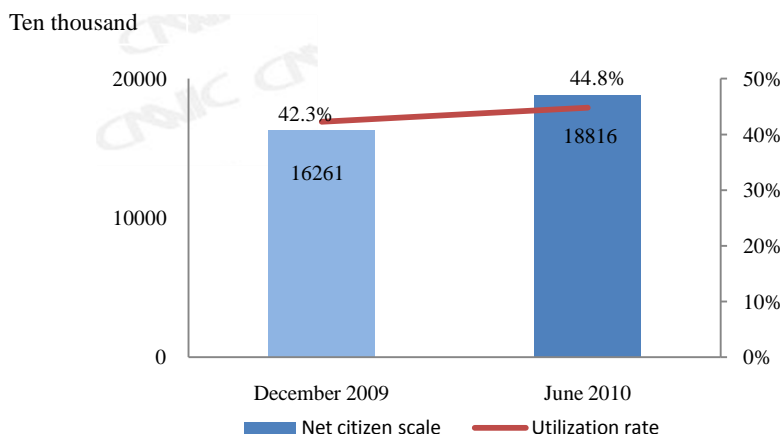


Fig. 30 Comparison on network culture users from December 2009 to June 2010

At present, there are 36.4% network literature users who read network literature works by the way of online/downloading only through computer and 30.7% by the way of online/downloading only through mobile, which shows that network culture users differ in the utilization of the two types of terminals, computer and mobile.

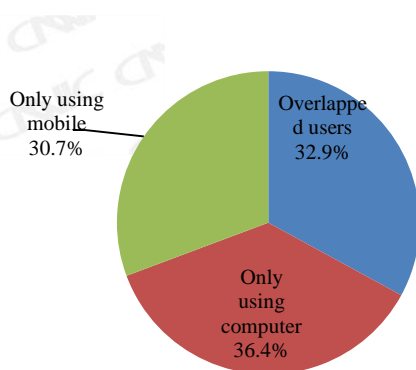


Fig. 31 Comparison on terminal utilization of network culture users

3. Web video

At present, the number of web video users has reached 265 million and the utilization rate has increased from 62.6% in the end of 2009 to 63.2%. The web video has ended the situation of decreasing users in the previous year and the utilization rate has started to rise slowly. In the first half year of 2010, there are 25 million newly added web video users, with an increase of 10.4%.

Since the video industry was screened and rectified from 2008 to 2009, the development

of domestic video industry has started to march towards standardization and order. Based on optimized market environment, in the first half year of 2010, China web video has taken on a stable development trend and owned more extensive user coverage and constantly increased users; meanwhile the sales methods of video websites have been constantly innovated and the recognition of advertisers on video website marketing. With the deployment and implementation of the policy for integration of telecommunications networks, cable TV networks and the internet, China web music will embrace a new development opportunity. The improvement of video transmission rate and increase of access channel will make web video obtain more extensive support from users, become an important means for public video consumption and rapidly lift the media and commercial value of web video. However, much higher requirements are raised on the bandwidth service ability and content making.

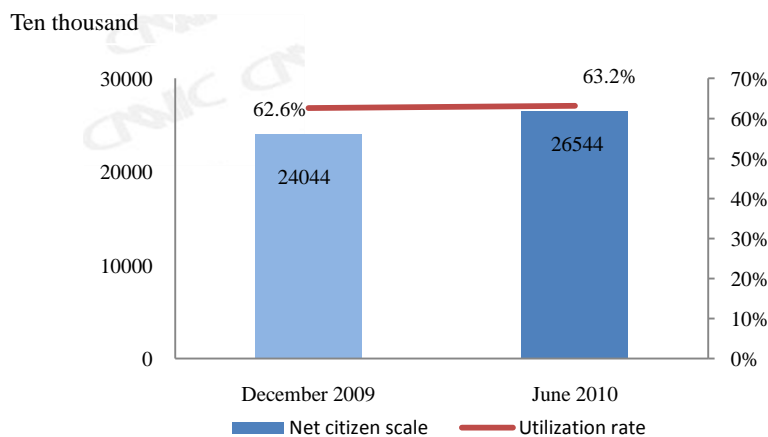


Fig. 32 Comparison on web video users from December 2009 to June 2010

II . Network security and Trusted Environment

In the first half year of 2010, there are 59.2% net citizens who have experienced virus or Trojan attack during the process of internet utilization and the number of net citizens who have experienced such insecure incidents is 250 million.

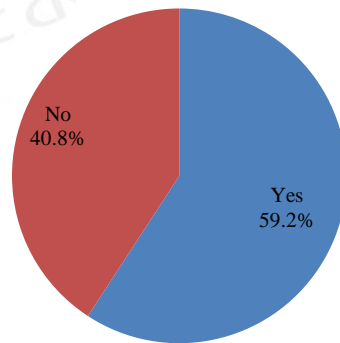


Fig.33 whether experiencing virus or Trojan attack or not in the first half year

In the first half year of 2010, there are 30.9% net citizens whose accounts or passwords have been stolen. The issue of network security still limits Chinese net citizens to develop towards network applications at a deep level.

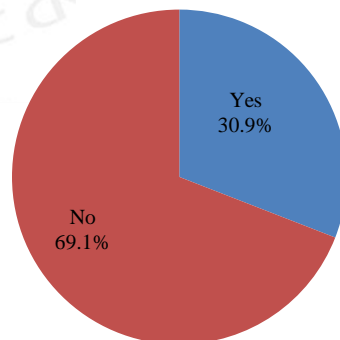


Fig.34 whether accounts or passwords have been stolen in the first half year

It is founded according to investigation that 82% e-commerce website visitors fear accessing faking websites; while if there is no way for them to acquire further identification information of such websites, 86.9% will choose to quite from the exchange. There is a urge demand for construction of more trustable and reliable network environment as for the development of internet towards the application of commercial exchange.

Chapter VI Analysis on Behavior of Internet Access using Mobile

I . Application of Internet Access using Mobile

In the first half year of 2010, mobile instant messaging remains the application with the highest permeability among internet access applications of net citizens using mobile, to 61.5%. There are many reasons for such phenomenon. First of all, the huge user scale and high user cohesion of instant messaging devices guarantee the existence of demand for mobile instant chatting. In addition, at present, as instant messaging devices are highly attractive, many mobile manufacturers install them in the mobile phones as standard software, which helps the utilization of users and improves the possibility of users to use mobile instant messaging devices.

Secondly, mobile search ranks the second (48.4%) in all utilization rates of internet access applications of net citizens using mobile. As mobile is poor in browse performance and input proficiency, mobile net citizens get more used to enter into all types of content pages by unified inlet. Thus, the application of search navigation continues to keep its pioneering position of user permeability.

The permeability of mobile social exchange website has increased fast in the first half year of 2010, to 35.5%, which shows a fine trend of growth. The social exchange trend of internet has become irresistible and occupied an important position in the traditional internet. However, mobile internet has been imitating and drawing lessons from internet, therefore, its overall development is slower than the traditional internet. In the future, the

social exchange application of mobile will embrace an even greater development.

From the view of content, the internet access using mobile still concentrates on the leisure and entertainment application and the permeability of applications such as music, culture, game, video, etc. ranks the first places; while the permeability of applications such as mobile mail and payment, etc. is lower. This is due to the fact that the mobile net citizens in general are not centralized in the commercial populations of high and medium end; the ordinary mass is the subject of mobile net citizens; and the mobile tends to entertainment terminal more.

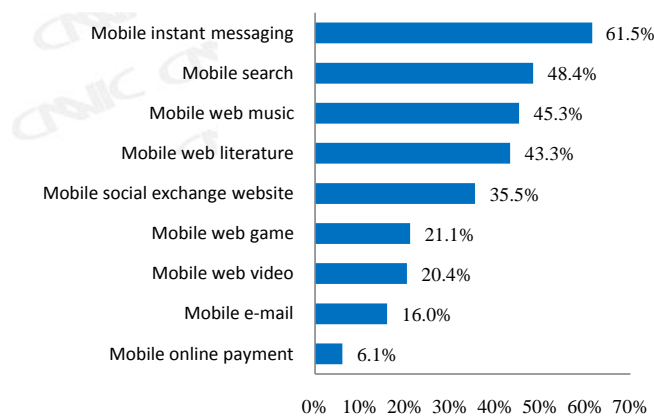


Fig. 35 Network application of mobile net citizens

II. Structural Features of mobile net citizens

(I) Gender structure

Compared to the end of 2009, the proportion of male among all mobile net citizens has slightly increased to 57.1%, which is consistent with the changing trend of gender structure of all net citizens. But the proportion of male users among mobile net citizens is larger than that of all net citizens. As for the utilization of mobile as internet access terminal, the male group shows a more obvious advantage.

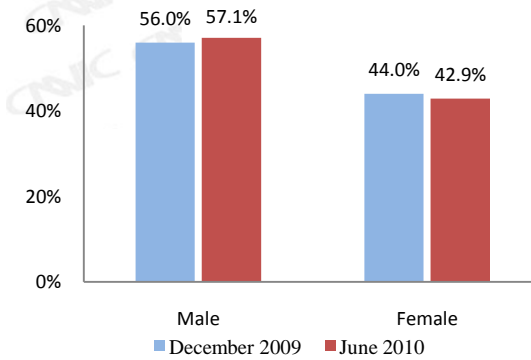


Fig. 36 Comparison on gender structure of mobile net citizens from December 2009 to June 2010

(II) Age structure

In the first half year of 2010, the age of mobile net citizens has developed towards maturity. Among mobile net citizens, the proportion aged from 30 to 49 obviously increases, with an increase of 3.7% and the proportion aged from 10 to 19 falls by 2.1%.

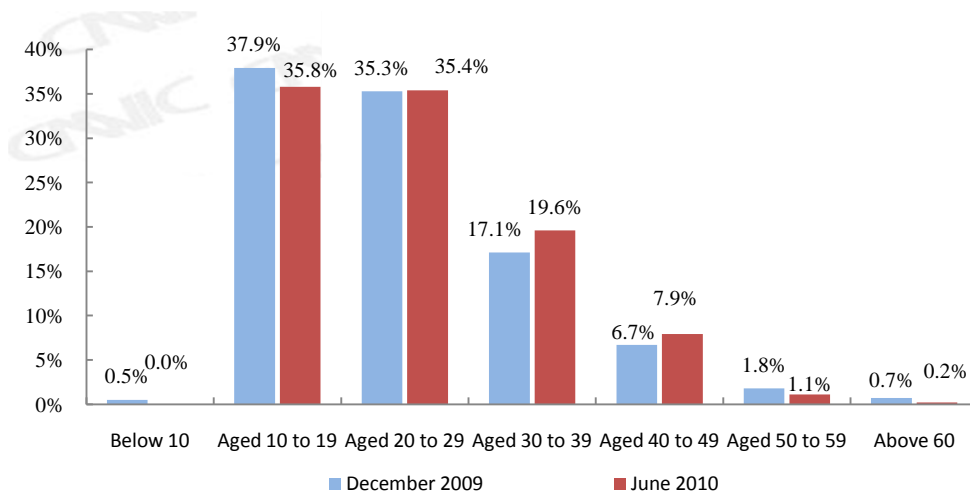


Fig. 37 Comparison on age structure of mobile net citizens from December 2009 to June 2010

(III) Education background structure

Compared with the education background structure of all net citizens, the education background of mobile net citizens is relatively low. In the first half year of 2010, the education background of mobile net citizens has been lifted. The proportion of net citizens with the background below primary school and junior middle school obviously decreases and that with the background of junior middle school and the above increases.

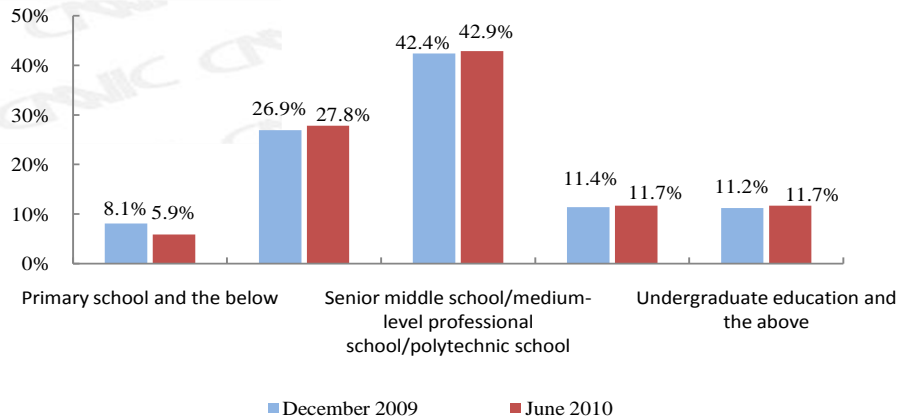


Fig. 38 Comparison on education background of mobile net citizens from December 2009 to June 2010

(IV) Occupational structure

Compared with the end of 2009, except for decreased proportion of workers of industry and service, professional technicians, rural migrant workers and the unemployed, the proportion of other vocational types among mobile net citizens has slightly increased. Under the trend of integration for internet access using both mobile and computer, internet access using mobile has been penetrating towards all groups.

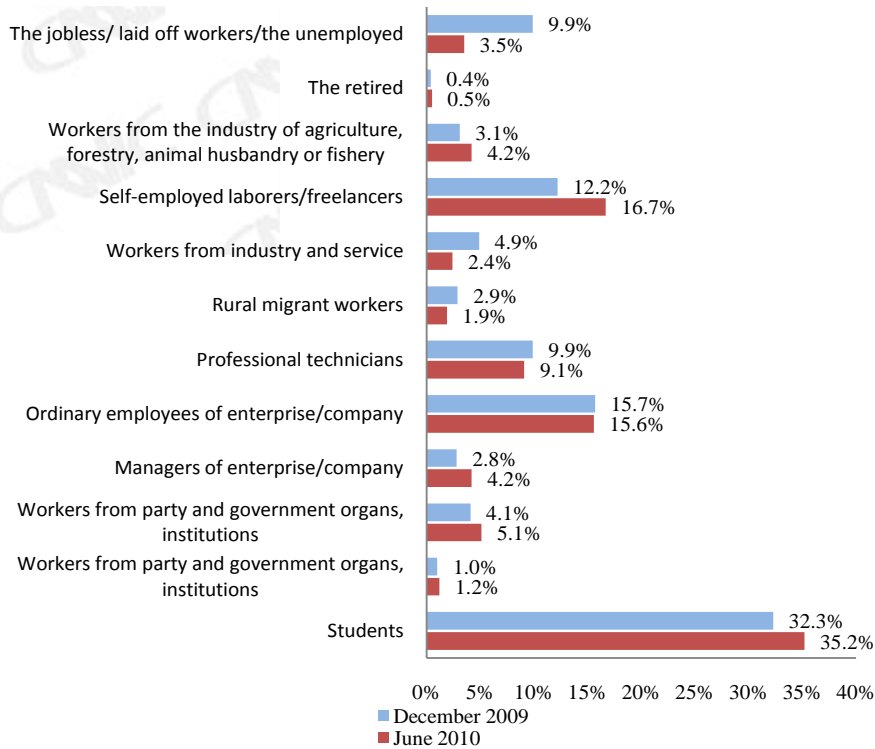


Fig. 39 Comparison on occupational structure of mobile net citizens from December 2009 to June 2010

(V) Income structure

As the occupational structure of net citizens is separated, the income structure of mobile net citizens also changes. Until June 2010, the proportion of mobile net citizens with the average monthly income below 500 yuan has increased to 21.9% and that from 3,001 to 8,000 has increased to 12.9%.

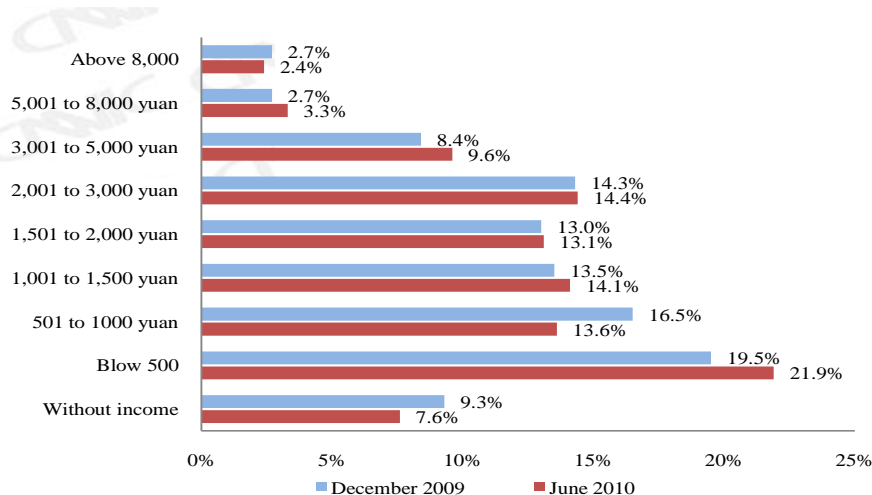


Fig. 40 Comparison on income structure of mobile net citizens from December 2009 to June 2010

(VI) Rural and urban structure

Until June 2010, the proportion of urban and rural mobile net citizens in China is 71.1:28.9%. The rural population among mobile net citizens remains to be higher than that of the overall net citizens. However, as there is an integration trend of surfing the internet using both mobile and computer, the mobile net citizens in rural areas have slightly decreased compared to the end of 2009. The rural and urban structure of mobile and overall net citizens tends to be identical.

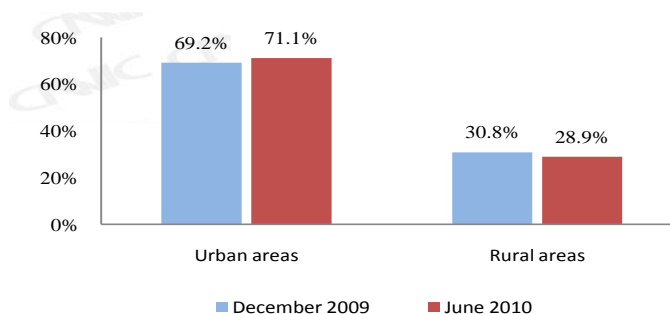


Fig. 41 Comparison on rural and urban structure of mobile net citizens from December 2009 to June 2010

Appendix 1 Basic Resources of Internet

Table 1: Number of IPv4 addresses in regions of China

Region	Address quantity	Equivalence
China Mainland	250,452,480	14A+237B+154C
Taiwan	29,629,440	1A+196B+28C
Hong Kong	8,892,160	135B+175C
Macaw	261,376	3B+253C

Data Source: APNIC, CNNIC

Table 2: IPv4 address allocation according to unit in China Mainland

Name of Unit	Address quantity	Equivalence
China Telecommunications Corporation	92,624,896	5A+133B+88C
China United Network Communications Group Co., Ltd	53,789,440	3A+52B+195C
China Mobile Limited	34,045,952	2A+7B+128C
China Education and Research Network	14,880,256	227B+14C
State Information Center	4,194,304	64B
Guangxi Shihu Science and Technology Co., Ltd.	2,990,080	45B+160C
Beijing Shenzhou Great Wall Telecom Technology Development Center	1,581,056	24B+32C
Beijing Education Information Network Service Center Co., Ltd.	1,572,864	24B
Beijing Guotong Intercommunication Technology Co.	1,536,000	23B+112C
Oriental Cable Network Co., Ltd.	1,400,832	21B+96C
Great Wall Broadband Network Service Co., Ltd.	1,359,872	20B+192C
Beijing Teletron Telecom Engineering Co., Ltd.	1,332,224	20B+84C
Beijing Chengyi Shidai Network Technology Engineering Co., Ltd.	1,048,576	16B
Beijing Century Intercommunication Broadband Data	772,096	11B+200C

Center Co., Ltd.		
CECT-CHINACOMM Communications Co., Ltd.	749,568	11B+112C
Beijing Wanwang Zhicheng Science and Technology Co., Ltd.	729,088	11B+32C
China Cable Television Network Co., Ltd.	663,552	10B+32C
Beijing Founder Broadband Network Technology Co., Ltd.	663,552	10B+32C
Beijing Weishi Chuangjie Technology Development Co., Ltd.	589,824	9B
Huabei Oil Communication Co.	557,056	8B+128C
China Video Communication Holdings Co., Ltd.	524,288	8B
CITIC Networks Co., Ltd.	524,288	8B
Beijing Kuancom Network Technology Co., Ltd.	524,288	8B
Shenzhen Topway Video Communication Co., Ltd.	524,288	8B
Beijing Bitong United Network Communications Group Co., Ltd	491,520	7B+128C
Guangdong Jinwanbang Technology Investment Co., Ltd.	479,232	7B+80C
Beijing Gehua CATV Network Co., Ltd.	475,136	7B+64C
Beijing New-billion Telecom Technology Co., Ltd.	458,752	7B
Beijing Shuxunda Communication Technology Co., Ltd.	446,464	6B+208C
Daqing Zhongji Petroleum Communication Construction Co., Ltd.	438,272	6B+176C
Shannxi TV and Broadcasting Internet Media Co., Ltd.	438,272	6B+176C
China Science and Technology Network	428,032	6B+136C
Beijing Broad Netcom Telecom Technology Co., Ltd.	425,984	6B+128C
Beijing FibrLINK Communications Co., Ltd.	417,792	6B+96C
Beijing SRIT NETech Co., Ltd. (Beijing)	385,024	5B+224C

Beijing Shidai Hongyuan Communication Technology Co., Ltd.	327,680	5B
Jiangxi Radio and TV Network Transmission Co., Ltd.	327,680	5B
Guangzhou Radio and TV Network Co., Ltd.	327,680	5B
Guangzhou Etrunk Network Telecommunication Co., Ltd.	299,008	4B+144C
China Netcom Broadband Corporation Ltd.	294,912	4B+128C
Foshan Ruijiang Science and Technology Co., Ltd.	278,528	4B+64C
Jinan Guangdian Jiahe Broadband Network Corporation Ltd.	270,336	4B+32C
Hubei Chutian Video Communication Network Co., Ltd.	262,144	4B
Fujian Fiber Intercommunication Co., Ltd.	262,144	4B
Guangdong Cable Television Network Co., Ltd.	262,144	4B
Shenzhen Yingda Communication Technology Co., Ltd.	249,856	3B+208C
263 Network Communication Co., Ltd.	220,160	3B+92C
Ningbo Netcom Inforport Co., Ltd.	212,992	3B+64C
China Motion Telecom Co., Ltd.	204,800	3B+32C
Shenzhen Wotone Network Development Co., Ltd.	196,608	3B
Chongqing Cable TV Network Co., Ltd.	163,840	2B+128C
Tianjin Broadcast and TV Network Co., Ltd.	143,360	2B+48C
Beijing Xirang Media and Culture Co., Ltd.	133,120	2B+8C
SVA Information Industry Co., Ltd.	131,072	2B
Beijing OptiEast Network Corporation Limited	131,072	2B
Beijing Hengchuan Jianye Science and Technology Co., Ltd.	126,976	1B+240C
Shanghai Minhang TV and Broadcasting Technology Development Co., Ltd.	122,880	1B+224C

Golden-bridge Netcom Communication Co., Ltd.	122,880	1B+224C
China Entercom Communication Technology Co., Ltd.	98,304	1B+128C
Langfang Development Area Huarui Xintong Network Technology Co., Ltd.	81,920	1B+64C
Foshan Shitong Broadband Network Co., Ltd.	81,920	1B+64C
Beijing China Fiber Network Communication Technology Co., Ltd.	73,728	1B+32C
Coca Cola Enterprise Management (Shanghai) Co., Ltd.	73,728	1B+32C
Hangzhou Ali Information Service Co., Ltd.	73,728	1B+32C
Beijing Baidu Wangxun Technology Co., Ltd.	69,632	1B+16C
Shanghai Bailong Network Technology Co., Ltd.	67,584	1B+8C
Shanghai Aorong Information Technology Service Co., Ltd.	65,536	1B
Shanghai HP Telecom Co., Ltd.	65,536	1B
Jinhanwang Technology Co., Ltd.	65,536	1B
Hangzhou Silk Road Telecommunication Technology Co., Ltd.	65,536	1B
Beijing Neteon Technology Co., Ltd.	65,536	1B
Tianjin Xinbei Broadband & Digital Network Co., Ltd.	65,536	1B
Beijing Heju Digital Technology Co., Ltd.	65,536	1B
China Netcom Communication Group Company Chongqing Branch	65,536	1B
China Digital Port Technology Co., Ltd.	65,536	1B
China TravelSky Holding Company	65,536	1B
Anhui Education and Research Network Center	65,536	1B
Shantou Tianying Information Technology Co., Ltd.	65,536	1B
Shenzhen Nova Technology Development Co., Ltd.	65,536	1B
Beijing CNLink Networks Limited	65,536	1B

Beijing CAPNET Information Service Co., Ltd.	65,536	1B
Sichuan TV and Broadcasting Network Co., Ltd.	65,536	1B
Shanghai Hanwei Information Technology Co., Ltd.	65,536	1B
Beijing Hangshu Broadband Network Technology Co., Ltd.	65,536	1B
Xiamen TV and Broadcasting Network Co., Ltd.	65,536	1B
Pingdingshan Coal Industry Group Information Communication Technology Development Co., Ltd.	65,536	1B
21ViaNet (Shanghai), Inc.	65,536	1B
China International E-commerce Center	65,536	1B
Airway Communication Group Co., Ltd.	65,536	1B
Jinhanwang Technology Co., Ltd.	65,536	1B
Beijing Jinfeng Weiye Technology Co., Ltd.	65,536	1B
Datong Coal Mine Group Communications Co., Ltd.	65,536	1B
Dagang Oilfield Communications Co.	65,536	1B
Liaoning Oriental Star Broadband Co., Ltd.	65,536	1B
Xiamen TV and Broadcasting Network Co., Ltd.	65,536	1B
Shanghai Yovole Computer Network Co., Ltd.	65,536	1B
Shenzhen Tencent Computer System Co., Ltd.	65,536	1B
Jiuzhou Changxiang Network Technology (Beijing) Co., Ltd.	65,536	1B
Hebei TV and Broadcasting Information Network Group Co., Ltd.	65,536	1B
China Cable Network Co., Ltd. Wenzhou Branch	65,536	1B
Sub-total	231,983,360	13A+211B+201C
Other units	18,469,120	1A+25B+209C
Total	250,452,480	14A+237B+154C

Data source: APNIC, CNNIC

Note 1: As a national internet registrar (NIR) of China recognized by APNIC and approved by Ministry of

Industry and Information Technology, has called ISP at home with some scale and Influence to form IP Address Allocation Alliance. There are 270 members in the Allocation Alliance of CNNIC at present, with 58,835,456 IPv4 addresses, equivalent to 3.5A. Most of the units above are members of IP Address Allocation Alliance, CNNIC.

Note 2: IPv4 Address Allocation Table only lists the units whose IPv4 address quantities are not less than 1B.

Note 3: The deadline for the above statistics is June 30, 2010.

Table 3 Number of IPv6 addresses in regions of China

Region	IPv6 Quantity (/32)
China Mainland	395/32
Taiwan	2314/32
Hong Kong	39/32
Macaw	2/32

Table 4 IPv6 Allocation of China Mainland

Name of Unit	IPv6 Quantity (/32)
China Telecommunications Corporation	258
China Education and Research Network	16
Beijing Tiandi Hulian Information Technology Co., Ltd.	16
Beijing Shenzhou Great Wall Telecom Technology Development Center	8
China United Network Communications Group Co., Ltd	2
China Mobile Limited	2
China Southern Power Grid Co., Ltd.	2
China Internet Network Information Center	1
China Science and Technology Network	1
China International E-commerce Center	1
Beijing Teletron Telecom Engineering Co., Ltd.	1

China Netcom Communication Group Company Chongqing Branch	1
Tianxun Ruida Communication Technology Co., Ltd. , Dongguan Bolu Telecom Branch	1
Beijing Wanwang Zhicheng Science and Technology Co., Ltd.	1
Beijing Software and Information Service Industry Promotion Center	1
CITIC Group Company, Division of Information Management	1
Oriental Cable Network Co., Ltd	1
Beijing Guxiang Information Technology Co., Ltd.	1
Great Wall Broadband Network Service Co., Ltd.	1
Hangzhou Silk Road Telecommunication Technology Co., Ltd.	1
Pingdingshan Coal Industry Group Information Communication Technology Development Co., Ltd.	1
Xinhua News Agency	1
Beijing Founder Broadband Network Technology Co., Ltd.	1
China Organizational Name Administration Center	1
Beijing Fibmlink Communications Co., Ltd.	1
Hangzhou Ali Information Service Co., Ltd.	1
Fujian Fiber Intercommunication Co., Ltd.	1
Hangzhou Koukouxianchuan Network Technology Co., Ltd.	1
CITIC Networks Co., Ltd.	1
Shanghai Feitong Network Technology Co., Ltd.	1
Shanghai HP Telecom Co., Ltd.	1

China Satellite Navigation and Communications Co., Ltd.	1
Guangdong Jinwanbang Technology Investment Co., Ltd.	1
Communication Science And Technology Co., Ltd. Of Changchun FAW	1
Computer Center , National Bureau of Statistics of China	1
Airway Communication Group Co., Ltd.	1
Shanghai Minhang TV and Broadcasting Technology Development Co., Ltd.	1
SVA Information Industry Co., Ltd.	1
Beijing Unihub Global Network Co., Ltd.	1
Zhongyuan Petroleum Survey Bureau, Division of Communication Management	1
Shanghai Information Network Co., Ltd.	1
Beijing Shenwei Xunteng Technology Development Co., Ltd.	1
Liaohu Oilfield Communications Co.	1
Shanghai DMT Information Network Co., Ltd.	1
Beijing Newnet Technology Development Co., Ltd.	1
Beijing Gaohua Securities Co., Ltd.	1
Union Life Insurance Co., Ltd.	1
Zhejiang Alibaba E-commerce Co., Ltd.	1
Network Information Center, University of Science and Technology of China	1
Shanghai Bailong Network Technology Co., Ltd.	1
Beijing Zhongguancun Software Park Development Co., Ltd.	1

Golden-bridge Netcom Communication Co., Ltd.	1
Chengdu Inforport Co., Ltd.	1
China Motion Telecom Co., Ltd.	1
Beijing Heju Digital Technology Co., Ltd.	1
Beijing Baidu Wangxun Technology Co., Ltd.	1
China Cable Network Co., Ltd. Wenzhou Branch	1
Shenzhen Topway Video Communication Co., Ltd.	1
Daqing Zhongji Petroleum Communication Construction Co., Ltd.	1
Guangzhou Etrunk Network Telecommunication Co., Ltd.	1
Sichuan Yilong TV and Broadcasting Network Co., Ltd.	1
Anhui Education and Research Network Center	1
Zhanjiang Wantong Dianxun Co., Ltd.	1
Pacnet Business Solutions (China))	1
Hangzhou Alibaba Advertising Co., Ltd.	1
Huabei Oil Communication Co., Information Center	1
Pingan Technology (Shenzhen) Co., Ltd.	1
Chongqing Cable TV Network Co., Ltd.	1
China Huadian Group Co., Ltd.	1
Shanghai Chenyi Network Technology Co., Ltd.	1
Shenzhen Nanling Technology Development Co., Ltd.	1
Guangdong Yingtong Network Investment Co., Ltd.	1
Beijing Neteon Technology Co., Ltd.	1
Shanghai Hanwei Information Technology Co., Ltd.	1
Beijing Guotong Intercommunication Technology Co.	1
Beijing Guotong Intercommunication Technology Co.	1
Beijing Guotong Intercommunication Technology Co.	1
Beijing Guotong Intercommunication Technology Co.	1

Tianjin Broadcast and TV Network Co., Ltd.	1
China Video Communication Holdings Co., Ltd.	1
Beijing Zhongyi Yingshi Communication Technology Co., Ltd.	1
Institute of High Energy Physics, Chinese Academy of Sciences	1
Shanghai Xinjue Information Technology Co., Ltd.	1
Beijing Online Communication Technology Limited	1
Shandong Information Center	1
Hubei Chutian Video Communication Network Co., Ltd.	1
Shanghai Yitong Communication Technology Co., Ltd.	1
Shenzhen Tencent Computer System Co., Ltd.	1
Beijing Xirang Media and Culture Co., Ltd.	1
Beijing Tongniu Information Technology Co., Ltd.	1
Beijing Chengyi Shidai Network Technology Engineering Co., Ltd.	1
China Cultural Relics Information Consulting Center	1
Guangdong Cable Television Network Co., Ltd.	1
263 Network Communication Co., Ltd.	1
China Cable Television Network Co., Ltd.	1
Beijing Sibozhanke Technology Co., Ltd.	1
Kingdom-Union Technology (Beijing) Co., Ltd.	1
Shenzhen Hairuiya Technology Co., Ltd.	1
Total	395

Data source: APNIC, CNNIC

Note 1: /32 in IPv6 Address Allocation Table is an address expression method of IPv6 and the corresponding address quantity is $2^{(128-32)} = 2^{96}$.

Note 2: The deadline for the above statistics is June 30, 2010.

Table 5 Number of IPv4 addresses in provinces of China

Province	Proportion
Beijing	21.0%
Guangdong	9.7%
Zhejiang	5.4%
Shanghai	5.1%
Jiangsu	5.0%
Fujian	4.7%
Shandong	3.5%
Henan	3.0%
Hebei	2.9%
Sichuan	2.7%
Hubei	2.6%
Henan	2.3%
Chongqing	1.9%
Heilongjiang	1.8%
Liaoning	1.7%
Shannxi	1.6%
Tianjin	1.5%
Anhui	1.5%
Guangxi	1.5%
Jiangxi	1.3%
Shanxi	1.3%
Jilin	1.1%
Yunnan	1.0%
Inner Mongolia	1.0%
Hainan	0.6%
Guizhou	0.6%

Gansu	0.5%
Xinjiang	0.4%
Ningxia	0.2%
Qinghai	0.2%
Tibet	0.1%
Others	12.4%
Total	100%

Data source: APNIC, CNNIC

Note 1: The above statistics is for the province where IP address owners live.

Note 2: The deadline for the above statistics is June 30, 2010.

Table 6 Number of domain name and CN domain in provinces of China

Province	Domain name		Including: CN domain	
	Quantity	Proportion out of total domain names	Quantity	Proportion out of total CN domains
Beijing	2,319,472	20.7%	1,777,987	24.5%
Guangdong	1,211,749	10.8%	631,888	8.7%
Zhejiang	1,075,975	9.6%	680,104	9.4%
Shanghai	825,961	7.4%	368,164	5.1%
Jiangsu	806,391	7.2%	504,587	7.0%
Fujian	501,740	4.5%	264,672	3.7%
Shandong	448,231	4.0%	199,225	2.8%
Henan	271,291	2.4%	214,552	3.0%
Hebei	255,928	2.3%	97,951	1.4%
Sichuan	253,538	2.3%	87,141	1.2%
Hubei	247,427	2.2%	172,549	2.4%
Henan	214,566	1.9%	100,173	1.4%
Chongqing	181,421	1.6%	101,528	1.4%
Heilongjiang	117,622	1.1%	64,316	0.9%
Liaoning	110,782	1.0%	61,019	0.8%
Shannxi	109,698	1.0%	58,736	0.8%
Tianjin	103,262	0.9%	43,928	0.6%
Anhui	99,446	0.9%	68,919	1.0%
Guangxi	84,847	0.8%	45,036	0.6%

Jiangxi	76,447	0.7%	49,432	0.7%
Shanxi	74,964	0.7%	37,746	0.5%
Jilin	66,936	0.6%	32,838	0.5%
Yunnan	50,929	0.5%	22,607	0.3%
Inner Mongolia	46,415	0.4%	25,913	0.4%
Hainan	36,952	0.3%	22,157	0.3%
Guizhou	35,876	0.3%	15,687	0.2%
Gansu	26,604	0.2%	10,229	0.1%
Xinjiang	21,834	0.2%	11,694	0.2%
Ningxia	16,755	0.1%	6,951	0.1%
Qinghai	13,334	0.1%	2,874	0.0%
Tibet	6,645	0.1%	2,518	0.0%
Others	1,488,862	13.3%	1,459,880	20.2%
Total	11,201,900	100%	7,243,001	100%

Note: The total number of domain names in every province excludes EDU.CN.

Table 7 Number of websites in provinces of China

	Number of Websites	Proportion out of total websites
Beijing	371,579	13.3%
Guangdong	396,536	14.2%
Zhejiang	263,928	9.5%
Shanghai	244,577	8.8%
Jiangsu	151,406	5.4%
Fujian	139,779	5.0%
Shandong	129,734	4.7%
Henan	93,025	3.3%
Hebei	68,395	2.5%
Sichuan	62,584	2.2%
Hubei	61,786	2.2%
Henan	60,476	2.2%
Chongqing	46,085	1.7%
Heilongjiang	45,552	1.6%
Liaoning	45,502	1.6%
Shannxi	40,536	1.5%
Tianjin	33,289	1.2%
Anhui	30,734	1.1%
Guangxi	24,107	0.9%
Jiangxi	23,154	0.8%
Shanxi	21,119	0.8%
Jilin	20,117	0.7%
Yunnan	13,398	0.5%
Inner Mongolia	11,548	0.4%
Hainan	9,745	0.3%
Guizhou	9,567	0.3%
Gansu	6,330	0.2%

Xinjiang	4,496	0.2%
Ningxia	4,049	0.1%
Qinghai	2,395	0.1%
Tibet	1,915	0.1%
Others	350,037	12.6%
Total	2,787,480	100%

Note: The total number of websites in every province excludes EDU.CN.

Table 8 Number of Classified websites under .CN in China

	Quantity	Proportion out of websites under .CN
cn	1256126	61.1%
com.cn	652988	31.8%
net.cn	83931	4.1%
gov.cn	23081	1.1%
org.cn	21822	1.1%
adm.cn	15737	0.8%
ac.cn	1049	0.1%
mil.cn	1	0.0%
Total	2054735	100%

Note: The total number of websites under CN in every province excludes EDU.CN.

Appendix 2 Investigation Support Units

(I) Investigation support websites (without order)

CCTV International	International Online	China Daily Website
Guangming Website	Southern Website	Eastday

(II) Investigation Inlet website (in the sequence of investigation linkage listed by websites)

Netease	Henan Website	Yunnan Info Port
PPS	Sichuan Online	ifeng.com
Heilongjiang Info Port	Soufun	39.net
Tudou.com	Jinling Hotline	Zhongsou.com
Hc360.com	Onlinedown.net	Sznews.com
Sina.com	21CN	TOM SKYPE
6.cn	Youku.com	Kaixin001.com
Eastmoney.com	Joy.cn	Eeo.com.cn
Xaonline.com	Souhu.com	China.com
Huaxun Finance	IT World	Duowan.com
Guizhou Info Port	Dahe.com	Yesky.com

(III) Bandwidth investigation support units

Beijing Communications Co. IDC

(IV) Investigation assistance units (without order)

China Telecommunications Corporation

China United Network Communications Group Co., Ltd

China Mobile Limited

CERNIC

CSTNet

China Telecommunications Broadcast Satellite Corporation

China International E-commerce Center

China Great Wall Intercommunication Network Center

Beijing Dongfang Wangjing Information Technology Co., Ltd.

Beijing Wanwang Zhicheng Science and Technology Co., Ltd.(China Wanwang)

SINONETS CO.,LTD.

Beijing Xinwang Hulian Technology Co., Ltd.

Beijing Xinwang Digital Information Technology Co., Ltd.

Beijing Zhongke Sanfang Network Technology Co., Ltd.

Chongqing Zhijia Information Technology Co., Ltd.(Online Liberation Monument)

Zhongqi Dongli Technology Co., Ltd.

Guangdong Shidai Hulian Technology Co., Ltd (former Zhuhai Shidai Hulian Information
Technology Co., Ltd.)

Xiamen Dongnan Rongtong Online Technology Co., Ltd. (former Xiamen Huashang Shengshi
Network Co., Ltd.)

Xiamen Sanwu Internet Intercommunication Technology Co., Ltd.

Xiamen Zhongziyuan Network Service Co., Ltd.

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