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Pew Internet & American Life PROJECT

a project of the Tides Center

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PEW INTERNET PROJECT DATA MEMO

55% OF ADULT INTERNET USERS HAVE BROADBAND AT HOME OR WORK

HOME BROADBAND ADOPTION HAS INCREASED 60% IN PAST YEAR AND USE OF DSL LINES IS SURGING

The number of Americans with access to high-speed Internet connections either at home or work is growing. As of March 1, the Pew Internet & American Life Project finds that 68 million adult Americans log on via broadband either at home or work. Fully 48 million adult Americans have broadband connections at home.

This is the first time the Project has tried to capture the total broadband universe and the relatively high figures suggest that broadband use is much greater than is widely presumed.

Impatience with tiresomely slow dial-up connections seems to tip home users into the broadband column, and this impatience plays a larger role than price of service in home adoption. Broadband in the home is increasingly the norm for the wealthier and better educated in America, as well as long-time Internet users. But there is evidence that relatively novice Internet users are moving from dial-up to broadband more rapidly than before.

Rural users lag in broadband adoption, and infrastructure availability is a reason for this.

Here are some highlights from the Pew Internet Project's February 2004 survey:[1]

- 55% of all adult Internet users – or 34% of *all* adult Americans – have access to high-speed Internet connections either at home or on the job.
- 39% of adult Internet users – or 24% of *all* adult Americans – have high-speed access at home, an increase of 60% since March 2003.

[1] Between February 3 and March 1, 2004, the Pew Internet & American Life surveyed 2,204 Americans age 18 or over (1,371 Internet users). Margin of error is +/-2 percent points for the full sample and +/-3 percentage points for Internet users. 63% of respondents were Internet users in this survey.

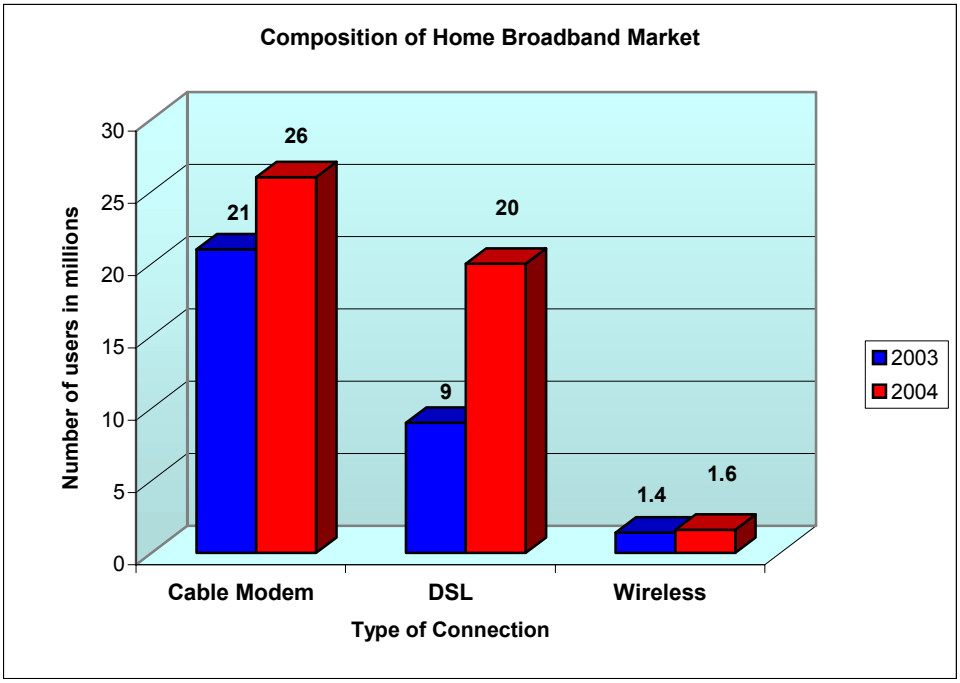
- A surge in subscription to DSL high-speed Internet connections, which has more than doubled since March 2003, is largely behind the growth in broadband at home.
- DSL now has a 42% share of the home broadband market, up from 28% in March 2003.
- For the first time, more than half (52%) of a key demographic group – college educated people age 35 and younger – has broadband connections at home.
- Only 10% of rural Americans go online from home with high-speed connections, about one-third the rate for non-rural Americans.

Fast Internet connections at home

Adoption of high-speed Internet connections in the home grew strongly in the United States in the first several months of 2004, with home broadband penetration standing at 39% among American Internet users by the end of February. This is up from 31% in the Pew Internet Project's prior survey in November 2003. Overall, 48 million American adults had high-speed connections in the home in February 2004. This represents a growth of 60% since March 2003 when 30 million Americans had broadband connections at home. Fully half of this growth has taken place since November 2003, suggesting that it was a broadband holiday season for many Internet users in the winter of 2003/2004. The appendix to this memo shows trends in home broadband adoption since the Pew Internet Project began surveying this issue in June 2000.[2]

At home, the increase in broadband adoption has been driven largely by growth in subscribers to digital subscriber line (DSL) technology. In March 2003, 67% of home broadband users connected via cable modems, while 28% used DSL, and 4% used wireless or fixed-satellite technology. In our latest survey, 54% of home broadband users connected with cable modems, 42% used DSL, and 3% used wireless or fixed-satellite technology. The growing home broadband pie meant that all segments of the market showed growth, but the number of DSL users at home more than doubled since March 2003, while the number of home cable modem users grew by about 24%.

[2] Our May 2003 report, *Broadband Adoption at Home* suggested that growth in high-speed home connections would ease given a declining number of dial-up users who said they wanted to switch to broadband. This prognostication is only partially supported by subsequent events, with growth moderate throughout 2003, but very fast at the turn of the year. The May 2003 report is available at http://www.pewinternet.org/reports/toc.asp?Report=90.



Broadband use in the workplace

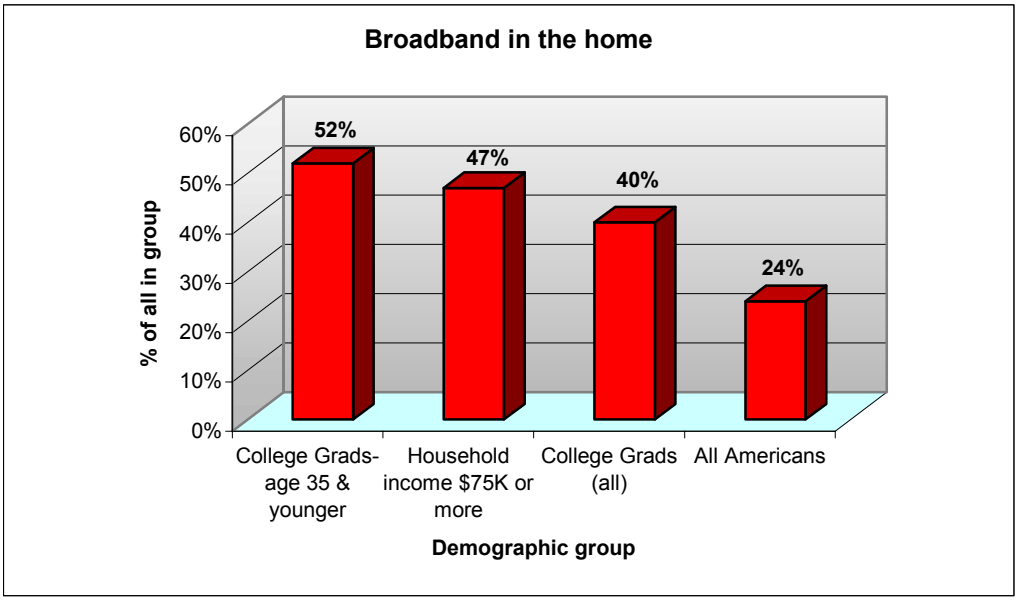
The February 2004 survey asked people whether they have access to a high-speed Internet connection at work. In the survey, 64% of Americans who are employed full or part time go online in the workplace. Of this group, fully 67% go online using a high-speed connection, 16% use dial-up, and 15% don't know what kind of connection they have. Combining home broadband users and those who have high-speed connections at work, 55% of American Internet users have access to a high-speed connection either at home or at work.

The survey did not inquire about the nature of people's jobs, but the demographics of workers who log on via broadband versus those who log on using a dial-up modem suggest that those with better paying jobs have higher quality access at work. More than half (54%) of work broadband users have college degrees and 37% live in households with incomes over $75,000 per year. For dial-up users at work, 40% have college degrees and 26% live in households with incomes over $75,000 per year. Those who do not at all go online from work are much less likely to have college degrees (17%) or live in a household with an income in excess of $75,000 per year (15%).

Broadband adoption among population subgroups

As our November 2003 report *Consumption of Information Goods and Services in the United States* shows, some population groups in America are especially ardent consumers of information technology. About 6% of the population – the Young Tech Elite, who are in their 20s and well-educated – make up a group most likely to have the

latest electronic gadgets and information services. As the graphic below shows, over half of a similar group in our February 2004 survey – college educated people age 35 and younger – has broadband at home. Among people who are relatively well off economically, close to half have home broadband connections.



Although those who have been online longest tend to have broadband in the home, there is evidence that new users are beginning to adopt broadband at home more quickly than before. Among Internet users who have been online for 10 or more years, 56% of those who go online from home have high-speed connections. Among Net users who have been online for less than 3 years, 22% of those who go online from home have broadband connections. However, this is twice the rate of home broadband adoption among online novices when compared with October 2002.

Factors in home broadband adoption

The decision to get broadband in the home seems driven more by impatience with the speed of the dial-up connection than price of service. When asked why they decided to switch to a home broadband connection, 60% of broadband-using respondents said connection speed was more important than price considerations. Few cited price considerations.

Reason cited for switch to broadband at home	
Connection too slow or frustrating	36%
Download files faster	21
Job-related tasks	10
"Always on" connection	7
Use phone & Internet at same time	7
Higher quality connection	5
Easier access to entertainment	4
Easier access to educational materials	3
Responded to promotional offering	3
Price fell to more affordable level	3
Convenience	3
Other	6
Source: Pew Internet & American Life Project, Feb 2004 survey, n=516 for home broadband users. Total may add to more than 100% due to multiple responses.	

How people value their online time, and how that changes over time, seems very much at the root of the home high-speed adoption calculation. This is best illustrated by looking at the online usage patterns of dial-up users. Internet users – dial-up or otherwise – do more and spend more time online the longer they have been Net users. For those dial-up users who have been online for less than five years, 42% go online on the average day and, out of 18 Internet activities queried in February 2004, they have tried 6 of them (about 2 of them on the average day). By contrast, dial-up users who have been Internet users for more than seven years have tried 8 online activities, with a bit more than 3 done on the average day. Fully 65% of these experienced dial-up users go online on the typical day.

As dial-up users turn to the Internet more, it becomes costly in terms of personal time expenditure to stick with their slow dial-up connections. One could easily imagine that the cost per amount of time spent online equalizes when people turn to broadband (i.e., people spend more for access but do more online). This means the switch to broadband results in the same or lower cost to users in real terms. It is no wonder that dial-up users who have been online for seven or more years are, by a 50%-32% margin, more likely to say they want broadband at home than those who have been online for five years or less.

Broadband users were asked in February 2004 how much they pay per month for their Internet service and home high-speed users reported an average monthly bill of $39. DSL users report an average monthly bill of approximately $38, while cable modem subscribers report $41. When dial-up users get fed up with their slow dial-up connections and seek out a broadband provider, DSL, on average, has an advantage over cable when it comes to price.

Prospects for switching among dial-up users

As for the pool of dial-up users who may one day move to broadband, 40% say they would like to get it and 58% say they don't plan to get it. Of the 40% who would like to get broadband at home, many are not interested in paying more for it: 22% say they would not pay an extra dime for broadband at home and on average this group said they would pay about $9.40 per month extra for broadband. Of the 58% of dial-up users who say that they are not interested in broadband at home, half say they would not pay anything extra for it. On average these users say they would pay only about $4.25 a month more for broadband.

The 40/60 ratio of dial-up users who do not want broadband versus those who do has stayed about the same since this question was last asked in October 2002. With home broadband use doubling since then, it would seem that some users over time change their attitudes about whether to get broadband. Growing impatience with dial-up, as noted, is probably behind attitude changes. Price is also a candidate for such changes. The price of broadband at home has fallen in the past few years, from $46 per month as estimated by respondents in January 2002 to $39 per month as estimated by respondents in February 2004. However, the estimated monthly price is about the same today as it was in our October 2002 survey. This further supports the notion that how people value their online time, not price, is the preeminent factor in home broadband adoption.

Availability

Availability can figure into broadband adoption in two ways. First, the physical infrastructure to provide broadband is an obvious prerequisite to having service. Second, the availability of multiple providers may matter, as the existence of some competition in the market may be conducive to adoption among consumers.

With respect to broadband infrastructure, 77% of Americans say they live in an area in which broadband is available, 8% said they do not live in an area where broadband is available, and 15% say they do not know. This compares with 71% of Americans who said in October 2002 that broadband is available where they live, 12% who said it was not available, and 17% who did not know. Of those who live in a place where they say broadband is not available, 54% say they would like to get it, higher than the 40% average for dial-up users.

When asked whether there is more than one broadband provider in their area, 61% of those who have broadband or know it is available said multiple providers serve their area. One in six (17%) said one provider serves their area and 22% did not know. Broadband users who lived in areas with multiple service providers said they paid $38.50 per month for service, while those who said they had one option for service paid an average of $42.80 per month.

Regional Broadband Use

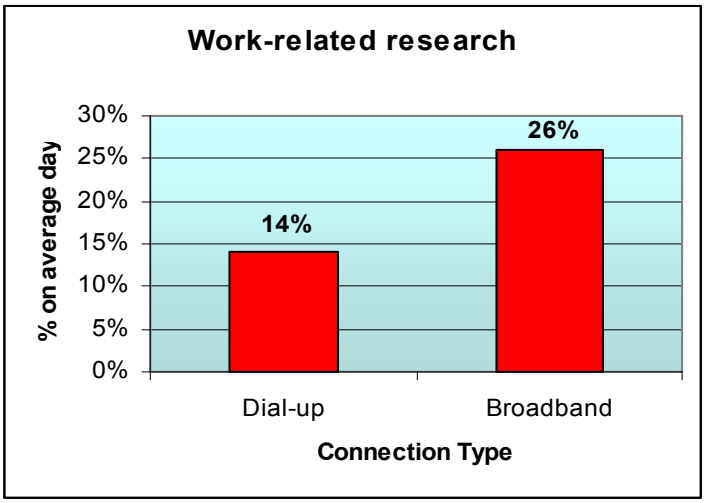
Residents of rural areas substantially lag their urban and suburban counterparts in home broadband adoption. Just 10% of Americans who live in rural areas have broadband connections at home, compared with 28% of those living in urban or suburban locations. Put differently, 25% of Internet users with access from home in rural area connect via broadband, with rural people less likely than others to use the Internet to begin with (by a 49% to 67% margin in February 2004).

Some of this gap is attributable to lack of availability of broadband infrastructure. When dial-up users who live in rural areas were asked whether high-speed Internet service to the home is available where they live, 27% said it was not, 38% said it was available, and 35% didn't know. Among non-rural residents, only 11% of dial-up users say broadband is not available where they live, 64% say it is, and 24% do not know. Rural Americans have demographic characteristics that make it less likely for them to have broadband connections; on average, rural dwellers are older, less educated, and not as wealthy as their non-rural counterparts. However, the large gaps in self-reported availability of broadband connections suggest that lack of high-speed infrastructure has something to do with lower home broadband use in rural areas.

Online activities and broadband users

Broadband users outpace dial-up users in terms of the scope and intensity of online activities. The Pew Internet Project's February 2004 tracking survey asked Internet users about 18 different activities which they may pursue online, from checking on the news to participating in an online auction. The average dial-up user has tried 7 of those activities and on the typical day will engage in 3 of them. By contrast, a home broadband user has tried, at one time or another, 9 of these activities and will do 4 of them on the average day. With home broadband users more likely than dial-up users to go online on the typical day (69% of broadband users go online on the average day compared with 51% of dial-up users), broadband users' online footprint is much heavier than that of dial-up users.

These differences show up vividly in comparison of dial-up and broadband users in select activities that Internet users may do on a given day. For broadband users, the high-speed connection results in a migration to cyberspace many activities that might have once taken place offline. Some of these tasks may be quite important, such as work-related research, while others may be everyday in nature, such as getting driving directions or a map. The following tables display the comparisons.


Work-related research
30%
25%
20%
15%
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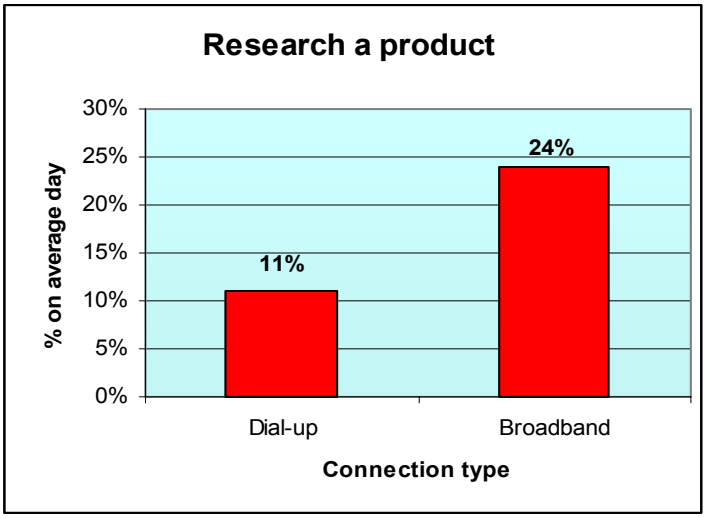
% on average day
14%
26%
Dial-up
Broadband
Connection Type


Research a product
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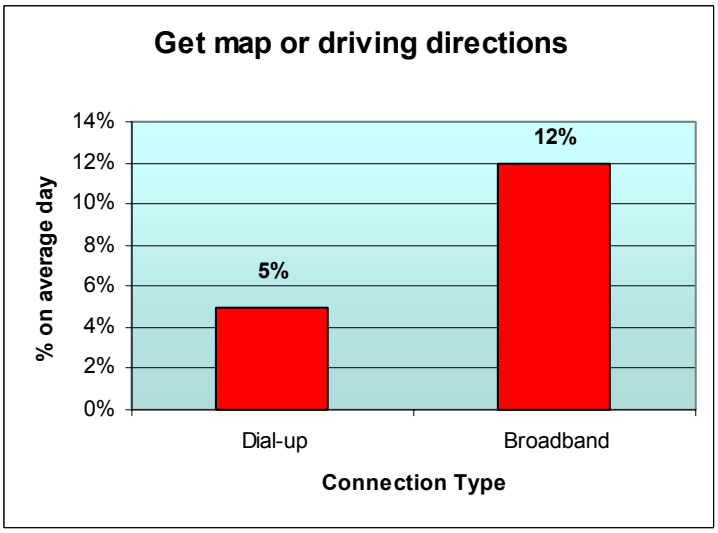
Get map or driving directions
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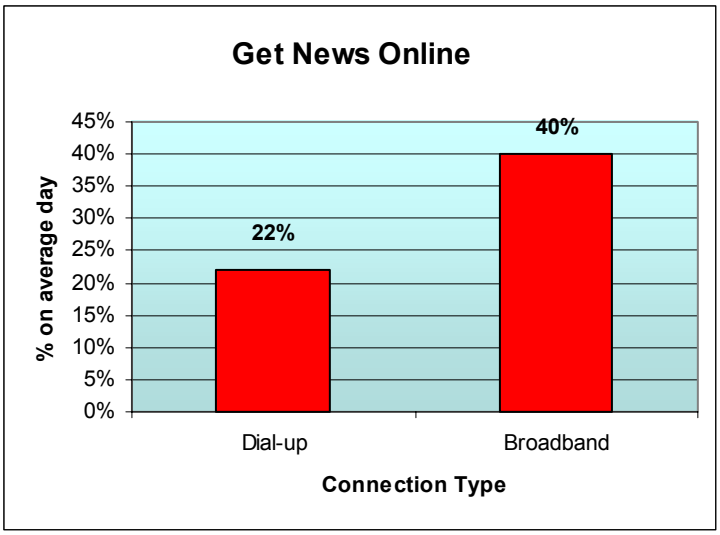

Broadband users on the cutting edge

Internet users with high-speed connections at home exhibit cutting-edge technological tendencies in other ways. Broadband users are far more likely than dial-up users to log on using a wireless device; 28% of broadband users have at one time done this versus 9% of dial-up users. On the average day, 11% of broadband users go online with a wireless device while 3% of dial-up users do.[3] Broadband users also take advantage of high-speed to network their computers at home. One-third (34%) of broadband users have done this, with 21% hard wiring with cables and 13% doing it wirelessly. Just 6% of dial-up users have networked their computers at home.

[3] Overall, 17% of Internet users have gone online using a wireless device, with 6% doing this on the average day.

Appendix

The graph below shows growth in trends in home broadband adoption since June 2000, when the Pew Internet & American Life Project first started asking Internet users the type of connection they have at home.