

Older Americans and the Internet

Just 22% go online, but their enthusiasm for email and search may inspire their peers to take the leap

25 March 2004

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Summary of Findings

22% of Americans 65 and older use the Internet.

The percent of seniors who go online has jumped by 47% between 2000 and 2004. In a February 2004 survey, 22% of Americans age 65 or older reported having access to the Internet, up from 15% in 2000. That translates to about 8 million Americans age 65 or older who use the Internet. By contrast, 58% of Americans age 50-64, 75% of 30-49 year-olds, and 77% of 18-29 year-olds currently go online.

Women reach parity with men in the wired senior population.

In the year 2000, about 60% of wired seniors were men and about 40% were women. In February 2004, the gender ratio among wired seniors has shifted to 50% men and 50% women – the same ratio as the general Internet population.

Online seniors as a group are still made up predominately of whites, highly-educated seniors, and those living in households with higher incomes who have Internet access, although there have been gains in other segments of the seniors cohort since 2000. For instance, the number of seniors who live in households with moderate amounts of income has risen dramatically, as has the number whose education ended with a high school diploma.

Once seniors get online, they are just as enthusiastic as younger users.

Wired seniors are often as enthusiastic as younger users in the major activities that define online life such as email and the use of search engines to answer a specific question. Also, wired seniors are as likely as younger users to go online on a typical day.

Communication and information searches attract wired seniors. There has been sharp growth in the number doing key Internet activities such as health searches, e-shopping, and online banking.

Email is equally popular among Internet users age 65 or older and their younger counterparts. Fully 94% of wired seniors have sent or received email, compared to 91%

This Pew Internet & American Life Project report is based on the findings of daily tracking surveys on Americans' use of the Internet in 2003 and 2004. The most recent survey data was gathered through telephone interviews conducted by Princeton Survey Research Associates between February 3 and March 1, 2004, among a sample of 2,204 adults, aged 18 and older. For results based on the total sample, one can say with 95% confidence that the error attributable to sampling and other random effects is +/- 2%. For results based Internet users (n=1,371), the margin of sampling error is +/- 3%.

of all Internet users.

There have been big increases since 2000 in the number of online seniors doing several key activities. It is important to stress, though, that even with these high growth rates, it is usually the case that online seniors have done these online activities at *lower rates* that younger Internet users.

- 66% of wired seniors had looked for health or medical information online at some point in their online life by the end of 2003. That is a 13-point jump since 2000, and a growth rate of 25%. And online seniors are much more likely than other Internet users to have logged on to get information about Medicare and Medicaid.
- 66% of wired seniors had done product research online by the end of 2003. That is an 18-point jump since 2000, and a growth rate of 38%.
- 47% of online seniors had bought something on the Internet by the end of 2003. That is an 11-point increase since 2000 and a growth rate of 31%.
- 41% have made travel reservations online by the end of 2003. That is a 16-point increase since 2000 and a growth rate of 64%.
- 60% of wired seniors had visited government Web sites by the end of 2003. That is a 20-point jump since 2000, and a growth rate of 50%.
- 26% of wired seniors had looked for religious and spiritual information by the end of 2003. That is a 15-point jump since 2000, or a growth rate of 136%.
- 20% of online seniors had done banking on the Internet by the end of 2003. That is a 12-point increase since 2000 and a growth rate of 150%.

Many off-line seniors are far removed from the Internet.

Most seniors live lives far removed from the Internet, know few people who use email or surf the Web, and cannot imagine why they would spend money and time learning how to use a computer. Seniors are also more likely than any other age group to be living with some kind of disability, which could hinder their capacity to get to a computer training center or read the small type on many Web sites.

Tomorrow's seniors will transform the wired senior stereotype.

There is a burgeoning group of Americans who are slightly younger than retirees and who are vastly more attached to the online world. In February 2004, we find that 62% of Americans age 50-58 years-old and 46% of Americans age 59-68 have Internet access. By contrast, just 17% of Americans age 69 and older have access.

In fact, older Baby Boomer Internet users (between 50-58 years old) are more like Generation X Internet users (between 28 and 39 years old) than like their older, "Mature" generational neighbors (those between 59 and 68 years old). For example:

Summary of Findings

- 75% of Generation X Internet users and 75% of Baby Boomer Internet users get news online, compared to 67% of Mature users.
- 59% of Generation X Internet users and 55% of Baby Boomer Internet users do research online for their job, compared to 30% of Internet users between 59 and 68 years old.

The "silver tsunami" identified in the Pew Internet Project's 2001 "Wired Seniors" report has gained momentum. As Internet users in their 50s get older and retire, they are unlikely to give up their wired ways and therefore will transform the wired senior stereotype.

Older Americans and the Internet: Summary of Findings at a Glance

22% of Americans 65 and older use the Internet.

Women reach parity with men in the wired senior population.

Once seniors get online, they are just as enthusiastic as younger users.

Communication and information searches attract wired seniors. There has been sharp growth in the number of older Americans doing key Internet activities such as health searches, e-shopping, and online banking.

Many off-line seniors are far removed from the Internet.

Tomorrow's seniors will transform the wired senior stereotype.

Source: Fox, Susannah. Older Americans and the Internet. Washington, DC: Pew Internet & American Life Project, March 25, 2004.



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Acknowledgements

Thanks go to Lee Rainie, Tom Spooner, and Peter Bell, who contributed editorial insights and invaluable number-crunching to this report.

Special thanks to my 94-year-old grandmother, Rosalie Yerkes Figge, who, when I showed her the Web in 1994, said, "I was born too early," but then proved herself wrong by taking to email like a fish to water.

About the Pew Internet & American Life Project: The Pew Internet Project is a nonprofit, non-partisan think tank that explores the impact of the Internet on children, families, communities, the work place, schools, health care and civic/political life. The Project does not advocate any policy outcomes. Support for the project is provided by The Pew Charitable Trusts. The project's Web site: www.pewinternet.org

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22% of Americans 65 and older use the Internet

The gap is narrowing, but Americans age 65 and older still lag behind younger generations when it comes to Internet access.

In 1996, just 2% of Americans age 65 or older went online. By the year 2000, that percent had increased to 15% of seniors. In a February 2004 survey, 22% of Americans age 65 or older reported having access to the Internet. This represents a 47% increase between 2000 and 2004. Eight million seniors now go online. By contrast, 58% of Americans age 50-64, 75% of 30-49 year-olds, and 77% of 18-29 year-olds go online as of February 2004.

"Wired seniors" — Americans age 65 and older who say they go online to access the Internet or World Wide Web or to send and receive email

If they do not go online, seniors are the least likely group to live with someone who does. Just 13% of non-users age 65 or older live in a household with Internet access, compared to 35% of non-users age 50-64 years old.³

"Off-line seniors" or "non-user seniors" — Americans age 65 and older who do not use the Internet

Women reach parity with men in the wired senior population.

In the year 2000, about 60% of wired seniors were men and about 40% were women. In February 2004, the gender ratio among wired seniors has shifted to 50% men and 50% women – the same ratio as the general Internet population.

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¹ Pew Research Center for the People and the Press: April 1996 Biennial Media Consumption Survey. Available at: http://people-press.org/reports/display.php3?ReportID=127

² Fox, Susannah. Pew Internet & American Life Project: "Wired Seniors: A fervent few, inspired by family ties." (September 9, 2001) Available at: http://www.pewinternet.org/reports/toc.asp?Report=40

³ Lenhart, Amanda. Pew Internet & American Life Project: "The Ever-shifting Internet Population: A new look at Internet access and the digital divide." (April 16, 2003) Available at: http://www.pewinternet.org/reports/toc.asp?Report=88

Certain demographic groups among seniors are likely to avoid using the Internet.

It is still predominately whites, highly-educated seniors, and those living in households with higher incomes who have Internet access, although there have been gains since 2000. Data gathered in several surveys throughout 2003 were combined in order to get an accurate estimate for older members of minority groups such as African Americans and Hispanics.

Lower education, lower income seniors

In the year 2000, about three-quarters of wired seniors had attended college, compared to 36% of all seniors, and a quarter of wired seniors had a high school education or less. In the ensuing three years, less-educated seniors have gained ground online. In February 2004, 62% of wired seniors have at least some college education, compared to 35% of all Americans age 65 or older. Thirty percent of wired seniors have a high school education or less, compared to 58% of all seniors.

In 2000, one in four wired seniors lived in a household with an annual income over \$75,000, compared to just 8% of all seniors. In February 2004, 17% of wired seniors live in high-income households, compared to 4% of all seniors. It is important to note, however, that fully 39% of seniors refused to answer the income question in February 2004.

African Americans

Just 11% of African Americans age 65 and over reported using the Internet in 2003, compared to 22% of senior whites. By comparison, 7% of senior African Americans went online in 2000. African Americans as a group lag behind whites when it comes to Internet access, but the difference is most stark in the over-55 population. For example, in 2003, 83% of whites between 18-24 years-old had Internet access compared to 68% of African Americans in that age group. But while 58% of whites between 55-64 years-old have Internet access, just 22% of African Americans in that pre-retirement age group have access.

Hispanics

Twenty-one percent of English-speaking Hispanics age 65 and over reported using the Internet in 2003, which is statistically equal to the 22% of senior non-Hispanic whites who had access. By comparison, 17% of senior Hispanics went online in 2000. So while English-speaking Hispanics lag behind non-Hispanic whites in many age groups, they reach parity in the senior population. For example, 70% of English-speaking Hispanics age 18-24 reported using the Internet in 2003, compared to 83% of non-Hispanic whites in that age group. And while 32% of English-speaking Hispanics age 55-64 had access

Part 1, 22% of Americans 65 and older use the Internet

in 2003, we found that 58% of non-Hispanic whites in that age group reported going online during the same time period.

Computer use in general is lower among seniors.

Twenty-nine percent of Americans age 65 and older say they use a computer at their workplace, at school, at home, or some other location on at least an occasional basis. By contrast, 71% of Americans age 50-64 use a computer. Both groups have become more computer-savvy since 2000, when 21% of seniors and 59% of Americans age 50-64 said they used a computer.

Tobey Dichter, founder and CEO of Generations on Line,⁴ points out that many seniors have an antique notion of computers, counting their use of punch cards in the 1960s and 1970s as "computer experience." She says many elders are afraid they will break any new technology they attempt to learn. "Access, skill, and intimidation are the barriers – and the greatest of these is intimidation," according to Dichter.

Most seniors go online at home, via dial-up connections.

Ninety-five percent of wired seniors say they go online at home and 10% go online at work. Some of these seniors use multiple places to access the Internet, so the figures add up to more than 100%. By contrast, 90% of the general Internet population goes online at home and 51% goes online at work. Seventy-two percent of wired seniors who go online at home have a dial-up connection, compared to 54% of the general Internet population who go online from home.

Once seniors get online, they are just as enthusiastic as younger users.

However, once someone age 65 and older gets access, they are often as enthusiastic as younger users in the major activities that define online life. For example:

- Wired seniors are as likely as younger users to go online on a typical day. When asked if they happened to go online or check their email yesterday, 59% of Internet users age 65 and older said yes, they had essentially the same percentage as the general Internet population (56%).
- Wired seniors are as likely as younger users to use email. Ninety-four percent of wired seniors have sent or received email again, essentially the same percent as the general Internet population (91%).
- Wired seniors are nearly as likely as younger users to use a search engine to answer a specific question. Seventy-six percent of wired seniors have used a search engine to find information, compared to 80% of all Internet users.

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⁴ http://www.generationsonline.org/

Part 1. 22% of Americans 65 and older use the Internet

In our 2001 report we noted that the more years of online experience a wired senior has, the more likely he is to fit the pattern of other online veterans (those with three or more years experience) by going online first thing in the morning, spending more time online, and trying more activities.

In the fall of 2000, just 23% of Internet users age 65 or older had three or more years of experience with email and the Web. In February 2004, 77% of Internet users age 65 or older have four or more years of experience online. Today's wired seniors are more like the general Internet population – an experienced, savvy group of users who are more willing to sample all the Internet has to offer.

The next section details the activities most popular – and unpopular – among wired seniors.



Familiar concerns drive wired seniors' online research

Wired seniors want to keep up to date, whether that means emailing their children or staying current with the news.

Communication tops the agenda for wired seniors – but they generally stick to email.

As noted, email is equally popular among Internet users age 65 or older and their younger counterparts. Fully 94% of wired seniors have sent or received email. But fewer use instant messaging to keep in touch with friends and family – 28% of wired seniors have IM'd, compared to 39% of all Internet users. There is a small group of seniors on the cutting edge of communication technology, however. Nine percent of wired seniors have made a phone call online – compared to 11% of all users.

Wired seniors are avid information seekers.

Wired seniors are similar to the rest of the Internet population when it comes to information utilities. Eighty-two percent of wired seniors have used a search engine to find information online, compared to 90% of the general population of Internet users. Fifty-nine percent of wired seniors have gone online to get news, compared to 71% of all users. Thirty-seven percent of wired seniors look for news or information about politics and the campaign, compared to 46% of all users. In addition, 60% of wired seniors have looked for information on a government Web site, compared to 66% of all users.

Today's wired seniors are much more interested in religious information than the seniors who had Internet access in 2000. Just 11% of wired seniors had looked for religious or spiritual material online in 2000. In the spring of 2003, 26% of wired seniors reported searching for this type of information online, compared to 29% of all Internet users.

Health information is popular among wired seniors.

Wired seniors are likely to describe their health as "fair" or "poor" and they are more likely than other age groups to be living with a disability or chronic illness.⁵ Sixty-six percent of wired seniors have looked for health or medical information online – the same

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⁵ Fox, Susannah and Deborah Fallows. Pew Internet & American Life Project: "Internet Health Resources." (July 16, 2003) Available at: http://www.pewinternet.org/reports/toc.asp?Report=95

Part 2. Familiar concerns drive wired seniors' online research

percent as the general Internet population. However, this represents a more than 25% increase since 2000 in the number of online seniors who had performed health searches.

Fully 53% of wired seniors have gone to Web sites that provide information or support for a specific medical condition or personal situation, compared to 54% of the general Internet population.

When it comes to specific types of health information, both wired seniors and younger users are pretty equally interested in details about a specific disease, treatment, or drug. (See table on next page for more details.) Seniors and their loved ones would do well to keep up to date since a recent RAND Health study found that seniors got the recommended care for age-related conditions only one-third of the time.⁶

Wired seniors truly surpass younger users in pursuit of only one health-related topic: Medicare and Medicaid information. Indeed, the Center for Medicare Education recently issued a policy brief to help senior educators guide seniors through the thicket of new options.⁷

Why don't online seniors seek health information on the Web? The main reason, according to their answers in our December 2002 survey, is that they are satisfied with the health and medical information they get elsewhere. Most did not fret about untrustworthy material online. Several said they didn't have any health concerns at that point in their lives. And a few said it is because they would not know where to start looking online.

⁶ Wenger, Neil. RAND Health: "Quality of Medical Care Provided to Vulnerable Community Dwelling Older Patients." (November 2003) Summary available at: http://www.rand.org/health/healthpubs/seniors.html

⁷ Stevens, Beth. Center for Medicare Education: "How Seniors Learn." (2003) Available at: http://www.medicareed.org/content/CMEPubDocs/ACFA8CC.pdf

Part 2. Familiar concerns drive wired seniors' online research

Health Tonice	Secrebed Onli	n o			
Health Topics Searched Online In all, 80% of all Internet users – and 70% of wired seniors – have searched for at least one of 16 health topics online. Many have searched for several kinds of information.					
Uniform popularity					
Information about a certain medical treatment or procedure	47%	45%	47%		
Information about prescription or over the counter drugs	34	31	34		
Information about experimental treatments or medicines	18	14	18		
Information about how to quit smoking	6	2	6		
More popular among wired seniors					
Information about Medicare or Medicaid	9	19	9		
More popular among younger users					
Information about a specific disease or medical problem	64	59	63		
Information about diet, nutrition, vitamins, or nutritional supplements	45	28	44		
Information about exercise or fitness	38	13	36		
Information about alternative treatments or medicines	28	23	28		
Information related to health insurance	26	20	25		
Information about depression, anxiety, stress, or mental health issues	22	6	21		
Information about a particular doctor or hospital	21	13	21		
Information about environmental health hazards	17	6	17		
Information about immunizations or vaccinations	13	6	13		
Information about sexual health	11	5	10		
Information about problems with drugs or alcohol	9	2	8		

Source: Pew Internet & American Life Project December 2002 Survey. N=1,220. Margin of error based on full sample of Internet users is ±3%. Margin of error based on wired seniors is ±5%.

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Wired seniors are doing more on the Internet, but they are still less likely than younger Internet users to try many online activities.

There have been big increases since 2000 in the number of online seniors doing several key activities on the Net. It is important to stress, though, that even with these high growth rates, it is usually the case that online seniors have done these online activities at *lower rates* that younger Internet users.

A rundown of the main activities we measure is on page 10 of this report. Here are some highlights of activities where there have been significant increases:

- 66% of wired seniors had done product research online by the end of 2003. That is an 18-point jump since 2000, and a growth rate of 38%.
- 47% of online seniors had bought something on the Internet by the end of 2003. That is an 11-point increase since 2000 and a growth rate of 31%.
- 41% have made travel reservations online by the end of 2003. That is a 16-point increase since 2000 and a growth rate of 64%.
- 60% of wired seniors had visited government Web sites by the end of 2003. That is a 20-point jump since 2000, and a growth rate of 50%.
- 26% of wired seniors had looked for religious and spiritual information by the end of 2003. That is a 15-point jump since 2000, or a growth rate of 136%.
- 20% of online seniors had done banking on the Internet by the end of 2003. That is a 12-point increase since 2000 and a growth rate of 150%.

It is important to stress that there is a double-edged quality to several of these figures. While there has been notable growth, it is still the case that seniors who use the Internet are less likely than younger Americans to do transactions online. One example: 66% of Internet users age 65 and older have looked up a product online, compared to 78% of all users. That gap is repeated when it comes to buying things online. While 47% of wired seniors have bought a product online, such as books, music, toys, or clothing, 66% of all Internet users have done so. Forty-one percent of wired seniors have made a reservation for travel or bought tickets online, compared to 57% of all users. Twenty percent of wired seniors have done their banking online, compared to 34% of all users. And just 9% of wired seniors have participated in an online auction, compared to 24% of all users.

Russell E. Morgan, president of the SPRY (Setting Priorities for Retirement Years) Foundation, says, "Seniors are more suspicious. They hear about identity fraud and credit card theft online and think, 'Why take the chance?'" However, Morgan points out that transportation and managing one's own finances are the two issues that worry seniors

⁸ http://www.spry.org

Part 2. Familiar concerns drive wired seniors' online research

most. He adds, "The more seniors can track their finances, the less likely they will get into trouble later on."

Wired seniors are essentially equal to younger users when it comes to researching financial information, such as stock quotes or mortgage interest rates. Forty-one percent of wired seniors have done this type of research, compared to 44% of all users. Fifteen percent of wired seniors buy or sell stocks, mutual funds, or bonds online, compared to 13% of the general Internet population. These numbers have not changed significantly between 2000 and 2004 – wired seniors and younger users have maintained, but not increased, their interest in following the stock market online.

Thomas S. Tullis, senior vice president of human interface design at Fidelity Investments, observes that while seniors are increasingly willing to use the Web for financial research, they are still more conservative than younger users when it comes to making trades.

Games, hobbies, and other diversions attract a smaller group of wired seniors.

Pew Internet Project surveys consistently find that hobby information is among the most popular topics among Internet users – 76% of all users have done this type of search. But only 52% of wired seniors have searched for hobby information. Fifty-four percent of wired seniors have surfed the Web "just for fun," compared to 67% of all Internet users.

Wired seniors are among the least likely groups to download music, video, or game files, but they are among the most likely to play a game online. Thirty-five percent of Internet users age 65 and older have played a game online, compared to 39% of all users.

There is one hobby activity that elders clearly dominate -36% of wired seniors have researched their family's history or genealogy, compared to 24% of all users.

Part 2. Familiar concerns drive wired seniors' online research

Online Activities					
The portions of Internet users in each age group who activities.	have used the 18-64	Internet for some p	opular online All users		
Uniform popularity					
Send or read e-mail	91%	94%	91%		
Look for health or medical information	66	66	66		
Go to Web sites that provide information or support for a specific medical condition or personal situation	54	53	54		
Get financial information	44	41	44		
Play a game	40	35	39		
Look for religious or spiritual information	29	26	29		
Buy or sell stocks, bonds, or mutual funds	12	15	13		
Make a phone call online	11	9	11		
More popular among wired seniors					
Research your family's history or genealogy	23	36	24		
More popular among younger users					
Use a search engine to find information	90	82	90		
Research a product or service before buying it	79	66	78		
Look for information on a hobby or interest	77	52	76		
Check the weather	76	60	75		
Get news	71	59	71		
Surf the Web for fun	68	54	67		
Look for information from a government Web site	66	60	66		
Buy a product	67	47	66		
Buy or make a reservation for travel	58	41	57		
Look for political news or information	47	37	46		
Check sports scores or information	44	34	43		
Download other files such as games, videos, or pictures	43	30	42		
Send instant messages	40	28	39		
Bank online	25	20	34		
Participate in an online auction	24	9	24		

Source: Pew Internet & American Life Project Surveys 2003-4. Margin of error based on full sample of Internet users is $\pm 3\%$. Margin of error based on wired seniors is $\pm 5\%$.



Implications for the future

Many seniors have no interest in going online. Those who do want to get access face significant barriers.

Eight in ten off-line seniors do not think they will ever go online. They often live lives far removed from the Internet, know few people who use email or surf the Web, and cannot imagine why they would spend money and time learning how to use a computer. But for the small group of seniors who are motivated to go online – or find themselves using the Internet despite personal reservations – there remain barriers to entry that are not unique to their age group, but combine in new ways to prevent widespread Internet use among Americans age 65 and older.

Lack of experience with computers

Just 29% of Americans age 65 and older uses a computer on at least an occasional basis. Many of these Americans were probably not in the workforce when computers became standard issue at offices, schools, factories, and other work sites.

Lack of first- or even second-hand knowledge of the Internet

One in four Americans has never used the Internet and do not know anyone who does. Seniors make up a large portion of these "truly disconnected" Americans. ¹⁰ This lack of peer or family reinforcement can have significant effects on a senior's interest or ability to go online. In February 2001, 84% of wired seniors reported that they first got Internet access for reasons unrelated to work or school and about half of those said family members encouraged them to do so – a higher percent than any other age group. A nearly equal group (45%) said getting Internet access was just something they personally wanted to do. Very few wired seniors who first got online for personal reasons said they received encouragement from friends. By contrast, 52% of all Internet users said they got access for personal reasons, not work or school, and friends had a greater influence than family members. ¹¹

Younger Internet users are often eager to share the benefits of email and the Web with their parents, grandparents, or other older relatives. A 2003 survey of young people (age

⁹ Lenhart, 2003.

¹⁰ Lenhart, 2003.

¹¹ Fox, 2001.

Part 3. Implications for the future

25-44) who assist an older relative with computer questions found that 80% reported positive effects, including an increase in their ability to stay in touch. ¹² More than six in ten respondents helped set up a computer for their older relative. Eight in ten respondents said they taught their older relative how to use a computer. Forty-five percent of the seniors asked their children or other younger relatives for help searching for information related to travel and entertainment. Next on the list were health information and information about books, movies, and music. Without hands-on support, many older Americans would not be able to go online.

Community learning centers can fill the gap left by the lack of family or friends willing or able to help. Philadelphia-based Generations on Line has developed step-by-step software designed specifically for those born between 1920 and 1929 and provides training at over 900 centers in 46 states and Canada. SeniorNet, another national organization which provides computer education and access for older adults, has 240 learning centers in the U.S. and abroad.

Increased likelihood of vision problems or other disability

Seniors are more likely than any other age group to be living with some kind of disability. Twenty-eight percent of seniors reported in December 2002 that a disability, handicap, or chronic disease keeps them from participating fully in work, school, housework, or other activities. By comparison, 21% of Americans between 50-64, 11% of Americans age 30-49, and 5% of Americans age 18-29 report such a disability. Americans of all ages who are living with a disability have among the lowest rates of Internet access in the country – just 4 in 10, compared to about 6 in 10 for the general population. Non-users living with a disability are less likely than other non-users to believe they will ever use the Internet and less likely than others to have friends or family who go online.

Small type, low-contrast color choices, and pull-down menus can have a significant effect on an older user's ability to navigate a site. The Nielsen Norman Group has found that standard Web sites are twice as difficult to use for wired seniors versus Internet users between 18-55 years old. Older users made nearly five errors per assigned task, compared with less than one error for younger users.

The National Institute on Aging and the National Library of Medicine conducted extensive research on how people age 60 or older use computers and published a

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¹² AARP: "Wired Generations: Getting By With A Little Help From One's Kids." (July 2003) Available at: http://links.aarp.org/generationsreport

¹³ http://www.generationsonline.org

¹⁴ http://www.seniornet.org/

¹⁵ Fox and Fallows, 2003.

¹⁶ Nielsen Norman Group: "Web Usability for Senior Citizens." Summary available at: http://www.nngroup.com/reports/seniors/

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checklist for Web site designers.¹⁷ They find that older adults lose the ability to detect fine details and therefore find it easier to read sans serif type at 12 point or 14 point type sizes. Older adults often process information more slowly than younger adults and therefore appreciate simple language and short sections of text. Finally, older adults are more likely to be able to navigate a site that employs single-mouse clicks to access information, large icons, and clear navigation such as "Previous Page" and "Next Page" buttons.

Perhaps not surprisingly, usability tests conducted at the Fidelity Center for Applied Technology's Human Interface Design department found that when specific design changes were made to accommodate older users, the changes also improved the performance of younger adults.¹⁸

Tomorrow's seniors will transform the wired senior stereotype.

While just 22% of today's senior population (age 65+) uses the Internet, there is a burgeoning group of Americans who are slightly younger but vastly more attached to the online world.

In our survey in February 2004, we find that 62% of Americans age 50-58 years-old and 46% of Americans age 59-68 have Internet access. By contrast, just 17% of Americans age 69 and older have access.

In fact, older Baby Boomer Internet users (between 50 and 58 years old) are more like Generation X Internet users (between 28 and 39 years old) than like their older, "Mature" generational neighbors (those between 59 and 68 years old).

Eighty-six percent of Generation X Americans and 76% of Americans age 50-58 use a computer at their workplace, at school, at home, or some other location, compared to 57% of Americans age 59-68 years old. Generation X Internet users and Baby Boom Internet users are equally likely to go online from home and work on a typical day, whereas Mature Internet users are more likely to go online only at home.

Internet users in their 30s and 50s are also more alike than different when it comes to some key online pursuits. Seventy-five percent of Generation X Internet users and 75% of Baby Boomer Internet users get news online, compared to 67% of Internet users between 59 and 68 years old. Fifty-nine percent of Generation X Internet users and 55% of Baby Boomer Internet users do research online for their job, compared to 30% of Internet users between 59 and 68 years old. Thirty-seven percent of Generation X

¹⁷ http://www.nlm.nih.gov/pubs/checklist.pdf

¹⁸ Chadwick-Dias, Ann; Michelle McNulty; and Tom Tullis. Fidelity Investments: "Web Usability and Age: How Design Changes Can Improve Performance." (November 2003.) More information available at: http://www.acm.org/sigs/sigchi/cuu2003/program.htm

Part 3. Implications for the future

Internet users and 31% of Baby Boomer Internet users send instant messages, compared to 26% of Internet users between 59 and 68 years old.

The "silver tsunami" identified in the Pew Internet Project's 2001 "Wired Seniors" report has gained momentum. As Internet users in their 50s get older and retire, they are unlikely to give up their wired ways and therefore will transform the wired senior stereotype.

Methodology

This Pew Internet & American Life Project report is primarily based on the findings of several daily tracking surveys of Americans' use of the Internet.

For the most recent survey, and the one used to determine the number of seniors online, telephone interviews were conducted by Princeton Survey Research Associates between February 3 and March 1, 2004, among a sample of 2,204 adults, 18 and older. For results based on the total sample, one can say with 95% confidence that the error attributable to sampling and other random effects is plus or minus 2 percentage points. For results based Internet users (n=1,371) the margin of sampling error is plus or minus 3 percent points. For results based on Americans age 65 and older (n=436) the margin of sampling error is plus or minus 5 percent points. In addition to sampling error, question wording and practical difficulties in conducting telephone surveys may introduce some error or bias into the findings of opinion polls.

The sample for this survey is a random digit sample of telephone numbers selected from telephone exchanges in the continental United States. The random digit aspect of the sample is used to avoid "listing" bias and provides representation of both listed and unlisted numbers (including not-yet-listed numbers). The design of the sample achieves this representation by random generation of the last two digits of telephone numbers selected on the basis of their area code, telephone exchange, and bank number.

New sample was released daily and was kept in the field for at least five days. This ensures that complete call procedures were followed for the entire sample. Additionally, the sample was released in replicates to make sure that the telephone numbers called are distributed appropriately across regions of the country. At least 10 attempts were made to complete an interview at every household in the sample. The calls were staggered over times of day and days of the week to maximize the chances of making contact with a potential respondent. Interview refusals were re-contacted at least once in order to try again to complete an interview. All interviews completed on any given day were considered to be the final sample for that day. The overall response rate was 32.8%.

Non-response in telephone interviews produces some known biases in survey-derived estimates because participation tends to vary for different subgroups of the population, and these subgroups are likely to vary also on questions of substantive interest. In order to compensate for these known biases, the sample data are weighted in analysis. The demographic weighting parameters are derived from a special analysis of the most recently available Census Bureau's Current Population Survey (March 2001). This analysis produces population parameters for the demographic characteristics of adults age 18 or older, living in households that contain a telephone. These parameters are then compared with the sample characteristics to construct sample weights. The weights are

Methodology

derived using an iterative technique that simultaneously balances the distribution of all weighting parameters.