

# SPEED MATTERS

BENEFITS OF BROADBAND

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a project of:

**CWA**

COMMUNICATIONS WORKERS  
of AMERICA | AFL-CIO, CLC



# INTRODUCTION

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“Speed Matters: The Benefits of Broadband” is a project of the Communications Workers of America (CWA) as part of our commitment to promote affordable, high-speed Internet for all Americans. High-speed Internet is essential for economic growth, job creation and global competitiveness.

We need high-speed Internet for our homes, schools, hospitals and workplaces. Speed defines what is possible on the Internet. It determines whether we will have the 21st century networks we need to create the jobs of the future, develop a sustainable economy and support innovation.

The United States ranks 15th among industrialized nations in high-speed Internet penetration. In addition, countries like Canada, France and South Korea have better, faster Internet connections. People in Japan can download an entire movie in two minutes, but it can take two hours or more in the U.S. Yet, people in Japan pay the same as we do for their Internet connection.

The United States also faces a significant digital divide. There is a significant difference in access between rural subscribers and their urban counterparts, and between low and high-income Americans. Only 50 percent of adults in rural areas subscribe to broadband compared to 68 percent in urban areas, and 93 percent of households earning over \$75,000 per year subscribe to broadband as opposed to 40 percent of Americans earning under \$20,000 per year. We must close these broadband gaps to ensure that all of our children will have access to unlimited information available on the Internet.

Affordable access is not enough. People must have the ability to use a computer and navigate the Internet with ease to benefit fully from the high-speed Internet—a skill often referred to as digital literacy.

The National Broadband Plan is a blueprint for investment in the broadband infrastructure that the U.S. needs. Along with our partners, Speed Matters seeks to close the gaps in high-speed Internet access by launching a campaign to deliver one gigabyte of capacity to anchor institutions in all communities. These networks can serve as a gateway to bring affordable high-speed access to all homes, businesses and communities. Governmental action—in partnership with the private sector—is essential to stimulate broadband investment. Working together we will make universal access a reality.

The benefits, as you will see in the coming pages, are endless.

Larry Cohen  
President, Communications Workers of America

To download and print “Speed Matters: The Benefits of Broadband” visit [www.speedmatters.org/benefits](http://www.speedmatters.org/benefits)

To take the speed test and get updates on the campaign visit [www.speedmatters.org](http://www.speedmatters.org)

To download the National Broadband Plan visit [www.broadband.gov/download-plan](http://www.broadband.gov/download-plan)

# HIGH SPEED INTERNET

## AND REDUCING THE DIGITAL DIVIDE IN UNDERSERVED COMMUNITIES



### OVERVIEW

When underserved communities gain access to high speed Internet, all Americans benefit. Whether they reside in remote rural communities, low-income urban neighborhoods, or anywhere in between, it is in the nation's interest to make sure that these disconnected communities are not left in the slow lane.

High speed Internet access has become vital to the success of individuals and communities. Our nation's commitment to equal economic opportunity, educational advancement, and democratic participation can only thrive if everyone has equivalent access to these critical communications networks. As important as it is to our country to ensure access to what we think of as more traditional resources or services for all citizens, closing the digital divide in America strengthens the entire country economically and socially.

### CURRENT CHALLENGES

The Pew Internet & American Life Project has found that poorer Americans and minorities are less likely than the affluent to have a high speed Internet connection. Although African-Americans and English-speaking Hispanics have begun to close the access gap with whites, Hispanics with limited English are less likely to use high speed Internet than either white or black Americans. The cost of computers, broadband access, and lack of digital skills serve as barriers to broadband adoption, even where the service is available. Sparsely populated rural areas often lack the financial incentive for Internet service providers to invest in costly high speed telecommunications infrastructure.

### BENEFITS OF HIGH SPEED INTERNET

- **Education:** With the accessibility of high speed broadband,

students in the most impoverished inner-city neighborhoods and distant rural regions can take advantage of the same Internet resources as students in the most affluent suburbs. Living on a farm hours away from city libraries would no longer put students at an educational disadvantage.

- **Economic Development:** Broadband availability creates wealth and opportunity for underserved low-income areas by attracting businesses that want to locate near a high speed Internet network, such as IT and communications companies that cannot operate competitively without broadband. A study by the Brookings Institution shows that for every percentage point increase in broadband penetration, employment expands by almost 300,000 jobs.
- **Public Health:** With a broadband connection people can also access general information about healthcare to manage their health and gain understanding of their condition(s) and options for care. Telemedicine offers cost-effective health care solutions for urban and rural residents.

### RECOMMENDATIONS

- Measures to increase broadband availability should focus on both lightly populated rural regions as well as densely populated underserved communities such as inner-city areas.
- Support efforts to make high speed internet access and computers more affordable for low income households.
- Encourage programs to teach digital literacy and computer training.
- Policy makers should focus on programs to support delivering one gigabyte of capacity to institutions that anchor our communities – libraries, schools and hospitals – so that all Americans will benefit from the build out of a high speed broadband infrastructure.

### FOR MORE INFORMATION

Visit [alliancefordigitalequality.org](http://alliancefordigitalequality.org), [lulac.org](http://lulac.org), [naacp.org](http://naacp.org), [nul.org](http://nul.org) and [speedmatters.org](http://speedmatters.org).



# HIGH SPEED INTERNET

## AND THE ENVIRONMENT



### OVERVIEW

Making affordable high speed Internet accessible to everyone creates many solutions to America's growing energy problems. Broadband reduces our carbon footprint while promising substantial economic pay-offs. By including universally accessible, high speed Internet as an essential part of our energy plan, the United States can build a green economy, greatly reduce energy use and greenhouse gas emissions, and spur economic growth by creating new environmental jobs.

### CURRENT CHALLENGES

Unfortunately, many Americans do not realize that high speed Internet enables solutions to many of our most challenging environmental problems. Although the U.S. consumes more energy than any other country, we trail behind many industrialized nations in broadband proliferation. As one of the world's biggest polluters, the environmental benefits of high-speed Internet cannot be fully realized while approximately 20 million Americans (six to eight million households) currently lack access to broadband and millions more are priced out of the market.

### BENEFITS OF HIGH SPEED INTERNET

- Broadband supports sustainable economic development in rural communities. When high speed Internet gets to small towns like Diller, NE local businesses can thrive – for example Blue Valley Meats in Diller experienced a 30 percent growth in business and doubled its employee ranks in the last 5 years as a result of building the website and reaching new consumers. Broadband helps build sustainable communities across America by reducing barriers of distance and the need to travel.
- A study by the American Consumer Institute found that the U.S. could achieve a net reduction of 1 billion tons of

greenhouse gas over 10 years, which if converted into energy saved, would constitute 11 percent of annual U.S. oil imports if we invested in broadband-enabled energy efficiency.

- Telemedicine, long-distance and business communication programs, and e-commerce are all high speed Internet-based applications that replace basic everyday carbon-intensive activities with carbon-neutral alternatives. The Climate Group finds that broadband-enabled travel substitution could save \$20-\$40 billion annually in gross fuel savings in the U.S. by 2020.
- Implementing smart grid in a manner consistent with programs that assist workers in the industry to adjust to new technologies will power the global 21st century economy. The U.S. could achieve energy savings equivalent to eliminating greenhouse gas emissions from 53 million cars by improving the efficiency of the power grid by just 5 percent. The Networking the Green Economy report projects that smart grid technologies would reduce power disturbances across the U.S. and save the economy \$49 billion per year.

### RECOMMENDATIONS

- Programs to support investment in smart grid, smart meters and smart appliances will increase energy efficiency and reduce greenhouse gases.
- Policy makers focus on delivering one gigabyte of capacity to institutions that anchor our communities – libraries, schools and hospitals – to promote sustainable communities in which all Americans will benefit from the build out of a high speed broadband infrastructure.

### FOR MORE INFORMATION

Visit [bluegreenalliance.org](http://bluegreenalliance.org), [sierraclub.org](http://sierraclub.org), [progressivestates.org/policy/issue/191](http://progressivestates.org/policy/issue/191) and [speedmatters.org](http://speedmatters.org)



# HIGH SPEED INTERNET

## ECONOMIC GROWTH AND JOBS



### OVERVIEW

Expanded access to high speed Internet generates major economic growth and rapid job creation. High speed connections accelerate business development by providing new opportunities for innovation, expansion and e-commerce. Connected communities create wealth and opportunity by attracting businesses that want to locate in areas with a strong broadband presence.

In the new global economy, access to broadband has become as essential to individual and community economic prosperity as electricity and roads. From rural to urban areas and everywhere in between, all people stand to benefit economically from a national high speed Internet network.

### CURRENT CHALLENGES

America has fallen behind other nations in crafting communications policies that effectively facilitate job growth and business advancement. Unfortunately, many lawmakers still conceive of high speed Internet as an optional luxury instead of a necessary foundation for economic success. The longer the U.S. waits to expand access to affordable broadband, the longer our economy will miss out on the enormous advantages of a connected country.

### BENEFITS OF HIGH SPEED INTERNET

- Studies show that each additional \$5 billion investment in broadband creates 250,000 jobs – 100,000 direct and indirect jobs from telecom and IT equipment spending plus another 150,000 in “network effects” spurring new online applications and services. With every percentage point increase in broadband penetration, employment expands by nearly 300,000 jobs.

- Jobs involved in the building and expansion of broadband networks pay 42 percent more than the average for manufacturing jobs in America.
- From 1998 to 2002, employment in communities with broadband grew 1 percentage point more than in communities without it.
- Broadband networks attract investment to areas that would not otherwise be viable to many businesses such as rural areas and inner-city regions.
- The expansion of energy efficient smart grids, which high speed communications are an integral part of, is expected to dramatically improve economic growth and provide thousands of new quality U.S. jobs.

### RECOMMENDATIONS

- Support tax incentives for broadband providers to expand networks with speed requirements capable of sustaining the business demands of tomorrow.
- Encourage efforts to expand high speed networks to economically depressed areas with high unemployment and underserved rural areas
- Connect programs for affordable computer purchase, broadband access and digital literacy linked with job training for low-income and displaced workers.
- Policy makers should focus on programs to support delivering one gigabyte of capacity to institutions that anchor our communities – libraries, schools and hospitals – so that all Americans will benefit from the build out of a high speed broadband infrastructure.

### FOR MORE INFORMATION

Visit [itif.org](http://itif.org) and [speedmatters.org](http://speedmatters.org)



# HIGH SPEED INTERNET

## AND RURAL COMMUNITIES



### OVERVIEW

High speed Internet breaks down the barriers of distance and time, allowing residents of rural areas to participate in economic and civic life far beyond their geographic region. Communications made possible by broadband technology eliminates the logistical constraints of regionally-based business models, allowing businesses in isolated areas to compete with their big-city counterparts. Ultimately, the numerous economic and social advantages enabled by the availability of high speed Internet in rural areas benefits the entire country.

### CURRENT CHALLENGES

The Pew Internet & American Life Project has found that rural residents are much less likely to subscribe to broadband than their urban counterparts. A study by Connected Nation finds that 19 percent of rural residents say they do not subscribe to broadband because it is not available in their area. Equally challenging is that many residents are not aware of the enormous benefits provided to them by high speed Internet. Nearly half of rural residents without a home broadband connection say it is because they do not need it. Cost can also present a problem for both providers and residents: 22 percent of rural residents say they do not subscribe to broadband because it is too expensive. Infrastructure investment in sparsely populated rural areas is often seen as unsustainable by telecommunications companies.

### BENEFITS OF HIGH SPEED INTERNET

- When given access to affordable broadband, rural businesses restricted to local markets, such as “mom and pop” shops or home-based businesses, can expand their market reach across the nation and even the world.

- Broadband brings the opportunity for direct access to education and health care for rural residents who are otherwise forced to travel long distances for college courses and medical treatment.
- Rural libraries newly enhanced by high speed Internet often experience a resurgence of community interest and participation. High speed Internet provides rural residents access to global information and cultural resources.
- Affordable broadband enables historically urban businesses like graphic design, Web site design, and other creative industries to experience new life in rural settings while competing on the same level as city-based companies.
- Farmers gain real-time access to vital information such as crop prices or weather forecasts, and marketing opportunities through high-speed networks.

### RECOMMENDATIONS

- Focus efforts to expand high speed Internet infrastructure to unserved and underserved rural communities.
- Target communities with low adoption rates to increase public awareness about the importance of high speed Internet.
- Support initiatives to keep the price of high speed Internet in underserved rural communities affordable.

### FOR MORE INFORMATION

Visit [connectednation.org](http://connectednation.org) and [speedmatters.org](http://speedmatters.org)



# HIGH SPEED INTERNET

## AND DISTANCE LEARNING



### OVERVIEW

Distance learning allows adults to gain vital skills training to secure employment and move beyond entry-level jobs, whether it be through getting a college degree online or completing an online worker training program. Busy people pressed for time and money learn online at their own pace and for less money than they would typically spend on an in-person course. Distance learning allows industry specialists in remote areas to impart their knowledge to wider audiences through two-way video conferencing. Over 80 percent of students in U.S. colleges and universities live off campus, as do the vast majority of students in secondary and continuing education programs. Connecting these millions of Americans to powerful new online educational and training applications requires a commitment to universally accessible broadband.

### CURRENT CHALLENGES

Traditional post-secondary degree courses and job training programs with inflexible schedules do not always accommodate the time constraints of people with full-time jobs and family responsibilities. Slower Internet connections limit online educational or training content to a text-based format. Educational content with audio, graphics and video can only be effectively delivered by high speed Internet, to which many adults still do not have access. For example, although simulations and gaming applications are increasingly popular teaching strategies, their use is restrained by a lack of access to sufficient bandwidth. Students and adult learners stuck with slow connections at home or at the public library experience frustration when attempting to access advanced online learning programs.

### BENEFITS OF HIGH SPEED INTERNET

- Self-paced, online learning frees people with irregular or inflexible work schedules from rigid classroom-based course schedules.
- Advanced two-way communications enable students and workers not only to watch lectures and training programs from home but to ask instructors questions and engage their classmates and colleagues via video conferencing.
- Training specialists from faraway areas can reach workers more easily, saving everyone time and money by eliminating costly travel.
- Broadband-enabled social networks enhance online learning by creating a community of learners that can share educational and training resources or work together on group projects.
- Many different types of communities have shown great success already with online learning: Low-income workers seeking advanced job skills, rural students unable to reach city libraries and incarcerated individuals training for future employment all benefit from distance learning.

### RECOMMENDATIONS

- Universities should strengthen their tradition of developing and deploying advanced Internet applications that have the potential to transform online learning and job training.
- Policymakers should extend affordable broadband to all Americans so that everyone can have the educational and employment benefits of high speed Internet.

### FOR MORE INFORMATION

Visit [educause.edu](http://educause.edu), [www.cww.rutgers.edu](http://www.cww.rutgers.edu) and [speedmatters.org](http://speedmatters.org)

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[www.speedmatters.org](http://www.speedmatters.org)  
Communications Workers of America

# HIGH SPEED INTERNET

## E-GOVERNMENT AND CIVIC ENGAGEMENT



### OVERVIEW

High speed Internet allows citizens to participate in civic life more fully and interact with government agencies with greater ease. E-Government solutions can make navigating government services more efficient, improve the quality of services and increase transparency. Although e-government does not replace the quality of services delivered in-person by skilled government employees, especially to vulnerable populations, high speed Internet enhances public employees' abilities to supplement these services in important ways. As federal, state and local governments increasingly rely on the Internet to provide information, forms and services for various government programs, the need for universal, affordable access grows. And with civic participation only a click away, high speed Internet can lower the barrier between citizens and their elected representatives. The capabilities of high speed Internet to aid in everything from simplifying interactions with public agencies to expanding the possibilities of a participatory democracy are endless.

### CURRENT CHALLENGES

Although an increasing number of government services and opportunities continue to be offered online, the absence of universal, affordable high speed connections and the high cost of computers keep many Americans from engaging e-government. Those without computers or access to broadband also miss out on opportunities for digital civic engagement, like participating in online campaigns or partaking in community websites. Poor coordination between federal, state and local government institutions makes establishing appropriate e-government services across administrative and geographic boundaries a challenge. Reservations about inadequate security and privacy safeguards undercut public confidence in e-government applications involving sensitive personal information.

### BENEFITS OF BROADBAND TO E-GOVERNMENT & CIVIC ENGAGEMENT

- Government forms completed online from Web sites open 24 hours a day are faster, cheaper and consume fewer resources than hard copies delivered through regular mail.
- High speed Internet allows a wide range of government services to be completed electronically including business filings, review of Medicare prescription drug options, real-time web-displayed public transit updates, and online car registration.
- The rapid download of video and data lets citizens tap countless resources on government and political issues, be they local, national or international.
- High speed Internet allows citizens to communicate with their elected officials or other candidates through e-mail, online petitions and even social networks.
- Two-way video streaming opens public government meetings to interact with faraway constituents in geographically dispersed areas.
- Online social networks allow citizens to connect with like-minded individuals to organize politically, participate in online campaigns, and make their voices heard.

### RECOMMENDATIONS

- Investment in research and development of e-government initiatives should include an emphasis on improving system compatibility across federal, state, and local governments.
- Access to affordable high speed Internet must be extended to under-served communities so more Americans can participate in civic life online.
- Efforts to develop online government training programs should be expanded and government digital outreach measures must be directed toward disconnected Americans unfamiliar with e-government.

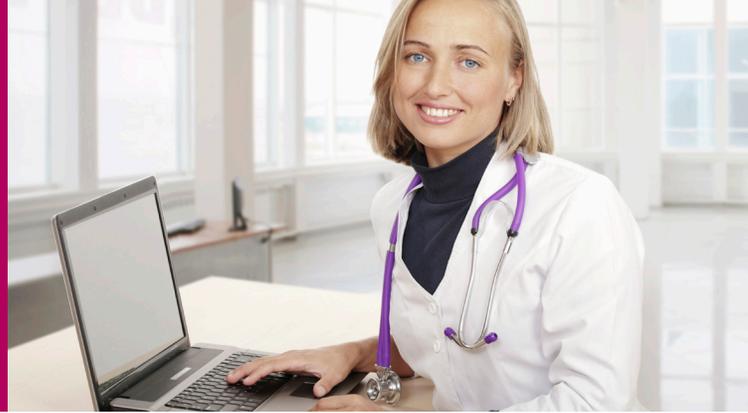
### FOR MORE INFORMATION

Visit [speedmatters.org](http://speedmatters.org)



# HIGH SPEED INTERNET

## AND HEALTH CARE



### OVERVIEW

The potential for using high speed Internet technology to help expand access and quality of health care in the United States is enormous. The use of advanced communications technology to transmit medical data and imaging in real-time, while linking patients to providers for direct consultation, removes geographical barriers and allows people to receive the medical care they need when and where it's needed.

In the face of rising medical costs and increasing gaps in insurance coverage, the cost-cutting efficiencies of telemedicine – the delivery of quality health-related services and information using telecommunications technologies - are more valuable than ever. Universal high speed Internet access would help bring the prospect of affordable and quality health care for all Americans closer to reality.

### CURRENT CHALLENGES

To make the practice of telemedicine possible nationally requires a commitment to pay for health services delivered to the point of need. While this may require an investment in both medical and communications infrastructure, studies show the savings of telemedicine will far outweigh costs. Improvements in both access to care and the quality of care delivered will be immediate. Legal issues including rules that prevent consultations across state lines must be addressed in order for some telemedicine services to be available nationwide. Before the full potential of telemedicine can be realized, high-speed two-way Internet lines must be made universally available.

### BENEFITS OF HIGH SPEED INTERNET

- Real-time transmission of medical imagery enables

the interpretation of MRI, ultrasound, X-rays, and other diagnostic procedures to be performed remotely.

- The number of strenuous patient transfers, such as from a nursing home to a doctor's office, or for expectant mothers seeking prenatal care from a distant hospital, can be significantly reduced through remote monitoring and online consultations only possible through a high speed Internet connection.
- A study from the University of Texas Medical Branch estimates that the U.S. health care system can save \$4.28 billion from the elimination of patient transfers alone. This benefit of high speed Internet does not include the potential savings from remote monitoring or interpretative services.
- High speed Internet allows physicians to connect with distant specialists for real-time guidance in emergency situations, potentially saving lives by eliminating the delay of long ambulance rides when seconds count, such as during a stroke or heart attack.

### RECOMMENDATIONS

- Substantial investment in the research and development of existing and new telemedicine applications and techniques.
- The deployment and adoption of two-way high speed Internet networks capable of reliable and secure transmission of medical imaging and data should be encouraged.
- Policy makers focus on delivering one gigabyte of capacity to institutions that anchor our communities – libraries, schools and hospitals – so that all Americans will benefit from the build out of a high speed broadband infrastructure.

### FOR MORE INFORMATION

Visit [americantelemed.org](http://americantelemed.org) and [speedmatters.org](http://speedmatters.org)



# HIGH SPEED INTERNET

## AND K-12 EDUCATION



### OVERVIEW

High speed Internet enhances every level of education from kindergarten through high school to college to graduate school. Advances in information and communications technology means that education is no longer confined to the classroom. New broadband-enabled educational tools allow for remote collaboration among fellow students on projects, videoconferences with teachers and real-time video exploration of faraway areas. The educational advantage possible with high speed Internet has become indispensable to students preparing to enter the 21st Century workforce. Those students with limited or no access in their formative elementary school years are falling behind. Computer skills must go beyond technical competency, to include higher-level skills such as critical thinking and problem solving as well as the creative use of technology. The earlier every student in America is connected to high speed Internet, the brighter our country's future will be.

### CURRENT CHALLENGES

Students on the losing side of the digital divide are being denied the powerful educational advantages possible with high speed Internet, while those in connected areas become accustomed to the digital world at an early age. Although general broadband adoption rates are rising, this increase is happening at disproportionate rates among different demographic groups. In 2008, the Pew Internet & American Life Project found that only 25 percent of low-income Americans had broadband at home, compared with over 50 percent among American adults. Students with little exposure to digital technologies translate to adults with limited career opportunities. Workers lacking technological versatility put the American workforce at a competitive disadvantage within the world economy.

### BENEFITS OF HIGH SPEED INTERNET

- Two-way, interactive video conferencing allows busy parents to confer with their students' teachers more frequently and conveniently.
- Fast connection speeds allow students to easily form online study groups and work on school projects both in face to face and virtual communities.
- Broadband connections enhance curricula at every grade level with dynamic and interactive Internet applications. For example, virtual field trips take students on tours of faraway places such as to our nation's capitol and the streets of foreign cities, or even to the depths of oceans and to the far reaches of outer space.
- Students in remote locations can have access to education specialists.
- Elementary and high school students with high speed Internet at home can access the resources of their school libraries remotely, including digital videos and high-volume data files.

### RECOMMENDATIONS

- Efforts to expand broadband must focus on underserved areas and demographics so every American student can take advantage of the educational benefits of high speed Internet.
- Community organizations should be engaged in working with community members to facilitate the use of tools and applications available through high speed Internet.
- Educators must have access to high quality professional development in effective technology use.
- Quality maintenance and technical support for computers should be readily available in every school.

### FOR MORE INFORMATION

Visit [aft.org](http://aft.org), [nea.org](http://nea.org) and [speedmatters.org](http://speedmatters.org)



# HIGH SPEED INTERNET

## AND LIBRARIES



### OVERVIEW

When libraries are connected to high speed Internet, the neighboring community benefits. Public libraries serve as critical gateways to information outside one's own community, and in the Information Age this role has become even more important. Libraries give people without home computers free access to the Internet, helping America close the digital divide. As reliance upon public libraries to provide broadband telecommunications services for their community increases, it becomes essential to have universal high speed connectivity in libraries across the country.

### CURRENT CHALLENGES

Although the need for libraries to provide broadband access is increasing, many libraries are ill-equipped to meet this need. Virtually all public libraries provide public access to the Internet, but more than half indicate that the connection speed is inadequate to satisfy their community's needs.

### BENEFITS OF HIGH SPEED INTERNET

- Students use connected libraries to download educational videos, view course lectures and access scholarly journals.
- Librarians use the Internet for business functions, such as running online catalogs, managing digitized content and serving patrons through e-mail and online reference.
- Residents in underserved communities such as rural or low income areas where most homes lack access to high speed Internet rely on Internet connectivity from their local public library.
- As central public meeting spaces within communities, libraries connected to high speed Internet can serve as disaster response centers, such as during a flood, fire or

hurricane.

- Senior citizens, many of whom do not own home computers, find public libraries helpful for finding information on health issues or government programs, and maintaining connections with family and friends who live far away.
- Many libraries provide information literacy training that allows less tech-savvy individuals to engage the Internet in ways that otherwise wouldn't.

### RECOMMENDATIONS

- Policy makers focus on delivering one gigabyte of capacity to institutions that anchor our communities – libraries, schools and hospitals – so that all Americans will benefit from the build out of a high speed broadband infrastructure.
- Library connectivity should be a priority in efforts to increase broadband proliferation, especially in underserved areas where a library is the community's only source of Internet.
- The federal E-rate program should continue its highly-successful program of subsidies for Internet connections for libraries and schools.

### FOR MORE INFORMATION

Visit [ala.org](http://ala.org) and [speedmatters.org](http://speedmatters.org)

ALA American Library Association



# HIGH SPEED INTERNET

## AND PEOPLE WITH DISABILITIES



### OVERVIEW

High speed Internet empowers people with disabilities to become more independent. An Internet connection with enough speed to allow two-way voice, data and video transfer can remove barriers that keep people with disabilities from participating in everyday activities such as employment, education, civic responsibilities and social connection.

There are 54 million Americans who have some form of disability. According to the 2008 U.S. Census, 50 million Americans have some kind of disability. Not only does this substantial segment of our population stand to benefit greatly from universally accessible broadband, but we all benefit from the increased participation when more people are broadband users.

### CURRENT CHALLENGES

Expert studies find that Americans with disabilities use the internet approximately half as much as those without disabilities and less than 24 percent of homes of people with disabilities have adopted broadband internet compared with 63 percent of all homes. This is true for people with disabilities in both urban and rural environments. With 60 percent of working-age persons with disabilities unemployed or underemployed, affordable, universal access to broadband at home is crucial. Those without high speed Internet access at home who must use public computers contend with transportation challenges and inaccessible locations.

### BENEFITS OF HIGH SPEED INTERNET

- Live streaming video and instant text communication liberate people who are deaf, or hard of hearing, and those

with speech disabilities, from dependency on the phone.

- High speed Internet makes new services available to people with physical disabilities, such as attending classes remotely, online medical consultations with faraway specialists, or applying for and securing jobs, eliminating the need for unnecessary or difficult commutes or trips.
- Programs that read text and describe visual contents aloud in a synthetic voice or a Braille display enable people who are blind or visually impaired to search the Internet, understand videos, and communicate online.
- For persons with certain mental conditions or learning disabilities, slow download speeds discourage Internet use.
- Video relay services (VRS), which require high speed Internet to run, allow people who are deaf to have phone conversations in their native sign language by means of an online interpreter.

### RECOMMENDATIONS

- Initiatives to expand high speed Internet should include, as a principle, provisions to ensure not only affordability, but also accessibility and usability, for people with disabilities.
- Measures undertaken to increase employment through deploying more high speed Internet availability should include the employment needs of people with disabilities.
- Research on high speed Internet access should look at the economic benefits of assimilating marginalized segments of society as a means of integration.

### FOR MORE INFORMATION

Visit [aapd.com](http://aapd.com) and [speedmatters.org](http://speedmatters.org)



# HIGH SPEED INTERNET

## AND PUBLIC SAFETY



### OVERVIEW

The application of high speed Internet technology to public safety initiatives – ranging from emergency services to homeland security – can save countless lives by improving on current responder-to-responder voice networks. Broadband networks enable police, fire and emergency medical personnel to react to crises more quickly while facilitating cooperation among multiple safety agencies. Advanced two-way, public networks allow safety officers to quickly access online resources, connect to network-enabled devices and rapidly transfer critical video and data files during crisis situations. High speed Internet also promises to improve victim-to-responder communications by enabling digital transmissions to and from the broadband-enabled public, like detailed public safety announcements sent over broadband networks. Expanding affordable broadband will let more people reach the help they require, and allow safety workers to provide emergency services of a higher caliber in less time.

### CURRENT CHALLENGES

Americans are increasingly tech-savvy, but many of our emergency service systems have failed to modernize. Although the public continues to use more broadband tools, they cannot interact with emergency services using these tools today because many first responders do not have the necessary capabilities. For example, for an individual capturing a digital photo or video of a crime, no standard process exists for transmitting that information to authorities in a timely way, such as calling 911.

The nation's public safety infrastructure is fragmented into thousands of independent local jurisdictions of police, fire and emergency services. The aftermaths of Hurricane Katrina and Sept. 11, 2001 demonstrated the challenges of communicating on multiple bandwidth frequencies across numerous safety

agencies. A universally available high speed Internet network could begin to address the challenge of integrating our nation's numerous public safety networks.

### BENEFITS OF HIGH SPEED INTERNET

- **Fire & Emergency Services:** Faster connections let first responders receive area maps, view video on situations such as how to pry open a broken train door or how to safely shut off electrical power, and allow multiple responders from numerous agencies to view the same images and data simultaneously. Better and faster data can be sent to emergency rooms to prepare them for incoming accident victims. Fire commanders can direct their units using voice, video and data-enhanced communications at an emergency scene or from a remote location.
- **Police:** High speed Internet allows the rapid upload of video and data from on-the-ground law enforcement personnel to police command centers, and allows monitoring of officers or suspects in high-risk situations. Images and fingerprints of suspects, video clips of criminal activity, and layouts of areas can be downloaded to police vehicle computers. An individual who snaps a cell phone photo of someone they believe may be the abductor of a missing child can share this with the appropriate authorities in an instant.
- **National Security:** Broadband facilitates biometrics screening - the measurement of personally identifiable physical characteristics like fingerprints or retinas - at entry points into a country or a sensitive facility, and enhances remote surveillance of borders, airports, ports, train stations, and government buildings. In the event of damage or destruction to vital government office space, high speed Internet can restore government services by enabling public officials and their staff to work remotely.

FOR MORE INFORMATION Visit [speedmatters.org](http://speedmatters.org)



# HIGH SPEED INTERNET

## AND DIGITAL LITERACY



### OVERVIEW

Having the skills to use a computer and navigate the Internet – often referred to as “digital literacy” – allows people to benefit more fully from high speed Internet. Digitally literate Americans are more attractive to prospective employers, and businesses comfortable with digital technology are more economically competitive. Tech-savvy students use high speed Internet to improve their academic performance and prepare for future jobs. Broadband enables people familiar with teleconferencing and online social networks to strengthen their ties with faraway friends and family. Fundamentally, high speed Internet is a tool with endless potential, and only the digitally literate have the skills to harness it effectively.

### CURRENT CHALLENGES

Computers connected to high speed Internet are of little use to those unfamiliar with digital technology. In both rural and urban areas, a significant portion of Americans cannot afford a computer, or the sometimes high cost of broadband subscriptions. Furthermore, many choose not to subscribe to high speed Internet even when it is available in their area because they do not understand the benefits it provides. In this fast-evolving information economy, digitally illiterate students and workers without access to broadband are at a stark disadvantage compared with those who are able to tap the resources of the Internet with ease. Expanding telecommunications infrastructure into underserved areas is vital, but it must happen alongside efforts to raise awareness of the benefits of high speed Internet and create digitally literate citizens.

### BENEFITS OF DIGITAL LITERACY

- As more services go online, digitally versatile workers have an increasing advantage in many sectors ranging from information technology (IT) to the service industry. Digital skills apply to and transfer across many professions, and even enhance a worker’s ability to apply for a job.
- Digitally literate students improve the quality of their school work by easily accessing online resources including lecture videos, library databases and teacher-student e-mail correspondence.
- Digitally literate people save time and money by paying bills, applying for jobs, doing their taxes and banking online.
- Digitally literate computer owners are far more likely to incorporate the Internet into their daily routine and realize the countless benefits of broadband.
- When an entire family is digitally literate and connected to broadband, social networking, video conferencing, and e-mail correspondence can strengthen family ties across vast geographic distances.

### RECOMMENDATIONS

- Measures to expand broadband to unserved and underserved areas should also provide technology training and support which promote digital literacy.
- Initiatives to improve digital literacy should target groups that need the most help like low-income families and communities.
- Programs designed to provide affordable computers and broadband to low-income areas should be supported.

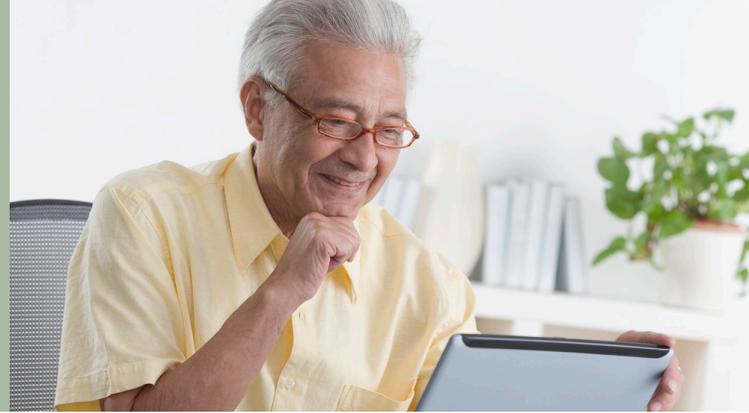
### FOR MORE INFORMATION

Visit [one-economy.com](http://one-economy.com) and [speedmatters.org](http://speedmatters.org)



# HIGH SPEED INTERNET

## AND SENIOR CITIZENS



### OVERVIEW

High speed Internet can help senior citizens live independently, improve their quality of life, increase participation in economic and civic life and reduce costs of medical care. High speed broadband also enables elderly people to share their knowledge through new, influential media and to stay in touch with loved ones. These benefits can only be realized if high speed Internet is available and accessible to everyone.

### CURRENT CHALLENGES

Too many seniors are on the wrong side of the digital divide. The Federal Communications Commission's (FCC) National Broadband Plan noted that seniors lag dramatically in access and ability to use digital technologies. According to the Pew Internet and American Life Project, only 42 percent of those aged 65 and over have access to computer technologies. The FCC found that fully one-third of the Americans who do not subscribe to broadband at home are 65 or older. Many seniors need assistance in how to use digital technology.

### BENEFITS OF HIGH SPEED INTERNET TO SENIOR CITIZENS

- Broadband enables improvements in health care delivery. Home-based health monitoring over a broadband connection allows seniors to connect directly with their doctors and avoid unnecessary admission to long-term institutional care. A Veterans Administration telehealth pilot program, reduced hospital admissions by 19 percent and the number of bed days by 25 percent. The program cost an average of \$1,600 per patient per year, compared to an average cost of \$78,000 for nursing home care. Most important, telemedicine enables many patients to live independently at home.
- Access to high-speed connections allows seniors to interact with new government tools including on-line

presentations and chats that explain everything from changes in Medicare to tax policy. For example, online simulations proved critical in helping people evaluate the best Medicare Part D prescription drug plan for their individual circumstances, yet people without home broadband access were not able to take advantage of these online programs from the comfort of their home.

- High speed internet allows seniors to stay connected to family and friends. A high speed connection offers the opportunity to view the video of a graduation or birthday party or have a video chat with grandkids who live far away. For frail or home-bound seniors, high speed internet has become a lifeline to the outside world.

### RECOMMENDATIONS

- Encourage programs to teach digital literacy, computer training and outreach, so that seniors do not lack the technical knowledge requisite for them to utilize the benefits of high-speed Internet.
- Policy makers must support initiatives to make high speed Internet not only accessible but also affordable for seniors.

### FOR MORE INFORMATION

Visit [ncba-aged.org](http://ncba-aged.org), [retiredamericans.org](http://retiredamericans.org) and [speedmatters.org](http://speedmatters.org)



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## PRINCIPLES FOR

# HIGH SPEED INTERNET POLICY

### UNIVERSAL BROADBAND

Just as government policies helped bring affordable telephone service to everyone, our policies should ensure that every individual, family, business, and community has access to and can use high-speed Internet at a price they can afford – regardless of their income or geographic location.

### HIGH SPEED

Speed matters on the Internet. U.S. policies should promote higher Internet speeds and higher capacity networks. The U.S. should adopt policies to implement the National Broadband Plan benchmarks of 50 megabits per second downstream and 20 megabits per second upstream by 2015 and one gigabyte of high speed capacity to community anchor institutions – libraries, schools and hospitals.

### OPEN INTERNET

We must protect free speech on the Internet so that people are able to go to the websites they want and download or upload what they want when they want on the Internet. There should be no degradation of service or censoring any lawful content on the Internet. At the same time, reasonable network management is necessary to preserve an effective and open Internet. Most important, building high-capacity networks will ensure that all Americans have fast, open access to all content on the Internet.

### CONSUMER PROTECTIONS AND GOOD JOBS

Public policies should include consumer and worker protections, should support the growth of good, career jobs, and require the public reporting of deployment, actual speed, price, and service.

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