



A National Imperative: Universal Availability of Broadband by 2010

Executive Summary

Broadband -- the capacity to deliver Internet access with a continuous "always on" connection and the ability to both receive and transmit digital content or services at high speeds -- has the potential to transform the way we live, learn, work and play.

With continuous always-on connections and high-speed, two-way capability enabling voice, data, graphics and video-rich applications, true broadband is the key to the next generation of communications and Internet services. The widespread adoption of true broadband will increase the efficiency and productivity of Americans at work and at home -- with a potential \$500 billion impact on the United States economy. The benefits to quality of life are immeasurable.

TechNet calls on the President and policymakers to make broadband a national priority and to set a goal of making an affordable 100-megabits per second broadband connection available to 100 million American homes and small businesses by 2010.

The United States needs a national policy that encourages investment in a new broadband infrastructure, applications and services. Yet, significant roadblocks are hindering broadband deployment at the federal, state and local levels. TechNet has developed the following principles to address these roadblocks and guide a national broadband policy.

1. Policymakers should continue to exercise regulatory restraint with respect to broadband applications and services.

An important goal of government policy should be to enable innovation in new broadband applications and services that will drive consumer demand. To do so, minimal regulation should continue to govern broadband applications and services. Specifically, the Federal Communications Commission should ensure that advanced services such as Voice over Internet Protocol communications are subject to minimal regulation.

Another key issue is the availability of music, high-definition video and movies via the Internet. TechNet supports efforts by industry to develop market solutions that unleash digital content, free of government technology mandates.

The government can play a key role in driving adoption of broadband applications and services through e-government investments and procurements, as well as through policies that encourage research and development.

2. The goal of public policy should be to encourage new investment in broadband networks through competition and the removal of regulatory uncertainty and disincentives.

The most critical broadband policy issue is how to drive investment in the last mile network, to bring high-speed Internet access to the home. Today, however, uncertainty over the regulatory treatment of investment in new broadband networks and facilities is a disincentive to new infrastructure investment by incumbents and new entrants.

TechNet supports a market-based approach in which broadband deployment is driven by competition in the marketplace unencumbered by excessive regulation. The goal of public policy should be to create a competitive, deregulated environment in which market forces and facilities-based competition drive investment in a true broadband network.

3. States and localities should promote streamlined laws and regulations that encourage broadband investment, and interstate consistency should be achieved whenever possible.

States and localities are too often obstacles to investment in the broadband network by imposing excessive regulatory requirements, delays and monetary costs on broadband providers. Legislation should limit the ability of local governments to impede access to public rights of way through excessive regulation and exorbitant fees. In addition, the cost and inconvenience of broadband deployment should be minimized through coordination of infrastructure development and construction.

4. National spectrum policy should utilize market-based approaches that reduce the artificial scarcity of spectrum for valuable broadband applications.

The development of advanced wireless technologies is a key factor in ensuring a competitive environment of multiple broadband technologies -- and the availability of broadband to Americans in rural communities. However, the full potential of wireless technologies will not be reached until the United States develops spectrum management policies that make spectrum available for broadband services.

The centerpiece of a national spectrum policy should be the use of market-based approaches that have as their primary goal the allocation of spectrum to the highest-value commercial applications. Policymakers should reallocate an additional 200 MHz of spectrum that could become available for broadband services, and existing spectrum holders should have flexibility to use spectrum for highest value services.

5. Investment incentives, potentially including targeted tax incentives, should encourage broadband deployment to underserved communities and businesses.

In a market-oriented environment that encourages the deployment of broadband networks, there still may be a segment of the U.S. population that does not have broadband availability. Public policies should seek to narrow the current and future disparity in the level of high-speed access to the Internet, to ensure that all Americans can enjoy to the benefits of broadband.

TechNet supports the creation of technology-neutral incentives for broadband users to spur deployment to underserved communities and to accelerate development of next generation Internet services to residences. Policymakers should also consider targeted incentives that make broadband available to small businesses.

6. Broadband policy should encourage innovation and government should not pick technology winners and losers.

TechNet supports facilities-based competition that spurs the accelerated and affordable deployment of a variety of broadband technologies. Competition and the marketplace should drive the deployment of a range of broadband technologies and services to consumers, and the government should not pick technology winners and losers.

A National Imperative: Universal Availability of Broadband by 2010

I. Introduction

Broadband -- the capacity to deliver Internet access with a continuous "always on" connection and the ability to both receive and transmit digital content or services at high speeds -- has the potential to transform the way we live, learn, work and play.

True broadband means much more than just a faster Internet. With continuous always-on connections and high-speed, two-way capability enabling voice, data, graphics and video-rich applications, true broadband is the key to the next generation of communications and Internet services. The widespread adoption of true broadband will increase the efficiency and productivity of Americans at work and at home -- with a potential \$500 billion impact on the United States economy. The benefits to quality of life are immeasurable.

TechNet calls on the President and policymakers to make broadband a national priority and to set a goal of making an affordable 100-megabits per second (Mbps) broadband connection available to 100 million American homes and small businesses by 2010.

Broadband will change the way we live, work, learn and play

Broadband will spur new applications, making the Internet a more significant and powerful part of the lives of Americans at home, work and play, and creating unlimited new business opportunities. Broadband has the power to transform education, e-commerce, health, communications, entertainment and government.

Although many of the most exciting broadband applications have yet to be developed, existing applications already illustrate the compelling public benefit of broadband.

- **Entertainment** - Broadband will bring consumers a range of new entertainment technologies, including high-definition video over the Internet, CD-quality Internet radio, file sharing to enable swapping of home videos and photographs, Web-based delivery of movies and large software and sophisticated, realistic online games.
- **E-Learning** – The ability to provide rich multi-media content, on-line testing, and other sophisticated learning tools and to do so independent of income or location is dependent on broadband. E-learning can have a tremendous impact on children and individuals in remote locations or disadvantaged communities and those with physical or mental impairments that require specialized approaches to learning.
- **National Security** - Broadband can provide a more effective homeland security system through real-time interagency coordination, monitoring and mobilization. In addition, a broadband infrastructure characterized by multiple carriers, multiple facilities and decentralization is resilient and reliable in the event of disruption. And when disruptions do occur, broadband supports rapid response by enabling

communications and work to continue seamlessly from homes and other remote locations.

- **Teleworking** - With data access at home as fast as the office, and videoconferencing from home an affordable option, Americans will be able to work more productively from home or other remote locations -- reducing traffic congestion, alleviating pollution, reducing dependence on foreign oil and improving quality of life -- generating potentially enormous cost-savings to our society.
- **Telehealth** - Sophisticated videoconferencing can enable leading doctors to treat patients in the most remote regions of the country, helping to reduce costs and provide better services to even the most rural regions in the U.S. In addition, "Telehomecare" or "Home Telehealth" services extend regular health care to homebound patients, including a combination of doctor-patient videoconferences, remote monitoring of vital signs, and remote-control use of diagnostic instruments. In addition to saving travel time and costs for home-care doctors and nurses, these services decrease bedtime for patients.

Broadband will have an enormous impact on the U.S. economy and competitiveness

The benefits of widespread adoption of broadband to the U.S. economy are enormous. Much of the economic growth of the late 1990s has been credited to productivity gains caused by the increased use of new data networks and other technology products. Accelerating the deployment of broadband will contribute to continued productivity gains and growth, with a potentially tremendous impact on the economy.

Broadband has the potential to revolutionize significant markets, including shopping, education, home entertainment and medicine -- with potentially enormous benefits.¹ For example, if broadband improved the efficiency of the retailing/wholesale sector by only three percent, annual societal gains could exceed \$50 billion. Similar gains in other sectors such as home entertainment, health care and education could produce tremendous societal benefits. A recent study estimated that widespread adoption of broadband could result in up to \$500 billion in annual benefits to the U.S. economy.²

Broadband access is particularly critical to the growth and success of small and medium-sized businesses, by enabling them to compete with larger or more established companies in marketing and access to the global marketplace.

¹ Robert W. Crandall and Charles L. Jackson, "The \$500 Billion Opportunity: the Potential Economic Benefits of Widespread Diffusion of Broadband Internet Access", July 2001.

² Id.

II. A National Broadband Goal

Ubiquitous broadband is quite simply the key to the next generation of the Internet, to unparalleled opportunities for economic growth and to immeasurable improvements in our quality of life.

It is critical that the United States adopt a national broadband policy. A recent report by the Organization for Economic Cooperation and Development (OECD) shows the United States falling further behind its competitors in terms of per capita broadband subscribers.³ Significantly, the United States and Italy remain the only G-7 countries that have not adopted a national broadband policy, and Italy has signaled its intention to do so. A national commitment to accelerated broadband deployment will be critical to maintaining U.S. leadership in high technology.

TechNet calls upon the President and other policymakers to make broadband a priority and to set a national goal of making an affordable 100-megabit per second broadband connection available to 100 American million homes and small businesses by the end of the decade.

We recognize that this ambitious goal will be achieved incrementally. Specifically, we believe that policies should encourage the availability of affordable broadband at speeds of at least 6 Mbps from two or more providers to at least 50 percent of U.S. households and small businesses by 2004. This goal will enable high-bandwidth applications including DVD-quality video, file-sharing and peer-to-peer computing.

Applications that will likely revolutionize how consumers use the Internet and spur consumer demand will require speeds of at least 6 Mbps. For example, high definition video requires 19.8 Mbps; DVD-quality video requires 4 to 6 Mbps; and television quality requires 750 kbps or more.⁴ Providing homes with data speeds comparable to those available in offices in order to facilitate telecommuting will require speeds of 10 Mbps.⁵

Today, approximately 4.4 percent of U.S. households and 10.7 million American homes with Internet access have broadband, typically at speeds of only 400 Kbps or less.⁶ Although estimates vary based on calculation methods, broadband passby rates are significantly higher. According to some estimates, broadband service via cable modem is currently available to approximately 70 percent of U.S. households, while DSL service is available to 45 percent of U.S. households.⁷ Although these passby rates are based on

³ The Development of Broadband Access in OECD Countries, Working Party on Telecommunications and Information Services Policies, October 2001.

⁴ Comments of Intel Corporation, In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996

⁵ Testimony of Corning Incorporated, House Energy and Commerce Committee, April 25, 2001.

⁶ Computer Science and Telecommunications Board, National Research Council, "Broadband: Bringing Home the Bits", (prepublication copy), 2002.

⁷ The Information Technology Association of America, Positively Broadband, October 2001

relatively slow transmission speeds, they are a foundation for the achievement of an ambitious interim broadband deployment goal.

Both cable and DSL deployment can achieve this goal with the commitment of sufficient resources. The cable industry may be best positioned to meet an aggressive deployment goal, primarily because the hybrid-fiber coaxial cable that characterizes much of the network can accommodate significant broadband data capacity.⁸ With aggressive investment, however, DSL deployment can also reach these goals. For example, SBC serves one-third of all access lines, representing approximately 100 million Americans. SBC's Project Pronto would provide downstream speeds of 1.5 Mbps to 80 percent of SBC's customers and 6 Mbps to over 50 percent of SBC's customers.

The longer-term goal of making a 100-Mbps broadband connection available to 100 American million homes and small businesses by the end of the decade is also achievable given current technologies. Many experts have defined 100 Mbps as the speed at which the Web's true potential can be achieved, by enabling faster surfing to streaming of high-quality digital audio and video, as well as faster upload of graphic images and large files.⁹

To achieve this goal will require network providers to invest hundreds of billions of dollars to upgrade infrastructures and increase bandwidth capacity in the last mile, primarily by providing new fiber connections to homes and offices. Today, virtually no American homes have connections with such bandwidth.

Many analysts and observers have noted the need to address the demand side of the broadband equation. Experience has demonstrated, however, that in the case of technologies for which strong complementarities exist between equipment and application markets, investment in equipment will drive the development of new applications that spur consumer demand. As in the experience of the personal computer and software industries, tremendous demand-side economies of scale are likely to drive an upward spiral of accelerated network deployment and development of new applications. It is essential, however, that public policy enable and encourage innovation in applications and services that are critical to fueling consumer demand for broadband.

⁸ McKinsey & Company, "Data is Too Much Better to Lose", The McKinsey Quarterly, 2001

⁹ Consumer Electronics Association, "100 Mbps and Beyond: Bringing Consumers High-Speed Access", 2001.

III. The TechNet Broadband Principles and Recommendations

The United States needs a national policy that encourages investment in a new broadband infrastructure, applications and services. Yet, significant roadblocks are hindering broadband deployment at the federal, state and local levels. TechNet has developed the following principles to address these roadblocks and guide a national broadband policy.

1. Policymakers should continue to exercise regulatory restraint with respect to broadband applications and services.

Despite the potential benefits of broadband, a gap in consumer demand for broadband currently exists. Recent estimates are that only about 12 percent of households with broadband availability have chosen to subscribe to a broadband service.¹⁰

A significant barrier to broadband deployment has been the lack of applications that will drive consumer adoption. A major factor in consumer decisions not to adopt broadband is the lack of a compelling reason to do so. The so-called “killer applications” that will drive consumer demand for broadband are not yet widely available.

An important goal of government policy should be to enable and encourage innovation in new broadband applications and services that will drive consumer demand. To do so, TechNet believes that policymakers should continue to exercise regulatory restraint with respect to broadband applications and services. Innovation and the free market, largely unfettered by government regulation, have guided the successful growth of the Internet. Minimal regulation should continue to govern broadband applications and services. Specifically, the Federal Communications Commission should ensure that advanced services such as Voice over Internet Protocol communications are subject to minimal regulation.

Another key issue is the treatment of digital content in the online world. Despite the legal issues of sharing copyrighted material, Napster demonstrated that the availability of abundant, popular content online can drive demand for residential broadband. According to [Excite@Home](#), at Napster's peak, MP3 data accounted for almost a quarter of the data moving to and from residential customers.

The availability of music, high-definition video and motion pictures via the Internet is expected to continue to be a major driver of demand for broadband. The challenge, however, is to ensure security against piracy threats while maintaining consumer acceptance of technologies and electronics products.

The technology industry and consumer electronics industry have a responsibility to develop the tools -- including security standards, encryption and other content protection technologies -- that will encourage the availability of on-line digital content. TechNet

¹⁰ Remarks of FCC Chairman Michael K. Powell, National Summit on Broadband Deployment, Washington, DC, October 25, 2001.

supports efforts by the technology, consumer electronics and entertainment industries to continue to work together to develop market solutions to these issues. TechNet is strongly opposed to government mandates that would impose specific copyright protection technologies or timeframes for resolving these issues.

The federal government, as well as state and local governments, can also play an important role in driving consumer demand for broadband through effective use of their procurement power and e-government investments in e-learning applications, health services and other e-government applications. In addition to driving demand for and consumer acceptance of broadband, adoption of e-government tools to modernize traditional governmental functions can help government agencies communicate more effectively and efficiently with citizens, saving time and money and improving citizen involvement.

Public policy should also stimulate the development of innovative new broadband applications and technologies through a commitment to research and development. TechNet supports strengthening the nation's research and development investment through increased federal funding for basic research and enactment of a permanent R&D tax credit.

Recommendations:

- The Federal Communications Commission should exercise extreme caution in regulating advanced services such as Voice over Internet Protocol communications that are essential drivers of demand for broadband
- The technology, consumer electronics and entertainment industries should work together to develop market-based tools to spur the lawful availability of digital content
- Congress should not mandate specific copyright protection technologies or timeframes for resolving these issues
- Government agencies, such as the Department of Commerce and others, should continue to act as a facilitator for increased dialogue and cooperation among industry to spur the availability of digital content
- The federal government, as well as state and local governments, should utilize their procurement power and e-government investments to drive consumer demand for broadband applications
- The Administration and Congress should continue to foster innovation through strong federal funding of basic research and enactment of a permanent R&D Tax Credit

2. The goal of public policy should be to encourage new investment in high-speed networks through competition and the removal of regulatory uncertainty and disincentives.

The most critical broadband policy issue is how to encourage investment in the last mile network, to bring high-speed Internet access to the home. Today, however, uncertainty over the regulatory treatment of investment in new broadband networks and facilities is a disincentive to new infrastructure investment by incumbents and new entrants.

TechNet supports a market-based approach in which broadband deployment is driven by competition in a market unencumbered by excessive regulation. The goal of public policy should be to create a competitive, deregulated environment in which market forces and facilities-based competition drive investment in a true broadband network, and, as a consequence, drive investment in an array of broadband services.

A range of broadband technologies, including cable, DSL, satellite and fixed wireless, currently compete in the broadband market. New investment in the last mile will require substantial investment by all providers. However, the investment necessary to bring high-speed broadband to the home is expensive and risky, exacerbated by the economic downturn and dramatically reduced access to capital. TechNet urges regulatory restraint by the Federal Communications Commission in order to foster an environment that encourages investment in a competitive broadband infrastructure.

Specifically, TechNet supports the Federal Communications Commission's decision not to use its regulatory authority to impose unbundling rules on cable operators. Government-mandated access is unnecessary at this nascent stage in the development of the broadband industry, in which cable, DSL and other broadband technologies are competing for marketshare. Market forces, not open access burdens, will incentivize investment in broadband networks.

As important, TechNet believes that the goal of public policy should be to encourage new investment in last-mile broadband facilities through competition and the removal of regulatory uncertainty and disincentives. A key issue before the FCC is the appropriate regulatory treatment of investment in new DSL or fiber facilities in the last mile. We believe that the FCC should carefully consider whether the application of unbundling requirements to new last-mile investment will discourage such investment and should use its authority to remove regulation where it creates significant disincentives to investment in new, last-mile broadband deployment.

The FCC should periodically determine whether the existing regulatory approach has encouraged new investment in broadband deployment and the availability of broadband from multiple providers at affordable prices or whether additional measures are needed to achieve these goals.

Finally, public policy should employ, whenever practicable, the federal purchasing power to achieve facilities-based competition through a policy that all government

telecommunications requirements be met by a minimum of two different facilities-based providers. Similarly, state and local governments should explore whether they can cost-effectively spur broadband deployment by requiring multiple providers. In so doing, governments can encourage new investment in fiber construction, support a competitive broadband marketplace and reinforce the reliability and robustness of the broadband infrastructure in the face of potential disruptions.

Recommendations:

- The Federal Communications Commission should continue to refrain from imposing unbundling rules on cable operators
- The Federal Communications Commission should use its existing authority to remove regulation where it creates significant disincentives to investment in new, last-mile broadband deployment
- The federal government should encourage facilities-based competition by requiring that all government telecommunications requirements be met by multiple providers

3. States and localities should promote streamlined laws and regulations that encourage broadband investment, and interstate consistency should be achieved whenever possible.

The federal government can create a framework that supports accelerated broadband deployment but actions by state and local governments are critical to the success of a national broadband policy. Today, however, states and their political subdivisions, including counties, cities and towns, are too often obstacles to investment in the broadband infrastructure by imposing excessive regulatory requirements, delays and monetary costs on broadband providers.

State and local governments exert enormous leverage over broadband providers through their control over public rights of way and public property. Too often, this leverage results in excessive fees, including exorbitant yearly per-foot charges, or fees based on a percentage of a provider's gross revenue, both unrelated to the use of rights of way and in many cases far in excess of appraised values of these easements. In-kind payments in the form of free fiber, services and conduit (and even unrelated "pet projects") are also routinely charged.

Broadband carriers also face delays in application processing, tower siting restrictions, layers of state and local taxes and other restrictions that are major impediments to broadband deployment.

In short, local governments too often view their role as an opportunity to generate government revenues, at the expense of accelerated, cost-effective broadband deployment. The resulting costs and delays in the deployment of broadband technologies are borne by consumers and businesses, and can significantly impede the development of regional economies.

TechNet encourages the adoption of legislation at both the federal and state levels to make clear the ability of broadband providers to access public rights of way without discrimination, excessive regulation and exorbitant fees. Such legislation should clarify the intent of the Telecommunications Act of 1996 by incorporating the recent findings by several federal and state appellate courts which have limited the ability of local governments to impose conditions and fees unrelated to the use of public rights of way. Such legislation should also require municipal action on requests for access to public rights of way within a fixed and reasonable time certain. Such legislation should, for example, codify recent case law from the 9th Circuit Court of Appeals that limits the fees sought by municipalities to actual and direct management costs incurred by the municipalities.

It is also critical that the cost and inconvenience of broadband deployment be minimized through coordination of infrastructure development and construction. TechNet supports a national effort to achieve state-by-state coordination of specified days for infrastructure construction, when all providers would be able to take advantage of planned construction to install infrastructure, with appropriate sanctions for failure by states and localities to

comply. By lowering costs of deployment for all broadband providers and consolidating infrastructure construction, the resulting economic benefits to local economies as well as to state and local governments and reduced inconvenience and inefficiencies for citizens would be significant.

State and local governments can also play an important role in driving consumer demand for broadband through effective use of the state procurement power and e-government investments in e-learning applications, health services and other e-government applications.

Several states are noteworthy for their efforts to make broadband a priority and are working to create an environment that encourages broadband deployment and use. Unfortunately, state and local best practices are not systematically compiled and shared. We urge state and local governments to make broadband deployment a priority by identifying, sharing and adopting best practices in rights of way policy, tower siting, zoning, application processing and fees, and other areas.

TechNet will foster an effort to assess and rank state policies to encourage broadband deployment through development of a Broadband Index. The Index will highlight the success or failures of states to encourage broadband deployment through deregulatory initiatives, timely decision-making and imposition of fair and reasonable fees. In so doing, the Broadband Index can put constructive pressure on all 50 states and the District of Columbia to make broadband deployment a priority and to adopt policies that spur broadband deployment.

Broadband deployment is critical to economic growth and development of the nation and regional economies. All states should recognize that broadband deployment is critical to creating a business-friendly environment that supports economic development. States should make accelerated broadband deployment the centerpiece of their business development plans. Without this commitment, a national broadband policy cannot succeed.

Recommendations:

- Congress and state governments should enact legislation that limits the ability of local governments to impose conditions and excessive fees unrelated to the use of public rights of way, and require municipal action within specified timeframes
- States should enact legislation that mandates local coordination of infrastructure construction, with appropriate sanctions for failure to comply
- State and local governments should utilize the state procurement power to spur broadband applications
- State governments should systematically share broadband best practices
- TechNet will foster an initiative to develop a National Broadband Index to evaluate the climate and success of deployment of broadband infrastructure in all 50 states and the District of Columbia

4. National spectrum policy should utilize market-based approaches that reduce the artificial scarcity of spectrum for valuable broadband applications.

The development of advanced wireless technologies is a key factor in ensuring a competitive environment of multiple broadband technologies -- and the availability of broadband to Americans in rural communities.

Satellite and fixed wireless technologies are currently the only economical technologies for rural areas. However, the full potential of wireless technologies will not be reached until the United States develops spectrum management policies that make more spectrum available for broadband services. Auction and trading prices for licenses strongly suggest that additional spectrum for wireless Internet services would be more highly valued than in many other current applications.

TechNet urges policymakers to create efficient processes for the reallocation of an additional 200 MHz of spectrum for wireless broadband Internet applications. Congress and the Administration should work with the private sector to expedite the reallocation of spectrum from government to commercial use.

Proceeds from the auctioning of spectrum can fund costs of moving to alternative spectrum as well as upgrades. Although the use of spectrum proceeds to reimburse costs of relocation and other government uses may be important, particularly in a time of budget constraints, short-term decisions about spectrum sale designed to address budget shortfalls will not result in thoughtful planning or optimal market value for spectrum. A market approach that makes government revenue generation a secondary goal will allow allocation to broadband providers, including those seeking to provide broadband to rural markets.

The centerpiece of a national spectrum policy should be the use of market-based approaches that have as their primary goal the allocation of spectrum to the highest-value commercial applications. Spectrum holders should have clear rights and obligations, and they should have greater freedom to aggregate, disaggregate and transfer spectrum. Existing spectrum holders should have flexibility to use spectrum for more valuable services.

The United States must move quickly to address these issues. Major European and Asian nations including Japan, Germany and the United Kingdom, have already developed comprehensive spectrum management plans and moved forward to allocate spectrum for advanced services. As a result, advanced technologies are already being deployed in these countries and the United States risks losing its global leadership in wireless technologies -- a key element in the next generation of the Internet.

Recommendations:

- A national spectrum policy should be established, relying on flexible, market-oriented spectrum allocation and usage

- Policymakers should reallocate an additional 200 MHz of spectrum that could become available for broadband services
- Public policy should provide clear rights and obligations to spectrum holders, providing them with greater flexibility to use spectrum for highest value services

5. Investment incentives, potentially including targeted tax incentives, should encourage broadband deployment to underserved communities and businesses.

In a market-oriented environment that encourages the deployment of broadband networks, there still may be a segment of the U.S. population that does not have broadband availability. Estimates are that as much as 10 to 15 percent of the U.S. population will not be served by broadband under market forces.¹¹ Even as cable, DSL and wireless companies roll out broadband products and networks, more can and should be done to spur more rapid investment to residences, rural areas, inner cities and other underserved communities. Public policies should seek to narrow the current and future disparity in the level of broadband access to the Internet, to ensure that all Americans have access to the benefits of high speed Internet access.

TechNet supports the creation of technology-neutral incentives for broadband users to spur deployment to underserved communities and to accelerate development of next generation Internet services to residences. Such incentives may include tax credits, subsidies and other targeted policies to reach that percent of the population that will not be served as a result of market forces.

Another important issue is ensuring broadband access for small business. While small and medium-sized businesses represent 85 percent of businesses in the United States, 40 percent of employment and one-third of economic output, only 6 percent of such businesses have broadband access.¹² This disparity is due largely to the location of small and medium-sized businesses outside of high-density areas where broadband is being deployed most rapidly. Policymakers should consider targeted incentives that make broadband available to small businesses.

TechNet also supports efforts by municipalities to deploy high capacity networks where necessary to reach underserved communities, provided that such efforts include protections against unfair competition by municipalities against future private sector providers.

Recommendations:

- Congress should adopt technology-neutral tax incentives for broadband users to spur deployment to underserved communities and residences
- Congress should consider targeted incentives to make broadband available to small businesses
- Local governments should play a direct role in ensuring broadband deployment where underserved communities will not be served by private sector providers

¹¹ See Remarks of FCC Commissioner Michael J. Copps, National Summit on Broadband Deployment, October 2001.

¹² The Precursor Group, "How Broadband Deployment Skews Economic/Business Growth", February 22, 2001.

6. Broadband policy should encourage innovation and government should not pick technology winners and losers.

TechNet supports facilities-based competition that spurs the accelerated and affordable deployment of a variety of broadband technologies. Competition and the marketplace should drive the deployment of a range of broadband technologies and services to consumers, and the government should not pick technology winners and losers. Competing technologies will result in a robust marketplace and reasonable prices for the consumer.

Facilities based competition will generate enormous benefits to consumers by encouraging a range of technology options and competition among broadband providers. Cable, DSL, satellite, fixed wireless, fiber and other technologies will be essential to making affordable broadband available to all Americans.