



6776 Little Falls Road
Arlington, VA 22213
703-536-7776
ahga@americanhomeowners.org
www.americanhomeowners.org

September 22, 2009

Chairman Julius Genachowski
Commissioners Michael J. Copps,
Robert M. McDowell, Mignon Clyburn
and Meredith Attwell Baker
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: GN Docket Nos. 09-47, 09-51, and 09-137 re Telework
Comments—NBP Public Notice #3

Dear Chairman Genachowski and Commissioners Copps, McDowell, Clyburn,
and Baker:

The American Homeowners Grassroots Alliance (AHGA), in serving our nation's 70 million homeowners, focuses on public policy issues that have substantial economic impact on homeowners and home ownership. Communications technology is playing a growing role in the personal and professional lives of American homeowners. We believe that continued breakthroughs in communications technology will continue to dramatically reshape the lifestyles of American homeowners and other consumers. One of the most important impacts of communications technology is in facilitating teleworking, including telecommuting by employees to their jobs as well as the creation of Internet-centric entrepreneurial home-based businesses.

Homeowners are welcoming telework for many reasons. With the dramatic growth in two income families, time-starved parents find that teleworking helps them cope with the many responsibilities of child-rearing. As commuting distances and times lengthen due to suburban sprawl, teleworking also provides a way to recapture precious hours lost to traffic jams. Surveys consistently show that telecommuting programs are among the most popular employee benefits. A recent survey of members of the American Institute of Architects revealed that home offices are the most popular special function room of new home buyers for the third year in a row.

According to IDC, a national research firm, there are now between 34.3 million and 36.6 million home office households in the United States. At least 18 million are home-based businesses, according to U.S. Census figures. They include millions of internet-centric service businesses such as website designers, consultants, real estate agents, eBay Power Sellers and other Internet auction-based merchants who derive all or most of

their income from Internet commerce. The balance are telecommuting employees of businesses of all sizes or employees of the federal, state or local governments.

Home-based technology-centric businesses (we call them **telehome businesses**) benefit society in many ways. Telehome business owners and telecommuters are helping to reduce rush hour traffic jams and defer the need for state and federal transportation infrastructure expansion and maintenance investments. No vehicle gets better mileage during rush hour than one that remains in the driveway. A study by TIAA LLC determined that a full time telecommuter who lives 22 miles from her office would save 320 gallons of gasoline and reduce CO2 emissions by 4.5 to 6 tons per year. The shift to teleworking is thus helping reduce environmental pollution and global warming.

Since they use existing space in their home offices, telehome businesses and telecommuters can substantially reduce the need for the construction of new commercial office space, which also helps the environment. Since almost all telehome businesses and telecommuters require broadband in order to function, they also provide an expanded revenue base for broadband providers that facilitates broadband expansion into rural areas and underserved markets.

Both telecommuters and telehome businesses are demand drivers for broadband deployment and economic development. The housing phenomena of “drive until you qualify” (for affordable mortgage payments) has put many former urban or suburban homeowners who would like to telecommute or create telehome businesses beyond the outer reaches of current broadband availability. They live in rural areas often 50-100 miles from urban centers. These “rurburbs” (rural communities with urban/suburban demographic characteristics) have potentially high adoption rates for broadband consumption if it is offered. They will then expand the teleworking community and reduce the number of long distance commuters.

The local availability of broadband enables technology oriented businesses and also attracts homeowners who would use broadband for a myriad of personal uses. The effect is synergistic, particularly as broadband is rolled out into previously unserved rural areas. As more workers with more technology skills find such locations attractive because of affordable housing costs and many other factors, technology oriented employers also benefit from appropriately skilled local workers.

Additional synergies also arise from wider broadband deployment driven in part by telework demand. They include the ability of the disabled and others with special needs or who are transportation-challenged to participate in the workforce, and they help make telemedicine more available. Wearable medical monitoring devices will enable many of the millions of chronically ill homeowners to remain in their homes while their conditions are remotely monitored 24/7. This broadband application will greatly reduce U.S. healthcare costs.

From the wording of the questions in this notice, it appears to be focused on employee telecommuting only. Telehome businesses have become an important and growing part of the economy, and we believe that this inquiry should address both types of teleworking. With 18 million home based businesses in the U.S., many millions of them

are Internet-centric already. Their economic impact is certainly significant. Even though some issues related to networking between a home office and corporate offices may often not apply, many other Internet/broadband issues affect both populations. Further, the distinction between a business and an employee is somewhat blurred under current law. Many professionals (real estate agents and other sales types, for example) operate as “independent contractors” to larger firms. They are technically separate business entities from a legal standpoint, but they share many of the characteristics, networking and other needs with telecommuting business employees.

Because of the many benefits of teleworking we believe that it is much more important to stimulate teleworking demand than to try to predict which avenues it will take. For that reason we have also added recommendations for accelerating teleworking/broadband demand at the end of these comments. They include policy recommendations on steps that the FCC, other agencies, Congress and state government should consider in order to accelerate teleworking.

In answering the questions posed in the notice, we are responding with both of these populations in mind. We have provided data and/or comments where we have information, but we do not have the answers to all of the questions. As requested in the notice we have responded in the order that the questions were posed in the notice.

1. Broadband and Telework

- a. Broadband is critical to most telehome businesses and telecommuters. It can replace fax machines and telephones and is the only way data intensive Internet technologies can be used in home offices. Skill sets that were previously not internet-centric (telemarketing for example) are now heavily dependent on applications that must be delivered at broadband speeds. Videoconferencing and other visually interactive technologies also enable telecommuters and telehome business owners to function effectively in a home office environment. Given the slow load times for dialup connections to websites, any type of business or work that requires website interfaces will almost certainly require broadband access. Many home businesses built around non-technical products or skills (craft-based business, many types of service companies, etc.) require the Internet to market their products and services and are thus also broadband-dependant.
- b. Employers should prepare to use telecommuting to maintain business operations during events such as terrorist attacks, natural disasters, outbreaks of disease, or other contingencies that can knock out a corporate headquarters and/or otherwise limit an employees’ ability to be physically at a particular location. This is an essential component of business continuity planning, and businesses must determine which corporate functions are critical and which can be decentralized to home office or other remote locations. Combined with other techniques to limit the risks of outages associated with facilities-based corporate networks, teleworkers offer a safety network to assure that a corporation can maintain core functions during times of crisis. Far-sighted companies should recognize this great benefit and build a teleworking component into their corporate security planning.
- c. A variety of technologies, processes, regulations must be implemented to foster teleworking. To date the only federal legislation on the subject is a law passed in 2000 requiring federal agencies to establish teleworking plans. Largely as a result of

that program about 7% of federal workers now telecommute. Although the 2000 federal legislation is modest though promising start, no complimentary federal legislation addresses teleworking in the private sector. While the benefits are great, significant startup costs are associated with establishing successful telecommuting programs. They include home office equipment and software to access their employers' virtual private networks (VPNs), associated firewalls and other security applications, and employee training on teleworking procedures, equipment and applications. The FCC, other federal agencies, and Congress should adopt policies and provide incentives to encourage teleworkers and their employers to make the investments necessary to enable teleworking. We provide more detailed policy recommendations in that regard at the conclusion of this document.

- d. Broadband has already dramatically changed and empowered teleworking. It will continue to do so in the future. It is impossible to predict what new applications will emerge that will change teleworking, but it is certain that continued broadband deployment will accelerate teleworking in rural areas. At some point it may be possible for a rural resident to grow up, attain a college education, and complete a successful career living the whole time in the same small rural town where they were born.
- e. We do not have data on application use by teleworkers, but believe email and voice communication are used most extensively by all teleworkers. We also believe that telehome businesses are more likely than telecommuters to use websites and Internet marketing tools, while telecommuters are more likely to use collaboration applications.
- f. Empowering broadband characteristics (mobility, reliability, speed) will continue to improve and will help accelerate teleworking in the future. Speed will obviously be particularly important to telehome businesses that maintain their own websites. Reliability is important to all teleworkers, and absolutely critical to some. Mobility is particularly to certain types of workers, such as those in sales. As mobile applications continue to develop rapidly they will continue to become an even more important factor in teleworking.
- g. We believe that a combination of research and development investments and market demand will determine what characteristics will evolve, and at what rates. Investment incentives, such as the R&D tax credit, will impact the rate of development and consumer-side demand drivers could have a similar impact.
- h. We do not have expertise in this area.
- i. (and J) Telework programs have far more benefits than harms. Existing data suggests that teleworking offers substantial benefits to businesses and workers. In addition to data showing that telecommuting is benefitting the federal government, more state governments are also developing telecommuting programs, and those programs also have yielded substantial benefits. For example earlier this month Virginia Governor Tim Kaine announced that 2,286 federal and private sector employees as well as 1,765 state employees participated in Telework Day in Virginia. Those teleworkers saved approximately \$113,000, avoided driving 140,000 miles and removed 75.89 tons of pollutants from the air through participation in Telework Day on August 3, 2009. If all eligible employees teleworked one day per week for a year, teleworkers in the Commonwealth would collectively avoid driving 602 million miles, remove 360,800 tons of pollutants from the air, and save \$807 million in commuting costs. Over the course of a year this would equal a \$1,822 annual raise for every

teleworker in Virginia, and save 46 hours a year in commuting. A survey of Virginia's teleworkers also showed that 69 percent felt they accomplished more than a typical day at the office and 91 percent said that they would be more likely to telework again as a result of their experience. Barriers to teleworking include the costs of supporting infrastructure (hardware, software, broadband subscriptions) to employers and/or employees. There are also certain types of jobs that are not subject to telecommuting (assembly line workers). In addition some employers have concerns about their ability to manage remote employees, and some employees fear that if they do not have sufficient "face time" in an office environment that it could limit their potential for career advancement. We believe that these concerns will lessen as telecommuting expands and employers/employees gain more comfort and experience in telecommuting.

2. Telework and Economic Development

- a. As stated earlier, broadband deployment enables both teleworking and technology businesses in areas where it is available. It also attracts homeowners with technology skills who use broadband for its vast array of uses. The effect is synergistic. As workers with more technology skills find such locations attractive because of affordable housing costs and many other factors, technology oriented employers also benefit from increased local availability of appropriately skilled local workers.
- b. There are numerous examples of many different ways that the diverse variety of telework programs have helped attract jobs or companies to economically struggling areas and have factored into local or regional economic development efforts. Virtually all of them have also faced various types of challenges, and coped with those challenges in various ways and with varying degrees of success. We do not believe that any one model can fit all needs, but there are lessons to be learned from all efforts. The FCC could function as an accelerator by compiling results and categorizing current and previous teleworking programs across the country and promoting this resource so that employers and governments can review these experiences in order to improve existing teleworking programs or plan new ones more effectively.
- c. We do not have expertise in this area. Our sense is that as technology/broadband costs have declined over the years, and that the economic benefits of shared remote workspaces in most cases may no longer be greater than working out of a home office. However, there may well be cases where shared remote workspaces still make sense and we do not have data to validate our hypothesis.

3. Programs

- a. We do not have data in this area.
- b. We do not have data in this area.
- c. We do not have data in this area.
- d. Given the popularity of telework programs it is reasonable to infer that they play a significant role in improving retention rates among many employees.
- e. We do not have data in this area.
- f. We do not have data in this area.
- g. As suggested previously, the FCC could provide a valuable public service by compiling successful examples in a central Internet clearinghouse where they could

be accessed by private and public organizations, governments and current or future teleworkers.

- h. We do not have data in this area. As suggested previously, the FCC could provide a valuable public service by compiling successful examples in a central Internet clearinghouse where they could be accessed by private and public organizations, governments and current or future teleworkers.
- i. We do not have data in this area. As suggested previously, the FCC could provide a valuable public service by compiling successful examples in a central Internet clearinghouse where they could be accessed by private and public organizations, governments and current or future teleworkers.
- j. We do not have data in this area. As suggested previously, the FCC could provide a valuable public service by compiling successful examples in a central Internet clearinghouse where they could be accessed by private and public organizations, governments and current or future teleworkers. The cost of hardware, software and broadband services remains a barrier to teleworking. Underutilized population segments (seniors, disabled, and/or family caretakers) can handle many technology oriented jobs from their home. Many do not have the ability to work outside their homes and they are likely to be loyal long-term workers. For this reason employers should look for opportunities where their workforce needs could be filled from these populations.
- k. We do not have data in this area.

4. Policy Recommendations

Teleworking will continue to expand as broadband becomes available to more unserved areas. Because of its ability to improve the lives of telecommuters and telehome business owners, help the environment, address national emergencies, and help the economy, specific proactive policies to encourage faster adoption of teleworking programs should be implemented by federal agencies, Congress, and state and local governments.

Limited private sector investment in telecommuting programs to date suggests that most employers do not fully appreciate the many benefits and/or the perceived return on investment in other company investments is better. This must be addressed by a combination of education and incentives targeted to the components of telecommuting programs. The expansion of telehome businesses can also be promoted by incentives to encourage homeowners to make investments in these businesses.

Expanding telecommuting programs also has implications for investments by broadband service and other providers. Private U.S. investment in broadband and cell phone/mobile computing deployment continues at a healthy pace. While U.S. broadband and cellular penetration is not as great as in some other developed countries, the vast geographic expanse of the U.S., and lack of federal government subsidies for broadband deployment (until this year's stimulus funding) is most likely the major cause of the difference.

The stimulus program investment in broadband deployment will be very helpful if properly managed, but ultimately it alone will be insufficient to provide universal broadband coverage. Specific proactive policies to encourage and enable increased investments in areas essential to teleworking by broadband service and other providers are also needed. Incentives to increase private sector involvement in broadband deployment to close the remaining gap should be provided.

Increased teleworking will change patterns of network use and further add to the fast growth in data transfer. While most broadband service providers have done a good job of reasonable network management, and the FCC deserves credit for its appropriate enforcement of its four network neutrality principles, we must provide economic incentives for businesses to make further investments in networks necessary to handle the increases in data demand that is occurring. These investments must be increased throughout the ecosystem (middle mile, etc.) and the incentives should be precisely targeted to get the kinds of upgrades needed in the amounts needed. Those investments will also help avert future unproductive debates over network neutrality issues, enabling policymakers to focus on the remaining matters at hand.

The FCC has made a positive contribution to broadband deployment in many ways. It has contributed substantially to plans for the \$7 billion+ in federal stimulus funds for broadband deployment, and the National Broadband Plan will be critical to the continued progress towards universal broadband availability. At this point in time the most critical task currently facing the agencies involved in awarding stimulus grants and contracts is effectively spending the federal stimulus broadband funds. The FCC and other agencies involved should allocate as many resources as possible to this challenging task. If successful the effort will greatly expand broadband availability. Not every grant or contract will meet its objectives, and we should not expect all of them to succeed. However many taxpayers will rightly wonder whether direct government investment in broadband deployment is the right way to go in the future if a large share of the efforts fall short of their objectives.

With the aforementioned in mind, we make the following policy recommendations.

- a. Since broadband access is essential to teleworking, the \$7 billion+ in stimulus funds allocated for expanding service to the unserved and underserved should be focused on the unserved. Further, it should focus on those unserved areas which will not soon be served by other private/public sector broadband deployments already in process or planning over the next few years. This will maximize the number of additional homes that can receive broadband as a result of the effort.
- b. Speed is good, but not the only consideration in making broadband deployment decisions under the stimulus program. In some cases geographic conditions will be such that a large number of homes can be cost-effectively provided less than the fastest broadband speeds while providing the fastest broadband speeds will be unaffordable. With trends in the direction of mobile computing delivery by cellular devices may be the appropriate solution in some cases. In those circumstances the federal government should balance all factors in awarding broadband grants and contracts.
- c. Adoption rates are important. Not all unserved rural communities are alike. Some

remain essentially farming communities with shrinking populations of older residents, mostly farmers. Others are growing, have more new, younger, and technologically oriented residents whose demographics more closely reflect suburban populations. Such communities with a high percentage of “rururban” residents (rural residents with urban/suburban demographic characteristics) exist across the country and are good candidates for broadband deployment from an ROI standpoint.

- d. Provide federal and state tax credits to encourage teleworking. A home office requires a substantial expenditure of money for hardware, software and broadband access by a home-based business owner, a telecommuter and/or the telecommuter’s employer. The recent \$4,000 Cash for Clunkers program shows tax credits can be a very effective stimulus, and the current \$8,000 first time home buyers tax credit is helping to pull the housing industry out of a steep decline. If we can provide Cash for Clunkers and dough for dwellings, why not a similar effort to encourage teleworking? The federal government currently provides a \$2,000 federal tax credit for hybrid vehicles purchases. An important justification for the tax credit is that hybrid vehicles greatly reduce air pollution, especially that caused by commuters and rush hour traffic jams. Because it would achieve an even better outcome (no vehicular air pollution from cars in the driveway and less air pollution because of fewer/shorter traffic jams), AHGA recommends a similar \$2,000 tax credit for technology expenses used in teleworking (hardware, software, broadband access, cell phones, etc). Whoever paid for the products/services (telehome business owner, telecommuter, and/or his/her employer), would be eligible for the tax credits.
- e. Additional categories of specific business expenditures that enable teleworking, such as the establishment of an employer’s VPN, associated firewalls and other security applications, and employee training on teleworking procedures, equipment and applications, should also be subject to tax credits or other incentives.
- f. One of the major challenges to increasing teleworking is the rapid growth in network volume. Video applications in particular consume great amounts of bandwidth. Networks will require substantially greater infrastructure investment in the future. This demand competes for the same funding that network providers would otherwise use for other constructive purposes such as expanding broadband deployment. For this reason there should be similar business incentives in the form of targeted enhanced R&D tax credits for broadband service providers or other businesses in the broadband ecosystem to enhance network investments, stimulate broadband rollout, and make other specific critical investments in technologies or areas requiring more resources (i.e. middle mile, etc.).
- g. To stimulate telehome businesses, help the environment, and reduce state and local transportation infrastructure costs, Congress should prohibit state sales taxes on Internet transactions. State and local governments exempt consumers from sales taxes for a variety of economic activities anyway (sales of prescription drugs and tax holidays on back to school expenses, etc.). An Internet commerce sales tax exemption is equally deserving. It would encourage Internet commerce, substantially reducing automotive pollution since the products will be delivered by the US postal carriers, and FedEx/UPS trucks that go up and down their streets anyway. It would reduce state and local government costs of maintaining and expanding transportation infrastructure. Such a policy is strongly supported by voters. Last year, Parade Magazine asked its readers “Should You Pay Sales Tax on Internet Shopping?” Based on 3,125 responses, 85% opposed taxing Internet sales.

h. Reform depreciation laws affecting technology products. Technology products (computers, peripherals cell phones, etc.) become outdated very quickly. To encourage employers/telehome businesses to maintain technological competitiveness the depreciation period for these products should be reduced to 2 years. Recordkeeping should also be simplified and liberalized for home offices, and limited personal use of computers, Internet access services, cell phones, etc., should be exempt from taxable liability.

There are probably few efforts that bring more benefits to society while at the same time receiving less federal, state, or local government funding support than teleworking. Many of the recommended investments contained herein will greatly leverage the ability of telework to contribute to society. Many will also result in measureable economic savings and represent a worthy investment from that standpoint alone.

The American Homeowners Grassroots Alliance congratulates the FCC for this important inquiry. On behalf of the nation's homeowners we urge the FCC to do everything in its power to stimulate telework.

Sincerely,

A handwritten signature in cursive script that reads "Bruce N. Hahn".

Bruce N. Hahn, President