



Hearing on

**“Connecting Main Street to the World: Federal Efforts to
Expand Small Business Internet Access”**

United States Senate

Committee on Small Business and Entrepreneurship

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**Statement of Senator Gordon H. Smith
President and Chief Executive Officer
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Good morning Chairwoman Landrieu, Ranking Member Snowe and members of the Committee. My name is Gordon Smith, and I am President and CEO of the National Association of Broadcasters (“NAB”). NAB is a nonprofit trade association that advocates on behalf of thousands of local radio and television stations and broadcast networks before Congress, the Federal Communications Commission (“FCC”) and other federal agencies, and the Courts.

I am grateful for the opportunity to speak with you today regarding the impact that implementing certain recommendations of the National Broadband Plan could have on small businesses, and especially the small broadcasters that I represent. Broadcasting is often mistakenly labeled “Big Media” – a collection of major companies that control hundreds of stations. But that image is inaccurate. While there are some large broadcasters, the majority of broadcast stations are small businesses. Single station owners can be found in communities across the country, both large and small. And like any other small businesses, small broadcast stations are often the most impacted by governmental regulatory decisions. I will also note other small business interests at stake under the National Broadband Plan, including local small businesses that advertise on broadcast television and new entrepreneurs that want to harness portions of broadcast digital signals to provide innovative services to the public.

It is my hope that this Committee and Congress will look very closely at how many of the recommendations in the National Broadband Plan will affect small broadcast stations that serve local communities – and your constituents – throughout the nation.

I. The Release of the National Broadband Plan Should Facilitate a Discussion about the Future of American Communications

Let me first acknowledge the effort of the FCC under the leadership of Chairman Julius Genachowski to develop the National Broadband Plan.¹ The task that Congress asked the FCC to undertake was daunting to say the least, but Chairman Genachowski tackled it with enthusiasm. He assembled a team from both within and outside the Commission called the Omnibus Broadband Initiative team. Over the course of seven months, that team developed a comprehensive 359-page document containing detailed information about the state of broadband deployment and recommendations for future action.

The document is, as you know, controversial. As the departing head of broadband team, Blair Levin, recently said: “We knew going in that people would like about 80 percent of the ideas and really hate about 20 percent of them.”² They expected mixed reviews – and, to their credit, have been clear that the plan was not intended to be the final solution, but the start of a dialogue. The Chairman himself described the plan as a “living, breathing strategic blueprint that will be reviewed and revised in light of experience and growing knowledge.”³

As I am sure this committee is well-aware, the broadcast community has some serious concerns with certain aspects of the National Broadband Plan. I will discuss some of those concerns in more detail below. But first I want to make some general observations about the Plan and its far-reaching proposals and ideas. I believe the vision that produced this Plan should be applauded. No one ever said that government

¹ The National Broadband Plan, rel. March 16, 2010, available at <http://www.broadband.gov>. (“NBP”).

² See “My chat with Levin about his broadband critics, surprises,” Cecilia Kang, Post Tech Blog, WashingtonPost.com, April 19, 2010, *available at* http://voices.washingtonpost.com/posttech/2010/04/my_chat_with_levin_about_his_b.html.

³ See Prepared Remarks of Chairman Julius Genachowski, Federal Communications Commission, March 2010 Open Agenda Meeting, “A National Broadband Plan for Our Future,” at 4 (March 16, 2010).

had to remain behind the technological curve or be short-sighted. But given the breadth of the plan and its recommendations, we strongly encourage this Committee and Congress as a whole to scrutinize the plan carefully, ask how it will affect your constituents and consider both the desires and needs of all Americans, not just those purchasing a first generation iPad.

We believe the National Broadband Plan represents an ideal opportunity to begin a serious discussion about the future of communications in our country. Contrary to what you may have heard, broadcasters are not anti-broadband. Indeed, we believe, as do many Americans, that expansive high-speed broadband connectivity will have strong positive effects on the economy, on health care, and on the environment.

Broadcasters see the opportunity that broadband can create for businesses. Already we are witnessing the effects of the so-called “over the top video” movement as consumers move away from pay television regimes and embrace instead a combination of on-demand IP-video and live, local digital television received via an antenna as their primary sources of video entertainment and news.⁴ Additionally, for more than a decade broadcasters have been repurposing existing content and creating new content for the Web. Those efforts are paying off. According to one recent report, TV online advertising revenue grew 10 percent in 2009 and was projected to grow 21 percent in 2010.⁵ We are encouraged by these signs and expect that broadcasters will continue to leverage their unique content for use on multiple platforms, including the Web and mobile video.

⁴ See Erick Schonfeld, “Estimate: 800,000 U.S. Households Abandoned Their TVs For The Web,” TechCrunch Blog, available at <http://techcrunch.com/2010/04/13/800000-households-abandoned-tvs-web/>.

⁵ See “Stations Outpace Papers In '09 Web Sales,” TVNewsCheck, April 20, 2010.

Other small businesses also have a stake in the broadcast/broadband confluence. Broadcasters have been approached by small start-up entities that want to use portions of the digital capacity on current broadcast channels to provide service to the public. For example, a small company called SEZMI has negotiated arrangements with some local broadcasters to lease and aggregate spectrum to deliver high-demand video content to customers. SEZMI presents itself as a direct competitor to multi-channel services such as cable and satellite.⁶ Another small business, the CTB Group, submitted comments in the National Broadband Plan proceeding describing a potential partnership with broadcasters that would provide a wide array of mobile video and data services along with digital broadcast signals.⁷

Significantly reducing the amount of spectrum allocated for broadcast television, as the current plan suggests, could stifle opportunities for new entrepreneurs like these to develop innovative services for the public. It could also diminish possible opportunities for other small businesses to gain access to affordable data networks.

Another potential (and not necessarily obvious) impact of the National Broadband Plan's proposal to significantly reduce the amount of spectrum allocated for local television service could be on the small local businesses that advertise on local stations. With the recent conversion to digital broadcasting, many stations are taking the opportunity to provide new programming streams to the public. Multicast programming includes news, weather, sports, religious, lifestyle, children's and other programming targeted toward underserved demographic groups. For example, LATV, based in Los Angeles, is a bilingual network channel distributed on digital multicast streams that

⁶ See Comments of Sezmi Corporation in GN Docket No. 09-51 (Dec. 22, 2009).

⁷ See Comments of CTB Group, Inc. in GN Docket No. 09-51 (Dec. 22, 2009).

offers music and entertainment for young Latino audiences. Yet another example is MHZ Networks, based in Northern Virginia, which programs 10 digital multicast channels in the Washington DC market including channels that air Chinese, French, Japanese, Middle Eastern, Nigerian, Russian, South African and Vietnamese news and information.

Small businesses that want to reach likely viewers on specialized channels have new opportunities to advertise at affordable rates. While the National Broadband Plan does not propose elimination of multicasting, under a scenario where the number, capacity and potential reach of broadcast stations is significantly reduced, the potential for growth in this area is diminished. These are important issues that this Committee should consider as it examines the National Broadband Plan.

We are very pleased that Congress is holding hearings to discuss the National Broadband Plan and are especially pleased that you have decided to include broadcasters in that discussion. As we describe below, we believe that broadcasting has a very important role to play in the future communications landscape, for both technical and important public policy reasons. We look forward to discussing with all of you how our service, the most relied upon news and information source available, is well positioned to take advantage of this movement toward greater connectivity. As Chairman Genachowski said recently at the NAB convention in Las Vegas: “We’re in the midst of a transformative digital age.”⁸ Representing an industry that last year completed a remarkable transition to all-digital broadcasts, I couldn’t agree more. The question before this Committee and Congress now is how we make this transformation

⁸ See “Remarks of Chairman Julius Genachowski, Federal Communications Commission, NAB Show 2010, Las Vegas, Nevada,” April 13, 2010, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-297469A1.pdf.

work for everyone – for broadcasters large and small, for small businesses throughout the country and, most importantly, for consumers and communities.

II. NAB Believes That Broadcast and Broadband Architectures Complement Each Other and Should Each Be Part of a Future Communications Eco-System

If the communications marketplace has taught us anything over the last seven decades, it's that there is no one right way to reach consumers with news, information and entertainment. First, radio was supposed to be the death of newspapers. Then television was supposed to be the death of radio. Then cable was supposed to be the death of broadcasting. And now the Internet is supposed to be the death of all other media. And yet, just this morning, I listened to broadcast radio, watched television, read a newspaper and accessed my email via the Web. Each medium provides a unique and important service and each medium has its strengths and limitations.

While there is little doubt that the Internet will continue its remarkable rise as a pervasive communications medium, there is just as little doubt that citizens will still want access to local news and information, high-quality video like high definition (“HD”) and 3D, and live events such as the Super Bowl and the Academy Awards. Broadcasting remains the ideal medium for delivering such content. This is particularly true in the wireless and mobile context. Wireless broadband is heralded in the National Broadband Plan as potentially more “transformative” than either the Internet or mobile communications alone. NBP at 77. And yet wireless broadband, even the faster and more robust variety imagined in the National Broadband Plan, has very distinct limitations. It cannot be all things to all people. And it especially cannot be all things to all people at the same time.

Wireless broadband operates using a point-to-point architecture. This unicast design essentially means that each user has his or her own path in the cellular network. This type of design has many advantages. One advantage is that two people standing next to each other using the same type of device and operating on the same wireless network can be accessing totally different types of information. The first person can be watching a video and the second person can be looking up directions to the closest Italian restaurant. But, if those two people and hundreds or thousands of other people near them are trying to access the same information at the same time – like they might during an emergency – the wireless network will quickly be overwhelmed.

In contrast, a broadcast point-to-multipoint architecture will never become overwhelmed. Additional users accessing the broadcast stream do not put any additional strain on the network, as they would in a wireless broadband point-to-point architecture. The lack of an uplink or return path feature in the typical broadcast model (often a perceived shortfall of the design) is, in fact, an important advantage when many people want access to the same content.⁹ There is no need to request information, as one must when using wireless broadband. The content is simply there and available. For this reason, a broadcast architecture is the ideal and most efficient method of supplying highly sought after content – whether local severe weather reports or major sporting events – to many people at the same time.

⁹ See James Krogmeier and David Love, *Technical Review: The Ongoing Need for Over-the-Air Broadcasting*, filed as Attachment A to Joint Comments of NAB and the Association for Maximum Service Television (MSTV) in FCC GN Docket Nos. 09-47, 09-137, 09-51 (Dec. 22, 2009), at 25-26.

This is an important point because, according to a report recently released by Cisco, almost 66 percent of mobile data traffic will be video by 2014.¹⁰ Predictions about the tremendous growth in the demand for wireless broadband are predicated on a belief that consumers will want to access much of the content – high-demand video – that broadcasters will be providing. Broadcasters are currently beginning the rollout of Mobile DTV, a service which, if successful, could help offload much of the traffic from wireless broadband networks. And they will be providing this service using their existing spectrum allocations. Mobile DTV operates on a thin slice of a digital broadcaster’s six MHz channel, side-by-side with primary HD channels and multicast channels. Using no more spectrum than that which is currently allocated to them, broadcasters should be able to lessen the demand on wireless networks and lessen the need for a radical reallocation of spectrum for wireless broadband use. But, reducing the spectrum allocated for broadcast television, as the National Broadband Plan suggests, would severely inhibit or even prevent the successful implementation of Mobile DTV.

III. Federal Agencies Should Complete a Comprehensive Spectrum Inventory to Inform Significant Decisions about Spectrum Needs and Uses

An important first step in the process of developing broadband solutions is an inventory and analysis of usage across all of the radio spectrum bands managed by the National Telecommunications and Information Administration (“NTIA”) and the FCC. In our dialogues with Congress and Federal agencies about broadband, NAB has emphasized three key principles that should guide efforts to promote broadband access and adoption, while preserving for the public the benefits of free, over-the-air

¹⁰ See “Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2009-2014,” Feb. 9, 2010, available at http://www9.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-520862.html.

broadcasting: (i) considering all frequencies that may be suitable for wireless broadband in developing an accurate assessment of spectrum suitable for broadband; (ii) prioritizing the efficient use of spectrum already allocated and suitable for wireless broadband; and (iii) maintaining an awareness of the limitations of wireless solutions as compared to wired solutions.

NAB believes that a comprehensive inventory – including spectrum allocated for Federal government use – would serve the public interest. A complete inventory and analysis of spectrum usage would inform the current debate over spectrum needs, and help to determine whether steps towards fostering greater spectrum efficiency – such as tightening service deployment deadlines for wireless licensees, or streamlining wireless licensing processes to get services to the public faster – are appropriate at this time.

Additionally, an inventory will demonstrate the high efficiency and unparalleled public benefits of the use of spectrum for free, over-the-air broadcasting. Digital television broadcasters are using their six MHz channel increasingly efficiently, providing HD programming, multiple program streams and soon Mobile DTV.¹¹ Broadcast services are a critical part of a national communications infrastructure that includes wired and wireless broadband services, wired and wireless voice services, and non-broadcast audio and video services. Our national priorities and public policies should continue to recognize the value that both free, over-the-air broadcasting *and* broadband can bring to every American.

¹¹ Local broadcasters are set to launch a Mobile DTV “consumer showcase” in Washington DC starting on May 3. Nine local stations will be airing more than 20 program streams to hundreds of viewers equipped with new Mobile DTV-enabled smartphones, laptops and portable DVD players. See News Release of the Open Mobile Video Coalition, “‘All Systems Go’ For May 3 Launch of Mobile Digital TV Consumer Showcase in Washington, D.C.,” April 12, 2010. Available at <http://www.omvc.org/assets/docs/press-releases/2010/OMVC-All-Systems-Go-NAB-FINAL.pdf>. Broadcasters expect to launch similar trials over the next year and full deployment throughout the country soon after.

NAB notes that, in tandem with the release of the National Broadband Plan, the FCC deployed a beta version of a “spectrum dashboard” – a tool that allows users to obtain basic information on licenses (including frequency bands) and descriptions of spectrum allocations. NAB applauds this initial step. As the Plan notes, however, the dashboard does not currently cover all bands.¹² The Plan recommends the development of an NTIA spectrum dashboard for federal spectrum and further expansion of the dashboard to cover additional FCC licenses, but observes that legislation being considered by Congress would examine a broader range of spectrum.¹³ NAB believes that a comprehensive inventory and report will be indispensable to Congress and Federal agencies as they consider the critical questions of broadband deployment and its impact on small business entities. It is simply not possible to make rational determinations about spectrum allocation without clear and up-to-date information about how all spectrum bands are being used.

IV. Spectrum Fees Could Have a Serious Negative Impact On Broadcast Stations, Especially Small Market Stations, That Operate with a Low or Negative Profit Margin

In the National Broadband Plan, the Commission asks Congress to grant authority to the agency to impose spectrum fees on license holders. See NBP at Recommendation 5.6. It also goes on to suggest that such fees “may help to free up

¹² The dashboard currently includes general information on non-federal use of spectrum bands in the range of 225 MHz to 3.7 GHz, as well as more detailed information about bands of particular relevance to broadband: the 700 MHz Band; Advanced Wireless Service (AWS); Broadband Personal Communications Service (PCS); Broadband Radio Service (BRS); Educational Broadband Service (EBS); Cellular; 2.3 GHz Wireless Communications Service (WCS); Full Power TV Broadcast; and Mobile Satellite Services (MSS).

¹³ See Radio Spectrum Inventory Act, H.R. 3125, 111th Cong. (2009) (requiring an inventory of spectrum between 225 MHz and 10 GHz as of February 18, 2010); Radio Spectrum Inventory Act, S. 649, 111th Cong. (2009) (requiring an inventory of spectrum between 300 MHz and 3.5 GHz as of February 18, 2010).

spectrum for new uses such as broadband, since licensees who use spectrum inefficiently may reduce their holdings once they bear the opportunity cost of spectrum.” NBP at 84.

In tandem with the National Broadband Plan, the Administration’s proposed FCC budget for FY 2011 includes the following recommendation:

“To promote efficient use of the electromagnetic spectrum, the Administration proposes to provide the FCC with new authority to use other economic mechanisms, such as fees, as a spectrum management tool. The Commission would be authorized to set user fees on unauctioned spectrum licenses based on spectrum-management principles. Fees would be phased in over time as a part of an ongoing rulemaking process to determine the appropriate application and level for fees. Fee collections are estimated to begin in 2010, and total \$4.8 billion through 2020.”

This proposal is problematic from any number of perspectives. First, there is no real difference between those who hold “unauctioned spectrum licenses” and those who hold licenses acquired at auction; the only difference is that the buyers obtained the use of the licenses by paying different entities. The vast majority of entities using licenses not purchased in a government auction paid a market-clearing price to the prior owner -- a price which reflected the true value of the ongoing business including the license at the time of purchase. In addition, the FCC is required to award new broadcast licenses via auction, and some broadcast station owners have obtained their licenses in these Commission auctions, after having paid the full market price.

Second, local radio and television broadcasters do not enjoy billion dollar surpluses in their checkbooks. Most radio licensees are small businesses, and many –

far too many – are now operating in the red.¹⁴ The FCC currently estimates that 97 AM stations and 271 FM stations and translators have been silent at least two months. See <http://www.fcc.gov/mb/audio/status/silent.html>. Imposing a levy like this would force many more to go dark or even exit the business permanently. That's not good for them as small businesses, but it's also not good for America, which depends upon local radio stations for news, information and entertainment programming, provided to listeners for free each and every day.

The same holds true of television broadcasters. While many larger television licensees do not qualify as small businesses, there are a number of television broadcasters, particularly in smaller markets, which do. Like all broadcasters, these stations have struggled during the recession. But even aside from current general economic conditions, they have faced the emergence of many new competitors for viewers and advertisers, and these problems are reflected in their bottom lines. In light of these competitive realities, the FCC has expressly recognized that small market television stations, independent stations and stations affiliated with minor networks are experiencing “particularly great” financial hardships. *Third Report and Order*, 22 FCC Rcd 21064, n. 192 (2007). As NAB has demonstrated in submissions to the FCC, and as the FCC has explained, “the ability of local stations to compete successfully” in the video marketplace has been “meaningfully (and negatively) affected in mid-sized and smaller markets,” primarily because “small market stations are competing for

¹⁴ As the Pew Research Center's Project for Excellence in Journalism recently reported, broadcast radio has the largest audience of all types of audio outlets, but “this is where the profit and revenue are under the most pressure.” *2010 State of the News Media*, Executive Summary, Audio Section (2010) (also noting that broadcast radio experienced an 18% drop in ad revenue in 2009 compared to 2008, which was itself a year in which ad revenue had declined from 2007).

disproportionately smaller [advertising] revenues than stations in large markets.” *Report and Order*, 18 FCC Rcd 13620, 13698 (2003).

If smaller broadcast stations already suffering from declining profitability, and even experiencing financial losses, are forced to pay spectrum fees to the government, then such stations will have even fewer financial resources for serving their viewers, and will be forced to reduce their programming and other services to local communities. After all, local news operations and other quality programming services are costly to maintain. Indeed, depending on the level of spectrum fees imposed, many small market stations, as well as non-major network affiliated stations in all markets that tend to serve niche audiences, could even be forced out of business. NAB believes that it would not be in the public interest for government-imposed fees to deprive viewers and communities of the important local television and radio services upon which they rely, including vital emergency information.

Clearly, these proposed fees are bad for the small businessmen and women who own radio and television stations and bad for their viewers and listeners. But they are also a bad way to govern. Think about the implementation of a new fee program as a “spectrum management tool.”

What the FCC is really proposing is a mechanism to influence the behavior of its licensees with new fees. From a spectrum management perspective that can mean only one thing: that the Commission wants to clear bands of frequencies of incumbent licensees by charging fees.

This Committee should not support this *sub rosa* way of spectrum reallocation. If the FCC wants to clear a band then it should commence a reallocation proceeding, tell

the American people of the consequences of reallocating the spectrum currently used to provide free, over-the-air broadcast services, and let the public comment. Raising fees, and forcing stations out of business in order to achieve the same result, is not the way that spectrum policy should be implemented. This is particularly true in light of the recent transition to digital television, where the American people were promised that they would receive crystal-clear digital pictures and additional services, including multicast channels, if they invested in digital receiving equipment. Imposing spectrum fees that would ultimately function to take spectrum away from digital television stations would strand the investment of broadcasters, the government and, most importantly, consumers in the digital transition.

V. Congress Should Direct the FCC to Focus its First National Broadband Plan Efforts on Fostering Deployment of Fixed Wireless Broadband Services Using Vacant Broadcast Channels in Rural Areas.

The first order of business for the National Broadband Plan should be encouraging deployment of fixed wireless broadband services for rural areas. It is these areas where broadband is less available and affordable, and where it is readily achievable – using vacant broadcast channels. Indeed, as discussed below, Canada has already authorized this technology to support its underserved rural populations.

As NAB has repeatedly advocated, use of vacant spectrum (aka “white spaces”) between television channels for fixed licensed broadband in rural areas is a way to improve broadband access for these underserved areas.¹⁵ Engineered properly, these unused channels could presumably be also utilized for backhaul in these areas.

¹⁵ See, e.g., Joint Reply Comments of MSTV and NAB, ET Docket Nos. 04-186 and 02-380, at 5 (March 2, 2007) (“MSTV/NAB Joint Reply Comments”) (supporting the introduction of fixed devices into the TV white spaces to “provide new broadband services, especially to rural and underserved areas of the United States”); Letter from David Donovan, MSTV and Jane Mago, NAB, GN Docket No. 09-51 (July 21, 2009).

Because the broadcast bands are used less intensively in rural markets, with appropriate technical protections fixed broadband services can operate in this spectrum without undermining consumers' access to free, over-the-air digital television or new mobile DTV services.¹⁶ Broadband deployment in rural areas can be swift, non-disruptive, and serve areas with the greatest need.

Indeed, the broadcast spectrum is ideal as a technical matter for use by fixed devices to provide rural broadband services. We emphasize, however, that certain baseline interference protections must be implemented when fixed broadband services are deployed in broadcast spectrum in rural areas. These include the proper desired to undesired ("D/U") ratios, prohibiting operation within the contour of co- and adjacent channel DTV stations and implementing stricter out-of-band emission limits.¹⁷ Congress should therefore instruct the FCC to ensure that these specific protections are included in its broadband planning for rural markets.¹⁸

Other parties that have addressed white space use in connection with the FCC's National Broadband Plan have noted its utility in rural areas.¹⁹ The Canadian government has likewise authorized licensed use of television spectrum for broadband

¹⁶ These protections include a prohibition on operation in the channels immediately adjacent to an occupied television channel (the "first adjacent channels"). See *Unlicensed Operation in the TV Broadcast Bands; Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, Second Report and Order and Memorandum Opinion and Order, 23 FCC Rcd 16807, 16812 ¶ 10 (2008).

¹⁷ See MSTV/NAB Joint Reply Comments, *supra* fn. 15 at 7-24.

¹⁸ Use of the white spaces for fixed broadband should not be confused with use of the white spaces for unlicensed mobile (a.k.a. "personal/portable") devices. Whereas "fixed" wireless broadband could help provide consumers in rural areas with reliable broadband access, mobile unlicensed devices do not themselves make broadband access available. Indeed, in addition to degrading consumers' access to digital television, unpredictable interference from unlicensed mobile devices may have the unintended effect of precluding use of the while-space spectrum for fixed broadband access.

¹⁹ See, e.g., Comments of Public Knowledge, Media Access Project, the New America Foundation, and U.S. PIRG, GN Docket No. 09-51, at 32 (June 8, 2009) ("Rural areas would have more white spaces compared to urban regions due to presence of fewer broadcasting channels there"); Comments of Wireless Communications Association International, GN Docket No. 09-51, at 47 (June 8, 2009).

in “rural and remote” areas. That decision similarly reflects the fact that, unlike in urban and suburban areas, in rural areas there is typically sufficient white-space spectrum for fixed broadband use, including for backhaul purposes.²⁰

Aside from the many technical advantages of authorizing licensed use of television spectrum for broadband in rural/remote areas, there is also a practical advantage in that it can bring a solution to market very quickly. In sharp contrast, proposals involving reallocation or repacking of broadcast and/or other spectrum could involve years of administrative rulemaking activity to determine exactly how specific bands should be used, the establishment of service rules for various bands, adoption of relocation rules and procedures and eventually an auction. Completion of an auction is only the beginning of yet a new set of administrative processes including FCC review of “long form” applications to evaluate the qualifications of winning bidders, collection of payments and then license grant.

This final step only means that Americans may receive new or expanded services several years down the road, because FCC rules generally only require wireless licensees to offer services to portions of their coverage areas within five or ten years after license grant.²¹ Accordingly, if a near-term solution to the lack of broadband

²⁰ See Interim Technical Guidelines for Remote Rural Broadband Systems Operating in the Band 512-698 MHz (TV Channels 21-51), Industry Canada (rel. March 2007).

²¹ See, e.g., 47 C.F.R. § 22.503 (within five years of license grant, paging licensees must construct and operate facilities covering two-thirds of the population in their geographic service areas or demonstrate substantial service); 47 C.F.R. § 24.103 (within 10 years of license grant, nationwide narrowband PCS licensees must construct base stations covering a specified geographic area, serve 75 percent of the U.S. population, or demonstrate substantial service); 47 C.F.R. § 24.203 (within 10 years of license grant, broadband PCS licensees holding 30 MHz blocks must operate with a signal level sufficient to provide adequate service to at least two-thirds of the population in their licensed area or demonstrate substantial service); 47 C.F.R. § 101.1011 (within 10 years of license grant, local multipoint distribution service licensees must demonstrate substantial service). If an extension of the construction period is not granted and construction deadlines are not met by a licensee, FCC rules provide that the licensee’s authorization automatically terminates. See, e.g., 47 C.F.R. § 1.946(c).

services in rural areas is desired, policymakers should pursue solutions that can and will be implemented in a timely manner. We therefore urge Congress to direct the FCC to pursue this path as its first priority. Quicker broadband deployment in rural areas would obviously benefit consumers but also small businesses by helping them become more competitive with larger entities and with entities in urban areas.

Television broadcasters can be an important component in the deployment of our national broadband system. Based on our knowledge of the broadcast spectrum and experience with digital television reception, NAB looks forward to working with Congress and the Commission in these efforts.

VI. Congress Should Also Direct the FCC and NTIA to Develop Policies That Encourage More Spectrally Efficient Uses of Existing Wireless Broadband Allocations

The National Broadband Plan recommends that the FCC make available 500 MHz of spectrum for wireless broadband use within the next ten years, 120 MHz of which is expected to come from spectrum currently allocated for broadcast television use. NBP at 77. This recommendation is guided by two beliefs: one, that a massive increase in demand for wireless broadband will be driven by smartphones and similar devices and two, that the existing wireless architecture will improve in speed but remain largely of the same design. Demand for wireless broadband undoubtedly will increase, although no one can predict by precisely how much. But the second belief about the capability of the existing wireless architecture is based largely on how much the government guides and incentivizes wireless broadband companies to use their existing allocations more efficiently.

Many experts do not agree that simply throwing more spectrum at wireless companies is the best approach for ameliorating a perceived spectrum shortfall.

According to a recent Aspen Institute publication entitled “Rethinking Spectrum Policy:” “Increased demand for wireless services does not automatically mean a need for increased spectrum. Wireless network capability is a function of the amount of spectrum available, spectrum efficiency, and frequency reuse, typically obtained in wireless networks by reducing the size of cell sites.”²² Martin Cooper, the lead inventor of the cell phone and leading expert in spectrum management, said recently that the solution to a predicted spectrum shortfall “is not redistributing spectrum [i]t is, in fact, creating new capacity” using new technology.²³ Indeed, according to Cooper’s law, spectrum efficiency doubles every two and a half years; over the last 90 years, spectrum utilization has increased over a trillion times.²⁴

As NAB has previously demonstrated, there is no necessary connection between simply allocating additional spectrum and an increase in broadband penetration.²⁵ Indeed, as other observers have pointed out, obtaining more spectrum is merely the cheapest way for wireless companies to expand service – it is not the only way or even the optimal way. As recently noted in the *Economist*, wireless companies “tend to lobby

²² MacCarthy, Mark, *Rethinking Spectrum Policy: A Fiber Intensive Wireless Architecture*, The Aspen Institute, Communications and Society Program, 2010, 9-10.

²³ See “Cell Phone Inventor: Spectrum Reclamation Isn’t Answer,” *Broadcasting & Cable*, John Eggerton, March 5, 2010.

²⁴ See ArrayComm, Cooper’s Law, <http://www.arraycomm.com/serve.php?page=Cooper> (last visited Dec. 18 2009) (describing the application of Cooper’s Law).

²⁵ See James Krogmeier and David Love, *Technical Review: The Ongoing Need for Over-the-Air Broadcasting*, filed as Attachment A to Joint Comments of NAB and the Association for Maximum Service Television (MSTV) in FCC GN Docket Nos. 09-47, 09-137, 09-51 (Dec. 22, 2009), at 10-11. This report explained that allocating more of a certain resource does not mean that the resource will be used or used efficiently, and pointed out that reviews of broadband policies from around the world had found no consistent correlation between regulatory structures and spectrum policies, on the one hand, and third generation wireless penetration, on the other.

governments for more and better spectrum before investing” in technologies that help them squeeze more capacity from their existing allocations.²⁶

One technology that shows particular promise to help reduce demand on wireless networks is the femto cell, a “low-power, short-range base station that users connect to an existing wireline broadband connection to expand coverage within a home or office.”²⁷ Femto cells, like WiFi hotspots, are a relatively cheap and easy way to quickly offload traffic onto higher-capacity wired broadband lines. Employed expansively through the country, and especially in high-population urban areas, Femto cells and similar technologies could help alleviate much of the need for more wireless broadband spectrum.²⁸ Such technologies will enable much more efficient use of spectrum, and will help enable the expansion of wireless broadband services without compromising other valuable services, including free, over-the-air broadcasting.

NAB strongly encourages Congress to create economic incentives for wireless companies to invest more in technologies like femto cells and to ensure they are using their existing allocations most efficiently. Dumping new spectrum in their coffers will have will have the opposite effect, discouraging investment and innovation, and will not ultimately result in the most efficient use of the nation’s spectrum resource.

VII. Conclusion

²⁶ See “Breaking up,” *The Economist*, February 13, 2010, at 65-66.

²⁷ See *Rethinking Spectrum Policy*, *supra* fn. 22.

²⁸ NAB has previously discussed femto cells and other emerging technologies in more detail in submissions to the FCC. James Krogmeier and David Love, *Technical Review: The Ongoing Need for Over-the-Air Broadcasting*, filed as Attachment A to Joint Comments of NAB and the Association for Maximum Service Television (MSTV) in FCC GN Docket Nos. 09-47, 09-137, 09-51 (Dec. 22, 2009), at 18-21.

NAB is very pleased to be a part of any discussion about the future of American communications. We believe that the National Broadband Plan is a unique opportunity for the government and private businesses to work together to shape how Americans will be accessing information in the 21st Century. Broadcasters, both large and small, will continue to play a major role in their local communities in the digital age. In particular, the broadcast industry urges this Committee to focus on fostering development of fixed wireless broadband services using vacant broadcast channels in rural areas. Such an effort should result in significant expansion of broadband accessibility and use by consumers and small businesses alike. Thank you for your attention.