



December 22, 2009

BY ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Re: GN Docket Nos. 09-47, 09-51, and 09-137

Dear Ms. Dortch:

The Association for Maximum Service Television, Inc. ("MSTV") and the National Association of Broadcasters ("NAB") hereby submit in the overall broadband docket the attached "Broadcasting And The Broadband Future: A Proposed Framework For Discussion." MSTV and NAB are concurrently filing Comments in response to Public Notice #26 (also in the broadband proceeding), to which this Framework Document will be attached. Those Comments address specific issues identified in Public Notice #26.

We are also filing the Framework Document separately because it relates to a broader array of issues in the overall broadband proceeding. We intend to supplement it in the future with additional information that we hope will be of assistance to the Commission as it moves forward in the broadband proceeding more generally.

Respectfully submitted,

/s/ _____
David L. Donovan
President
MSTV

/s/ _____
Jane E. Mago
Executive Vice President and General Counsel
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cc: Commissioners

Attachment: Broadcasting And The Broadband Future: A Proposed Framework For Discussion (Including Technical Review and NAB Comments in the Federal Trade Commission's New Media Workshop)

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington DC 20554**

In the Matter of)	
)	
Spectrum for Broadband)	GN Docket Nos. 09-47, 09-137
)	
A National Broadband Plan for Our Future)	GN Docket No. 09-51

To: The Commission

**BROADCASTING AND THE BROADBAND FUTURE:
A PROPOSED FRAMEWORK FOR DISCUSSION**

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**BROADCASTING AND THE BROADBAND FUTURE:
A PROPOSED FRAMEWORK FOR DISCUSSION**

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BROADCASTING AND THE BROADBAND FUTURE: A PROPOSED FRAMEWORK FOR DISCUSSION

EXECUTIVE SUMMARY

The Association for Maximum Service Television, Inc. (“MSTV”) and the National Association of Broadcasters (“NAB”) here submit their initial suggestions for how the Commission should proceed in developing an optimal national broadband plan.

The debate about the spectrum-related aspects of the national broadband plan, unfortunately, has become narrowly focused on whether the Commission should seize some or all of the spectrum that supports the nation’s broadcast television service, which benefits all Americans, and re-allocate it to wireless uses. In *Public Notice #26*, the Commission’s Broadband Task Force prudently, but belatedly, asked certain specific questions that, for the first time in the Task Force’s deliberations, relate to this issue. (MSTV and NAB are concurrently filing Comments that respond to those specific questions).

A broader perspective is necessary, however. This “Broadcasting and the Broadband Future: A Proposed Framework for Discussion” (“Framework Document”) attempts, as a preliminary matter, to provide the needed broader perspective. The 19-day comment period provided by *Public Notice #26* and the scope of *Public Notice 26* are not sufficient to provide this needed broader perspective. MSTV and NAB intend to supplement this Framework Document later with additional input, to more fully develop and support the positions set forth here.

A principal purpose of the Framework Document is to rebut the false dichotomy between broadcasting and wireless — the improper and untested presumption that the Commission must choose one or the other. In fact, both are important parts of the national

communications landscape, and it is neither desirable nor necessary to elevate one over the other for purposes of re-allocating spectrum or providing resources for broadband uses.

* * *

This Framework Document, therefore, starts by demonstrating how television broadcasting serves critical communications needs: (1) many of the benefits it delivers are public goods, *i.e.*, goods whose value is difficult to quantify and certainly cannot be derived from predicted auction revenues; (2) other services cannot and will not deliver these benefits to the public if broadcasting is marginalized or terminated due to loss of spectrum; (3) because of innovations being launched now — mobile DTV and multicast services, as well as HDTV — these public goods will be even more valuable in the future; and (4) even pay service subscribers benefit from broadcasters’ highly trusted local journalism, emergency alerts, and other locally-oriented services.

Accordingly, the Commission needs to assess the damages to the public that would result from confiscating broadcast spectrum — wiping out the massive and recent investments of American consumers, the federal government and broadcasters in the digital transition — and depriving them of its benefits (HDTV, 1,400-plus digital multicast services so far, with more to come, and mobile DTV). Broadcasting’s core services would also be undercut, marginalized, or destroyed.

This Framework Document also rebuts the Brattle Study,¹ which reflects the efforts of the wireless industry and others to denigrate the value of broadcasting in support of

¹ Bazelon, Coleman, Brattle Group, *The Need for Additional Spectrum for Wireless Broadband: The Economic Benefits and Costs of Reallocations*, October 23, 2009 (“Brattle Study”).

expropriating its spectrum. Although the Study notably stops short of endorsing this conclusion, it suffers from these defects:

- it ignores television’s social benefits to the public;
- it assumes that broadcasting services, both present and future, would be unaffected by spectrum re-allocations — a proposition that is erroneous on its face;
- it fails to consider other land-based and wireless-based sources of additional broadband capacity;
- it overlooks the costs and delays in the re-allocation process that are particularly relevant since mobile DTV can more efficiently and immediately address the demand for mobile video services (which represents two-thirds of the wireless industry’s alleged need for additional wireless capacity); and
- it makes other serious, incorrect assumptions and methodological errors.

The Framework Document next shows that broadcasting plays a necessary and irreplaceable role in our country’s communications ecosystem. As a consequence, it is an essential complement to land-based and wireless broadband services. They are not either/or alternatives. The attached Technical Review describes this point in greater detail.²

Then, this Framework Document lays out the following suggestions for how the Commission should proceed:

1. Treat broadcasting and broadband as complementary services;
2. Assess the availability of non-spectrum-based resources to meet broadband needs;
3. Critically evaluate the wireless industry’s bloated and unsupported claims that it needs additional spectrum;
4. Catalogue the spectrum resources already allocated for wireless use but underutilized;

² See Technical Review: The Ongoing Need for Over-the-Air Broadcasting (Attachment A) at Executive Summary (1) and Section V.

5. Examine how the wireless industry can use its existing spectrum resources more efficiently and exploit new spectrum and new technologies to the same end;
6. Inventory all spectrum (no re-allocations should be ordered until this step has been completed), whether overseen by NTIA or the FCC; and
7. Work with broadcasters to devise non-coercive, non-destructive ways in which broadcasters can help address the legitimate capacity needs of the wireless industry without sacrificing service to the American public.

In implementing these suggestions or taking other action, the Commission should act in accordance with legal and Constitutional constraints and the basic precepts of national communications policy, including the priority goal of providing service to local communities.

BROADCASTING AND THE BROADBAND FUTURE: A PROPOSED FRAMEWORK FOR DISCUSSION

Television broadcasting is a vital part of the nation's communications ecosystem, and innovations that are now being introduced will only enhance its role and increase its value to consumers. Broadcasters are ready to work with the Commission and other industries to facilitate greater access and availability of wireless broadband for the American public. The Association for Maximum Service Television, Inc. ("MSTV")³ and the National Association of Broadcasters ("NAB")⁴ here offer suggestions for placing the discussion of these important issues in a practical and constructive framework—one that is balanced, proceeds without reliance upon untested assumptions, aims for effective solutions, and avoids destructive outcomes harmful to American consumers. Within this framework, broadcasting and wireless broadband are complementary, not mutually exclusive, services.

The current debate must be considered in the context of the recent DTV transition, which was completed on June 12, 2009. For years leading up to the transition, the Administration, Congress, the FCC, and the industry told American consumers that if they purchased a new DTV receiver, they would receive free, over-the-air HDTV and new multicast services.⁵ Consumers participating in the government-sponsored digital-to-analog converter box

³ MSTV is a nonprofit trade association of local broadcast television stations committed to achieving and maintaining the highest technical quality for the local broadcast system.

⁴ NAB is a nonprofit trade association that advocates on behalf of local radio and television stations and also broadcast networks before Congress, the Federal Communications Commission and other federal agencies, and the courts.

⁵ Michael J. Copps, *Remarks at Digital Television Switch-Over in Wilmington, NC*, Sept. 8, 2008, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-285228A1.pdf ("You know, in addition to a better picture and better sound, DTV brings another huge potential reward. I'm talking about the ability of broadcasters, using the new digital technologies, to send out four, five or even six different program streams on the same amount of spectrum where they can broadcast only one stream in analog."). See also Press Release, (continued...)

program were told they would receive more programming channels. In response, consumers spent more than \$109 billion on DTV receivers. Less than six months later, wireless advocates are proposing and the Broadband Task Force is considering policies that would undermine this promise.

From nearly the beginning of the Task Force's work on the national broadband plan, some have initially accepted the claim that wireless broadband will need more spectrum and have presumptively targeted television broadcast spectrum as a leading source for this additional spectrum. It is a mistake, and without justification, to narrow the focus of this proceeding so dramatically. The Commission should start by testing the first premise, which is suspect and exaggerated.

Indeed, the wireless industry and some other commenters have gone so far as to urge the FCC to expropriate all television broadcast spectrum.⁶ Other proposals, explicitly or implicitly, would force broadcasters to surrender large chunks of broadcast spectrum. Advocacy of these measures has chilled meaningful dialogue about voluntary and collaborative measures and has cast a shadow on the new services that broadcasters are rolling out, potentially deterring investments that will support the delivery of these services to the public. Broadcasting and

FCC, 1 Day Until DTV Transition: Focus at End of Technological Transition is on People (June 11, 2009) (noting that the digital transition will provide "consumers with a better picture and sound and more channels"); Press Release, Michael Copps, Acting Chairman, FCC, 2 Days and Counting to DTV Transition (June 10, 2009), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-291346A1.pdf ("One of the great benefits of digital technology is that stations can now provide many more free over-the-air channels than the single channel they provide today").

⁶ See Reply Comments of the CTIA—The Wireless Association on NBP Public Notice #6, Spectrum for Broadband, GN Docket Nos. 09-47 *et al.*, Nov. 13, 2009, at 16 ("CTIA again urges the Commission to take a hard look at the spectrum use of the U.S. broadcast industry."); *id.* at 17 (urging "reallocation of broadcast television spectrum for commercial mobile wireless broadband uses."); *id.* at 18 (advocating "Commission consideration of broadcast television spectrum reallocation for licensed commercial mobile wireless broadband services.").

broadband are not “either/or” propositions; that is a false choice that the Commission should reject.

It is clear that a comprehensive inventory of present and future spectrum availability and usage is a necessary precursor to any consideration of spectrum re-allocation proposals, as Congress itself has signaled in the form of pending legislation.⁷ The inventory of spectrum usage must survey government spectrum under the NTIA’s jurisdiction, as well as satellite, BRS/EBS, broadcast, and other spectrum under the FCC’s jurisdiction. Only 5.18 percent of the spectrum in the 225 MHz to 3.7 GHz range is allocated exclusively for television service.⁸ In the meantime, the Commission should pursue measures that facilitate broadband deployment without draconian and disruptive spectrum re-allocation.

At least in parallel with, if not precedent to, this comprehensive and unbiased spectrum inventory process, the Commission should rigorously assess wireless broadband’s future spectrum needs. In discharging this responsibility, the Commission should (i) assess how much of broadband’s capacity needs can be met by non-spectrum distribution means like coaxial and fiber-optic cable; (ii) take into account how new and emerging technologies and access to new spectrum will increase the spectral efficiency of wireless broadband utilization over the next six to ten years; (iii) ask how much of the claimed new spectrum needs are for video distribution (for which broadcasting is inherently a more effective and efficient mode of distribution); and

⁷ See Spectrum Relocation and Improvement Act of 2009, H.R. 3019, 111th Cong. (2009); Radio Spectrum Inventory Act, H.R. 3125, 111th Cong. (2009); Radio Spectrum Inventory Act, S. 649, 111th Cong. (2009); *Hearing on H.R. 3125, The Radio Spectrum Inventory Act, and H.R. 3019, The Spectrum Relocation Improvement Act Of 2009*, 111th Cong. (Dec. 15, 2009).

⁸ See Technical Review: The Ongoing Need for Over-the-Air Broadcasting (Attachment A) at III(A).

(iv) honor the principle that throwing new spectrum at a supposed spectrum problem will deter, rather than spur, spectrum efficiency initiatives and technical innovation.

Before turning to MSTV and NAB's specific comments, it is necessary to address a crucial fact of technology that has been assiduously ignored, as well as a pernicious myth that has been advanced in this proceeding. The technological fact is that the case for more broadband spectrum is based primarily on demand for mobile video services. Yet broadcasting's point-to-multipoint architecture is a far more efficient means of delivering many of these services, especially real-time, live video content, than wireless' point-to-point distribution architecture. Broadcasters' mobile DTV services are being implemented now, do not have to await a protracted re-allocation process, and will not disrupt and destroy existing consumer services.

The myth pervading this proceeding is that only those Americans who receive television service exclusively over-the-air, via antennas, have a stake in this service and that viewers who receive this service as part of their pay-TV packages would be unaffected by re-allocation of spectrum away from it. The fact is that all television viewers, not just viewers who rely in whole or in part on over-the-air television, benefit from local broadcast services. It is inconceivable that, with the demise or marginalization of over-the-air television service that would result from the spectrum re-allocation proposals broached to date, pay-TV subscribers would receive anywhere near the same amount, quality, and diversity of local services—local journalism, local emergency information and alerts, and a variety of local voices—as they do now. Neither cable, satellite, nor the Internet would serve these functions if broadcasting were crippled or eliminated.

I. BROADCASTING IS THE NATION’S PREEMINENT SYSTEM FOR DELIVERING VIDEO CONTENT TO MASS AUDIENCES. IT PROVIDES NUMEROUS IRREPLACEABLE BENEFITS TO THE PUBLIC.

A. Consumers Benefit From Local Broadcast Services.

1. Overview.

Local broadcasting provides many economic and non-economic benefits to American consumers. Over-the-air television service is free; it is universal; and it is local. Broadcasters offer innovative new services: over 1,400 multicast services are available today, just six months after the transition to digital television,⁹ contributing to diversity and localism, and mobile DTV is already being rolled out. The benefits of television broadcasting accrue not just to the tens of millions of households that rely exclusively on over-the-air television, but also to households that subscribe to pay-TV services. Additionally, aside from conventional economic benefits, local television broadcasting produces a wide array of public goods—public goods that subscription services cannot replace.

The public’s broadcasting service, unlike cable and satellite services, does not mail a bill to viewers every month. As Chairman Genachowski has advised Congress, “[b]roadcast television remains an essential medium, uniquely accessible to all Americans.”¹⁰ A viewer with a television and antenna can receive free, wireless, high-definition programming, including network programs, sports, local news and weather, syndicated programs, films, and special events. Cable, satellite, and telephone companies that distribute multichannel video

⁹ According to Media Access Pro(tm), BIA/Kelsey.

¹⁰ *Rethinking the Children’s Television Act for a Digital Media Age: Hearing Before the United States S. Comm. on Commerce, Sci. and Transp.*, 111th Cong. (July 22, 2009) (statement of Julius Genachowski, Chairman, FCC) (“Statement of Julius Genachowski”). See also Press Release, FCC, Ten Days and Counting to DTV Transition (June 2, 2009) (citing Acting Chairman Copps’ statement that, “[f]or many people, free, over-the-air television is their primary source of news, information and emergency alerts—not to mention entertainment”).

programming (“MVPDs”) charge consumers ever-increasing rates for video content, including premiums for HD channels.¹¹

Local stations provide local news and coverage of breaking stories. Indeed, in times of emergency, local broadcast stations often are the only available source of information (whether the consumer accesses that information by tuning in to the station’s over-the-air signal, receiving it through a subscription service, or even obtaining it from the station’s website).¹² Television broadcasting is reliable, even in times of emergency or, more commonly, bad weather (rain and snow often knock out the signal from satellite providers).

Chairman Genachowski has observed that broadcasting is “the exclusive source of video programming relied upon by millions of households in this country.”¹³ There is important value in preserving a free TV alternative for all Americans, so that those who cannot afford or choose not to subscribe to pay-TV services are not forced to take them. All Americans should have a free service available to them as an option and competitive choice.

Broadcasters will continue to roll out new, innovative services. These new services include high-definition programming, multicast services, and mobile DTV. Mobile

¹¹ See, e.g., Matt Richtel, *Cable Prices Keep Rising, and Customers Keep Paying*, N.Y. Times, May 24, 2008, available at <http://www.nytimes.com/2008/05/24/technology/24cable.html> (“Cable prices have risen 77 percent since 1996, roughly double the rate of inflation”); Ben Patterson, *Average Cable TV Bill Rose 7.5% in Second Half of 2008*, The Gadget Hound, Apr. 20, 2009, <http://tech.yahoo.com/blogs/patterson/44841> (citing “pricier HD channel tiers” as a factor in the increases).

¹² See Advisory, FCC, 5 Days and Counting to DTV Transition (June 7, 2009) (warning consumers to be prepared for the digital transition, in order to avoid losing access to vital emergency information).

¹³ See Statement of Julius Genachowski, *supra* note 9. The Commission has recognized repeatedly the importance of access to broadcast services, particularly news and emergency information. See, e.g., *FCC Requires Public Interest Conditions for Certain Analog TV Terminations on February 17, 2009*, Public Notice, FCC 09-7 (Feb. 11, 2009) (establishing “enhanced nightlight” service to ensure that “viewers relying on over-the-air television do not lose access to local news, public affairs and emergency information before they are ready for the full power television transition to all-digital television service” and identifying 123 stations “whose early termination [of analog service] poses a significant risk of substantial public harm”).

DTV will be deployed over the next year, with 70 stations in 28 markets (covering 39 percent of the country) committed to launch soon, and with 30 stations already on the air with mobile DTV.¹⁴ A national roll-out is expected to follow quickly.¹⁵ Research shows that consumers have a high interest in receiving local news and information via live mobile DTV, with breaking news, emergency reports, and weather topping the list.¹⁶ Mobile DTV should be included in the calculus of the value of television broadcasting.¹⁷ But the Commission should not assume that Wall Street or economists can correctly value new mobile services at this stage (or have correctly valued them).¹⁸ Neither the public good benefits of mobile DTV (the public goods concept is

¹⁴ Further, more than 25 companies have consumer devices with mobile DTV reception capability in the pipeline, with several devices expected to be demonstrated at the Consumer Electronics Show (“CES”) in January.

¹⁵ Broadcasters have invested heavily over a three year period to develop the mobile DTV standard and the variety of equipment necessary to implement it. Although the FCC should be technology-neutral, and not in the position of picking technology winners and losers, it now is “considering taking an active role” in promoting for-pay mobile TV services (*i.e.*, mobile video from MVPD platforms and broadband-based video platforms). See NBP Public Notice #27, DA 09-2519 (Dec. 3, 2009), at 2.

¹⁶ See Frank N. Magid Associates, Inc., *The OMVC Mobile TV Study: Live, Local Programming Will Drive Demand for Mobile DTV* (Dec. 2009), available at http://www.openmobilevideo.com/_assets/docs/press-releases/2009/OMVC-Mobile-TV-Study-December-2009.pdf. Among the results of the study: 88 percent of respondents expressed an interest in watching local news and information on a mobile device, exceeding other categories of content such as entertainment (65 percent) or sports (44 percent). Mobile DTV may provide a market of perhaps \$2 billion per year in advertising revenue in the United States by 2012. See Richard V. Ducey *et al.*, *Study of the Impact of Multiple Systems for Mobile/Handheld Digital Television* 102 (2008), available at <http://www.nabfastroad.org/jan14rptfinaldouble.pdf>.

¹⁷ Gary Shapiro, President and CEO of CEA, has recognized that “[w]ith the successful digital transition now behind us, the ATSC Mobile DTV standard gives broadcasters an opportunity to provide consumers with the next generation of compelling over-the-air content.” *The Standard: News from the ATSC*, vol. 10, issue 3 (Nov. 2009).

¹⁸ The example of cellular telephone service is illuminating: when cellular telephone service was first introduced in 1982, it was significantly undervalued. There were just three applicants for the cellular license in Chicago. See *Advanced Mobile Phone Service, Inc.*, 91 FCC 2d 512 (1982). It would be a mistake to assume that the value of mobile DTV already has been incorporated into the market’s assessed value of broadcasting assets.

discussed below) nor the purely “economic” values of mobile DTV are ripe for a specific evaluation at this point.

Importantly, the benefits of television broadcasting accrue not just to the tens of millions of households that rely exclusively on over-the-air television, but also to households that subscribe to pay-TV service.¹⁹

- Tens of millions of households that pay to subscribe to an MVPD service have additional television sets that are not hooked up to cable or satellite boxes, and these households rely on free, over-the-air broadcast services. There are millions of cable and satellite households that collectively own more than 23 million television sets that are not connected to a pay-TV service.²⁰ In fact, 35 percent of U.S. households, including over-the-air only homes and MVPD homes with additional sets, have television sets that rely on over-the-air television to get a signal.²¹
- Pay-TV subscribers rely primarily on broadcaster-provided local news, local emergency information and alerts, and other local services because MVPDs provide little or no local services of this kind.²² Only a handful of markets

¹⁹ The most recent video programming report published by the FCC cited a 2007 Nielsen estimate that “15.5 million households, or about 14 percent of the 111.4 million total U.S. television households, rely on over-the-air television broadcasts for video programming.” *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, Thirteenth Annual Report, 24 FCC Rcd 542, at para. 108 (2009) (“Thirteenth Annual Report”).

²⁰ See Thirteenth Annual Report at para.108 (citing NAB’s estimates that “there are as many as 19.6 million households containing 45.5 million television sets that do not subscribe to an MVPD and that there are an additional 14.7 million MVPD households with 23.5 million television sets that are not connected to MVPD service”). NAB’s estimates result in a total of 34.3 million households that rely on over-the-air television in whole or in part, representing about one third of the United States. See also National Telecommunications and Information Administration (“NTIA”), *TV Converter Box Coupon Program Weekly Status Updates*, Dec. 2, 2009, https://www.ntia.doc.gov/dtvcoupon/reports/NTIA_DTVWeekly_120209.pdf (noting that 34,761,460 households were approved to receive DTV converter box coupons).

²¹ See Statement of Mark L. Goldstein, Director, Physical Infrastructure Issues, GAO, *Broadcasters’ Transition Status, Low-Power Station Issues, and Information on Consumer Awareness of the DTV Transition*, GAO-08-881T (Sept. 23, 2008), at 11 (noting that about 65 percent of homes have all televisions connected to a pay-TV service, while the remaining 35 percent rely on over-the-air television for at least one television set).

²² In 2008, local television remained the most popular source of news in the United States. Stations produce an average 4.1 hours of local news per day. See PEW Charitable Trust, Project for Excellence in Journalism, *The State of the News Media: An Annual Report on American Journalism, 2009*, available at http://www.stateofthemediamedia.org/2009/narrative_localtv_audience.php?media=8&cat=1 Proe. See also Communications Infrastructure Security, Access, and Restoration Working Group, *Media Security and* (continued...)

have local cable news channels.²³ The Commission should not assume that local broadcast content, relied on by both over-the-air viewers and pay-television subscribers, would continue to be available in a system where there is no over-the-air service or it is a marginalized service.

- Broadcasting reduces capacity demands on other wireless or wired services.²⁴ Relatedly, mobile DTV provides a way to spread emergency information and alerts on a spectrally efficient, point-to-multipoint basis and to reduce demand on other emergency communications systems.²⁵
- Free over-the-air television service gives consumers a choice to stop paying for expensive cable or DBS subscriptions. This is a valuable option for every consumer, and its importance cannot be overstated in light of the ever-increasing prices for such pay-TV services and the state of the economy.²⁶

As support for the view that the value of local broadcast television is diminishing,

data presented by the Broadband Task Force purportedly show a 56 percent decline in the

Reliability Council, *Final Report* (Feb. 25, 2004), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-244430A1.pdf (“It is therefore vital that one or more television broadcasters be capable of continuing operations under the extremely adverse conditions that could occur in the event of a disaster.”); Public Safety and Homeland Security Bureau, FCC, *FCC Preparedness for Major Public Emergencies* (Sept. 2009) at 32 (noting that “[c]ertain provisions of the Stafford Act limit the FCC’s ability—through FEMA—to help for-profit critical infrastructure entities in a disaster situation. This has resulted in the inability of Federal emergency personnel to assist, for example, *broadcasters that provide essential emergency information to at-risk population segments such as non-English speakers*” (emphasis added)); Remarks of FCC Commissioner Michael J. Copps, Joint Center for Political and Economic Studies, U.S. Capitol Visitors Center (Sept. 22, 2009) (“We rely so heavily on our broadcast media for so much of the news we must have; for emergency and public safety information”); *Syntax-Brilliant Corp.*, 23 FCC Rcd 6323, 6340 (2008) (noting that televisions that are unable to receive television broadcast signals “could impede the dissemination of emergency information in case of disaster”); *Broadcast Localism*, 23 FCC Rcd 1324, 1358 (2008) (“[P]roviding emergency information is a fundamental area in which broadcasters use their stations to serve their communities of license.”).

²³ See Adam Lynn *et al.*, *National Owners Dominate Local Cable News: Local Cable News Channels Do Not Significantly Contribute to Source or Viewpoint Diversity*, available at http://www.freepress.net/files/study_4_cable_local_news.pdf.

²⁴ See Attachment A at I (noting that “[o]ver-the-air television broadcasting in general, and mobile DTV in particular, are complements rather than impediments to wireless broadband solutions”).

²⁵ See Attachment A at V(C).

²⁶ See *Turner Broadcasting Sys., Inc. v. FCC*, 512 U.S. 622, 627 (1994) (“[T]oday’s cable systems are in direct competition with over-the-air broadcasters as an independent source of television programming.”); *Implementation of Cable Television Consumer Protection And Competition Act of 1992*, 22 FCC Rcd 17791, at para.25 (2007) (noting the competition MVPDs face from broadcast television and other sources).

number of exclusively over-the-air television viewers between 1998 and 2009.²⁷ These data present a flawed picture of consumer demand for broadcast television. First, local stations provide the most popular programming carried by MVPD operators.²⁸ Second, the Task Force’s analysis assumes that no over-the-air viewing occurs in homes that subscribe to an MVPD. To the contrary, over-the-air viewing in MVPD homes is significant and is an important service to these subscribers.²⁹ Third, the period covered in the Task Force’s “snap shot” does not reflect the future. It represents the waning days of a single channel, fixed analog TV service. Contrary to the Task Force’s dated snap shot, recent estimates indicate that over-the-air viewing in the United States will increase substantially over the next few years. A recent study showed that the number of over-the-air only homes is expected to increase by 36 percent, from 10.7 million in 2010 to 14.7 million in 2014.³⁰ Also, the overall number of homes that will have at least one over-the-air television receiver will increase from 32.3 to 51.4 million during the same period, an increase of 59 percent.³¹ These data show that, with the completion of the digital transition, consumer interest in over-the-air reception is growing.

²⁷ Public Notice, FCC, FCC Identifies Critical Gaps in Path to Future Broadband Plans (Nov. 18, 2009) at 2.

²⁸ According to TVB, “Broadcast television dominates subscription TV in delivery of the top 200 programs on a national level — it’s the same story with local broadcast. In the top 10 people-metered markets, broadcast takes the lion’s share of the top-rated programs-whether Adults 18-49 or Adults 25-54-when compared with subscription TV.” Television Bureau of Advertising, *Local Market Top 200 Report*, http://www.tvb.org/rcentral/viewertrack/trends/Top_200.asp (last visited Dec. 18, 2009).

²⁹ See n.20, *supra*. Also, the so-called 56 percent decline must be taken in context. For example, a decline in over-the-air homes by 5 percentage points, from 15 percent of households to 10 percent, could be represented statistically as a 50 percent decline. The Broadband Taskforce provides no context for its data.

³⁰ Informa Telecoms and Media, UK LTD, *Global Digital TV: 9th Edition*, Oct. 2009, at 378. We recognize these figures may reflect lower over-the-air viewership today than is reported by Nielsen. Nonetheless, the data are significant, for they show an increasing trend in the overall use of over-the-air service.

³¹ *Id.*

In addition to growth in traditional over-the-air viewing, over-the-air local television broadcasting is expanding its reach outside the home. HP, Dell and others are incorporating ATSC digital reception chips in a number of their computers and laptops.³² A number of companies are selling “dongles” which transform laptops and netbooks into portable TV sets. The deployment of mobile DTV, through these and other devices, will expand the reach of over-the-air television to millions of mobile devices, including PDAs, netbooks, and cellular telephones. In short, over-the-air broadcast television is becoming more, not less, valuable.

2. The Public’s Television Broadcast Service Produces Substantial Public Goods That Benefit All Americans.

Local television broadcasting produces a wide array of public goods—public goods that subscription services cannot replace. Any proposal to re-allocate spectrum on the theory that an alternative use would make the spectrum more “valuable” must take into account the full value of the existing and future uses of the spectrum as currently allocated, and that value must not be confined to only economic considerations. Because broadcasters serve the public interest, the value of the country’s broadcast service cannot be calculated simply by comparing the auction prices that purchasers would pay for spectrum allocated to broadcasting use as opposed to wireless use.

In authorizing auctions as a mechanism for picking among applicants for *already allocated* spectrum, Congress was fully aware of this distinction and of the importance of basing allocation (as opposed to licensing) decisions on the public interest, including public good

³² See, for example, the HP TouchSmart 600xt series, *available at* http://www.shopping.hp.com/series/category/desktops/600xt_series/3/computer_store, and the Dell Mini 10 Laptop with integrated DTV tuner, *available at* <http://www.dell.com/us/en/home/notebooks/laptop-inspiron-10/pd.aspx?refid=laptop-inspiron-10&s=dhs&cs=19>.

considerations. As a consequence, it explicitly required the FCC to ground its spectrum allocation decisions in the public interest.³³ And it barred the FCC from considering potential auction revenues in making allocation decisions. *See* 47 U.S.C. § 309(j)(7)(A) (“In making a decision... to assign a band of frequencies to a use for which licenses or permits will be issued... the Commission may not base a finding of public interest, convenience, or necessity on the expectation of Federal revenues from the use of a system of competitive bidding under this subsection.”).

Congress’s clear directive reflects sound and well-established economic theory. In their seminal work, Noll, Peck, and McGowan observed the “public good” nature of local over-the-air broadcasting: “The precise magnitude of the benefits to consumers from the present system is difficult to measure since television normally is not sold, and hence consumers are rarely required to express the intensity of their desire by forgoing some income for the privilege of viewing.”³⁴

A public good has several different attributes. Classically, a public good is a benefit or service that is *non-rivalrous* and *non-excludable*. One person’s consumption of a public good does not affect another’s consumption of that same good (“non-rivalrous”), and it is not practical to prevent consumers from consuming the public good (“non-excludable”).

Broadcast television meets both of these criteria. Over-the-air broadcasts are available to all

³³ *See* 47 U.S.C. § 303(c) (requiring the Commission to “[a]ssign bands of frequencies to the various classes of stations” as the “public convenience, interest, or necessity requires”). *See also* 47 U.S.C. § 309(a) (requiring the Commission to “determine whether the public interest, convenience, and necessity will be served by the granting of” any particular application); 47 U.S.C. § 309(a) (requiring local licensing of frequencies, so “as to provide a fair, efficient, and equitable distribution of radio service to each” state and community”); *Improving Public Safety Communications in the 800 MHz Band*, 19 FCC Rcd 14969, n.238 (2004) (noting that “auctions may not always serve the public interest”).

³⁴ Roger G. Noll *et al.*, *Economic Aspects of Television Regulation* 21-22 (Brookings Institute, 1973).

consumers, free of charge, and the costs of producing and providing over-the-air television are *not dependent on the number of people watching*: it costs the local, over-the-air television station the same whether eight thousand or eight million viewers are watching.³⁵

Local broadcasting advances consumer welfare and public safety, provides a forum for civic participation, distributes educational and informational programming, promotes local businesses, and otherwise helps to achieve the very public policy goals articulated by Congress in the American Recovery and Reinvestment Act (which in turn must guide the Commission in this proceeding).³⁶ Among the many intangible benefits of our country's system of television broadcasting are that it is free, universal, local, innovative, public service-oriented, diverse, and supportive of local commerce.

Free. As noted above, the public's broadcast service is free. It is advertiser-supported and available to all Americans, including those who cannot afford expensive pay-TV services. And many consumers, including low-income viewers, the elderly, Hispanics, and African Americans, rely more heavily than the rest of the population on over-the-air television service.³⁷ Indeed, more than 23 percent of households with incomes under \$30,000 per year, more than 20 percent of African American television households, and more than 25 percent of

³⁵ See Bruce M. Owen and Steven S. Wildman, *Video Economics* 23 (Harvard University Press, 1992).

³⁶ See American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 6001(k)(D), 123 Stat. 115 (Feb. 17, 2009). The Act identifies 11 specific objectives, such as consumer welfare, civic participation, public safety and homeland security, community development, education, private sector investment, entrepreneurial activity, and job creation and economic growth, to which broadcasting makes major contributions (and to which it will continue to make such contributions in the future). Congress did not intend, and could not have intended, to require seizure of broadcast spectrum that would undercut broadcasting's ability to make such contributions.

³⁷ See Reply Comments of Univision Communications Inc., NBP Public Notice #6, GN Docket Nos. 09-47 *et al.*, Nov. 13, 2009, at 3 (noting heavy reliance on Univision's over-the-air signal in markets such as Los Angeles and San Francisco).

Hispanic television households rely solely on over-the-air broadcasting.³⁸ The public's free, over-the-air television service has enabled the country to avoid pouring resources into funding an ongoing television "universal service" fund.

Universal. Broadcast television service is universal. It is available to 99.7 percent of all Americans. Many American households are beyond cable's reach because of the expense of laying cable in sparsely-populated, rural areas of the country. Terrain and foliage prevents satellites from serving all Americans. Cable and satellites are also far more vulnerable to service interruptions than over-the-air broadcast services (in the case of satellite services, mere rain storms can shut down service). The value of broadcasting's reliable "universal service" role, especially in times of emergencies, is not reflected in market valuations.

Local. Broadcasters employ local reporters and operate local newsrooms that provide important coverage of their communities, unlike satellite and cable (with limited exceptions). These communities depend on their local broadcasting service to cover city hall, conduct investigative journalism, report on developments in local schools, inform them about local political issues (including debates and elections), and cover community businesses and organizations. Broadcasters have "boots on the ground" in their communities, and the important role they play locally is worth preserving. Local broadcast stations provide a trusted, reliable, and accountable source of information and journalism.³⁹

³⁸ See Comments of NAB, *In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, MB Docket No. 07-269 (filed July 29, 2009).

³⁹ For more on the key role that television journalism plays for consumers, see NAB's Comments in the Federal Trade Commission's New Media Workshop, Project No. P091200 (Nov. 6, 2009) (attached hereto for ease of reference as Attachment B).

Innovative. Key service innovations recently initiated by broadcasters, in addition to free, over-the-air, high-definition television, include mobile DTV and multicast services and zoning techniques that offer the opportunity for hyper-local news, information and advertising. Consumers seek out HD programming for its superior picture quality, which enhances everything from sports to movies to network programs to local news.⁴⁰ Consumers have invested over \$109.8 billion in HD television sets since 2003, and the best-quality HD programming is available for free over-the-air.⁴¹ And consumers increasingly are demanding access to video programming while on-the-go. The broadcasting industry is poised to meet this demand with real-time mobile streaming video, along with the capability of related interactive services such as audience measurement and viewer voting.⁴²

Public Service. Broadcast television stations serve their communities and the public interest. For example, each station across the country provides at least three hours per week of educational and informational programming for children. Broadcasters' additional multicast programming streams include a similar level of educational/informational children's programming. Local broadcasters air public service announcements without compensation, ensuring that viewers receive information on health, safety, and other important matters. The television broadcast industry spent more than \$1 billion in consumer education just concerning the digital television transition. They enhance political discourse by providing coverage of

⁴⁰ Many stations have made significant investments in the infrastructure necessary to provide local news programming in HD. For example, WBOC-DT, Salisbury, Maryland, spent \$13 million to create the NewsPlex, a state-of-the art high-definition newsroom/studio. See *The WBOC NewsPlex*, WBOC (TV), <http://www.wboc.com/Global/story.asp?S=8803958>.

⁴¹ See Consumer Electronics Association ("CEA"), *FastFacts Historical Data* (2009). The CEA's figure represents 118.5 million receivers. CEA also projects the investment of another \$21.6 billion, for 31.2 million receivers, in 2010.

⁴² See Attachment A at Section V(C).

elections, campaigns, and political debates, and by giving access to political candidates. Stations allow public officials to directly reach voters in their communities. Broadcasters provide emergency information and alerts, in addition to their regular news and public affairs programming. In times of emergency, such as in the case of the bridge collapse in Minneapolis and Hurricane Katrina, broadcasters provide non-stop news, information on missing persons, and other important safety information for days, without running any advertising. The journalistic standards that local broadcasters follow seek to ensure that reliable information is available when the public needs it. And there are nearly 400 stations that provide exclusively non-commercial, educational programming.⁴³

Diverse. The public's broadcasting service serves many markets and different consumer needs. It provides programming for children, teenagers, and adults; for central cities and outlying rural populations; for those who do not speak English; for minorities; and for viewers from many different cultural backgrounds. Broadcasters meet these needs in a variety of ways. For example, the Univision station group, which serves more than 50 markets, provides programs (and closed captioning) in Spanish and has noted that within the Hispanic community there is "disproportionate reliance on over-the-air broadcasts."⁴⁴ WPEC, in West Palm Beach Florida, uses a digital multicast channel to provide Mi Pueblo TV, a Spanish-language programming service produced in cooperation with members of the local Hispanic community.

⁴³ *Television & Cable Factbook*, 2009.

⁴⁴ See Reply Comments of Univision Communications Inc., NBP Public Notice #6, GN Docket Nos. 09-47 *et al.*, Nov. 13, 2009, at 3.

Many other stations use the ability to provide a second language audio to serve non-English speakers. Broadcasting also provides a voice for religious broadcasters and small businesses.⁴⁵

Supportive of Local Commerce. Local businesses (and local political candidates) can reach viewers effectively and efficiently over local television stations. The audiences for subscription services and the Internet are fractured, and reaching a wide audience within the local market through those means is difficult, expensive, and uneven. Local television stations provide an effective platform to reach these wide audiences. Television broadcasting supports and promotes the health of local and regional commerce, in turn facilitating the development of local job opportunities. With television broadcasting accounting for nearly \$50 billion of all advertising revenue in the United States, generating hundreds of billions of dollars in sales, it is clear that millions of jobs are attributable to local broadcasting.⁴⁶

B. The Brattle Study Is Flawed.

The debate over the appropriateness of taking all or large chunks of spectrum away from the public's local, free, and universal television service has been distorted by economic analyses that purport to estimate the value of competing spectrum uses by limiting that evaluation to a single construct: the revenues that can be achieved from auctioning that

⁴⁵ Providing broadcasting service for these communities is valuable not only in its own right, but in order to enhance other values, such as civic participation: research shows that "relative to non-Hispanic electoral participation, Hispanic turnout is five to ten percentage points higher in markets with Spanish-language local television news." See Felix Oberholzer-Gee and Joel Waldfogel, *Media Markets and Localism: Does Local News en Español Boost Hispanic Voter Turnout?* at 2 (National Bureau of Econ. Research, Working Paper No. 12317, 2006).

⁴⁶ According to the Television Bureau of Advertising, in 2008, network advertising was \$25.5 billion and syndication advertising was \$4.4 billion. See *Broadcast TV Revenues Were Down 0.4% in 2008*, Apr. 1, 2009, http://www.tvb.org/rcentral/AdRevenueTrack/revenue/2008/ad_figures_1.asp. As for the advertising revenues generated by local television stations, BIA/Kelsey estimates that total value for 2008 was \$20.1 billion. See *Investing in Television: 2009*, 1st edition. Therefore, the total amount spent by advertisers to reach audiences watching broadcast programming in 2008 was \$50.0 billion. (This total does not include expenditures on underwriting of non-commercial television stations.)

spectrum.⁴⁷ The fundamental flaw in this approach, which also pervades much of the debate about re-allocating broadcast spectrum to wireless uses, is that it ignores the public good benefits of broadcasting.

Specifically, the Brattle Study, submitted by the CEA, has been widely cited for the proposition that the benefits of re-allocating the broadcast spectrum would exceed the costs.⁴⁸ But neither the Brattle Study nor any other evidence in the record supports this conclusion. To the contrary, the 22-page Brattle Study cannot provide the foundation for a Commission recommendation to Congress that would fundamentally reshape the American communications market and disrupt core communications policies. The Study's weaknesses are recognized even by its sponsor, which "does not necessarily endorse" its results, but instead offers it as "the type of analysis that should be considered by the FCC."⁴⁹ This Commission has appropriately placed a high value on complete, careful, and unbiased analyses. The Brattle Study does not meet this test.

While a complete rebuttal of the Brattle Study would take additional time, the Study suffers from at least five fatal flaws described below: (1) it fails to recognize, let alone quantify, the social benefits associated with over-the-air broadcasting; (2) it fails (by its own admission) to analyze alternative distribution means or other sources of additional spectrum; (3) it relies on a static (or "partial equilibrium") analysis which fails to account for either the full benefits of the current spectrum allocation or the full costs of spectrum re-allocation in a

⁴⁷ Brattle Study.

⁴⁸ See, e.g., Reply Comments of the CTIA—The Wireless Association on NBP Public Notice #6, Spectrum for Broadband, GN Docket Nos. 09-47 *et al.*, Nov. 13, 2009 at 15, n.54.

⁴⁹ Comments of the Consumer Electronics Assoc., GN Docket Nos. 09-47 *et al.*, Oct. 23, 2009, at 4 ("CEA Comments").

dynamic marketplace; (4) it explicitly fails to take into account the costs and delays associated with administrative re-allocation of spectrum; and (5) it is based on serious false assumptions and methodological errors. The net effect of each of these flaws is to bias the Study's results in favor of a pre-determined and incorrect conclusion.

1. Failure To Recognize Or Account For The Social Benefits Of Over-The-Air Broadcasting.

Over-the-air broadcasting generates substantial social benefits, in the nature of public goods, in addition to its market benefits. The need to take these public goods into account in valuing alternative spectrum uses has long been understood by experts and by the Commission. As a 1992 study by the Commission's Office of Plans and Policy explained, "Examining market values is not sufficient to make policy judgments ... because of the possible divergence between the social and market value of broadcasting services. To determine whether it is socially desirable to shift spectrum to a different use it is necessary to estimate social values."⁵⁰

The Brattle Study implicitly recognizes the importance of measuring social benefits, as it bases its conclusions in part on the assertion that "Broadband deployments produce benefits well beyond the direct economic impacts."⁵¹ Yet it fails to acknowledge, evaluate, or quantify the social benefits of local broadcasting.

2. Failure To Consider Other Sources Of Spectrum And Alternative Means For Delivery Of Broadband Services.

⁵⁰ See Evan Kwerel and John Williams, *Changing Channels: Voluntary Reallocation of UHF Television Spectrum 1* (FCC Office of Plans and Policy, Working Paper No. 27 1992).

⁵¹ Brattle Study at 3.

While the Brattle Study is cited for the proposition that spectrum should be re-allocated *from broadcasting* to mobile broadband, its analysis cannot and does not support this conclusion, for the simple reason, among others, that it does not take into account the availability of non-broadcast spectrum and other distribution resources available for broadband uses. Indeed, the Brattle Study explicitly states that broadcast frequencies “may or may not be the least expensive to free up,” acknowledges that “there are likely frequencies controlled by the federal government that would be economical to reallocate,” and concludes that “[t]o the extent other frequencies are less expensive to free up—say from the current federal government allocations—the net benefits reported below would be even larger.”⁵² By its own admission, the *most* the Brattle Study might demonstrate (and it does not) is that *some* additional spectrum should be allocated to mobile broadband, not that *broadcast* spectrum should be re-allocated.

3. Failure To Account For The Dynamic Effects Of Spectrum Re-Allocation.

The Brattle Study relies on a static or “partial equilibrium” analysis of the effects of spectrum re-allocation, and thus fails to measure its full impact over time. This failing affects multiple aspects of the Study’s analysis; here we point out only two.

First—and crucially—the Brattle Study assumes, without any basis and contrary to common sense, that the quantity and quality of local broadcast content would be unaffected by the re-allocation of broadcast spectrum. That is, it assumes that local broadcasters could be deprived of most or all of their spectrum, and with it the ability to generate revenues from existing services and future services—multicasting, mobile DTV, supplementary and ancillary services—without any impact whatsoever on broadcasters’ ability to support the largely fixed

⁵² Brattle Study at 11.

and substantial costs of producing local news and other content. Yet, it is precisely these marginal revenues that broadcasters are likely to rely on to sustain local content production, particularly in an era when advertising revenues are declining in the face of competition from the Internet and other new media. Assuming that local broadcasting content would continue unaffected in the absence of the revenues made possible by new and innovative uses of broadcasting spectrum is wishful thinking, not an economic analysis.

A second example of static analysis is the Brattle Study's failure to take into account the consumer benefits of the new and innovative services now being rolled out by broadcasters in the wake of the DTV transition, which would be foregone in the event of spectrum re-allocation. Even the study's sponsor recognized this omission, noting that "[the Brattle Study] analysis does not take into account the advent of digital television broadcasts to mobile and handheld devices using the newly adopted A/153 ATSC Mobile DTV Standard, which has the potential of serving millions of American consumers with live, local DTV content on a new generation of devices."⁵³

4. Failure To Consider The Administrative Costs And Delays Of Spectrum Re-allocation.

The Commission's experience with spectrum re-allocation—the 800 MHz band is one example—demonstrates that re-allocation is neither easy, instantaneous, nor error-free.⁵⁴ Thus, any serious analysis of re-allocating broadcast spectrum to mobile broadband use must take into account the costs and delays associated with re-allocation. These costs include the

⁵³ CEA Comments at 4, n.6.

⁵⁴ See, e.g., *Improving Public Safety Communications in the 800 MHz Band*, DA 09-1395, at para. 3 (June 24, 2009) (postponing the 800 MHz rebanding financial reconciliation "true-up" date to December 31, 2009 and recognizing that the "rebanding projects had been subject to unforeseen complexity and delay").

costs of re-allocating broadcast spectrum shared with others (such as unlicensed devices).⁵⁵ Yet, the Brattle Study wishes away these complications. It acknowledges as much, noting that its “key point” is “not to describe the specifics of any reallocation program, but rather to establish that there are significant gains from reallocating the broadcast spectrum and all interested parties could be made better off.”⁵⁶ Whatever benefits and costs might result from spectrum re-allocation depend on the “specifics” of the re-allocation program. Before the Commission can conclude that there would be *any* net benefits of moving from the current allocation to a different one, it must have a clear plan for getting from here to there—and take fully into account the “specifics” and the costs of the transition. The Brattle Study simply ignores these issues. Thus, for example, the Brattle Study compares its (vastly understated) estimate of the value of broadcasting to its (vastly overstated) value for mobile broadband without discounting the latter for what would likely be a decade-long re-allocation process with administrative and other delays. In simple terms, the Brattle Study would have the Commission re-allocate spectrum, at great cost to the public, so that the mobile telephone industry can offer in the future what broadcasters are offering today—namely, high-quality, desirable, and often localized video programming.

⁵⁵ The Brattle Study fails to consider two important aspects of the FCC’s recent decision in the proceeding concerning unlicensed devices in the TV band (“white space” devices). First, the FCC justified allowing these devices in the TV band on the grounds that they would provide broadband services. Thus, they would compete with the proposed services contemplated by the auction bidders, thereby driving down the price. Second, from an interference perspective, auction value of spectrum will decrease significantly if bidders must share spectrum with these unlicensed devices. Finally, once allowed in the band, it is impossible to reclaim such devices from consumers and there is no licensee to hold accountable.

⁵⁶ Brattle Study at 11.

5. Incorrect Assumptions And Methodological Errors.

Even a cursory review of the Brattle Study reveals multiple additional incorrect assumptions and methodological errors. To take the most obvious example, the Study presents two alternative values of the “opportunity costs” of eliminating over-the-air broadcasting: the costs to broadcasters (calculated based on market valuation) and the costs to consumers (calculated based on the costs of subscribing to cable). Its largest, but not only, error is the suggestion that the two calculations should be thought of as *alternatives*.⁵⁷ The simple fact is that if broadcast spectrum is re-allocated, broadcasters will lose *at least* some portion of the future stream of income represented in their market valuations, *and* over-the-air consumers will face the additional costs of subscribing to cable or DBS (or going without). With respect to consumers, it would not just be over-the-air only households that would need reimbursement, as suggested in the Brattle Study, but also the many pay-TV subscribers that have additional receivers unconnected to an MVPD service or who receive broadcast content through their MVPD carriers. Nor was the cost calculation correct; providing consumers with the ability to again receive HDTV would include the cost of a set-top box (and even basic DTV service is generally on a different tier than basic analog service).

For the Commission to put in jeopardy the very existence of local broadcasting in this country on the basis of such flimsy analysis would be arbitrary and capricious.

⁵⁷ *Id.* at 16 (“An *alternative* measure of the opportunity cost associated with the broadcast band is the cost of transitioning the number of over-the-air only households from 10 million to 0.” (emphasis added)).

II. LOCAL TELEVISION BROADCASTING IS A CRITICAL COMPONENT OF THE NATIONAL COMMUNICATIONS ECOSYSTEM AND IS A NECESSARY PART OF THE BROADBAND SOLUTION.

The public's broadcasting service efficiently provides consumers with wireless, digital video programming, including high-definition programming. A single broadcast station can deliver high-definition digital video programming to millions of consumers simultaneously, with no reduction in quality or speed or increase in costs. Whether the programming is a popular network series, sports, or coverage of a hurricane or terrorist attack, the country's television broadcast service can easily deliver this content to the entire population.

Free over-the-air broadcasting is highly efficient for this purpose. The nationwide transition to digital television, which all full-power broadcasters completed by June 2009, has increased the efficient use of a 6 MHz channel by 400-500 percent, and broadcasting today achieves a digital data rate of almost 20 Mbp/s within a 6 MHz channel.⁵⁸ This sophisticated, highly-capable, point-to-multipoint digital communications system is far more efficient and effective for many uses — notably, serving fixed viewers with multicast and HD content while at the same time providing mobile video to vehicles and portable and hand-held devices — than the point-to-point broadband networks operated by the telephone companies. “The efficiency tradeoff is clear — it is more efficient to broadcast a DTV program on a single channel to 1,000 viewers than to transmit the same information a thousand times.”⁵⁹ Broadcasters' high-power,

⁵⁸ The ATSC standard provides for a data rate of 19.39 Mbp/s per 6 MHz channel. *See* Attachment A at Section II, n.13. In connection with the digital transition, broadcasters also returned 108 MHz of broadcast spectrum to the FCC for the Commission to auction for other purposes and improve public safety communications.

⁵⁹ *See* Attachment A at Section II.

high-coverage operations mean that they have relatively low costs in providing service efficiently and economically to a mass audience.

High definition television and other digital television services were properly viewed as such a dramatic improvement over analog television that the country endured the upheaval of the digital transition in order to provide these benefits to the American people. Congress was right to require that the digital transition be implemented.⁶⁰ This improvement is a paradigm shift in technology, and is more significant than the transition from black and white to color television. Broadcasters in the field attest to the fact that their switchboards light up when their programming switches from HDTV to a standard definition format. As a result of this bold transition to digital broadcasting, the United States has led the world and still leads it.

In addition to providing HD video to consumers at home, broadcasters are bringing mobile DTV to the public on the go.⁶¹ As with traditional broadcasting, mobile DTV permits a single station to serve hundreds of thousands or millions of viewers at once (depending on the population of the market in question) with no deterioration in speed or quality.⁶² A recent

⁶⁰ Over-the-air television broadcasting is so important that the federal government just spent billions of dollars to ensure that American consumers could continue to receive it, from the \$1.5 billion initially allocated for the NTIA's digital converter box coupon program to the additional \$650 million allocated by Congress, including \$90 million for consumer education. And the Commission adopted numerous policies and regulations to promote the maximization of digital television and to minimize losses of over-the-air coverage. These policies and regulations include those concerning "use it or lose it" build-out obligations, channel elections, coverage standards for modifications, and limitations/prohibitions on early transitions.

⁶¹ The mobile DTV standard adopted by the Advanced Television Systems Committee ("ATSC") in October of this year makes possible real-time mobile streaming video, the capability of innovative, interactive services such as audience measurement and viewer voting, and compatibility with digital video recording ("DVR") technology on the consumer's device to permit time-shifted viewing at the consumer's convenience.

⁶² A point-to-multipoint service like broadcasting will be significantly more efficient than a point-to-point system in providing popular content. Consider that over the week of November 9, 2009, over 176 million people watched the top ten shows on broadcast television. This sort of volume would swamp wireless broadband capacity because broadband is essentially a point-to-point delivery service. See Nielsen, *Nielsen TV Ratings*, <http://en-us.nielsen.com/rankings/insights/rankings/television> (accessed as of December 3, 2009) (continued...)

study shows high consumer demand for mobile video, particularly for the video content offered by the public's broadcasting service: 88 percent of respondents are interested in watching live, local news and weather programming on mobile devices.⁶³ The public's broadcasting service already has the infrastructure and ability to meet this consumer demand for mobile video. Broadcasters have begun providing mobile DTV services to the public, and within several months these services are expected to reach 39 percent of the country.⁶⁴

Broadcasters also use their 6 MHz channels to provide multicast video services. A multicast program stream is a standard-definition digital programming stream that a broadcaster provides in addition to its primary program channel. Many stations provide more than one multicast programming stream. In small markets where there are allocation constraints or where it is difficult to sustain multiple transmission facilities, some stations are using multicast streams to provide a major network service (such as ABC, CBS, NBC, or FOX) to viewers. Prior to the transition these stations often provided "part time affiliation" with the major networks. Local broadcasters across the country are using multicast channels to provide other desirable programming services, such as qubo (children's programming), thisTV (films and other entertainment), LATV (bilingual music and entertainment), WCSN (sports), and a suite of

(providing ratings data for Broadcast TV in the United States for the week of November 9, 2009). While many viewers watched these shows through pay-TV services, it is clear that viewership is concentrated on a handful of popular programs.

⁶³ See *Magid Morning Facts: OMVC-Magid Study Reveals High Interest in Mobile DTV Services*, Frank N. Magid Assocs., Dec. 9, 2009, available at http://www.magid.com/publications/magid_morning_facts/news_article.asp?articleID=3329.

⁶⁴ In October, seven Washington-area television stations transmitted live local news, weather, sports and other programs to mobile DTV compatible devices, including mobile phones, laptop computers, and netbook PCs. See Press Release, OMVC, With Standard Adopted, Broadcasters Poised to Bring Mobile DTV to American Consumers, (Oct. 16, 2009) available at http://www.openmobilevideo.com/_assets/docs/press-releases/2009/OMVCOctober162009FINAL.pdf.

educational, non-commercial program services from PBS (including PBS World, Create, PBS Learner, and the Spanish-language V-me network).⁶⁵ With the digital transition completed only six months ago, the diversity and robustness of multicast services can be expected to continue to develop strongly in the future.

Digital broadcasting has the potential to be used for other new, innovative services. Various broadcasters use their digital spectrum to provide ancillary/supplementary services. These services can include data and software transmissions and interactive services.⁶⁶ And broadcasters are developing various technologies for the roll-out of the next-generation digital broadcasting standard. As one example, Sezmi is introducing a service that seamlessly blends programming content delivered by over-the-air broadcast and broadband distribution channels. Sezmi's high-capacity DVR set-top boxes are already on sale in certain markets, and a major roll-out is planned over the coming months. Sezmi also has negotiated arrangements with some local broadcasters to lease and aggregate spectrum in local markets, using that spectrum to deliver high-demand video content other than broadcast programs to customers, in addition to the broadcasters' local signals.

Digital broadcasting has other inherent efficiencies. The infrastructure for state-of-the-art digital broadcasting is already built, after many billions of dollars invested by broadcasters, the public, and the federal government in the Congressionally-mandated digital transition. These services are being provided today: it would be wasteful and destructive to

⁶⁵ Additional examples of multicast programming, including news and other local programming, are described in the attached comments submitted by NAB to the FTC for its journalism workshop. *See* Attachment B at 9.

⁶⁶ For example, PBS has a mechanism whereby participating stations lease access for datacasting purposes. Broadcasters return five percent of gross revenues from ancillary/supplementary services to the U.S. Treasury.

expend additional effort, resources, and time to construct duplicative wireless infrastructure to replace the more efficient broadcast infrastructure that is already in place.

III. RE-ALLOCATION OF TELEVISION SPECTRUM FOR BROADBAND PURPOSES WOULD HARM CONSUMERS.

With the public interest paramount in any spectrum allocation decision, the Commission should give full weight to consumer expectations and investments. Some have proposed, explicitly or implicitly, to take all television spectrum away from television broadcasters.⁶⁷ Some proposals are less draconian but still extremely destructive. All are deeply flawed. First, the effect on local news and other local programming, including emergency information, would be devastating. (No DBS system and few cable systems provide independent local news, much less multiple independent, competing local news services.) Second, particularly in this economy, it would not be feasible to give consumers, for an indefinite amount of time, “TV stamps,” so as to avoid forcing citizens to forego service altogether or subscribe to expensive and not always available MVPD services.

Another scenario that has been suggested would entail a partial but forced re-allocation of spectrum from local broadcasting to broadband. Called “stacking,” it would place multiple stations on a single channel. As described in more detail below, this proposal would also harm the public’s broadcast services.

⁶⁷ See, e.g., the Brattle Study; Comments of CTIA —The Wireless Association, GN Docket Nos. 09-47 *et al.*, Nov. 13, 2009, at 15 (describing broadcast spectrum as “ripe” for reallocation); see also *Aides Hear Case for Ending Over-The-Air TV*, CongressDaily, Dec. 8, 2009, available at http://www.nationaljournal.com/congressdaily/hbp_20091208_1961.php (describing the CEA’s lobbying efforts before both the House and Senate wherein the CEA advocated repurposing broadcast television spectrum).

These and other re-allocation scenarios that have been at the center of the broadband debate, expressly or implicitly, entail forced loss of capacity that would undercut existing broadcast services.⁶⁸

A. Service Losses That Would Result From Various Re-Allocation Proposals Would Harm Consumers.

“Stacking” would entail using a 6 MHz channel to multicast the signals of two or more different television stations. In effect, the plan would decrease the bit stream of local stations making it impossible to provide the full array of services they now provide. It necessarily would entail the loss of high-definition television, because HD signals consume the majority of a 6 MHz television channel’s capacity. Consumers would lose this desirable capability, which was the major purpose of the digital transition,⁶⁹ despite having heavily invested in televisions with DTV tuners and HD capability. In 2009 alone, it is estimated that consumers will have spent over \$25 billion for HDTV receivers.⁷⁰ The digital transition was “sold” to the public as a means to achieve the advances of digital television, chief of which was

⁶⁸ At this point it is not clear how much spectrum the Broadband Task Force will recommend re-allocating from the public’s over-the-air television service. There has been some discussion of re-allocating and clearing a nationwide block of spectrum of up to 200 MHz. To obtain a nationwide spectrum block of this magnitude, the government would have to dislocate all stations operating on these channels in multiple markets. If nationwide consent could not be achieved, some form of coercion would be necessary to clear this spectrum.

⁶⁹ Some have argued that stations could provide more HDTV channels on a 6 MHz channel if they improved their compression technology and adopted MPEG4. Today broadcasters use MPEG2 compression and all TV receivers and digital to analog converter boxes are built to decode this compression standard. Switching to MPEG4 compression would require replacing every DTV set and digital-to-analog converter box. Such a policy would strand billions of dollars in receiving equipment.

⁷⁰ David Goetzl, *Big Picture: HDTV Sales on Upswing*, MediaPost News, Sept. 29, 2009, http://www.mediapost.com/publications/?fa=Articles.showArticle&art_aid=114483 (citing estimates of SNL Kagan); Comments of MSTV and NAB, NBP Public Notice #6, GN Docket Nos. 09-47 *et al.*, Oct. 23, 2009, at 9. In 2008 alone, consumers purchased 4.4 million antennas. Press Release, Harris Corporation, Consumers Positive on U.S. Digital Television Transition; Many May Switch to Free Over-The-Air Reception, According to Survey (June 11, 2009), *available at* <http://www.prnewswire.com>. Over the past two years, consumers have invested tens of million in antennas for the reception of over-the-air television.

HD television.⁷¹ Further, social and policy harms would result from making HDTV available exclusively as a pay/subscription service.

Stacking would also force broadcasters to turn off (or never turn on) multicast signals, and it would preclude mobile DTV services. They would simply lack sufficient spectrum capacity to maintain or launch these new services.

Additionally, stacking would have adverse consequences for pay-television subscribers. As described above, many homes that subscribe to cable or satellite have additional television sets that rely on an antenna, and these consumers would be harmed by the loss of free, over-the-air HD television. In addition, up to 50 percent of all cable headends rely on the HD signals of over-the-air television stations to obtain local television stations' programming. DBS likewise places heavy reliance on over-the-air HD signals in order to provide broadcast television programs to their subscribers.⁷² This effect would be particularly prevalent and particularly destructive in rural areas where it is uneconomical to construct and maintain an expensive fiber or microwave link to the cable or satellite system's headend. Thus, pay-television subscribers would lose a valuable and free alternative for HD television service, as well as possibly losing access via their MVPDs to local stations' HD signals.⁷³

⁷¹ See Press Release, FCC, 1 Day Until DTV Transition: Focus at End of Technological Transition is on People (June 11, 2009) (noting that the digital transition "is an unprecedented engineering feat," "providing consumers with a better picture and sound and more channels"); Press Release, FCC, 3 Days And Counting to DTV Transition (June 9, 2009) (underscoring the better picture and sound quality of digital television.).

⁷² Satellite receive sites in 182 of the 210 broadcast markets installed new off-air receiving equipment in connection with the digital transition. According to DirecTV, 73 percent of all of the television station signals carried by DirecTV were received at satellite receive sites via over-the-air transmission.

⁷³ Stacking also could cause other problems, from technical difficulties to confusion with respect to channel identification.

A second alternative that has been discussed is a “repacking” of the television band. Under this approach each station would retain its current 6 MHz channel and 19.39 Mbps bit stream. Spectrum efficiencies would be achieved by collocating stations on a common tower or antenna farm.⁷⁴ Repacking the television band would entail heavy costs to consumers and broadcasters. The Commission and Congress are well aware of the service disruptions that occurred in the digital transition when some stations undertook necessary facility relocations. In many areas, such repacking not be achieved without significant reductions in stations’ coverage areas. Service disruptions that would result from the all-market, tower-relocation proposals could well be orders of magnitude worse than experienced during the DTV transition. The result is that millions of viewers likely would lose substantial amounts of, or all, local television services.

Collocation may not be possible, especially in highly urbanized areas. Many existing towers are not engineered to hold multiple broadcast antennas.⁷⁵ In many urbanized areas there is simply not enough land to accommodate this policy. For example, delays in building the Freedom Tower have complicated broadcast transmission in New York City.⁷⁶ In many areas the federal government would have to preempt local zoning regulations.⁷⁷ The

⁷⁴ Because of interference concerns, stations cannot operate on adjacent channels in the same market. Such operation may be possible, however, if both stations are broadcasting from exactly the same location, such as a common tower or antenna farm.

⁷⁵ TV broadcast transmitting antennas are much larger than those used in other wireless systems. For example, the antenna used by WUSA-TV in Washington weighs approximately 19 tons.

⁷⁶ The Empire State building cannot accommodate all of the New York stations, and efforts to use Governors Island have not been successful.

⁷⁷ Local zoning fights may be long and costly. For example, it took years of effort and a federal statute to preempt local land use regulations to allow a DTV tower to be used in Denver.

nature and extent of the problems and harms, including service losses, cannot be determined in the absence of detailed proposals.

B. Consideration Of Destructive Re-Allocation Scenarios Should Take Into Account The Fragile State Of Broadcast Services In Markets Of All Sizes.

It is widely recognized that print journalism is in grave peril, that the new media will not serve many of the functions that print journalism has served, and that our political and social structures may suffer as a result.⁷⁸ Increasingly, the country is realizing that broadcast journalism is similarly threatened. Chairman Genachowski has been in the vanguard of those who have been alert to this danger and its adverse consequences for the American public.⁷⁹ As borne out by various research statistics, he is aware that the American public trusts and turns to its local broadcast news more than any other news source.⁸⁰

⁷⁸ See John Eggerton, *Genachowski's Media Mission*, Broadcasting & Cable, Aug. 3, 2009 (quoting Chairman Genachowski as stating "I have real concerns, as many Americans do, about what is going on in America with respect to newspapers, local news and information. It has been an area of ongoing interest at the FCC from the beginning. Local news and information has been a core pillar of the Communications Act and remains that."); Michael J. Copps, Acting Chairman, FCC, Remarks at the Free Press Summit: Changing Media (May 14, 2009) ("[W]e are skating perilously close to depriving our fellow citizens of the depth and breadth of information they need to make intelligent choices about their future. Newsrooms decimated. Beat reporters laid off. Newspapers literally shrinking before our eyes. . . . We're not only losing journalists, we may be losing journalism."); FTC, Public Workshops and Roundtables: From Town Crier to Bloggers: How Will Journalism Survive the Internet Age?, 74 Fed. Reg. 51605, 51606 (Oct. 7, 2009) (noting concerns regarding whether the economic hardships facing newspapers have reduced the coverage of "certain types of news" including "public affairs reporting" and "local journalism").

⁷⁹ See John Eggerton, *Genachowski on Net Neutrality, Broadband*, Broadcasting & Cable, Oct. 19, 2009 (quoting Chairman Genachowski discussing broadcast journalism and stating: "It remains essential for the country to have a healthy and vibrant broadcasting industry that meets the informational needs of our communities. I understand that many stations are facing challenges in this difficult economic climate. At the FCC, our door is open for ideas on the best ways to make sure that we have a broadcasting industry that's healthy, vibrant and serves the public interest."); Chopra, *Genachowski to Use Media and Government Report to Guide Policy*, Comm. Daily, Oct. 5, 2009 (quoting Chairman Genachowski as acknowledging that new media is "putting real stress on journalism").

⁸⁰ According to a recent study by the Pew Research Center for the People & the Press, television remains the dominant source of news for most people, and the public generally turns to local television stations to identify and report on local issues (as compared to newspapers, radio, and the Internet). See Press Release, Pew (continued...)

The causes of this weakening of local broadcasting's viability are well known: the absence of revenue sources other than advertising, the dilutive onslaught of Internet and cable advertising, and the country's general economic malaise. The new opportunities made available by digital technologies—multicasting and mobile DTV, in particular—offer prospects for strengthening the economic base that makes possible local television's irreplaceable and indispensable role of service provider to the American public. Clearly, broadcasters have invested heavily and with foresight in making themselves prepared for these opportunities, and as with most new technologies, they have ventured and experimented with a variety of innovative services.⁸¹ But only in the last six months have they been able to launch their entrepreneurial ideas in a fully digital marketplace, and it may take several years before the market and the public anoint successes and failures. It is in this precarious environment that proposals for re-allocating broadcast spectrum are being advocated that would deter investment in these promising new services and undercut the financial foundations for broadcasters' important existing services.

Many local broadcasters, especially smaller-market stations and stations serving minority audiences in large markets, may well not be able to survive if they cannot compete with offerings of enhanced picture quality (HDTV) and new services (multicast and mobile DTV). But the problem affects all stations in all markets. And forced channel changes, relocation of transmitters and towers, and major alterations to stations' service areas could threaten stations'

Research Center for the People & the Press, *Public Evaluations of the News Media: 1985-2009*, Press Accuracy Rating Hits Two Decade Low (Sept. 12, 2009), at 4, *available at* <http://people-press.org/reports/pdf/543.pdf>; *see also id.* at 14 (noting that the vast majority of Americans “say that if all local television news programs went off the air—and shut down their web sites—it would be an important loss”).

⁸¹ *See* Attachment B.

ability to serve their markets and disrupt longstanding television DMAs, which facilitate the buying and selling of advertising time on television stations in all markets.

IV. IN DEVELOPING A BROADBAND PLAN, THE COMMISSION SHOULD PROCEED SYSTEMATICALLY AND SHOULD NOT TAKE AT FACE VALUE PRESUMPTIONS THAT OTHERS INSIST ON.

Because of the stake all Americans have in the country's broadcast television service, because of the harms to the public that would be caused by the re-allocation of broadcast spectrum, and for reasons of good government, MSTV and NAB recommend that the Commission proceed as follows.

First, the Commission should approach the development of a broadband plan with the recognition that the point-to-multipoint wireless digital architecture operated by broadcasters and the point-to-point wireless digital broadband architecture operated by wireless companies are complements. It should not assume, as many have urged, that it must choose between the two. This is a false and unnecessary dichotomy.

Second, the Commission should scrutinize claims that more spectrum must be allocated for point-to-point wireless broadband services. The principal support for this claim is an International Telecommunication Union ("ITU") model. CTIA uses this ITU model to support its argument that 800 MHz is needed for wireless broadband by 2015.⁸² The ITU model is examined in detail in Attachment A at Section III(D). As demonstrated in Attachment A, the ITU model is very sensitive to input assumptions, and modifying certain assumptions made by

⁸² CTIA, Wireless Crisis Foretold: The Gathering Spectrum Storm and Looming Spectrum Drought (attached to CTIA, Written Ex Parte Communication, GN Docket No. 09-51, Sept. 29, 2009).

CTIA about video and other issues changes the results of the ITU model to suggest that no additional spectrum is required, even by 2020.⁸³

As described in Attachment A, CTIA cites the ITU model in its effort to build its case for the wireless industry's future spectrum needs. But, the ITU model results that CTIA used to show a shortfall of 800 MHz in 2015 also show that there is a similar shortfall of hundreds of megahertz in 2010. There is clearly not a shortfall today, let alone of this magnitude.⁸⁴

In its assessment of the wireless industry's spectrum needs,, the Commission should take into account that some two-thirds of these claims are for the delivery of video services to mobile devices.⁸⁵ But because broadcasting uses a point-to-multipoint delivery architecture (not a point-to-point wireless architecture) and because it already is in the process of launching these new services, broadcasting can meet large portions of mobile video demand more quickly, more economically, in a more spectral-efficient fashion, and with less disruption. If broadcasting's ability to deliver mobile video to consumers is properly considered, wireless

⁸³ As recently as 18 months ago, a leading wireless carrier catalogued for the Commission the large quantities of spectrum available for wireless, suggesting that there was no scarcity at the time (nor did it indicate that any scarcity was projected for the future). See Joint Opposition to Petitions to Deny and Comments, Cellco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC, *Applications of Atlantis Holdings LLC*, WT Docket No. 08-95, Aug. 19, 2008 (attaching "The Supply of Spectrum for CMRS" report by Charles Jackson).

⁸⁴ See Attachment A at Section III(D).

⁸⁵ See Attachment A at Executive Summary (1) ("[e]xperts project that mobile video will dominate traffic over mobile broadband networks in the coming years, with up to two-thirds of broadband usage growth forecast to be from video."). Even the CTIA predicts that nearly 64 percent of global mobile traffic will be video by 2013. See Comments of CTIA—The Wireless Association, NBP Public Notice #6, GN Docket Nos. 09-47 *et al.*, Oct. 23, 2009, at 30; see also *QuickPlay Media Sees More Than 60 Percent Growth In Demand for Mobile TV, Video Content in Q1 2009*, Broadcast Engineering, May 18, 2009, available at <http://broadcastengineering.com/products/quickplay-media-demand-mobile-video-content-0518/>.

claims for more spectrum would be reduced by 500 MHz. When other factors are taken into account, these claimed needs shrink to very small amounts of spectrum, if any at all.

Third, the Commission should catalogue the significant spectrum resources that already are allocated and being used for wireless broadband purposes. As part of this spectrum catalogue process, the Commission should take into account additional spectrum already in the pipeline for wireless uses, but that is currently unused or underutilized. 749 MHz of spectrum already is available for use on a licensed basis for mobile broadband between 225 MHz and 3.7 GHz.⁸⁶ In addition, hundreds of megahertz of additional spectrum are available on an unlicensed basis.

Some have alleged that the United States is behind other countries in the amount of spectrum they have in the pipeline for future broadband use. But these allegations overlook the fact that the countries used in these comparisons still have yet to reap their “digital dividends,” because they have lagged behind the United States in completing the digital television transition and allocating the newly vacated spectrum to wireless.⁸⁷

Fourth, the FCC should thoroughly investigate how wireless providers can use existing spectrum resources more efficiently. The Commission’s inquiry into this subject should not stop at current technologies. New technologies are being developed now and will be developed in the future that will unquestionably enhance the wireless carriers’ efficient use of existing wireless (and wireline) capacity. As documented in the Technical Review, “a large number of emerging technologies are poised to improve the system spectral efficiency of

⁸⁶ See Attachment A at Section III(B), Table 1.

⁸⁷ See Attachment A at Section III(B) for a more detailed discussion of this point.

wireless broadband systems.”⁸⁸ Research shows particular promise in new technologies such as multiple-input multiple-output (“MIMO”) wireless systems, femtocells, and user cooperation.⁸⁹ According to Cooper’s Law, coined by the lead inventor of the cell phone, spectrum efficiency doubles every two and a half years; over the last 90 years, spectrum utilization has increased over a trillion times.⁹⁰ In addition, the “trend has been that technology advances make possible the effective use of higher and higher spectrum bands. A number of different bands above 3.7 GHz may be viable future options.”⁹¹

Fifth, the Commission should assess the extent to which broadband needs can be met by non-spectrum-based, distribution technologies—wire, and coaxial and fiber-optic cable, in particular dark fiber (*i.e.*, fiber optic cables that are presently unused due to overcapacity in fiber optic networks). As noted in the Technical Review: “[o]f particular importance are fiber wireline networks which offer very high data rates (and the potential for future rate increases).”⁹² Serious efforts to maximize non-spectrum resources would help to achieve the two goals of improving broadband access and preserving the role of incumbent spectrum uses.

⁸⁸ See Attachment A at Section IV(A).

⁸⁹ Unwired Insight, *3G Networks Will Evolve, But Will They Cope?* (Executive Summary, Sept. 2009), available at <http://www.unwiredinsight.com/PDF/Unwired%20Insight%20white%20paper.pdf> (underscoring the importance of complementary service delivery mechanisms, including femtocells and mobile broadcasting).

⁹⁰ 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).

⁹¹ See Attachment A at Section IV(B) (describing the ability to use for wireless broadband purposes the 3650-3700 MHz, 4940-4990 MHz, 5 GHz, 27.5-31.3 GHz, 38.6-40 GHz, and 60 GHz bands).

⁹² See Attachment A at Section IV(C) (continuing, “[i]f the penetration of fiber-to-the-home increases, a number of problems related to spectrum could also be solved. Deploying in-home femtocell and Wi-Fi networks that communicate through these fiber links could give high rate wireless broadband with small cell sizes and extensive frequency reuse”).

Sixth, the Commission should conduct a comprehensive inventory of present and future spectrum availability and usage. Congress has already begun to take action in this regard.⁹³ A complete inventory of spectrum usage must survey satellite, BRS/EBS, broadcast, and other spectrum under the FCC's jurisdiction, as well as government spectrum under the NTIA's jurisdiction.

Seventh, concurrently with the above steps, the Commission should work with broadcasters on various non-coercive ways in which spectrum currently allocated for broadcasting might be used to meet wireless spectrum needs that cannot otherwise be met. MSTV and NAB have proposed fixed, licensed wireless services in rural areas where sufficient broadcast spectrum may be available (without harming the public's broadcast service).⁹⁴ This proposal is consistent with Senator Rockefeller's insistence that "we need real broadband solutions for real people — and we need them now."⁹⁵ In addition, some broadcasters may be willing to lease spectrum capacity to broadband providers for backhaul and other uses supportive of broadband services. Another constructive approach would be for the Commission, in cooperation with local broadcasters, to focus on developing localized broadband solutions. The Task Force's preoccupation with re-allocations to create nationwide spectrum blocks entails broadcaster coercion, would lead to large-scale service dislocations, and stands in the way of

⁹³ See Spectrum Relocation and Improvement Act of 2009, H.R. 3019, 111th Cong. (2009); Radio Spectrum Inventory Act, H.R. 3125, 111th Cong. (2009); Radio Spectrum Inventory Act, S. 649, 111th Cong. (2009); *Hearing on H.R. 3125, The Radio Spectrum Inventory Act, and H.R. 3019, The Spectrum Relocation Improvement Act Of 2009*, 111th Cong. (Dec. 15, 2009).

⁹⁴ See MSTV and NAB Comments—NBP Public Notice #6, GN Docket Nos. 09-47 *et al.*, Oct. 23, 2009, at 13-14.

⁹⁵ David Hatch, *Rockefeller Warns FCC Over Direction Of Broadband Plan*, Congress Daily, Nov. 6, 2009.

more tailored, effective, practical, and quicker solutions in which broadcasters can play a constructive cooperative role.

Finally, in crafting its broadband recommendation to Congress, the Commission should be mindful of statutory and constitutional requirements. They include the requirement to ensure that all spectrum allocation decisions be governed by the public interest standard — a determination that, by law, cannot be based on narrow, incomplete and unreliable economic analysis based on auction revenues.⁹⁶ The Commission must also take into account the prohibition against arbitrary and capricious agency action under the Administrative Procedure Act.⁹⁷ The Supreme Court has noted that when an agency changes course, it would be arbitrary and capricious for the agency to ignore “serious reliance interests” that “its prior policy has engendered.”⁹⁸ The Commission also should ensure that any spectrum re-allocation proposals do not run afoul of the Fifth Amendment prohibition on regulatory takings and do not infringe the First Amendment. In the end, the Commission’s broadband recommendations must be guided by its ultimate legal and policy touchstone — the public interest.

* * *

⁹⁶ See 42 U.S.C. § 309(a) (requiring all spectrum license decisions to be made consistent with the “public interest, convenience, and necessity”); see also Section 1 of the Communications Act, 47 U.S.C. § 151 (requiring the Commission to regulate in the interests of providing universal communications for all communities and for various interests including promoting the safety of life and property); see also 47 U.S.C. § 307(b) (requiring the Commission to “make such distribution of licenses, frequencies, hours of operation, and of power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same”).

⁹⁷ See 5 U.S.C. § 706(2)(C).

⁹⁸ See *FCC v. Fox Television Stations, Inc.*, 129 S. Ct. 1800, 1811 (2009).

For the reasons described above, MSTV and NAB urge the Commission to implement the action plan summarized in Section IV of this Framework Document.

Respectfully submitted,

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