

**BEFORE THE**  
**Federal Communications Commission**  
**WASHINGTON, D.C. 20554**

<b>In the Matter of</b>	)	
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
International Comparison and Consumer	)	
Survey Requirements in the	)	GN Docket No. 09-47
Broadband Data Improvement Act	)	
	)	
Deployment of Advanced Telecommunications	)	GN Docket No. 09-137
Capability to All Americans in a Reasonable and	)	
Timely Fashion, and Possible Steps to Accelerate	)	
Such Deployment Pursuant to Section 706 of	)	
The Telecommunications Act of 1996	)	

**COMMENTS OF JOINT BROADCAST PARTIES**  
**NBP PUBLIC NOTICE # 26**

**Eagle Creek Broadcasting, LLC**  
**Journal Broadcast Group**  
**Northwest Broadcasting, Inc.**  
**Sarkes Tarzian, Inc.**  
**ShootingStar Broadcasting of New England, LLC**  
**Spanish Broadcasting System, Inc.**  
**WNET.ORG/Educational Broadcasting Corp.**  
**WQED Multimedia**

Steven A. Lerman  
Dennis P. Corbett  
Brian M. Madden  
Sally A. Buckman  
David S. Keir  
Nancy A. Ory

Lerman Senter PLLC  
2000 K Street, NW  
Suite 600  
Washington, DC 20006  
(202) 429-8970

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Their Attorneys

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Eagle Creek Broadcasting, LLC, Journal Broadcast Group, Northwest Broadcasting, Inc., Sarkes Tarzian, Inc., ShootingStar Broadcasting of New England, LLC, Spanish Broadcasting System, Inc., WNET.ORG/Educational Broadcasting Corporation, and WQED Multimedia (“Joint Broadcast Parties”), by counsel, hereby comment on the Commission’s December 2, 2009 *Public Notice* seeking data on current and planned uses of the broadcast television spectrum.<sup>1</sup> In the aggregate, the Joint Broadcast Parties are licensed to operate 21 commercial and 4 non-commercial television broadcast stations in communities ranging from Newark, New Jersey to Medford, Oregon.<sup>2</sup>

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<sup>1</sup> FCC Public Notice, “Data Sought on Uses of Spectrum,” NBP Public Notice #26, DA 09-2518, GN Dkt. Nos. 09-47, 09-51, 09-137, released Dec. 2, 2009 (“*NBP Public Notice #26*”). The original comment deadline was December 21, 2009. These comments are timely filed today, December 22, 2009, due to the closure of the federal government on December 21, 2009 as a result of the record snowfall in the Washington, DC area this past weekend. See 47 C.F.R. § 1.4(e)(2) & (j); FCC Public Notice, “FCC Closed December 21, 2009,” released Dec. 22, 2009.

<sup>2</sup> The stations licensed to each of the Joint Broadcast parties are listed in the Attachment to these Comments.

## **INTRODUCTION AND SUMMARY**

Before responding to specific questions posed in the *Public Notice*, the Joint Broadcast Parties are compelled to note the extraordinarily inadequate time period that the Commission has provided to address the critical and far-reaching questions raised here, with profound potential impact for both the future of free over-the-air television broadcasting and the provision of broadband services, including video, to mobile users. Broadcasters fully understand the complexities of undertaking the formulation and delivery of a comprehensive National Broadband Plan (“NBP”), and that it is an iterative and accretive process. Nonetheless, given the scope and detail of the information that the Commission requires to make an informed and coherent decision, it would not be possible to create the necessary public record on which such sound, forward-looking decisions could be based, even if all of the time remaining before delivery of the NBP on February 17, 2010 were allocated for this evaluation alone.

Accordingly, parties commenting at this stage can only scratch the surface in providing responses to the multiple queries posed. As a result, the Commission cannot reasonably expect to draw definitive conclusions from the information gathered in response to such an expedited deadline in the midst of the holiday season. At best, the Commission will be in a position to identify a range of possible options and further issues requiring additional investigation and public input toward the goals of achieving the most efficient use of the television broadcast spectrum and ensuring sufficient spectrum capacity to meet future demands for broadband video, voice and data applications.

Even in the short time allotted for comment on these issues, however, two overriding points are clear. First, there is insufficient basis in the record of this proceeding to reach a conclusion that an urgent “spectrum crisis” requires reallocation of large swaths of non-government spectrum to wireless mobile services. The Commission needs to consider seriously

whether the high capacity broadband services most desired by users (*e.g.*, access to live and local programming) may be better delivered using broadcast technology, as well as through wired and fixed wireless facilities, rather than via downloads to hundreds or thousands of individual IP addresses. It would be a poor tradeoff indeed to place at risk the current well-developed, successful, and much-desired content available on local broadcast stations in order to ensure that viral YouTube videos can be downloaded seamlessly on smartphones in a few congested urban areas.

Second, broadcasters are just beginning to explore and develop their own promising broadband services and other capabilities using digital television (“DTV”) technology, which the Commission has recognized offers “a wealth of possibilities in terms of the kinds and numbers of enhanced services that could be provided to the public,” and which “should encourage entrepreneurship and innovation.”<sup>3</sup> These enhanced services and innovations, including mobile TV, as well as the promise of increased competition and consumer choice that they herald, must not be stifled just as they begin to bloom. This is particularly the case where the advent of these services will help support the vital news and information gathering function that local TV broadcasters serve.

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<sup>3</sup> *Advanced Television Systems and Their Impact Upon Existing Television Broadcast Service*, Fifth Report & Order, 12 FCC Rcd 12809, 12822 (¶ 33) (1996) (“*DTV 5<sup>th</sup> R&O*”).

## RESPONSES TO INQUIRIES

### A. General Approach to Spectrum Assessment

#### **Question A.1.**

*What factors should the Commission consider when examining and comparing the benefits of spectrum used for over-the-air television broadcasting and those of spectrum used for wireless broadband services?*

In projecting the future utility of spectrum for over-the-air television broadcasters and wireless broadband service providers, the Commission should consider the following key factors:

(a) the differential regulatory constraints on broadcasters in comparison to the far more relaxed approach to commercial mobile services that has unavoidably influenced the development of these two industries; (b) the historic and continuing public interest benefits provided by broadcasters' unique program content (see also Section C); (c) the substantial future utility of the broadcast delivery model in the broadband video environment; and (d) the benefits of maintaining and enhancing competition in the market for communications services.

#### **a. Any Efficiency Comparison Between Broadcast Television and Wireless Mobile Services Must Take Into Account the Very Different Regulatory and Business Models That Have Applied to These Services.**

The Joint Broadcast Parties believe that some interest groups participating in this proceeding have made poorly-reasoned and unsupportable assertions regarding broadcasters' use of spectrum, arguing erroneously that TV broadcasting is inherently inefficient and that the industry is therefore incapable of playing a role in meeting the public's demand for future mobile broadband services. This transparently self-serving analysis should be wholly unconvincing to anyone who understands the vast differences in the regulatory environment for these licensed services, and the disparate business realities under which each industry operates.

Specifically, in Reply Comments filed in response to *NBP Public Notice #6*, CTIA – The Wireless Association (“CTIA”) opined “that broadcasters finally upgraded their outdated analog

technology to more modern spectrum technologies reluctantly and only after a Congressional mandate . . .,” which it characterizes as very different from wireless companies’ rapid transition to digital service.<sup>4</sup> This portrayal ignores the severe spectrum limitations under which broadcasters operate. Over the past 25 plus years, the time period during which broadcasting and mobile wireless services have coexisted, the amount of spectrum available to wireless providers has increased almost fifteen-fold,<sup>5</sup> while the amount of television broadcast spectrum has been reduced by more than 25 percent (from 402 MHz to 294 MHz). During this same period, the quantity of spectrum that a single licensee may hold in most markets has remained virtually static for TV licensees (6 MHz),<sup>6</sup> but has increased dramatically, from 20 MHz to 145 MHz or more in some markets, for wireless service providers.<sup>7</sup>

Although broadcasters were assigned a second 6 MHz channel on a temporary basis for the duration of the digital transition, the purpose of this additional license was simply to minimize disruption to television viewers with significant sunk costs in analog television receivers. Rapid

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<sup>4</sup> Reply Comments of CTIA, NBP Public Notice #6, GN Dkts. 09-47, 09-51 and 09-137, at 18-20 (filed Nov. 13, 2009) (“CTIA NBP #6 Reply Comments”).

<sup>5</sup> For purposes of this calculation, “wireless” spectrum is deemed to include spectrum allocated for cellular, broadband PCS, SMR, 700 MHz, AWS-1, AWS-2, AWS-3 and BRS/EBS services (592 MHz). The spectrum figures are taken from the Wireless Telecommunications Bureau’s thirteenth annual report to Congress on the state of competition in the Commercial Mobile Radio Services marketplace. *See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, DA 09-54, WT Docket No. 08-27 (WTB 2009) at 40. On June 20, 2008, the Commission proposed adding 5 MHz of spectrum to the AWS-3 band. *See Service Rules for Advance Wireless Services in the 2155-2175 MHz Band*, Further Notice of Proposed Rulemaking, 23 FCC Rcd 9859 (2008).

<sup>6</sup> Although in some markets it may be possible for a single company to hold two 6 MHz licenses, these circumstances are limited and subject to FCC evaluation on a case-by-case basis. *See* 47 C.F.R. § 73.3555(b)(2).

<sup>7</sup> This figure represents the Commission’s “spectrum screen” for markets in which AWS-1 and BRS spectrum is available, i.e., the point at which FCC staff analysis is required to determine whether acquisition of spectrum above the “screen” may result in undue concentration. For markets in which AWS-1 is available but BRS is not, the spectrum screen is 125 MHz. For markets where BRS is available but AWS-1 is not, the spectrum screen is 115 MHz. Where neither service is available, the spectrum screen is 95 MHz. *See Sprint Nextel Corporation and Clearwire Corporation*, Memorandum Opinion and Order, 23 FCC Rcd 17570, 17600 (2008).

conversion from analog TV to DTV would not have been compatible with legitimate consumer expectations. Consumers who purchased TVs during the late 1990s and the early part of this decade did so with the understanding that the significant costs associated with such purchases could be amortized over a number of years, and that the FCC would not set policy requiring rapid transition to DTV that would require immediate investment in new receiving or converter equipment.<sup>8</sup>

By contrast, wireless providers have much greater control over their end user equipment market. Many cell phones, particularly entry-level models, are inexpensive and quickly disposable. Not only are many of these handsets given away for free as a means of enticing subscribers into purchasing multi-year service plans, but even more expensive full-featured phones for which users do pay out of pocket are rapidly outmoded by the development of new features that encourage mobile phone replacement within a year or two. For these reasons, the widespread deployment of analog end user equipment for mobile communications posed a vastly smaller impediment to digital roll out than for broadcasters.

Moreover, the substantially smaller amount of spectrum available to TV broadcasters has necessarily prevented them until very recently from experimenting with innovative spectrum uses and expanded services. Each of the former analog licenses held by broadcasters was limited by technology to delivering only a single standard TV signal. In addition, at the outset, broadcasters were, for the most part, similarly limited to providing a single high-definition signal on their DTV channel. The financial commitment to transition from the old to the new method of broadcasting while maintaining two separate transmitting antennas, sometimes at different locations, made it difficult for broadcasters to explore fully the ancillary service opportunities offered by DTV until

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<sup>8</sup> In any case, even after a significant transition period, the government nonetheless subsidized the purchase of more than 34 million analog-to-DTV converter boxes to avoid loss of service by those still using analog receivers without subscribing to a multi-channel video distribution service.

the transition was completed just a few months ago.<sup>9</sup> And it was indisputably the Commission's intention that at the conclusion of this process DTV licensees would have the opportunity to take advantage of "increased flexibility" and that "allowing at least some level of flexibility would increase the ability of broadcasters to compete in an increasingly competitive marketplace, and would allow them to serve the public with new and innovative services."<sup>10</sup>

Certainly, the Commission could not reasonably make a decision to withdraw yet more spectrum from TV broadcast licensees premised on a conclusion that broadcasters have been unable to innovate and provide new services, when such innovation has been inhibited to date by the technical limitations and the archaic regulatory constraints under which TV broadcasters operate. While a detailed critique of the FCC's broadcast ownership rules is beyond the scope of this proceeding, the FCC should consider the role that these regulations play in limiting the scope of digital services that can be offered using broadcast spectrum. The agency's implicit thesis that dedicated broadcast spectrum may now be less necessary than it was in the 20<sup>th</sup> Century, and that it could potentially be considered fungible with other wireless service spectrum, strongly indicates that the need for dramatically differential ownership rules uniquely impacting these frequencies has passed, and that regulations more appropriate to 21<sup>st</sup> Century business and cultural realities are required.

It is instructive that the most recent merger involving an FCC-regulated service, the proposed combination of Comcast and NBC Universal, involves few expressions of concern

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<sup>9</sup> Conversely, it is fair to ask where wireless service providers would be today in terms of the scope and range of services that they provide had they been substantially limited by government regulation from introducing new services. It seems apparent that had that been the case, mobile telephony providers would have been unable due to spectrum constraints to progress beyond the original voice services paradigm for their service to provide the much broader wealth of services that are provided today. Indeed, given the relative lack of regulatory constraints on the wireless industry, it is noteworthy that the wireless operators provide almost no original content to their customers of any type – even ringtones are largely supplied by third-party providers.

<sup>10</sup> *DTV 5<sup>th</sup> R&O*, 12 FCC Rcd at 12816a (¶ 19).

relating to the TV broadcast licenses held by NBC, but instead is raising questions that relate to the combination of a multichannel subscription service provider with the holder of substantial programming content, as well as the related impact of this combination on the future delivery of video programming via the Internet.<sup>11</sup> The media industry paradigm has shifted dramatically, but the FCC's regulatory model remains entrenched in the concerns of the 1960s and 1970s. If TV broadcasters were relieved of unnecessary regulatory shackles, which have hindered the industry's adjustment to the changing communications world, they could be more significant contributors to the future of digital broadband, without sacrificing their unique contribution to the public welfare and discourse.

**b. Broadcasters Provide Unique Public Interest Benefits That Cannot Easily Be Replicated If Diminished.**

The unique and irreplaceable public interest benefits provided by broadcasters have been well-documented by both key decision makers and numerous commenters participating at earlier stages of this proceeding. Chairman Genachowski noted earlier this year, "broadcast television remains a unique medium, the exclusive source of video programming relied upon by millions of households, and a very significant source for millions of others."<sup>12</sup> The uniqueness and importance of this medium was amplified by a group of local broadcasters responding to NBP

Public Notice #6:

Broadcast television service is available to virtually every household in the country. The public does not pay a penny for this service. Complicated reception equipment is unnecessary. The service is ubiquitous and available 24 hours a day, seven days a week. The service helps drive local economies and local businesses. The transmission signal is local, much of the programming is local, and much of

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<sup>11</sup> See, e.g., Cecilia Kang, "Comcast and NBC Meet with Regulators," Washington Post, December 10, 2009 (available at <http://www.washingtonpost.com/wp-dyn/content/article/2009/12/09/AR2009120904416.html>, viewed 12/21/2009).

<sup>12</sup> Statement of FCC Chairman Julius Genachowski, Before the U.S. Senate Committee on Commerce, Science and Transportation, Hearing on "Rethinking the Children's Television Act for a Digital Media Age," at 2 (July 22, 2009).

the advertising is local. If government leaders or political campaigners want to get a message to the public or debate an important issue, broadcast television is their resource. If there is an emergency, the broadcast signal thankfully will be there – even if other communications systems are vulnerable to outages and congestion gridlock.<sup>13</sup>

In short, millions of individuals and many thousands of businesses rely every day on broadcast television for important, sometime essential, news and information that is available nowhere else in the same format, quality and quantity.

Despite these well-recognized benefits, the rapid changes and expansion in the number of available outlets that make up the advertising market, which once provided steady support for free broadcast programming, have necessitated efforts to find new revenue streams to augment declining ad revenue. When the DTV Table of Allotments to transition TV broadcasting to digital delivery was established, the Commission expressly found that the ability to offer ancillary and supplementary services was an integral part of the transition and the future economic health of DTV.<sup>14</sup> Even then, there was growing recognition that changes wrought by the Internet would markedly alter the advertiser-supported business model that almost all broadcasters had followed as a means of sustaining their ability to provide free over-the-air service.

Absent the ability to explore new and innovative revenue models using spectrum made available for other uses due to advances in digital compression technology, broadcasters would be unable to sustain the level and quality of service that local TV viewers deserve, expect and require. As Steven Waldman of the FCC noted just last week, “full time, local, professional

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<sup>13</sup> Reply Comments of Local Television Broadcasters, NBP Public Notice #6, at 4 (filed Nov. 13, 2009).

<sup>14</sup> See, e.g., *DTV 5<sup>th</sup> R&O*, 12 FCC Rcd at 12820-21(¶ 29) (“[W]e recognize the benefit of permitting broadcasters the opportunity to develop additional revenue streams from innovative digital services. This will help broadcast television to remain a strong presence in the video programming market that will, in turn help support a free programming service”) (“*DTV 5<sup>th</sup> R&O*”).

journalism” is a function “crucially important for democracy.”<sup>15</sup> Unlike the iconic Black Knight of Monty Python fame, whose bravado far outstripped his brains, broadcasters cannot stand stolidly and unthinkingly declare that it’s “just a flesh wound” as their limbs are hacked off one by one,<sup>16</sup> and the life’s blood of revenue that could support this free and highly-valued broadcast content is drained away.

**c. Broadcasting is Part of Future Broadband Service, Not Mutually Exclusive With It.**

Another troubling component of the current *Public Notice* is the extent to which it appears to envision broadcast and broadband as an “either/or” choice with respect to future spectrum use. The Joint Broadcast Parties strongly believe that this represents a false dichotomy, as broadband services can be and are being offered on an ancillary basis in the TV broadcast spectrum.

Mobile broadband content can be delivered much more efficiently via a broadcast model, particularly when popular programming, including important local and national news events, attracts a mass audience. The ability to provide high bandwidth broadcast video for which there is high demand using the DTV spectrum is of particular importance as the studies relied upon by the wireless service providers make clear that demand for mobile video is a key driver for additional wireless broadband capacity.<sup>17</sup> By channeling the most popular video content over broadcast frequencies rather than using individual IP addresses to establish inbound and outbound

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<sup>15</sup> Steven Waldman, “Public Interest and the Media in the Digital Age,” Blogband, The Official Blog of the National Broadband Plan (posted Dec. 17, 2009).

<sup>16</sup> *Monty Python and the Holy Grail* (1975), Scene 4.

<sup>17</sup> See Rysavy Research, “Mobile Broadband Spectrum Demand,” at 15 (HD TV is one of the most bandwidth intensive mobile applications) & 17 (consumption of video streaming and HD movies accounts for the greatest capacity consumption for wireless carriers) (December 2008), cited by CTIA Comments, NBP Public Notice #6 at 5-6 (filed Oct. 23, 2009).

wireless data links, the capacity strain on core wireless spectrum can be relieved, and the need for additional spectrum allocations for these services correspondingly reduced.<sup>18</sup>

The premise that cable and other multi-channel video penetration now provide a substitute for broadcast TV is also fundamentally misplaced. As others have noted, many households that subscribe to cable nonetheless continue to rely on over-the-air reception both at home and for out-of-home viewing, and the latter segment will only increase as mobile TV evolves. The fact that primary in-home viewing of broadcast content has migrated toward wired delivery does not mean that the spectrum is no longer needed to serve viewers. The essential nature of this service was made plain earlier this year when Congress passed the DTV Delay Act to move the DTV transition from February to June, so that “millions of Americans, including those in our most vulnerable communities, would [not be] left in the dark.”<sup>19</sup>

In this regard, it is worth noting that AT&T recently disclosed that the principal capacity demands (up to 40 percent for high-bandwidth applications such as video and music streaming came from just three percent of its subscribers.<sup>20</sup> Based on current AT&T subscriber data, this means that the critical driver of the claimed spectrum need for this carrier involves fewer than 1 million people on its network. Even if you were to extrapolate this use across all wireless carriers, the number of users driving demand for greater capacity would be well under ten million. By contrast, conservatively estimating the number of Americans who rely exclusively on over-the-air television reception to receive video programming at about ten percent, the number of

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<sup>18</sup> See also Reply Comments of Sezmi Corporation, NBP Public Notice #6, GN Dkts. 09-47, 09-51 & 09-137, at 5 (filed Nov. 13, 2009).

<sup>19</sup> Signing Statement of President Barack Obama on Signing the DTV Bill (February 11, 2009) (available at [http://www.whitehouse.gov/the\\_press\\_office/StatementofPresidentBarackObamaonSigningtheDTVBill](http://www.whitehouse.gov/the_press_office/StatementofPresidentBarackObamaonSigningtheDTVBill) viewed 12/21/09).

<sup>20</sup> See Marguerite Reardon, “AT&T Wants iPhone Users to Change Habits; Company Mulls Incentives to Curb Heavy Wireless Data Usage,” CNET News.com (Dec. 10, 2009).

people that would lose television service if the industry were undermined would be approximately 31 million.

In short, broadcasters have only just begun to make the most of the new capabilities that the DTV transition has afforded them in providing service to the public. The Commission has recognized the potential for such new services repeatedly, making plain that the use of “6 MHz channels is necessary to provide viewers *and consumers* the full benefits of digital television made possible by the DTV Standard, including high definition television (“HDTV”), standard definition television, *and other digital services.*”<sup>21</sup>

Indeed, Congress itself noted in connection with the adoption of the 1996 Telecommunications Act “that permitting broadcasters more flexibility in using their spectrum assignments is consistent with the public policy goal of providing additional services to the public. Such a policy not only promotes more efficient spectrum use, but also encourages innovation.”<sup>22</sup>

Ultimately, the availability of spectrum not controlled by wireless incumbents may allow for the development of business models that would not otherwise arise, including revenue sharing approaches under secondary market leases that allow smaller carriers access to additional spectrum that they would be otherwise unlikely to access.<sup>23</sup>

**d. The Commission Has Historically Favored Both Intramodal and Intermodal Competition and Should Not Depart from that Model by Tilting the Regulatory Balance To Favor One Service Approach.**

As the Consumer Electronics Association (“CEA”) noted at the earliest stage of this proceeding, “intermodal platform competition has increasingly yielded lower prices and innovation for consumers of high-speed Internet services.”<sup>24</sup> It would therefore be alarmingly

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<sup>21</sup> *DTV 5<sup>th</sup> R&O*, 12 FCC Rcd at 12814 (¶ 12) (emphasis added).

<sup>22</sup> H.R. Rep. No. 104-204, pt. 1, at 55 (1995).

<sup>23</sup> The Communications Act already provides for broadcasters to remit a portion of revenues derived in this manner to the U.S. Treasury. See 47 U.S.C. § 336(a).

<sup>24</sup> CEA Comments, GN Dkt. No. 09-51, at 10 (filed June 8, 2009).

short-sighted public policy for the Commission to arbitrarily and irretrievably foreclose possible development of new service models in the broadcast television band that would allow broadcast video and data delivery to mobile devices. The Commission's own declarations in the later stages of the adoption of the DTV Standard reflected the conclusion that broadcasters should have "the freedom to innovate and respond to the marketplace in developing the mix of services they will offer the public," and that in this regard it was carrying out the mandate of the 1996 Telecom Act "[t]o promote competition and reduce regulation ..."<sup>25</sup>

In contrast to the pro-competitive impact of allowing broadcasters to realize the benefits of using DTV spectrum to launch new services, the clear impact, indeed the obvious expectation of the carriers advocating spectrum reallocation, is that the three or four major incumbent wireless carriers that have consistently dominated recent wireless spectrum auctions will absorb virtually all of this additional capacity, reducing competition and potentially stifling the development of new types of mobile service.<sup>26</sup> Despite the oft-repeated bromide that auctioning spectrum magically results in the spectrum being put to its "highest and best use," from a practical standpoint this will only be certain where the spectrum involved is largely clear of existing operators and the bidding parties are seeking initial spectrum assignments to provide new services. When established service providers seek additional spectrum, other factors, including imbedded economies of scale and business advantages created by pairing new with existing

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<sup>25</sup> *DTV 5<sup>th</sup> R&O*, 12 FCC Rcd at 12826 (¶ 41).

<sup>26</sup> For example, in the 2006 auction of Advanced Wireless Services licenses, 78% of the available spectrum as measured by value was purchased by the top four wireless carriers – Verizon Wireless, AT&T, T-Mobile USA, and a consortium including Sprint-Nextel. *See* FCC Website at [http://wireless.fcc.gov/auctions/default.htm?job=auction\\_summary&id=66](http://wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=66). In the 700 MHz auction of the analog spectrum previously returned by TV broadcasters, just two of the largest incumbent carriers, AT&T and Verizon Wireless, secured an even higher percentage of the valuable spectrum --84%. *See* FCC Website at [http://wireless.fcc.gov/auctions\\_results\\_files.htm?id=73&type=full&setSize=0](http://wireless.fcc.gov/auctions_results_files.htm?id=73&type=full&setSize=0).

spectrum, skew the balance significantly.<sup>27</sup> Ordaining such an outcome by reallocating any spectrum from the un-concentrated broadcast TV industry to the HHI-challenged wireless industry would be a clear disservice to the public interest. Instead, as counseled by CEA at an earlier stage of this proceeding, “the Commission should continue to be technology-agnostic and allow consumers to determine what devices and applications succeed or fail.”<sup>28</sup>

**Question A.2.**

*What would be the impact to the U.S. economy if insufficient additional spectrum were made available for wireless broadband deployment, in terms of investments, jobs, consumer welfare, innovation, and other indicators of global leadership?; and*

**Question A.3.**

*What would be the impact to the U.S. economy and public welfare if the coverage of free over-the-air broadcast television was diminished to accommodate a repacking of stations to recover spectrum?*

Given the other inquiries posed by the Commission in this proceeding, the two questions set forth above are closely interrelated, and are therefore considered here in parallel.

**a. The Amount of Spectrum Sufficient to Meet Broadband Demand Has Not Been Conclusively Established in This Proceeding.**

It is undoubtedly true that the consequences of making “insufficient” spectrum available for wireless broadband deployment – or for any spectrum-based service valued by the public – would be considerable with respect to the public welfare. For this reason, the Commission ought to be equally concerned about the potential for allocation of insufficient spectrum for the television broadcast service in order to avoid adverse impact outlined under section A.1.(b), above.

Given these parallel concerns, and because the posture of this proceeding augers only the prospect of increasing mobile wireless spectrum at the expense of TV broadcast spectrum, it is

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<sup>27</sup> See, e.g., Simon Willkie, “Spectrum Auctions Are Not a Panacea: Theory and Evidence of Anti-Competitive and Rent- Seeking Behavior in FCC Rulemakings and Auction Design,” Center for Communication Law and Policy, University of Southern California (March 26, 2007).

<sup>28</sup> CEA Comments, GN Dkt. 09-51, at 8-9 (filed June 8, 2009).

particularly important that – before reaching the question of the potential consequences arising from *insufficient* spectrum allocations – a threshold determination be made regarding the quantity of spectrum that might actually be required to meet emerging needs for wireless broadband. In order to properly answer that question, decision makers must have a clear sense of how the spectrum is currently being used, and what technological and other factors bear on its future use and development, including potential future enhancements in spectrum efficiency, emerging technologies and services that may impact efficiency, on one hand, or spur additional spectrum demand, on the other, and the extent to which spectrum previously allocated is being fully utilized or remains to be completely deployed and exploited. Indeed, these are the very types of questions the Commission has posed in *NBP Public Notice #26* with respect to the TV broadcast spectrum.

Unfortunately, it does not appear that the Commission has directly posed similar targeted questions with respect to wireless spectrum usage.<sup>29</sup> The proceeding began with the not unreasonable premise that wireless service providers would benefit from having “more” spectrum available, but that facially defensible assumption has now ballooned into an undocumented assertion that as much spectrum as possible must be reallocated to this business model in order to stave off a “looming spectrum crisis.” The essential factual underpinnings to support these claimed requirements, however, have not been established through objective data. As FCC

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<sup>29</sup> Even to the extent that some issues of this nature have been raised, they have been broached largely within the closed ecosystem of the wireless service providers and equipment manufacturers and have been focused on the issue of future innovation and efficiency rather than current utilization and the degree to which currently allocated spectrum is being used to its greatest potential. *See Fostering Innovation and Investment in the Wireless Communications Market*, GN Dkt. 09-157, 24 FCC Rcd 11322 (2009).

Associate General Counsel Mark Lloyd commented just last week, “policy should not be based on what seems to be true.”<sup>30</sup>

In this case, data that are available in the record of this proceeding do much to undermine the currently prevailing meme that *vast quantities* of new mobile wireless spectrum must be allocated *as soon as possible* for 4G and follow-on mobile broadband services. In particular, at the outset of the NBP inquiry, the Commission specifically requested comment “on the extent to which access to spectrum may pose a constraint on broadband access and development.”<sup>31</sup> The commercial wireless industry did not respond to this request for information with anything approaching the urgency and fervor of subsequent filings with respect to the need for spectrum. Both trade associations and individual wireless carriers filed very extensive comments in response to the *NBP NOI*, but the need for more spectrum was not given great emphasis in their presentations. For example, while CTIA pointed to the need for additional spectrum resources, and expressed concern that the U.S. is behind other nations in identifying additional spectrum for wireless services, its comments did not suggest great urgency, let alone a need that was approaching a crisis point.<sup>32</sup> At the same time, the CEA filed comments stating definitively that “200 MHz of spectrum [should] be identified by NTIA and the FCC toward higher value uses,”<sup>33</sup> a quantity that was echoed by T-Mobile in its Comments.<sup>34</sup> Verizon Wireless filed voluminous

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<sup>30</sup> Comments of FCC Chief Diversity Officer Mark Lloyd, “Social Media, Net Neutrality, and the Future of Journalism,” Keynote Speech, December 14, 2009 (available at <http://www.mediaaccess.org/articles/comments-of-keynote-speaker-mark-lloyd-at-social-media-net-neutrality-and-future-of-journalism-event>, viewed 12/15/2009) (emphasis added) (“Lloyd MAP Keynote”).

<sup>31</sup> *A National Broadband Plan for Our Future*, Notice of Inquiry, 24 FCC Rcd 4342, 4355 (¶ 44) (2009) (“*NBP NOI*”).

<sup>32</sup> See Comments of CTIA, GN Dkt. No. 09-51, at 24-26 (filed June 8, 2009).

<sup>33</sup> Comments of CEA, GN Dkt. No. 09-51, at 7 (filed June 8, 2009).

<sup>34</sup> See Comments of T-Mobile at 13 *et seq.* (filed June 8, 2009) (“T-Mobile urges the Commission to develop a program under which the Commission and NTIA would work cooperatively to identify, reallocate, and auction 200 MHz of new spectrum for commercial use”).

comments that totaled over 170 pages, including a lengthy attachment, out of which it devoted a scant two pages to the issue of identifying additional spectrum for wireless broadband, noting that the FCC should evaluate current spectrum use by conducting a spectrum inventory and that the 40 MHz of additional wireless spectrum in the pipeline for assignment was insufficient to meet future needs.<sup>35</sup> AT&T also filed lengthy comments that did not explicitly make the case for allocation of any additional spectrum.<sup>36</sup>

It is not clear exactly where, why or how the notion of a “spectrum crisis” originated, but it appears that this idea was first expressly injected into the public debate by the CEA in a press release issued on August 21, 2009, coincidentally the day after the Commission initiated the second phase of the NBP proceeding by releasing the first of many public notices focusing on discrete issues related to the formulation of the plan. On that day, CEA trumpeted a filing with NTIA and stated “that the country faces a spectrum crisis that requires urgent action” and reallocation of frequency resources “from vacant and underused government and private sources.”<sup>37</sup> CTIA soon advanced the narrative in a September 10, 2009 *ex parte* filing with the FCC, and the spectrum crisis subsequently was described as “brewing,”<sup>38</sup> “looming,”<sup>39</sup> “immediate”<sup>40</sup> and ultimately “universally recognized” (this last assertion by AT&T, which had not even bothered to comment on the spectrum access issue just five months earlier).<sup>41</sup> Along with the ratcheting up of the level of rhetoric, the wireless industry also moved the spectrum

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<sup>35</sup> See Comments of Verizon Wireless, GN Dkt. No. 09-51, at 68-70 (filed June 8, 2009).

<sup>36</sup> See Comments of AT&T, GN Dkt. No. 09-51 (filed June 8, 2009).

<sup>37</sup> Press Release, “CEA Calls for Spectrum Reform and Unified Agency Control,” dated 8/21/2009 (available at [www.ce.org/print/Press/CurrentNews/press\\_release\\_detail.asp?id=11778](http://www.ce.org/print/Press/CurrentNews/press_release_detail.asp?id=11778), viewed 12/10/2009).

<sup>38</sup> CTIA *Ex Parte* Letter, GN Dkt. No. 09-51, at 1 (filed Sept. 10, 2009).

<sup>39</sup> CTIA *Ex Parte* Letter, GN Dkt. No. 09-51, at 1 (filed Sept. 29, 2009).

<sup>40</sup> Reply Comments of MetroPCS, GN Dkt. No. 09-51, NBP Public Notice #6, at 2 (filed Nov. 13, 2009).

<sup>41</sup> Reply Comments of AT&T, GN Dkt. No. 09-51, NBP Public Notice #6, at 21 (filed Nov. 13, 2009).

benchmark dramatically upward in stating the amount of new spectrum it believed was required – most settling at the 800 MHz mark.<sup>42</sup>

It is hard not to see in this progression an echo chamber quality, orchestrated to the present alarm over a “spectrum crisis,” particularly given the justifications provided by various commenters in support of this notion, which simply cross-reference each other – with trade associations referring to the filings of individual service providers and manufacturers, and vice versa.<sup>43</sup> The only supporting documents cited to support the new crisis mentality are both studies that long pre-date the June 2009 filings that gave much more benign assessments concerning future wireless spectrum availability. In particular, to the extent that any support at all has been provided for current alarm, it is found in just two sources – (1) the December 2008 Rysavy Report, released in March of this year by CTIA, which had commissioned the study, and (2) a 2006 ITU study on future mobile spectrum needs.<sup>44</sup>

The only one of these sources that projects the appearance of an unbiased analysis is the ITU Spectrum Study. In fact, however, that report is rendered far less authoritative once the principal inputs for its analysis are understood. While data gathered with the apparent imprimatur of an intergovernmental standards-setting body might seem highly persuasive, typically

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<sup>42</sup> See, e.g., CTIA Comments, NBP Public Notice #6, at 16 (filed Oct. 23, 2009); T-Mobile Comments, NBP Public Notice #6, at 3 (filed Nov. 13, 2009) (echoing CTIA). More recently, however, CTIA President Steve Largent has indicated that he would be “shocked if they give us 800 additional megaHertz,” indicating that this figure is more aspirational than realistic. Kenneth Corbin, “CTIA Looks Ahead to Spectrum, Net Neutrality Fights,” Enterprise Networking Planet, December 18, 2009 available at <http://www.enterprisenetworkingplanet.com/news/article.php/3854491/CTIA-Looks-Ahead-to-Spectrum-Net-Neutrality-Fights.htm> (last viewed 12/22/09).

<sup>43</sup> See, e.g., CTIA NBP #6 Reply Comments at 3 (*citing* comments filed by AT&T, Verizon Wireless, T-Mobile, Qualcomm, Motorola, CEA, Covad, and Cisco, et al.); T-Mobile Reply Comments USA, NBP Public Notice #6, at 4 n.2 (*citing* comments filed by AT&T, CTIA, Verizon Wireless, 3G Americas, MetroPCS, Clearwire, Motorola, Qualcomm, et al.).

<sup>44</sup> See *Estimated spectrum bandwidth requirements for the future development of IMT-2000 and IMT-Advanced*, Report ITU-R M.2078 (2006) (“ITU Spectrum Study”).

government representatives draw heavily upon advocates for affected industries when compiling such assessments. Although the ITU Spectrum Study does not detail the particular individuals that prepared the report, or their professional associations, it is notable that two of the three sources cited in the paper's bibliography – including the only one of the three that focuses on spectrum requirements on its face – were prepared by or for the UMTS Forum, an organization the objective of which is *to promote mobile broadband* by drawing “together everyone with an interest in mobile broadband, including network operators, regulators and the manufacturers of network infrastructure and terminal equipment.”<sup>45</sup> The chief objective stated on the Forum's website is to “understand and profit from the opportunities of 3G/UMTS networks and their Long Term Evolution (LTE),” a goal which it pursues by, among other things, participating “actively in the work of the ITU” and maintaining “[a] strong promotional voice ... via a high-profile presence at conferences, seminars and workshops.”<sup>46</sup> Given this pedigree, it is unsurprising that even those who have taken a role otherwise supportive of the wireless carriers on this issue have questioned the methodology underpinning the ITU Spectrum Study because “it doesn't take into account economic forces and it's not the right way to think about how much spectrum is needed.”<sup>47</sup>

Accordingly, there are no wholly objective data in the record that document a need to re-allocate any specific amount of spectrum to address a so-called “crisis” in spectrum availability for wireless broadband. The paucity of hard data is highlighted by the fact that other informed observers have noted that, aside from the ITU Spectrum Study, there appears to be “no other

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<sup>45</sup> UMTS Forum Website, What We Do, available at <http://www.umts-forum.org/content/view/2885/203> (viewed 12/21/2009). UMTS stands for Universal Mobile Telecommunications System.

<sup>46</sup> UMTS Forum Website, About the UMTS Forum, available at <http://www.umts-forum.org/content/view/2002/125> (viewed 12.21/2009).

<sup>47</sup> Comments of Coleman Bazelon, “Let's Make a Deal: Broadcasters, Mobile Broadband, and a Market in Spectrum,” Progress & Freedom Foundation Congressional Seminar, at 28 (December 1, 2009).

credible estimate of U.S. spectrum needs.”<sup>48</sup> The incomplete and one-sided information currently in the record would seem likely to result in a fundamentally inaccurate assessment of the scope and nature of the issue.<sup>49</sup>

Moreover, given the difficulty of finding suitable spectrum to meet the expressed desires of wireless carriers within the next five to ten years, it is significant that the premise that wireless growth must be sustained by such ever expanding spectrum allocations has been strongly questioned. Michael Calabrese and Benjamin Lennett of the New American Foundation have written recently “that the quantity of available spectrum is not by itself the most important factor in meeting projected mobile data demand,” but instead that the critical requirement “is to shrink the effective size of the cell to the level of the home, business – and even to the individual,” *i.e.*, “most of each user’s data consumption should not flow through the wireless carrier’s infrastructure ... but should flow over short distances directly into non-carrier wireline backhaul.”<sup>50</sup> This potential model for future growth suggests that what may really be needed to meet next generation broadband demands is more unlicensed spectrum to allow ubiquitous, spectrum efficient Wi-Fi hotspots, potentially freeing up wireless mobile links for their core person-to-person communications function.

**b. It is Far Too Early for the Commission to Attempt a Meaningful Evaluation of the Success of DTV Broadcasters in Developing Innovative Spectrum Uses.**

Of course, even the existence of a critical spectrum need would not demonstrate that broadcast spectrum should be re-allocated by government dictate. As noted in Section A.1.(c),

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<sup>48</sup> Michael Calabrese and Benjamin Lennett, “Mobile Data Demand and the Need for Increased Spectrum Access,” New America Foundation Issue Brief #27, at 2 (October 2009) (“Calabrese & Lennett”).

<sup>49</sup> For example, if one analyzed the level of childhood hunger in America by walking into suburban elementary schools and asking first graders, “who wants a cookie?” and followed up by asking, “who wants five cookies?,” any conclusion based primarily on this data would be suspect on its face.

<sup>50</sup> Calabrese & Lennett at 3-4.

above, there are a number of opportunities for broadcasters to use their existing spectrum to contribute to the development of robust broadband services without going through the lengthy, costly and contentious process of reallocating spectrum.

From the earliest stages until the conclusion of the DTV proceeding, the Commission made abundantly clear that that the advent of the new technology carried with it the promise of “a wealth of possibilities in terms of the kinds and numbers of enhanced services that could be provided to the public,” and that granting broadcasters flexibility in pursuing these possibilities “should encourage entrepreneurship and innovation.”<sup>51</sup> If the Commission’s judgment was correct, then the broadcast industry must have the promised opportunity to realize the benefits of the new technological opportunities afforded by the digital transition. Coming less than a year after the transition has finally been completed, any other course would be fundamentally contrary to the Commission’s judgment in the DTV proceeding that its course would “provide the certainty that many broadcasters, equipment manufacturers and consumers need to invest with confidence in new technology while at the same time preserving the flexibility to accommodate innovation and experimentation.”<sup>52</sup>

Indeed, a sudden reorganization of the broadcast TV assignment table of the sort currently implied by the FCC, coming in the immediate wake of the more than two decade process of shifting from analog to digital television, could only undermine public confidence in future FCC spectrum policy decisions by stranding a substantial portion of the capital investment in DTV equipment. Such a regulatory u-turn could only lead to broad skittishness within the investment community that no force of “this time we really mean it” assurance will remove with respect to

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<sup>51</sup> *DTV 5<sup>th</sup> R&O*, 12 FCC Rcd at 12822 (¶ 33).

<sup>52</sup> *Advanced Television Systems and Their Impact Upon Existing Television Broadcast Service*, Fourth Report & Order, 11 FCC Rcd 17771, 17796 (¶ 61) (1996).

concerns about the long-term dependability of the Commission and the potential for sudden, fundamental regulatory overhaul.

Assuming *arguendo* that the Commission's predictive judgment, arrived at and perpetuated over the course of two decades, might at some point be judged incorrect, the time for that evaluation is not now. It is far too soon to leap to such a harsh, and objectively unsupportable, conclusion. Indeed, if such a conclusion were warranted at this juncture, the principal lesson that could be drawn might well be that the long-term predictive judgments of regulators, based on current paradigms, may quickly prove to be fundamentally misplaced and lead to misallocation of spectrum. Given such danger, it would seem far more appropriate that the Commission, rather than rushing into a dizzying reversal, take a much more measured approach and allow future spectrum use in the band to be determined on a more granular and dynamic basis, in response to market forces, rather than making a command decision that broadcast spectrum be reallocated for the benefit of the major wireless incumbents.

**Question A.4.**

*How do television broadcasters use the capabilities of digital television today? Please provide information on data rate allocations to HD, SD, multicast streams, bandwidth leasing arrangements, etc. and the business rationale behind these choices.*

As indicated above, broadcasters are just beginning to explore the range of opportunities opened up by the DTV transition. Currently, broadcasters are offering a range of ancillary services in addition to their primary HDTV function. Not all broadcast TV programming needs to be transmitted in HD format, and broadcasters are able to allocate their bandwidth on a dynamic basis, freeing capacity for other important uses. Among these uses are secondary video programming streams to serve significant niche audiences in their local communities. For example, in the Milwaukee market, Journal Broadcast Group's WTMJ-TV augments its market leading news operation on Channel 4 with two standard definition multicast channels, one

offering 24-hour local weather forecasts, alerts and emergency information, and the other broadcasting the youth-oriented THECOOLTV programming service. In five other markets, Journal is using subchannels to meet the needs of Spanish speaking audiences delivering the Mexicanal service, featuring Spanish language news and entertainment programming geared toward a Mexican-American audience, in Boise, Idaho; Las Vegas, Nevada; Palm Springs, California, and Tucson, Arizona; and the LATV Network, offering bilingual programming directed at Latin American audiences, in both Ft. Myers, Florida and Tucson.

**Question A.5.**

*How do broadcasters plan to use licensed spectrum in the future?*

- a. *What innovations in applications, services, or business models will create synergies between broadband and broadcast services, or other new value from currently licensed spectrum?*

Because of the early stage in the realization of the full benefits of the digital transition, most broadcasters are still in the exploratory stage of evaluating the most efficient and consumer-oriented services made possible by DTV. At this early stage, one of the most promising technologies, and one in which there appears to be very significant consumer interest, is Mobile TV. The newness of this technology is highlighted by the fact that the ATSC announced just last week a certification program for mobile TV and stated that it “is currently in the process of writing a ‘recommended practice’ document for mobile DTV that is applicable to ‘everybody involved in implementation.’”<sup>53</sup> In remarks earlier this month, Rupert Murdoch noted that News Corporation has been working for two years to develop mobile technology, which would use

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<sup>53</sup> Glen Dickson, “ATSC Launches Certification Program for Mobile TV; Will apply to both broadcast gear and consumer receivers,” *Broadcasting & Cable* (December 16, 2009), available at [http://www.broadcastingcable.com/article/440764-ATSC\\_Launches\\_Certification\\_Program\\_For\\_Mobile\\_DTV.php](http://www.broadcastingcable.com/article/440764-ATSC_Launches_Certification_Program_For_Mobile_DTV.php) (viewed 12/17/2009).

DTV spectrum to bring video – and perhaps newspaper content – to mobile devices.<sup>54</sup> Moreover, in submitting its now much-discussed study evaluating the relative value of currently allocated TV spectrum for broadcast versus wireless mobile use, CEA candidly admitted that the “analysis does not take into account the advent of digital television broadcasts to mobile and handheld devices ... which has the potential of serving millions of American consumers with live, local DTV content on a new generation of devices.”<sup>55</sup>

Mobile TV technology offers huge potential for meeting user demand for high capacity video on the go – the very use that poses the greatest strain on current wireless mobile capacity.<sup>56</sup> A study released just recently by the Open Mobile Video Coalition found that “nearly 90% of mobile device owners” were interested “in watching live news and weather programming on-the-go.”<sup>57</sup> While other types of programming also garnered significant interest, the highest demand was for live programming, and particularly local news and information.<sup>58</sup> As discussed in greater detail in Section C., below, these are precisely the services that local television broadcasters are in a unique position to provide.

- b. *How should the Commission evaluate the future economic value of over-the-air digital television and new capabilities to offer mobile TV broadcasting? How does the financial community in general view that future value?*

The Joint Broadcast Parties do not believe that it is constructive for the Commission to make forward-looking decisions regarding long-term spectrum policy based substantially on financial valuations calculated by academic theorists or Wall Street analysts. As NAB President

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<sup>54</sup> See Rupert Murdoch, “Journalism and Freedom,” *Wall Street Journal*, December 8, 2009 (adapted from Dec. 1, 2009 remarks at FTC’s workshop on journalism and the Internet).

<sup>55</sup> CEA Comments, NBP Public Notice #6, at 4 n.6 (Oct. 23. 2009).

<sup>56</sup> See, *supra*, at 10-11 & nn. 17-18.

<sup>57</sup> Frank N. Magid Associates, Inc., “The OMVC Mobile TV Study: Live, Local Programming Will Drive Demand for Mobile TV,” at 1 (December 2009).

<sup>58</sup> *Id.*

Gordon Smith commented last week in testimony before the House Energy & Commerce Communications Subcommittee, “In the broadcasting context, the “total value” is not a strict financial measure, but rather is one that encompasses the broader public policy objectives such as universal service, local journalism and public safety.”<sup>59</sup>

In fact, the financial component of “value” may be no easier to quantify than these public interest components. It is well known that such valuations are only as valid as the underlying assumptions made regarding current business models, the accuracy of available company or industry data, and the prescience of long-term growth projections. Enron Corporation, for example, had a peak market capitalization of \$66 billion in August 2000, but had dropped in value by about 60% one year later, and less than four months after that was in Chapter 11.<sup>60</sup> More recently, Lehman Brothers market value peaked in February 2007 at \$60 billion, but the company was in liquidation less than nineteen months later, in September 2008.<sup>61</sup>

This is not to suggest that the future prospects for wireless mobile services are based on either accounting fraud or outsized market risks, but simply that assumptions regarding long-term value must be analyzed carefully. This is so because even in the absence of accounting manipulations or failed derivative strategies, market valuations can plummet simply due to honest, but mistaken, assumptions that current market trends will extend into the future without disruption. For example, Lucent Technologies soared in value from 1996 through 2000 based on high expectations for equipment sales driven by rapid expansion of telecom network capacity to meet Internet voice and data demands, but the company ended up losing more value in the

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<sup>59</sup> Testimony of Gordon H. Smith, President & CEO, NAB, Before the House Subcommittee on Communications, Technology and the Internet, at 8 (Dec. 15, 2009).

<sup>60</sup> See N. Craig Smith and Michelle Quirk, “From Grace to Disgrace: The Rise and Fall of Arthur Andersen,” *Journal of Business Ethics Education*, at 92 (March 2004).

<sup>61</sup> “Case Study: The Collapse of Lehman Brothers,” Investopedia.com, available at <http://www.investopedia.com/articles/economics/09/lehman-brothers-collapse.asp> (viewed 12/21/2009).

ensuing six years for those who invested at the peak *than Enron and Lehman combined*. Lucent's market capitalization fell from a peak of approximately \$288 billion in December 1999 to less than \$13 billion when it was acquired by Alcatel in December 2006. This cautionary tale about extrapolating future demand from current growth rates has undeniable relevance in considering the recently touted valuations of the broadcast spectrum based on the potential for the FCC to auction this spectrum to mobile wireless incumbents. Fundamentally, as detailed further in Section C, below, the value that the established and proven system of over-the-air television broadcasting provides to viewers and to society as a whole cannot be measured based purely on current financial considerations.

**Question A.6.**

*Consumers are migrating away from mass-market "appointment" viewing to more fragmented and time-shifted viewing. What impact will this trend have on the television broadcasting industry? What can the Commission do to help broadcasters participate in this evolution?*

The Commission should be careful not to draw from the general trend toward more diffuse programming interests a conclusion that time-shifting and fragmented viewing will wholly replace viewing of events in real time, or that broadcasters are not already participating in this evolution. As noted above, TV viewers place a premium on live programming, and particular interest attaches to breaking news, Presidential addresses, political debates, and sports. In addition, the broadcast delivery model will continue to be the best way to deliver the most popular video entertainment programming even in a time-shifted world, as it is far more efficient for video content to be delivered simultaneously to thousands of DVRs than to be individually downloaded by the same number of interested viewers. Appointment TV still exists, but viewers now decide when the appointment will be. The likely expansion of portable media players into mobile DVRs in the coming years will only enhance the utility of this model.

At the same time, the identification of a trend does not necessarily mean that it represents an inexorable change from one model to a new paradigm that will replace entirely the original, established delivery scheme, let alone that the new model is one that should be fully embraced and nurtured. As a voice from within the FCC recently stated, “To elevate and place hope in new media and determine that old media is not relevant is to misunderstand our complex media environment.”<sup>62</sup> Fundamentally, there is no reason to believe that both mass media and personal media cannot co-exist and thrive, absent a rash policy judgment that has the inappropriate effect of a governmental anointment of winners and losers instead of allowing such judgments to be made by the marketplace.

Recognition that a trend exists also does not mean that there is a policy basis to embrace, let alone accelerate, the trend. As Nicholas Carr states succinctly in his 2008 book *The Big Switch*, “More choices do not necessarily mean better choices.”<sup>63</sup> While the availability of increasingly personalized content online has significant benefits for people seeking to connect with others who have similar interests or to get specific information that they need when they need it, it can also have the effect of atomizing the marketplace. As mass audiences shrink, enterprises that have historically produced high quality entertainment programming or, more importantly, high quality, competently edited news and information, have more difficulty recovering the costs necessary to sustain themselves.<sup>64</sup> The consequences of these changes can be seen every day as newspapers shrink or close, and broadcast news operations tighten their budgets. To the extent that audience fragmentation may be a precursor to social fragmentation,

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<sup>62</sup> Lloyd MAP Keynote, December 14, 2009.

<sup>63</sup> Nicholas Carr, *The Big Switch: Rewiring the World from Edison to Google*, at 151 (Norton, 2008) (“*The Big Switch*”).

<sup>64</sup> Carr, *The Big Switch* at 157 (“Once you fragment both the audience and the advertising in such a market, large investments in the production of certain creative works become much harder for businesses to justify”).

through the loss of common political and cultural experience,<sup>65</sup> it seems prudent for policymakers at least to take steps that will encourage the continued availability of mass media platforms, rather than to adopt policies that promote the opposite result.

**Question A.7.**

*In the Telecommunications Act of 1996, Congress instructed the Commission to conduct an evaluation of the advanced television services program within 10 years after the date the Commission first issued licenses for such services. Subsection (1), which requires an assessment of the willingness of consumers to purchase the television receivers necessary to receive broadcasts of advanced television services may no longer be pertinent in light of the completion of the digital transition. Please comment on subsections (2) and (3) of Section 336(g) that require the Commission to conduct:*

- a. an assessment of alternative uses, including public safety use, of the spectrum used for advanced television broadcasts*

As in the case of broadcast and broadband, use of broadcast spectrum to meet public safety needs is not mutually exclusive with use of portions of the same channel to continue providing broadcast news, entertainment and other programming. Television broadcasters are already using a portion of their digital broadcast capacity to support various public safety initiatives. For example, as noted in comments in this proceeding filed by the Association of Public Television Stations, The Corporation for Public Television Stations, and the Corporation for Public Broadcasting (“PTS Comments”), public television has teamed with the Department of Homeland Security to enhance the Emergency Alert System (“EAS”) to create the backbone infrastructure of a digital presidential emergency alert and warning system. Further, public television is obtaining geotargeting and dynamic allocations equipment “to transmit alerts to mobile service providers as part of the Commercial Mobile Alert System.”<sup>66</sup> Public television

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<sup>65</sup> Carr, *The Big Switch* at 167 (“[T]wo of the hopes most dear to Internet optimists – that the Web will create a more bountiful culture and that it will promote greater harmony and understanding – should be treated with skepticism. Cultural impoverishment and social fragmentation seem equally likely outcomes”).

<sup>66</sup> PTS Comments at 6.

stations are also experimenting with datacasting to enhance public health services.<sup>67</sup> These initiatives constitute concrete steps television broadcasters have taken to utilize their digital broadcast capacity for public safety purposes, and foreshadow the great potential television broadcasters have to utilize their digital broadcast capacity in ways that fully and dramatically serve the public interest.

- b. an evaluation of the extent to which the Commission may be able to reduce the amount of spectrum assigned to advanced television broadcast licensees.*

Based on the comments provided in response to other Commission inquiries posed in *NBP Public Notice #26*, the Joint Broadcast Parties do not believe that there is any basis for reducing the amount of spectrum assigned to individual advanced television broadcast licensees. Indeed, as outlined in Section A.1., above, there is a strong case for relaxing existing regulatory restrictions on spectrum aggregation by broadcasters to permit them at least some of the same flexibility in spectrum use for broadcast broadband services that other service providers already have. Such regulatory reform could spur opportunities for both new direct competition in the wireless broadband marketplace or allow development of business arrangements that could put additional spectrum in the hands of the wireless mobile service providers that claim an urgent need for additional spectrum.

## **B. Potential Approaches to Increase Spectrum Availability and Efficiency**

### **Question B.1.**

*What are the advantages of a channel-sharing approach to broadcasters' business? What are the disadvantages of this approach? What are the technical and business requirements to enable successful channel sharing?*

As a practical matter, there are far more disadvantages than advantages to such an approach from virtually any standpoint. Channel sharing, *i.e.*, the reduction of spectrum capacity

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<sup>67</sup> *Id.* at 7.

for each video signal in the TV broadcast band, would require either that TV broadcasters give up at least: (1) the ability to provide the highest quality digital pictures – a capability that the industry and the FCC worked for well over a decade to achieve in a manner that was as seamless as possible to terrestrial television viewers – or (2) the ability to provide a menu of multicast channels, mobile TV, datacasting, and other next generation broadband services that have been anticipated for years as a dividend of the DTV transition, and could potentially impose constraints on both in the near term. Giving up these capabilities, which carry with them the opportunity to generate additional revenue from expanded advertising inventory or carriage fees with respect to the leasing of excess capacity either directly to end users or to other service providers, would extinguish a critical source of revenue to replace declining rates charged for advertising. As a result, the viability of the entire over-the-air broadcast model could be placed at risk, not because this model ceases to have substantial and irreplaceable value to viewers and to the public-at-large, but simply because an improvident policy choice will have been made to starve one type of service provider in order to feed another.

Such an approach would also prove unnecessarily confusing and costly to viewers who continue to rely on over-the-air television service, as any spectrum repacking plan would be difficult, if not impossible, to accomplish without significant changes in broadcast transmitting and receiving equipment, including retrofitting or replacement of all TV receivers. Such a requirement would be doubly difficult to make television viewers swallow so close on the heels of the long-anticipated and ultimately successful DTV transition.

**Question B.2.**

*What opportunities exist to free up broadcast spectrum through greater collocation of transmission facilities closer to the center of densely populated areas? There are numerous examples of broadcasters collocating facilities already. What are the financial and other benefits of collocation? What are the tradeoffs for broadcast TV stations and consumers in terms of signal coverage and local programming efforts?*

In order to gain any spectrum efficiency advantage from collocation of broadcast facilities, as opposed to operational efficiencies that have been gained by the advent of centrally-located DTV antennas, all of the facilities within a given market would need to be collocated at a single site. By equalizing the signal strength of each station at the location of each receiving antenna, such an approach could work to free up some spectrum at the fringes of major markets. The disadvantages of such an approach, however, vastly outweigh any spectrum efficiency advantage.

First, combining multiple stations on a single tower in each market would impose high equipment and antenna costs on broadcasters that have just incurred large capital expenditures to build new DTV stations, in some cases at different locations from their analog transmitted sites. Combining several stations at a single site on a single tower would also be likely to require the construction of new towers because many existing towers are unlikely to have been built to the specifications required to accommodate many collocated DTV transmitters and associated equipment.

Second, the spectrum freed up by collocation will not be in the urban core areas where spectrum is most needed for mobile wireless services. For this reason, the availability of such bandwidth to these providers is unlikely to be of much practical utility.<sup>68</sup> If auctioned, it would

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<sup>68</sup> Moreover, in many urban areas, the spectrum most appropriate to relinquish from a technical standpoint would be the upper VHF spectrum, which is less useful for with DTV and wireless mobile operations alike.

fetch little money, and if sold, such spectrum would likely be warehoused in the short-, and perhaps the long-term, as incumbent wireless providers wait to determine what market demand, if any, ultimately develops for capacity so far from the areas of highest service demand. In addition, where spectrum is freed up in outlying areas, local broadcast service may be lost, with potential impact on the FCC's statutorily-mandated localism priorities.<sup>69</sup>

**Question B.3.**

*How will video capabilities improve over time using current MPEG-2 and 8-VSB technologies? What improvements could be gained by deployment of next generation technologies over that currently achieved under the ATSC standard? What would be required for broadcasters and consumers to transition to more advanced technologies?*

Both MPEG-2 and 8-VSB technologies are mostly mature. While both may enjoy very modest increases in quality and efficiency over the next few years, these gains are not likely to be great. New compression technologies that are now available are more efficient, however. This includes the MPEG-4 technology implemented by the satellite carriers. The problem with these technologies in the terrestrial environment is that television receivers that are currently deployed are not capable of receiving compression formats other than MPEG-2. MPEG-4 is not approved by the ATSC for DTV transmission. Making such a change would again entail replacement of all current TV sets and tuners, which as noted above, is a lengthy and difficult process that could easily take more than a decade.

**Question B.4.**

*To what extent would establishing antenna and receiver standards facilitate spectral efficiency and improved reception in broadcasting? What other actions could the FCC take to enable broadcasters to make more efficient use of their spectrum?*

As a practical matter, establishing standards for DTV receivers would do almost nothing to improve spectral efficiency and DTV reception. The planning factors used to establish the protected contours for DTV stations made assumptions that result in the protected DTV signal

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<sup>69</sup> See 47 U.S.C. § 307(b).

level being just above the ambient noise floor in most areas. The noise floor cannot be reduced simply by adopting receiver standards. In fact, the noise floor continues to rise over time as the proliferation of electronic devices has been increasing the amount of ambient noise that TV receivers must filter.

Imposing standards on DTV receiving antennas would also impose additional costs on the over the air viewers who have just been forced to spend money to upgrade their receivers or add converter boxes to continue receiving TV signals following the DTV transition, and would likely need to install outdoor antennas to maintain quality reception. This could be especially problematic for residents of multiple dwelling units, where it is normally extremely difficult, if not impossible, to install outdoor receiving antennas.

**Question B.5.**

*What percentages of broadcast programming streams are transmitted to MVPDs by over-the-air broadcast? What percentage of MVPD subscribers receives their broadcast TV stations via an over-the-air broadcast link (either directly or through the MVPD)? What would be the costs to replace over-the-air delivery to MVPDs and consumers with other means (fiber, microwave)?*

Providing a detailed answer to this query requires far more time than has been allotted for comment in this proceeding, as the percentage of broadcasters delivering programming to their cable and satellite providers over the air today varies greatly from market to market. In general, over-the-air delivery is likely to predominate in many smaller and mid-sized markets. The cost to provide cable and satellite providers with direct feeds can be very high, and will also vary greatly market to market.

### C. Broadcasting and the Public Interest

#### **Question**

*What are the benefits of free, over-the-air television broadcasting, in particular with respect to public awareness of emergency information, local news, political discourse, and education?*

#### **Local Television Stations Provide a Unique Information Resource That, If Discarded As A Result of Improvident Regulation, Is Unlikely To Be Recreated On Any Other Platform.**

As indicated in connection with Question A.6, above, broadcast viewership, like media consumption generally, has experienced significant fragmentation and time-shifting as a result of individuals seeking to meet their increasingly specific information needs when and where they want, both with respect to video programming and the wealth of information available on the Internet. Local television viewers, however, do not need to consult Google to know where to turn for highly-valued local news and information, public affairs programming, emergency alerts, detailed weather information and warnings, educational presentations and sports coverage. Particularly in times of crisis or breaking news of broad interest, it is local television stations that lead the way in providing clear, immediate and comprehensive coverage in real time.<sup>70</sup> The very recent record snowfall in the Washington, DC area undoubtedly prompted many FCC Staffers to tune in to one of the local TV news stations for the latest updates on the storm.

While much breaking news information now gets forwarded by email or posted on social networking sites, particularly Twitter, the actual content being emailed, tweeted and hyperlinked is very frequently broadcast news content. One can take virtually any recent domestic breaking news story, and almost invariably find that the first coverage, the first video images and the most reliable on-the-spot coverage have been provided by local television stations. To focus on just one

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<sup>70</sup> Newspapers also provide such local coverage, but typically with less immediacy due to the absence of a well-established video channel that local residents can turn to for live, up-to-the-minute coverage.

recent example, in the case of the tragic shootings at Ft. Hood, Texas, the local newspaper in Austin, Texas, about sixty miles from the military base, got its first information about the attack from one of the local TV news operations.<sup>71</sup> There simply is no “app” for local news, at least one that exists independent of aggregated content from well-established local news organizations, particularly broadcast television stations.

#### **D. Market Mechanisms for Spectrum Contribution**

##### **Question**

*What market-based or other incentive mechanisms should the Commission consider to enable broadcasters to choose whether or not to make any spectrum (excess or otherwise) available for reallocation to wireless broadband use?*

Broadcasters are already choosing to use their spectrum to meet the needs of wireless mobile users through the development and deployment of mobile TV. No spectrum reallocation is required to meet these needs. As outlined in Section A, above, the most appropriate market-based mechanism to allow maximization of the efficiency of the broadcast TV spectrum is the relaxation of out-dated ownership limitations that currently impede TV licensees from acquiring larger amounts of spectrum with which to meet the expanding and changing variety of video consumer needs.

#### **CONCLUSION**

As stated above, the limited amount of time remaining before the NBP must be delivered precludes reaching definitive conclusions regarding many of the important questions raised in *NBP Public Notice #26*. The record compiled so far in this proceeding does not demonstrate a need for the government to radically revise the allocation scheme that currently governs the broadcast TV bands by reallocating some, or all, of this spectrum for wireless mobile use.

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<sup>71</sup> See Craig Kanalley, “Fort Hood Shooting Shows How Twitter Lists Can Be Used for Breaking News,” Poynter Online, Nov. 6, 2009 (available at <http://www.poynter.org/column.asp?id=31&aid=173078>, viewed 12/15/2009).



**Digital Television Stations Licensed to Joint Broadcast Parties**

**Eagle Creek Broadcasting, LLC**

Eagle Creek Broadcasting of Corpus Christi, LLC is the licensee of:  
Station KZTV(DT) (Facility Id No. 33079), Corpus Christi, TX

Eagle Creek Broadcasting of Laredo, LLC is the licensee of:  
Station KVTV(DT) (Facility Id No. 33078), Laredo, TX

**Journal Broadcast Corporation**

Journal Broadcast Corporation is the licensee of:  
Station KGUN-TV (Facility Id No. 36918), Tucson, AZ  
Station KIVI-TV (Facility Id No.59255), Nampa, ID  
Station KMIR-TV (Facility Id No. 16749), Palm Springs, CA  
Station KMTV-TV (Facility Id No. 35190), Omaha, NE  
Station KNIN-TV (Facility Id No. 59363), Caldwell, ID  
Station KTNV-TV (Facility Id No. 74100), Las Vegas, NV  
Station KWBA-TV (Facility Id No. 35095), Sierra Vista, AZ  
Station WFTX-TV (Facility Id No. 70649), Cape Coral, FL  
Station WGBA-TV (Facility Id No. 2708), Green Bay, WI  
Station WSYM-TV (Facility Id No. 74094), Lansing MI  
Station WTMJ-TV (Facility Id No. 74098), Milwaukee, WI

**Northwest Broadcasting, Inc.**

Broadcasting Licenses is the licensee of:  
Station KMVU-DT (Facility Id No. 32958), Medford, OR

Mountain Licenses is the licensee of:  
Station KAYU-TV (Facility Id No.58684), Spokane, WA  
Station KFFX-TV (Facility Id No.12729), Pendleton, OR

Stainless Broadcasting, LP is the licensee of:  
Station WICZ-TV (Facility Id No. 62210), Binghamton, NY

**Sarkes Tarzian Inc.**

Sarkes Tarzian Inc. is the licensee of:

Station KTVN(DT) (Facility Id No. 59139), Reno, NV

Station WRCB(DT) (Facility Id No. 59137), Chattanooga, TN

**Shooting Star Broadcasting of New England, LLC**

Shooting Star Broadcasting of New England, LLC is the licensee of:

Station WZMY-TV (Facility Id No. 14682), Derry, NH

**Spanish Broadcasting System, Inc.**

WSBS Licensing, Inc. is the licensee of:

Station WSBS-TV (Facility Id No. 72053), Key West, FL

**WNET.ORG/Educational Broadcasting Corp.**

Educational Broadcasting Corporation is the licensee of:

Station WLIW(DT) (Facility Id No. 38336), Garden City, NY

Station WNET(DT) (Facility Id No. 18795), Newark, NJ

**WQED Multimedia**

WQED Multimedia is the licensee of:

Station WQED(DT) (Facility Id No. 41315), Pittsburgh, PA

Station WQEX(DT) (Facility Id No. 41314), Pittsburgh, PA