

**Before the
Federal Communications Commission
Washington, DC 20054**

In the Matter of)
) ET Docket No. 10-235
Innovation in the Broadcast Television Bands:)
Allocations, Channel Sharing and)
Improvements to VHF)

COMMENTS OF AT&T

AT&T Services, Inc. (“AT&T”), on behalf of its wireless companies, files these Comments in response to the Notice of Proposed Rulemaking (“*Notice*”) released by the Federal Communications Commission (the “Commission”) pertaining to the use of broadcast television (“TV”) spectrum.¹

I. INTRODUCTION AND SUMMARY

The National Broadband Plan documented the need for an additional 500 megahertz (“MHz”) of spectrum for mobile, fixed and unlicensed broadband use over the next 10 years.² The Commission recognized the substantial growth of wireless broadband and the upward trend of such growth. Thus, the Commission appropriately concluded that it should act promptly to free up spectrum and that the failure to do so would constrain the growth of wireless broadband, ultimately resulting in higher prices, poor service quality, an inability to compete, depressed

¹ Innovation in the Broadcast Television Bands: Allocations, Channel Sharing and Improvements to VHF, ET Docket No. 10-235, *Notice of Proposed Rulemaking* (rel. Nov. 30, 2010) (“*Notice*”).

² *Connecting America: The National Broadband Plan*, Federal Communications Commission, Washington, D.C. (“*The National Broadband Plan*”), Ch. 5, p.84 (March 2010).

demand, and diminished innovation.³ To encourage prompt action, the National Broadband Plan set a goal of allocating 300 MHz of spectrum for mobile flexible broadband use within the next five years, of which 120 MHz would be reallocated from the broadcast television bands (“TV Bands”).⁴

In this *Notice*, the Commission initiates the process of making 300 MHz of newly allocated spectrum available for broadband use and to reallocate 120 MHz of spectrum in the TV Bands. Specifically, the Commission proposes to allow for the flexible use of the TV Bands for mobile and fixed services that is co-primary with the existing allocation, permit two or more television stations to share a single six-megahertz channel in the TV Bands, and encourage improved television service within the VHF TV Bands. If successful, these actions to facilitate broadband uses in the TV Bands would set the stage for future Commission action to allocate the TV Bands to mobile broadband use, including the process for the voluntarily return of broadcast licenses to the Commission and the allocation of those licenses to providers who will deploy the spectrum for innovative fixed and mobile broadband use.

AT&T supports Commission efforts to ensure the availability of spectrum to support mobile broadband demand in the coming years, including the measures proposed in this *Notice* to advance the National Broadband Plan goal of ultimately effecting a reallocation of 120 MHz from the TV Bands to mobile broadband. AT&T’s usage trends clearly underscore the National Broadband Plan’s conclusions regarding the need for the additional mobile broadband spectrum. Further, the TV Bands are well-suited to the provision of mobile broadband services. This *Notice* furthers the Commission’s policy of promoting the efficient use of spectrum, in this case

³ *Id.* at 77.

⁴ *Id.* at 88.

through the allocation of the TV Bands for broadband use, the sharing of 6 MHz channels within the TV Bands by two or more stations, and for improved service within the VHF TV spectrum.

II. DISCUSSION

A. **Modifying the Table of Allocations to Allow Broadband Use in the UHF TV Bands is a First Step to Allocating the Spectrum to Broadband Use.**

AT&T supports the modification of the Table of Frequency Allocations to add a “mobile” co-primary allocation for the UHF TV Bands.⁵ This allocation is a necessary first step to allocating the spectrum to fixed and mobile broadband use, as it would provide the Commission with the latitude to facilitate the types of flexible use rules that allow the UHF TV Bands to flow to their most productive use, as dictated by customer demand.

The potential for large contiguous swaths of spectrum and the excellent propagation characteristics of the UHF TV Bands are well-suited to providing mobile broadband services. Making the UHF TV Bands available for that purpose will provide the spectrum needed for mobile providers to offer improved service, potentially creating new economic growth and investment opportunities. It presents the best opportunity for the Commission to put the TV Bands to their most productive and valuable use, as demonstrated by the relative disparity between the market value of spectrum used for broadcast TV versus the market value for spectrum used for mobile broadband.⁶ Further, coupled with the other measures proposed in this *Notice*, including allowing the shared use of 6 MHz channels by multiple broadcast stations,

⁵ The UHF TV Bands occupy 470-608 MHz (TV channels 14-36) and 614-698 MHz (TV channels 38-51).

⁶ *The National Broadband Plan*, Ch. 5, p.89 (“That [700 MHz] auction resulted in an average spectrum valuation for mobile broadband use of \$1.28 per megahertz-pop. The TV bands have propagation characteristics similar to those of the 700 MHz band. However, the market value of these bands in their current use ranges from \$0.11 to \$0.15 per megahertz-pop. Other attempts to size the current economic value of spectrum for over-the-air television using alternative methods have resulted in comparable megahertz-pop valuations.”)

reallocation of a portion of this UHF spectrum to broadband wireless use should have limited impact on broadcast services.

Allowing for flexible use of the TV Bands for mobile use would also promote more efficient use of the TV Bands. As the Commission has recognized, “[f]lexibility of use enables markets in spectrum, allowing innovation and capital formation to occur with greater efficiency. More flexible spectrum rights will help ensure that spectrum moves to more productive uses, including mobile broadband, through voluntary market mechanisms.”⁷ The high demand for and finite inventory of spectrum for mobile broadband use makes it crucial that the Commission act to promote flexible use of the TV Bands as proposed in this *Notice*.

The *Notice* proposes to change the Table of Frequency Allocations to allow for flexible use, including for mobile services, for the VHF TV Bands as well as the UHF TV Bands. While expanding the allocations to the VHF TV Bands may provide maximum latitude for the Commission to consider alternatives for the use of the TV Bands, the VHF TV Bands are not ideal for mobile use and are not part of the 300 MHz that the Commission has committed to allocate for mobile use in the next few years. As the Commission recognizes in this very *Notice*:

[T]he propagation characteristics of these [VHF] channels allow undesired signals and noise to be receivable at relatively farther distances, nearby electrical devices tends to emit noise in this band that can cause interference, and reception of VHF signals requires physically larger antennas that are generally not well suited to the mobile applications expected under flexible use, relative to UHF channels.⁸

For this reason, the National Broadband Plan goal of reallocating 300 MHz of TV Band spectrum to mobile use within the next few years is limited to spectrum from 225 MHz to 3.7

⁷ *Id.* at 79.

⁸ *Notice* at ¶42.

GHz, which excludes the VHF TV Bands. In future proceedings to develop rules for mobile use of the TV Bands, the Commission should focus on the UHF TV Bands only.

B. Television Broadcasters Should be Permitted to Share 6 MHz Channels.

AT&T further supports permitting television broadcasters to share a single 6 MHz channel in the TV Bands. Allowing such sharing would provide a mechanism for television broadcasters to voluntarily vacate television channels and yet still continue to operate, serving the viewing public. Without a way for broadcasters to continue operating, many broadcasters would not voluntarily vacate any portion of the TV Bands and the potential exists for little, if any, TV Band spectrum to be reallocated for broadband use. AT&T supports the Commission's effort to make the process of vacating TV Band spectrum for broadband use a voluntary process that is a "win-win" for all concerned.

While AT&T understands that many broadcasters are committed to the highest quality high definition signal and cannot share channels, voluntarily channel sharing by those broadcasters that can and wish to consolidate into fewer channels will increase efficiency in the TV Bands. Allowing voluntary sharing will allow broadcasters to craft the business relationships that maximize the use of the TV Bands, while simultaneously meeting the needs of the broadcasters, yet without degrading the quality of television service for television viewers. In this regard, while developing the plan for shared use, the Commission should take extreme care to not develop prescriptive rules that overly limit the ability of broadcasters to design creative ways of allocating use of a single 6 MHz channel.

While channel sharing may not be suited for all broadcasters, there can be no argument that for those broadcasters which are able and willing to share, it offers not only enhanced spectral efficiency, but also lower operational expenses for the broadcasters involved, and therefore is in the public interest. The Commission's plan contemplates that stations sharing a

single 6 MHz channel will also share a single transmitting facility.⁹ Thus, sharing a 6 MHz channel will reduce network infrastructure costs for those broadcasters that participate.

C. Efforts Should be Taken to Increase the Utility of the VHF TV Bands.

As discussed above, the Commission recognizes the limitations of the VHF TV Band. AT&T agrees with the Commission that this limited utility of the VHF TV Bands creates pressure on the UHF TV Bands, as many broadcasters seek reassignment of their VHF broadcast licenses to the UHF TV Bands, and that this pressure complicates efforts to reallocate spectrum from the UHF TV Bands to mobile broadband use.¹⁰ Thus, AT&T supports the Commission's efforts to consider additional measures to enhance the utility of the VHF TV Bands for broadcast television.

AT&T understands the complexities of RF propagation, and the difficulty of designing end user devices with large antennas. Indeed, mobile providers are even more constrained than television broadcasters in this respect, since the form factor of a VHF antenna would render a mobile device untenable. AT&T agrees that any measures that can be undertaken to increase the utility of the VHF TV Band, including permitting power increases for operators in that band and eliminating ownership restrictions associated with VHF spectrum, should be considered. Among those measures considered by the Commission is the imposition of standards for indoor VHF antennas, although it has not previously regulated that product. Specifically, the Commission proposes that all indoor VHF antennas comply with the industry standards in ANSI/CEA-2032-A, "Indoor TV Receiving Antenna Performance Standard," February 2009.¹¹

⁹ *Id.* at ¶29.

¹⁰ *See The National Broadband Plan*, Ch. 5, p.92.

¹¹ *Notice* at ¶29.

To the extent that the Commission elects to impose such standards, AT&T encourages the Commission to follow its current direction and adopt only those standards that are industry developed. Standards that are developed by the Commission rather than by industry risk being quickly outdated or necessitating frequent updates and revisions, something the Commission may find administratively burdensome. To insure that industry-developed standards that are updated or revised are adopted on a timely basis, AT&T encourages the Commission to develop a system for automatically or quickly incorporating new or updated standards into any rules imposing performance standards for indoor VHF antennas.

III. CONCLUSION

The Commission has recognized that broadband and mobile services present unique economic, social, and educational opportunities for American society, but that the mobile broadband services can be easily constrained by the absence of sufficient spectrum. With a limited inventory of spectrum readily available for broadband use, the *Notice* appropriately gets a head start on making more spectrum available to the mobile broadband providers to insure that they can continue to meet consumer demands. The Commission's proposals to allocate the TV Bands for mobile use, to allow multiple television broadcasters to share a single 6 MHz channel in the TV Bands, and to increase the utility of the VHF TV Bands will promote the availability of more spectrum for mobile broadband use and set the stage for further action to make such spectrum usable for that purpose. AT&T applauds the Commission's effort and looks forward to those further actions and to the eventual release of spectrum in the TV Bands for mobile broadband use.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert Vitanza", with a long horizontal flourish extending to the right.

Robert Vitanza
Gary L. Phillips
Paul K. Mancini
Attorneys for AT&T Inc.

AT&T Services, Inc.
1120 20th Street, N.W.
Suite 1000
Washington, D.C. 20036
(202) 457-3076 (Phone)
(202) 457-3073 (Fax)
robert.vitanza@att.com

March 18, 2011