

**Before the
Federal Communications Commission
Washington, D.C. 20554**

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

COMMENTS OF CABLEVISION SYSTEMS CORPORATION

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Cablevision Systems Corporation (“Cablevision”), by its counsel, hereby submits comments on the Notice of Proposed Rulemaking (“*NPRM*”) issued by the Federal Communications Commission (“FCC” or “Commission”) in the above-captioned docket.¹

INTRODUCTION AND SUMMARY

The Commission’s *NPRM* presents an intelligent plan for using voluntary market transactions to meet the demand for more broadband wireless spectrum. Cablevision supports the Commission’s proposal to introduce greater flexibility for the use of broadcast spectrum to provide broadband wireless services – both as a path to longer-term spectrum reform and as a framework for parties to use voluntary arrangements to clear spectrum for broadband use in the near term.

Cablevision’s interest in this proceeding stems from its experience as the operator of the nation’s largest contiguous WiFi network, comprising tens of thousands of access points, serving urban and suburban public places – parks, main streets, train stations, airports and retail spaces – throughout Cablevision’s tri-state service area in New York, Connecticut, and New Jersey. The

¹ *In re Innovation in the Broadcast Television Bands: Allocations, Channel Sharing and Improvements to VHF*, Notice of Proposed Rulemaking, ET No. 10-235, FCC 10-196, 2010 WL 4877342, ___ FCC Rcd ___ (FCC Nov. 30, 2010) (“*NPRM*”).

service, available without additional charge to Cablevision's Optimum Online broadband customers, demonstrates the tremendous opportunity and challenges of broadband data. Since its launch in 2009, Cablevision's Optimum WiFi has served more than 50 million customer logons, is enjoyed regularly by hundreds of thousands of users, and has served more than 2.5 petabytes – 2.5 quadrillion bytes – of broadband data. Growth in users, combined with increased *usage* by each new user, promises exponential growth in demand for wireless bandwidth. As demand for wireless data on both licensed and unlicensed spectrum grows, the national imperative to meet that demand does as well.

The Commission's proposal to reallocate the television broadcast spectrum for flexible use, including mobile broadband, is an important component of a national program to increase wireless broadband capacity. As discussed below, television broadcasters currently have access to approximately 300 megahertz of prime spectrum and use that spectrum incredibly inefficiently. At the same time, the demand for broadband spectrum is growing exponentially. The Commission has long recognized the desirability of shifting spectrum from service-specific allocations to flexible use so that it can be used for its most valued purpose. The Commission's plan to allow voluntary arrangements to repurpose television broadcast spectrum is thus a sensible and measured step in advancing an important national goal.

For the same reasons, the Commission's proposal to allow broadcasters to share a single six-megahertz channel is an efficient way to make use of voluntary arrangements to release as much spectrum as possible for broadband while preserving broadcast television. To best meet the Commission's goals, Cablevision suggests that the Commission allow maximum flexibility in sharing arrangements, and, as much as possible, ensure that broadcasters who enter such arrangements maintain the same rights and privileges as they currently have. Cablevision

recommends that the Commission (1) allow commercial and noncommercial stations to share use of a single channel (including channels designated for noncommercial use); (2) assess any over the air (OTA) service losses caused by relocation under a flexible public-interest test that, among other things, recognizes the benefits of promoting broadband in that spectrum; and (3) maintain the must-carry rights for stations entering into a sharing arrangement or relocating their broadcast facilities and frequencies. Finally, Cablevision suggests that the Commission consider other issues implicated by its proposal, including clarifying the applicability of the media ownership rules to channel consolidation for the provision of broadband and the permissible uses of so-called “white spaces” that would otherwise go unused under the Commission’s current rules.

I. THE COMMISSION’S PROPOSAL ENCOURAGES EFFICIENT USE OF THE BROADCAST TELEVISION SPECTRUM BY ALLOWING ITS USE FOR BROADBAND.

The Commission’s proposal to make broadcast television spectrum available for flexible use, including fixed and mobile wireless broadband services, is an important contribution to spectrum policy. To begin with, the proposal promotes the Commission’s longstanding principle that command-and-control service allocations should, where possible, be cast aside in favor of flexible use. As the National Broadband Plan noted, fixed service allocations inhibit the free flow of spectrum to its most highly valued uses: “In the case of commercial spectrum, the failure to revisit historical allocations can leave spectrum handcuffed to particular use cases and outmoded services, and less valuable and less transferable to innovators who seek to use it for

new services.”² Flexible spectrum rights, on the other hand, enable spectrum to support more productive uses, including broadband, through voluntary market mechanisms.³

Moreover, there are particularly strong reasons to repurpose the spectrum currently allocated to broadcast television for flexible use, as the Commission proposes. Broadcast television uses valuable spectrum very inefficiently – indeed, much of its spectrum is not being used at all. To avoid interference between TV stations, stations on the same and adjacent channels must comply with technical provisions that effectively require significant distances to be maintained between co-channel and adjacent channel stations.⁴ Television stations operate with relatively high antennas and high power so that their signals can propagate to and serve viewers at significant distances.⁵ But such propagation distances also extend the range at which TV signals can cause interference and, accordingly, increase the area between stations where, under current rules, channels may not be used.⁶ As a result, there are typically a number of TV channels in a given area that are not usable.⁷ Indeed, of the approximately 300 megahertz allocated to broadcast television, in any given market no more than 150 megahertz is actually

² *Connecting America: The National Broadband Plan* at 78-79, Federal Communications Commission, (March 2010) (“*National Broadband Plan*”).

³ *Id.* at 79.

⁴ *See In the Matter of Unlicensed Operation in the TV Broadcast Bands, Second Memorandum Opinion and Order*, 2010 WL 3726622, ¶ 6 FCC 10-174 (2010) (“*White Spaces 2nd MO&O*”).

⁵ *See id.*

⁶ *See id.*

⁷ *See id.*

being used – and that is in our largest cities.⁸ Even in cities with more than one million people, on average only about 100 megahertz of television broadcast spectrum is utilized.⁹

At the same time, this 300 megahertz swath of spectrum serves a relatively small subset of the population, as the overwhelming majority of households in the United States subscribe to cable or satellite television service. Less than ten percent of the U.S. population relies on over-the-air TV, and this number continues to decrease.¹⁰ The Commission’s proposal to introduce flexibility into the broadcast band and to allow broadcasters to share channels neatly addresses this issue: it preserves the value of over the air broadcast but allows underutilized broadcast spectrum to be repurposed to a higher and better use.

The benefit to be gained from repurposing this spectrum is particularly significant given the overwhelming demand for more broadband spectrum. As third-generation (3G) wireless services have matured, the use of smartphones and other mobile computing devices has skyrocketed, and as fourth-generation (4G) wireless services have begun to roll out, the demand for spectrum has never been greater. North American wireless networks carried approximately 17 petabytes per month in 2009, an amount of data equivalent to 1,700 Libraries of Congress.¹¹ By 2014, this data load is expected to grow to more than 740 petabytes per month, a greater than

⁸ See Prepared Remarks of FCC Chairman Julius Genachowski, New America Foundation, *Mobile Broadband: A 21st Century Plan for U.S. Competitiveness, Innovation and Job Creation*, Washington, D.C. (Feb. 24, 2010).

⁹ See *id.* In markets with less than 1 million people, only 36 megahertz are typically used for broadcasting.

¹⁰ See Broadcast Engineering, *Nielsen: Broadcast-only TV Households to Slip Below 10 Percent*, May 4, 2010, <http://broadcastengineering.com/hdtv/nielsen-broadcast-only-tv-households-slip-below-10-percent-0504>.

¹¹ See *National Broadband Plan* at 76.

40-fold increase.¹² And the growth in demand is only going to continue to increase with inevitable advances in network technology. As the proliferation of 3G services has demonstrated, the higher data throughput rates enabled by more advanced networks spur the development of new applications and devices that can take advantage of faster, bigger wireless pipes, which generates a corresponding increase in demand for wireless service as users adopt new applications and devices. The Commission's proposal to change the U.S. Table of Frequency Allocations to make broadcast television spectrum available for flexible use, including for fixed and mobile wireless broadband services, is thus unquestionably a good proposal.¹³

II. THE COMMISSION'S PROPOSAL TO ALLOW AND ENCOURAGE TELEVISION CHANNEL SHARING IS A GOOD MEANS OF FREEING UP SPECTRUM FOR BROADBAND.

Cablevision supports the Commission's proposal to allow multiple television stations to share a single six-megahertz channel as a means of making more broadcast spectrum available for broadband. The Commission has the authority to allow this kind of channel sharing, and doing so has the potential to open up large swaths of spectrum that might otherwise go unused. Below, Cablevision comments on a number of questions in the *NPRM* on how best to implement that proposal.

A. Cablevision Recommends Allowing Commercial Stations and NCEs To Share a Single Channel, and Allowing Such Sharing on Spectrum Reserved for Noncommercial Use.

To provide the most flexibility to repurpose broadcast spectrum through voluntary arrangements, Cablevision recommends that the Commission allow commercial stations and

¹² See *id.* at 76-77.

¹³ See *NPRM* ¶ 16.

NCEs to share a single television channel, and allow commercial stations to operate on a shared channel reserved for NCE use.¹⁴ Because it is unclear how many broadcast stations will voluntarily participate in the channel sharing contemplated by the Commission's proposal, a rule permitting sharing between commercial stations and NCEs will make the most effective use of spectrum. In some markets, for example, there may not be enough commercial stations or enough NCEs to share separate commercial and non-commercial channels effectively. To encourage the most efficient channel sharing and thereby to create as much broadcast spectrum as possible, Cablevision recommends against constraining sharing arrangements by forcing an artificial separation between commercial stations and NCEs in terms of the channels they occupy. There is no statutory requirement for such separation, and as the Commission proposes, the different rights and obligations of commercial stations and NCEs can be preserved by maintaining separate licenses and operations.¹⁵ Given the ability to maintain such separation, there appears to be no compelling policy reason to prohibit this kind of sharing.

In the same vein, Cablevision proposes that the Commission allow commercial stations to operate on a shared channel reserved for NCE use. Allowing such operation provides maximal flexibility to clear as much broadcast spectrum as possible, enabling shared channels to be located on frequencies that make the most sense from a band-sharing perspective, rather than based on NCE reservations that never contemplated flexible use in the band. Cablevision

¹⁴ See *NPRM* ¶ 24.

¹⁵ See *id.* Indeed, Cablevision recommends that the Commission consider allowing NCEs greater flexibility to use their spectrum than they currently enjoy in order to further encourage the repurposing of their spectrum for broadband. Compare *In re Ancillary or Supplemental Use of Digital Television Capacity by Noncommercial Licenses*, Report and Order, 16 FCC Rcd 19,042, 19,048 ¶ 15 (2001) (the entire bitstream of an NCE, including any ancillary or supplemental services, must be used "primarily for a nonprofit, noncommercial, educational broadcast service").

recognizes that maintaining roles for NCEs is an important policy. That policy can best be advanced, however, by ensuring that there remain sufficient opportunities for NCEs to provide broadcast services on some channel assignment in a market generally, not by a rigid adherence to particular frequencies' NCE "status" under a command-and-control regime.

B. Cablevision Recommends That the Commission Assess Service Losses Caused by Channel Sharing on a Case-By-Case Basis, Recognizing the Benefits of Enabling Broadband Services.

As the Commission acknowledges, channel sharing will necessarily require modifications and relocation of some transmission facilities, which may cause some viewers to gain and other viewers to lose the ability to receive an adequate over-the-air signal from a particular television station.¹⁶ Where there are no appreciable service losses caused by such relocation and/or modifications, they will likely be approved as in the public interest without question. Even when there is some loss of over the air service, however, Cablevision suggests that the Commission recognize that a relocation and/or modification incidental to channel sharing may nevertheless be in the public interest.

To assess such service losses, Cablevision supports the Commission continuing to conduct a case-by-case assessment,¹⁷ and to include in that assessment such factors as the value of the intended use of spectrum made available by a sharing arrangement,¹⁸ the density of over-

¹⁶ See *NPRM* ¶ 25.

¹⁷ See *id.* ¶¶ 26-27.

¹⁸ See *In re Service Rules for the 746-764 and 776-794 MHz Bands and Revisions to Part 27 of the Commission's Rules*, Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, 15 FCC Rcd 20845, 20870, ¶ 61 (2000) ("We would recognize . . . a presumption favoring grant of any requests that . . . would [among other things] make new or expanded wireless service, such as '2.5' or '3G' services, available to consumers . . .").

the-air and multichannel video programming distributor (MVPD) broadcast reception options,¹⁹ and the actual penetration of over the air viewership in a given market or for a given broadcast channel.²⁰ If these factors are properly weighed, Cablevision believes channel sharing arrangements should be allowed in most circumstances – where any impact on over the air viewers can be minimized.

C. Ensuring That Channel Sharing Does Not Diminish or Enlarge Must-Carry Rights Will Best Meet the Commission’s Goals.

In order to persuade broadcasters to share channels voluntarily and to avoid time-consuming challenges from MVPDs, Cablevision agrees that the Commission should clarify that a station’s must-carry rights will not be diminished or enlarged by entering a sharing arrangement or relocating incidental to a sharing arrangement.²¹ The mere fact that multiple broadcast licensees share a single broadcast channel should not affect their must-carry rights. With respect to the cable must-carry provisions, for example, each “television broadcast station” eligible for mandatory carriage is accorded must-carry rights with respect to a “primary video” signal.²²

¹⁹ See *NPRM* ¶ 27 & n.46; see also *Eagle 22, Ltd.*, Memorandum Opinion and Order, 7 FCC Rcd 5295, 5296, ¶ 7 (1992) (permitting a construction permit modification where at least 60 percent of the population in the loss area was within the Grade B contours of between five and 17 full-service stations); *NPRM* ¶ 28.

²⁰ Additionally, applicants may be able to mitigate service losses by providing affected customers with alternative arrangements, such as Digital Transmission Systems or free cable or satellite service.

²¹ See *NPRM* ¶ 31.

²² See 47 U.S.C. §§ 534, 535. The Communications Act leaves the Commission considerable discretion to effectuate its proposal. Specifically, the Act defines the term “broadcast station” as “a radio station equipped to engage in broadcasting,” without specifying what a “station” is. 47 U.S.C. § 153(6). The use of the term “equipped” arguably suggests that a station consists of some “equipment” used for broadcasting – but even if that is the case, licensees sharing a channel can be viewed as separate “stations” so long as they each maintain some separate

Moreover, so long as a station that relocates to engage in channel sharing remains in the same designated market area (“DMA”), the Commission generally has ample authority to ensure that its must-carry rights do not change. A full-power commercial station is entitled to carriage on a cable system when it is “licensed and operating on a channel regularly assigned to its community by the Commission,” and that community “is within the same [DMA] as the cable system”²³ – unless its market has been expressly modified by the Commission.²⁴ While a relocation might in theory provide grounds for a new market modification of cable must-carry rights,²⁵ the Commission retains considerable discretion as to whether it grants such

equipment. And the Commission has some leeway to determine what kinds of apparatus constitute equipment “to engage in broadcasting,” 47 U.S.C. § 153(6). The Communications Act’s definition of “radio station license” makes this clear, stating that the term refers to authorization “for the use or operation of apparatus for transmission of energy, *or* communications, *or* signals by radio.” *Id.* § 153(49) (emphasis added). Alternatively, licensees maintaining no separate equipment might still be viewed as differentiated “stations” so long as they were assigned different frequencies – under the common definition of “station” as meaning “[a] frequency assigned to a broadcaster.” *American Heritage Dictionary of the English Language* 1694 (4th ed. 2000). Either way, the single video stream delivered by each licensee would satisfy the “primary video” statutory term. The Commission has concluded that the term “primary video” is easily read to encompass “a single programming stream and other program-related content.” *See In re Carriage of Digital Television Broadcast Signals*, 20 FCC Rcd at 4530, ¶ 2 (citation and quotation marks omitted). Thus the video stream of each “station” sharing a channel fits comfortably within the definition of “primary video.” Moreover, the Commission has also found that the term “primary video” is ambiguous enough to encompass multiple programming streams from a single station. *See id.* at 4524-36, ¶¶ 33-41. Accordingly, even if the Commission interpreted all of the licensees sharing a channel to constitute a single “station,” all of their video streams could be read as the “primary video” signal of that station.

²³ 47 U.S.C. § 534(h)(1)(A). Similarly, with respect to direct broadcast satellite (“DBS”), broadcasters’ must-carry rights are tied to the DMA in which a DBS provider relies on the statutory copyright license to retransmit the signal of any other “local” full power station (*i.e.*, one located in the same DMA). *See* 47 U.S.C. § 338(k)(3); 17 U.S.C. § 122(j)(2).

²⁴ *See* 47 U.S.C. § 534(h)(1)(C).

²⁵ *See id.*

modifications.²⁶ The Commission could quite easily find that modifying a market due to a relocation for channel sharing would not “better effectuate the purposes” of the must-carry statute, as is required to modify a market under the statute.²⁷

Importantly, Cablevision recommends that the Commission make clear that previously granted cable market modifications will be maintained after a sharing arrangement is approved. Without assurance that communities previously added to a station’s cable must-carry market will remain after the station relocates to engage in channel sharing, the station may be reluctant to voluntarily agree to the arrangement. And if communities previously deleted from a station’s market can be added due to its agreement to a sharing arrangement, MVPDs that seek to support channel sharing, like Cablevision, may oppose such arrangements. Channel sharing should not become an opportunity to relitigate previously granted market modifications, as that will only inhibit such arrangements, and delay the benefit of making more spectrum available for broadband.

III. CABLEVISION RECOMMENDS THAT THE COMMISSION ADDRESS OTHER ISSUES RAISED BY REPURPOSING BROADCAST SPECTRUM FOR BROADBAND.

Allowing the use of broadcast spectrum for broadband may raise a number of additional issues in practice. For example, because a viable broadband service will almost certainly require the use of more than one six-megahertz channel, a provider should be allowed to consolidate multiple television channels in a market. Yet the Commission’s media ownership rules make

²⁶ See *Cablevision Sys., Corp. v. FCC*, 570 F.3d 83, 94 (2d Cir. 2009), *cert. denied*, 130 S. Ct. 3275 (2010).

²⁷ See 47 U.S.C. § 534(h)(1)(C)(i).

that kind of consolidation difficult.²⁸ Cablevision thus recommends that the Commission make clear that it will apply its media ownership rules flexibly and with due regard to their purpose. Broadband providers do not seek to obtain broadcast spectrum in order to dominate discourse in the market. Indeed, ownership of multiple television stations for broadband may not impact the number of voices in a market at all, if, for example, the broadband provider is using channels that would otherwise not be available for broadcast because of interference concerns. In a similar vein, Cablevision recommends that the Commission consider granting exclusive use of adjacent white spaces to those using broadcast channels to provide broadband in order to provide more bandwidth for broadband. Particularly in urban areas, few white spaces are likely to be available even for unlicensed use under the Commission's current rules due to interference concerns. In such instances, it makes sense for the Commission to consider modifying broadcast licenses to allow use of adjacent white spaces, which would otherwise go unused.

²⁸ See, e.g., 47 C.F.R. § 73.3555(b) (allowing ownership of two television stations in the same market only in limited circumstances); *id.* § 73.3555 note 7 (ownership of more than two full-power television stations in the same market is not allowed). These rules are currently under review in the Court of Appeals. See *Prometheus Radio Project v. FCC*, Nos. 08-3078 et al. (3d Cir. argued Feb. 24, 2011).

CONCLUSION

As discussed above, Cablevision supports the Commission's proposal to allow use of the broadcast bands for broadband and to enable sharing of broadcast channels by multiple stations.

Cablevision urges the Commission to move forward with this proceeding expeditiously.

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