

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

In the Matter of)
)
Wireless Broadband Access) GN Docket No. 04-163
Task Force Report)

**REPLY COMMENTS OF
THE ASSOCIATION FOR MAXIMUM SERVICE TELEVISION, INC.**

The Association for Maximum Service Television (“MSTV”) submits these reply comments to underscore the importance of a successful DTV transition in bringing the benefits of sophisticated wireless services – both broadcast and broadband – to the American public. First are the benefits inherent in digital television: Viewers will receive visually-stunning displays in high-definition (“HDTV”) format, as well as an increased diversity of programming thanks to local stations’ ability to broadcast multicast streams. The Commission recently reported that 1,497 of the 1,697 U.S. television stations with a DTV construction permit or license are broadcasting a digital signal.¹ As a result, thousands of hours of high-definition programming will be delivered on a free and over-the-air basis to consumers this year.² Also, DTV technology allows broadcasters to provide ancillary services, such as datacasting, which

¹ See Summary of DTV Applications Filed and DTV Build Out Status, April 7, 2005, *available at <http://www.fcc.gov/mb/video/files/dtvsum.html>* (last visited April 12, 2005).

² See Preparing for the Digital Transition, 109th Cong. (2005) (Statement of David H. Arland, Vice President, Thomson, Inc.) (reporting that “[t]oday, the top broadcast networks combined offer 90 to 100 hours of HDTV programming each week, and that doesn’t even include sports programming.”).

offer promising solutions for wireless data needs, including those of public safety officials.³ Second, owing to the spectral efficiency of DTV technology, at the end of the transition the 700 MHz spectrum will be vacated by broadcasters to make way for commercial wireless and public safety uses. For these reasons, a successful DTV transition will meaningfully advance the goal of the Wireless Broadband Access Task Force (the “Task Force”) to “facilitate the more rapid deployment of wireless broadband services for the benefit of all Americans.”⁴

Curiously, a number of commenters to the Task Force’s Report advocate positions that would *harm* the progress of the DTV transition and thus delay clearing of the 700 MHz spectrum. QUALCOMM asks for the right to interfere with viewers’ reception of out-of-core DTV signals⁵ just as broadcasters and the Commission are seeking to encourage the widespread adoption of the technology necessary to receive those signals.⁶ Similarly, Microsoft urges the Commission to allow an infinite quantity of unlicensed devices into the television broadcast spectrum, with little or no controls to prevent interference to over-the-air viewers. As described below and in other proceedings, MSTV respectfully requests that the Commission reject such proposals and focus instead on fostering a successful conclusion to the digital transition.

³ See, e.g., Glen Bischoff, *Datacasting in Public Safety’s Future?*, Mobile Radio Technology, at 8 (March 1, 2005)

⁴ Wireless Broadband Access Task Force, *Report*, GN Docket No. 04-163, at 1 (rel. Feb. 2005) (“*Report*”).

⁵ Comments of QUALCOMM Inc., GN Docket No. 04-163 (filed April 22, 2005) (“QUALCOMM Comments”).

⁶ See, e.g., *Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television*, 17 FCC Rcd 15978, 15989 (2002) (adopting a DTV tuner mandate).

I. QUALCOMM’S PROPOSAL TO UNDERMINE THE TV/DTV PROTECTION STANDARDS COULD DELAY THE CLEARING OF 700 MHz SPECTRUM FOR OTHER COMMERCIAL WIRELESS AND PUBLIC SAFETY USES.

QUALCOMM’s proposal to allow the existing 700 MHz entrants to interfere with out-of-core television services (including those broadcasting in DTV)⁷ poses a serious risk to consumers’ acceptance of DTV technology, and may delay the clearing of 700 MHz spectrum for use by other wireless providers and public safety agencies.⁸ Along with the National Association of Broadcasters (“NAB”), MSTV has already provided to the Commission extensive engineering and legal analyses concerning the public interest harms posed by QUALCOMM’s proposal, as it was initially set forth in a “Petition for Declaratory Ruling” earlier this year. The MSTV/NAB pleadings, which are attached to these reply comments for reference by the Task Force, explain the principal harms posed by QUALCOMM’s request, which include:

- *Disenfranchisement of Over-the-Air Viewers*: Allowing 700 MHz entrants to create up to two percent new interference to viewers of out-of-core television services would disenfranchise potentially millions of viewers.
 - QUALCOMM’s claim that “the vast majority of” viewers would not be affected by such interference because they “do not watch TV over the air”⁹ ignores the 21 million households that rely *solely* on free, over-the-air

⁷ As MSTV explained in its initial comments to the Task Force’s Report, nationwide there are over 180 stations operating a digital channel outside of the core. Many of these channels are located in populous markets such as Los Angeles, where the ABC, CBS, Fox, and UPN affiliates as well as a noncommercial educational channel all broadcast in DTV from outside the core television spectrum. *See* Comments of MSTV, GN Docket No. 04-163, at 7-8 (filed April 22, 2005) (“MSTV Comments”).

⁸ Specifically, QUALCOMM asks that (1) 700 MHz entrants be allowed to create allegedly “*de minimis*” interference to up to two percent of viewers within a given station’s licensed service contour; (2) a broadcast interference standard, OET-69, be declared an “acceptable” methodology for demonstrating “compliance” with Section 27.60; and (3) new procedures be adopted to overwhelmingly favor grant of 700 MHz applications premised on the unsuitable OET-69 methodology. *See* QUALCOMM Comments, GN Docket No. 04-163, at 16.

⁹ *Id.* at 17.

television¹⁰ and the over ten million cable households that have at least one television set not connected to a pay television service.¹¹ All told, there are an estimated 73 million television sets nationwide that rely solely on over-the-air service.¹²

- The harm could be particularly acute in minority communities. For example, over half of Hispanic households in the Los Angeles DMA rely solely on local broadcasters' free, over-the-air television signals.¹³
- *Inapplicable Engineering Standards*: OET-69 is designed to measure interference from one broadcaster to another broadcaster. QUALCOMM's attempt to use OET-69 for demonstrating a 700 MHz entrant's compliance with the TV/DTV protection requirements of Section 27.60 presents a classic "round peg, square hole" scenario and would not accurately measure the interference potential of proposed 700 MHz systems.¹⁴
- *Interference Risk Heightened by "Streamlined" Procedures*: The streamlined procedures requested by QUALCOMM would further increase the likelihood that a 700 MHz entrant could gain approval for an operation that would fail to fully protect the public's television service.¹⁵
- *Noncompliance with Administrative Procedure Act*: In addition to the substantive harms posed by the requested weakening of the TV/DTV protection standards, grant of QUALCOMM's request would violate the Administrative Procedure Act ("APA") by substantively amending a legislative rule outside of a notice-and-comment rulemaking proceeding. QUALCOMM's claim that it merely seeks "clarification"¹⁶

¹⁰ See *Estimated Cost of Supporting Set-Top Boxes to Help Advance the DTV Transition: Testimony Before the Subcommittee on Telecommunications and the Internet, Committee on Energy and Commerce, U.S. House of Representatives*, Statement of Mark L. Goldstein, Director, Physical Infrastructure Issues, GAO, 7-8 (Feb. 17, 2005) ("GAO Study").

¹¹ *Id.* at 8.

¹² Specifically, there are an estimated 45 million sets in the exclusively over-the-air households and 28 million sets not connected to a pay television service in the households that subscribe to such a service. See Comments of NAB and MSTV, MB Docket No. 04-210, Attachment A (filed Aug. 11, 2004).

¹³ MSTV/NAB Reply Comments at 6, citing Comments of Pappas Southern California License, LLC, WT Docket No. 05-7, at 8 (filed March 10, 2005) ("Pappas Comments").

¹⁴ See, e.g., MSTV/NAB Comments, WT Docket No. 05-7, at 15-17.

¹⁵ As noted by one broadcaster, "QUALCOMM's suggestion of a streamlined procedure ... would make a mockery out of the stringent interference protection afforded to ... broadcast stations." Pappas Comments, WT Docket No. 05-7, at 16.

¹⁶ QUALCOMM Comments, GN Docket No. 04-163, at 16.

of Section 27.60 is baseless: the Commission has made clear that 700 MHz licensees are to “fully protect” the public’s television service from harmful interference during the DTV transition.¹⁷ Furthermore, the Commission has never established a “*de minimis*” interference allowance outside of a notice-and-comment rulemaking.¹⁸

Harmful interference to out-of-core viewers also threatens the progress of the DTV transition, the success of which is crucial to the Task Force’s goals. By weakening the TV/DTV interference protection standards, the Commission would allow 700 MHz entrants the right to prevent viewers from accessing the over 180 DTV stations operating in out-of-core spectrum.¹⁹ With fewer DTV channels available to them, consumers would have less incentive to purchase sets capable of receiving DTV signals.²⁰ These consumers would lose out on the benefits of digital television, including high-definition television and the high-speed data

¹⁷ *Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59)*, 17 FCC Rcd. 1022, 1039 (2001)

¹⁸ When the Commission has allowed “*de minimis*” interference, it has done so strictly in the context of a notice-and-comment rulemaking. For example, the Commission’s amendment of Section 73.623(c), which instituted the two percent/ten percent standard for DTV source interference, was achieved in a properly-constituted rulemaking proceeding. *See Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order*, 13 FCC Rcd. 7418, 7450 (1998).

¹⁹ MSTV Comments, GN Docket No. 04-163, at 7. Although QUALCOMM generally limits its technical discussions to the proposed operation of its MediaFLO service on channel 55, the requested amendment of Section 27.60 could have far-reaching and deleterious effects on over-the-air television services broadcast throughout the 700 MHz spectrum. Indeed, a number of 700 MHz entrants have filed in support of QUALCOMM’s request, and these entrants presumably believe that grant of QUALCOMM’s request would allow them to create harmful interference to viewers of over-the-air television services. *See* Comments of Aloha Partners, L.P., WT Docket No. 05-7, at 3 (filed Feb. 17, 2005); Comments of Access Spectrum, LLC, WT Docket No. 05-7 (filed March 10, 2005); Comments of Corr Wireless Communications LLC, WT Docket No. 05-7 (filed March 10, 2005); Comments of Harbor Wireless, L.L.C., WT Docket No. 05-7 (filed March 10, 2005); Comments of Motorola, Inc., WT Docket No. 05-7 (filed March 10, 2005); Comments of the 700 MHz Advancement Coalition, WT Docket No. 05-7 (filed March 10, 2005).

²⁰ As MSTV noted in its initial comments in this proceeding, the Commission should also take note that the potential for interference from these services is not limited to base station operations. That is, Section 27.60 of the rules was not intended to deal with the operation of mobile devices indoors or where these devices operate for long durations as opposed to short-burst duty cycles. *See* MSTV Comments, GN Docket No. 04-163, at 7, n.25.

services made possible by datacasting. Affected markets would suffer a decline in progress towards the 85 percent statutory threshold required for ending the transition (and clearing the 700 MHz spectrum for future wireless uses) in a given market.²¹ Contrary to QUALCOMM's boast that grant of its proposal would yield "far reaching" benefits,²² public safety officials and prospective licensees of the mostly unassigned 700 MHz spectrum would be ill served by it.

II. UNLICENSED DEVICES POSE A STAGGERING INTERFERENCE RISK TO VIEWERSHIP OF FREE, OVER-THE-AIR TELEVISION, ESPECIALLY DURING THE DIGITAL TRANSITION.

Pursuant to an NPRM issued in May 2004, the Commission is considering rules that would allow a limitless quantity of unlicensed devices to proliferate throughout the entire "core" television spectrum during and after the digital transition.²³ Microsoft has used the comment cycle to the Task Force's Report to again advocate adoption of that proposal.²⁴ Yet as MSTV and NAB, along with a diverse range of parties – including Motorola, the Society of Broadcast Engineers, Consumer Electronics Association, Shure, Inc., the National Translator Association, Association of Public-Safety Communications Officials, and QUALCOMM – have explained in that proceeding, such operation would cause considerable interference, especially during the digital transition, and would do so on the *core* television spectrum. The effects of such interference would be to dissuade consumers from purchasing DTV technology and thereby

²¹ 47 U.S.C. § 309(j)(14).

²² QUALCOMM Comments, GN Docket No. 04-163, at 12.

²³ *Unlicensed Operation in the TV Broadcast Bands*, Notice of Proposed Rulemaking, ET Docket No. 04-186, FCC 04-113 (rel. May 25, 2004) ("Unlicensed Devices NPRM").

²⁴ Comments of Microsoft Corp., GN Docket No. 04-163, at 4-5 (filed April 22, 2005) ("Microsoft Comments").

prolong the digital transition and clearing of out-of-core spectrum for future uses. Indeed, when the Commission opened the unlicensed devices proceeding, then-Commissioner Martin expressed concern that “opening this inquiry into the TV broadcast bands at this time may create additional uncertainty and potentially delay the digital transition.”²⁵

The attached pleadings filed last year by MSTV and NAB describe a myriad of problems with the unlicensed devices proposal, including the:

- inability of unlicensed devices to reliably and consistently determine whether a television channel is vacant, in large part because the “spectrum sensing” techniques touted by the proposal’s supporters are underdeveloped, unproven and untested.
- failure of the proposal to provide a feasible enforcement mechanism to locate and shut down interfering devices.
- lack of “white space” outside of unpopulated areas during the DTV transition.
- disruption to the ongoing and carefully-developed DTV channel election and repacking process, which will not conclude until late 2006 at the earliest.
- likely derailment of the Commission’s planned conversion of 2,100 licensed LPTV and 4,700 licensed television translator stations to DTV.²⁶
- potential to raise the spectral noise floor to the point that *no* reliable communications will be possible in the affected spectrum (*i.e.*, there are no limits on the number of unlicensed devices which could occupy the spectrum).
- failure to consider the relative benefits of *licensed* “white space”

²⁵ *Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, Notice of Inquiry, 17 FCC Rcd 17003 (2002) (Separate Statement of Commission Kevin J. Martin, Approving in Part and Dissenting in Part); *see also* Unlicensed Devices NPRM, Statement of Commissioner Jonathan S. Adelstein (“[I]t is worrisome that we are undertaking this proceeding right in the middle of our important digital television transition. I have lingering concerns about the wisdom of allowing unlicensed operations in the vacant television bands before the DTV transition is complete, and I encourage commenters to fully address this timing issue and any problems that it creates.”).

²⁶ Report and Order, *Amendment of Parts 73 and 74 of the Commission’s Rules to Establish Rules for Digital Low Power Television, Television Translator, and Television Booster Stations and to Amend the Rules for Digital Class A Television Stations*, MB Docket 03-185, FCC 04-220 (rel. Sept. 30, 2004), ¶1 (Digital LPTV Order).

In response to the grave dangers posed by the unlicensed devices proposal, especially to the digital transition, MSTV has spearheaded the Coalition for Spectrum Integrity (“COSI”), a coalition of trade associations, organizations, businesses, manufacturers, and public safety organizations in the broadcast, cable, commercial wireless, and wireless microphone industries (among others). As COSI recently documented in the attached letter to Sen. Ted Stevens, Chairman of the Senate Commerce Committee, adoption of the unlicensed devices proposal “will undermine the digital transition” and “result in adverse consequences that would far outweigh any potential benefits from permitting unlicensed interfering devices” in the broadcast television spectrum.²⁷

Commenters to the Task Force’s Report have reiterated many of COSI’s concerns. For example, the Wireless Communications Association International, Inc., a trade association of the wireless broadband industry, urges that the Commission “assure incumbent licensees that changes in Commission rules and policies will not compromise their ability to provide consumers the high quality of service, that the marketplace is increasingly demanding.”²⁸ And QUALCOMM expresses a “strong belief” that “if there are vacant channels in licensed spectrum, such as in the TV bands ... the Commission should auction licenses for the spectrum rather than giving the spectrum away, particularly to the large companies who are seeking it.”²⁹

Moreover, in a separate proceeding concerning service rules for the 3650-3700 MHz spectrum, Intel – which has previously advocated adoption of the TV unlicensed devices

²⁷ Letter from the Coalition for Spectrum Integrity to the Honorable Ted Stevens, Chairman, Senate Committee on Commerce, Science and Transportation, April 8, 2005.

²⁸ Comments of the Wireless Communications Association International, Inc., GN Docket No. 04-163, at 6 (filed April 22, 2005).

²⁹ QUALCOMM Comments, GN Docket No. 04-163, at 18.

proposal – acknowledged that “‘listen before talk,’ or sensing, techniques only work well for short range, low power applications: they do not work well for long range, high power services.”³⁰ Yet proponents of the unlicensed devices proposal have made clear that they would use the broadcast spectrum to deploy very *long-range* applications.³¹

In light of the many problems posed by the unlicensed devices proposal, the Commission should not allow unlicensed devices into the television broadcast spectrum during the digital transition. If the Commission were to proceed with that proposal, it would face a tension between two competing goals: the promotion of a successful transition to digital television (including the clearing of out-of-core spectrum for future wireless broadband uses) and the opening up of spectrum below 1 GHz to new uses. By attempting to achieve both goals simultaneously, the Commission risks failure on both fronts. Instead, it should focus on bringing the digital transition to a successful conclusion and, only then, on any potential new shared uses of the television broadcast spectrum.

³⁰ Letter from Peter Pitsch, Director – Communications Policy, Intel Corp., to Marlene H. Dortch, Secretary, FCC (filed March 3, 2005).

³¹ *See, e.g.*, Comments of Microsoft Corp., ET Docket Nos. 02-380 and 04-186, at 6 (filed Nov. 30, 2004) (alleging that “some [unlicensed] WISP signals could travel over 31 kilometers” using the television broadcast spectrum).

CONCLUSION

Proposals that would allow wireless entrants to interfere with reception of over-the-air DTV signals threaten the progress of the DTV transition and the corresponding return of out-of-core spectrum for public safety and commercial wireless uses. MSTV thus respectfully requests that the Commission (1) dismiss the "Petition for Declaratory Ruling" in which QUALCOMM seeks a reduction of the TV/DTV interference protection standards of Section 27.60 and (2) issue an Order unequivocally rejecting any proposal to introduce unlicensed devices into the broadcast spectrum during the DTV transition and deferring any consideration of new shared uses for the broadcast spectrum until after the transition is complete.

Respectfully Submitted,



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April 22, 2005