

Before the  
Federal Communications Commission  
Washington, D C 20554

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In the Matter of )  
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Qualcomm Incorporated Petition for ) WT Docket No 05-7  
Declaratory Ruling )

ORDER

Adopted: October 12, 2006

Released: October 13, 2006

By the Commission Chairman Martin and Commissioner Copps issuing separate statements

I INTRODUCTION

1 On January 10, 2005, Qualcomm Incorporated (Qualcomm) filed a Petition for Declaratory Ruling (Petition) seeking clarification of certain rules and the establishment of a streamlined review process in order to accelerate the deployment of new services in the 700 MHz Band before the end of the digital television (DTV) transition<sup>1</sup> For the reasons discussed below, we grant in part and deny in part Qualcomm's request for declaratory ruling regarding the interference protection requirements applicable to the 700 MHz Band As Qualcomm requests, we declare that Office of Engineering and Technology Bulletin No 69 (OET-69), with certain modifications, is an acceptable methodology for making alternative showings for Qualcomm's MediaFLO system pursuant to the section 27.60(b)(1)(iii)<sup>2</sup> provision for demonstrating compliance with incumbent broadcaster protection requirements<sup>3</sup> We decline to establish through declaratory ruling a *de minimis* exception to the section 27.60 interference protection criteria However, we find it in the public interest to grant a waiver to Qualcomm providing a measured approach towards the requested *de minimis* interference exception, whereby the percentage of permissible interference incrementally increases each year from the release of this order until the end of the DTV transition Finally, we deny Qualcomm's request for a declaratory ruling establishing streamlined processing for our review of OET-69 interference protection showings

II BACKGROUND

2 In the Lower 700 MHz Band, the Commission divided the 48 megahertz of spectrum into several blocks of both paired and unpaired spectrum to accommodate a potential range of new fixed, mobile and broadcast services and technologies Specifically, the spectrum was divided into five blocks based on two different architectures (1) three 12-megahertz paired blocks consisting of two 6-megahertz segments (Blocks A, B, and C), and (2) two 6-megahertz unpaired blocks consisting of contiguous

<sup>1</sup> Qualcomm Incorporated Petition for Declaratory Ruling (filed Jan 10, 2005)

<sup>2</sup> 47 C F R § 27.60(b)(1)(iii)

<sup>3</sup> See "OET Bulletin No 69, Longley-Rice Methodology for Evaluating TV Coverage and Interference," Office of Engineering and Technology, Federal Communications Commission (Feb 6, 2004) (OET-69) OET-69 is an engineering methodology developed to evaluate TV coverage and interference, using predictions of radio field strength at specific geographic points while accounting for the terrain between the transmitter and each specific reception point

spectrum (Blocks D and E)<sup>4</sup> Unlike the commercial spectrum in the Upper 700 MHz Band, the Commission established multiple Lower 700 MHz Band blocks based on units of 6 megahertz given the specific support in the record from, among others, broadcast interests<sup>5</sup> Furthermore, the Commission established the two 6-megahertz unpaired blocks in order to “allow for development and deployment of certain services including new broadcast services that do not depend on paired frequencies”<sup>6</sup>

3 The Commission determined that the band plan in the Lower 700 MHz Band should include a combination of licenses to be assigned over small geographic areas and large regional areas For the two 6-megahertz unpaired blocks, the Commission adopted large, regional Economic Area Groupings (EAGs)<sup>7</sup> Qualcomm acquired licenses for five EAGs in Auction 49 and subsequently acquired the license for the sixth EAG by assignment from the original licensee Accordingly, Qualcomm is the licensee of all six EAGs that were auctioned as “Block D” in the Lower 700 MHz band Qualcomm’s wholly-owned subsidiary, MediaFLO, intends to deploy and operate a nationwide mobile multimedia network, delivering video, audio and data content to third-generation mobile phones<sup>8</sup> MediaFLO uses Qualcomm’s FLO (Forward-Link Only) technology, and is designed to use Qualcomm’s spectrum license as a base station transmit block (downlink), while MediaFLO subscribers use their mobile devices to transmit back using existing CDMA spectrum (uplink)<sup>9</sup> According to Qualcomm, MediaFLO will support between 50 and 100 national and local content channels, available via either real-time viewing, or “clip-casting,” where content streams into each mobile device’s storage for later viewing<sup>10</sup> The MediaFLO signal would be transmitted at up to 50 kilowatts Effective Radiated Power (ERP)<sup>11</sup> Since Qualcomm is licensed on Channel 55, it must protect TV/DTV broadcasters on Channels 54, 55 and 56 in each of its respective markets, pursuant to the interference criteria of section 27.60,<sup>12</sup> which serves to protect both incumbent TV and DTV broadcasters before completion of the DTV transition

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<sup>4</sup> See Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), *Report and Order*, 17 FCC Rcd 1022, 1053-54 ¶ 76 (2002) (*Lower 700 MHz Report and Order*)

<sup>5</sup> *Id.* at 1055 ¶ 80 At that time, the designation of 6 megahertz blocks was compatible with the interests of incumbent broadcasters, which also operate on 6 megahertz channel blocks, and was intended to minimize incumbency problems, though such problems will become moot at the end of the digital television (DTV) transition when the spectrum is cleared of TV/DTV broadcast stations

<sup>6</sup> *Id.* at 1056-57 ¶ 84

<sup>7</sup> *Id.* at 1059-60 ¶¶ 91, 93

<sup>8</sup> Petition at 4

<sup>9</sup> Petition, Att B at 1

<sup>10</sup> Petition at 5

<sup>11</sup> See Letter from Dean R. Brenner, Senior Director, Government Affairs, Qualcomm Incorporated to Marlene Dortch, Secretary, FCC, *Ex Parte* in WT Docket No. 05-7 (filed June 29, 2005) Qualcomm’s Petition assumed that, consistent with the Commission’s Part 73 rules, MediaFLO could operate at 50 kilowatts ERP in both the horizontal and vertical polarizations However, in this subsequent *ex parte*, Qualcomm amended its methodology, consistent with Part 27, to reflect operation at 25 kilowatts ERP in *each* polarization (horizontal and vertical), so that the sum of each polarization equals 50 kilowatts ERP According to Qualcomm, this change means that the signal strength of MediaFLO’s transmitters will be 3 dB less at any point than was assumed in the initial Petition *Id.*

<sup>12</sup> See 47 C.F.R. § 27.60

4 Section 27.60 of the Commission's rules sets forth the protection criteria for base, fixed, control and mobile transmitters operating in the 698-764 MHz and 776-794 MHz frequency bands, in order to reduce the potential for interference to public reception of existing TV/DTV broadcast stations transmitting on Channels 51 through 68.<sup>13</sup> Specifically, section 27.60(a) requires a minimum desired signal-to-undesired signal ratio (D/U ratio) of 0 dB at the hypothetical Grade B contour of an adjacent-channel analog TV station, and 40 dB at the hypothetical Grade B contour of a co-channel analog TV station.<sup>14</sup> Additionally, section 27.60(b) references specific minimum geographic separations that must be maintained between a 700 MHz licensee's transmitter and an incumbent broadcast station.<sup>15</sup> Under section 27.60(b)(1)(iii), 700 MHz band licensees may demonstrate compliance with the Commission's TV/DTV protection criteria by submitting an engineering study justifying geographic separations that are less than the rule otherwise requires based upon the authorized or applied for parameters of the broadcast station and the actual parameters of the land mobile station.<sup>16</sup>

5 In its Petition, Qualcomm first seeks clarification that OET-69 is an acceptable basis for demonstrating compliance with section 27.60. Qualcomm argues that, for use in the engineering demonstration, OET-69 is appropriate because (1) the broadcast community is familiar with OET-69, (2) it is the required methodology for evaluating digital LPTV and TV translator station applications, (3) it is appropriate for analyzing the particular technology Qualcomm intends to deploy, and (4) identifying a particular acceptable methodology will speed the deployment of 700 MHz services.<sup>17</sup>

6 Second, Qualcomm requests that the Commission declare that, for purposes of making engineering showings pursuant to section 27.60(b)(1)(iii), predicted interference to not more than two percent of the population served by a TV/DTV station is *de minimis* and therefore acceptable.<sup>18</sup> Qualcomm notes that, under section 73.623 of the Commission's rules, predicted interference from a DTV station to not more than two percent of the population served by another DTV or TV broadcast station is considered *de minimis*, and argues that the same standard should apply to showings made pursuant to section 27.60.<sup>19</sup> Qualcomm also claims that the public will benefit from such a determination through increased availability of new wireless services, while any interference caused will be minimal and temporary.<sup>20</sup> Further, Qualcomm contends that the actual number of viewers affected by even the full allowance of *de minimis* interference will be significantly smaller than two percent, since most viewers of any affected station receive service via cable or satellite.<sup>21</sup>

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<sup>13</sup> *Id*

<sup>14</sup> 47 C.F.R. § 27.60(a). The hypothetical Grade B contour encircles the incumbent broadcast station at a distance of 88.5 km (55 miles). *Id*. Section 27.60(a) also requires a minimum D/U ratio of -23 dB at the equivalent hypothetical Grade B contour (41 dBu) of an adjacent-channel DTV station, and 23 dB at the equivalent hypothetical Grade B contour of a co-channel DTV station. *Id*.

<sup>15</sup> 47 C.F.R. § 27.60(b).

<sup>16</sup> 47 C.F.R. § 27.60(b)(1)(iii).

<sup>17</sup> Petition at 13-15.

<sup>18</sup> *Id* at 18.

<sup>19</sup> *Id*.

<sup>20</sup> *Id* at 19.

<sup>21</sup> *Id*.

7 Third, Qualcomm requests that the Commission establish streamlined processing procedures for OET-69 showings, including a rebuttable presumption that such showings are sufficient when no objections are filed with the Commission<sup>22</sup> Specifically, Qualcomm proposes that whenever a 700 MHz licensee shows compliance based on OET-69 in a given market, the burden should shift to any objector to show within a 14-day comment period that the licensee's proposed operation will not comply with the applicable protection requirements<sup>23</sup> Absent any objection, Qualcomm argues, the next weekly Public Notice should indicate acceptance<sup>24</sup>

8 On January 18, 2005, the Wireless Telecommunications Bureau's (Bureau) Mobility Division (Division) sought comment on the Qualcomm Petition<sup>25</sup> Several parties largely representing the interests of 700 MHz licensees filed supporting comments,<sup>26</sup> while parties largely representing the interests of broadcasters filed opposing comments<sup>27</sup>

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<sup>22</sup> *Id.* at 23

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

<sup>25</sup> Pleading Cycle Established for Qualcomm Incorporated Petition for Declaratory Ruling, WT Docket No. 05-7, *Public Notice*, 20 FCC Rcd 1293 (2005) Pursuant to a request from the Association for Maximum Service Television (MSTV) and the National Association of Broadcasters (NAB), the Bureau extended the deadlines for comments and reply comments in order to afford more time for interested parties to develop complex legal analyses and engineering studies See Qualcomm Incorporated Petition for Declaratory Ruling, WT Docket No. 05-7, *Order*, 20 FCC Rcd 3594 (2005) Accordingly, comments were due March 10, 2005, and reply comments were due March 25, 2005 We also note that on November 1, 2005, the State of New York (New York) filed a request for waiver of section 90.545 of the Commission's rules, an analogous provision to section 27.60, that requires 700 MHz public safety licensees to protect incumbent TV/DTV broadcasters On January 26, 2006, the Bureau sought comment on the New York request for waiver and specifically asked commenters whether the waiver was "an appropriate vehicle for considering approval of a system that is allowed to cause some amount of predicted interference to TV and DTV service, or whether this issue should be considered first in another context, such as the broader Qualcomm request that is pending before the Commission" See *Wireless Telecommunications Bureau Seeks Comment on Request for Waiver of Television Interference Rules by the State of New York to Implement a 700 MHz Public Safety Communications System*, WT Docket No. 06-18, *Public Notice*, 21 FCC Rcd 336 (2006) While generally similar to Qualcomm's request in that relief from broadcaster protection criteria is sought, New York's request differs from Qualcomm's in certain key procedural and technical respects as follows (1) New York seeks a waiver to implement 99 specific sites that in the aggregate it contends will cause "*de minimis*" interference to not more than one percent of the population served by each co-channel or adjacent channel TV/DTV station in the New York City area; (2) New York's estimates incorporate a reduction in population figures for cable/satellite penetration rates and viewer ratings; and (3) New York proposes to deploy a relatively low power, narrowband two-way mobile system Because we are acting on Qualcomm's request as a waiver rather than a declaratory ruling establishing a *de minimis* interference exception, we do not find it appropriate to incorporate New York's Request for Waiver into this proceeding

<sup>26</sup> Comments of Access Spectrum, LLC in WT Docket No. 05-7 (filed Mar. 10, 2005) (Access Spectrum Comments), Aloha Partners, L.P., Comments in Support of the Qualcomm Petition for Declaratory Ruling in WT Docket No. 05-7 (filed Feb. 17, 2005) (Aloha Comments), Corr Wireless Communications, L.L.C.'s Comments in Support of Declaratory Ruling in WT Docket No. 05-7 (filed Mar. 8, 2005) (Corr Comments), Comments of Harbor Wireless, L.L.C. in WT Docket No. 05-7 (filed Mar. 10, 2005) (Harbor Wireless Comments), Comments of Motorola, Inc. in WT Docket No. 05-7 (filed Mar. 10, 2005) (Motorola Comments), Comments of the 700 MHz Advancement Coalition in WT Docket No. 05-7 (filed Mar. 10, 2005) (700 MHz Coalition Comments), Aloha Partners, L.P., Reply Comments in WT Docket No. 05-7 (filed Mar. 25, 2005) (Aloha Reply Comments); Reply Comments of the Association of Public Safety Communications Officials-International, Inc. (APCO) in WT Docket No. 05-7 (filed Mar. 25, 2005) (APCO Reply Comments), Reply Comments of the National Public Safety (continued )

9 Finally, Congress recently created greater certainty regarding the availability of unencumbered 700 MHz spectrum for wireless commercial and public safety licensees by establishing a “hard date” of February 17, 2009, by which time incumbent analog broadcasters must vacate the spectrum<sup>28</sup>

### III DISCUSSION

#### A Use of OET-69 as a Methodology to Measure Interference

10 *Petition* Qualcomm requests clarification that the procedure set forth in OET-69 is an acceptable engineering methodology for demonstrating compliance with section 27.60(b)(1)(iii) of the rules which, as indicated above, permits the submission of an engineering study justifying a proposed geographic separation based on actual parameters of the proposed Part 27 station and the actual, or applied for, parameters of the broadcast station<sup>29</sup> Qualcomm submits that it intends to rely upon such a clarification in cases where it is unable to (1) locate transmitters a sufficient geographic distance from the broadcast transmitter to satisfy the geographic separation requirements of section 27.60, (2) satisfy a calculated geographic separation in accordance with the overlapping approach associated with D/U ratios, or (3) obtain written concurrence from the incumbent broadcaster<sup>30</sup>

11 In support of this request, Qualcomm states that the broadcast industry has extensive experience in applying OET-69 in “short-space” scenarios, and the Commission has indicated that OET-69 should be used in evaluating digital LPTV and TV translator applications in lieu of the overlapping contour D/U ratio approach<sup>31</sup> Qualcomm also asserts that the MediaFLO waveform is analogous to the DTV waveform in that the two waveforms “look” similar from an interference perspective, are digital

(Continued from previous page)

Telecommunications Council (NPSTC) in WT Docket No. 05-7 (filed Mar. 25, 2005) (NPSTC Reply Comments), Qualcomm Incorporated, Reply Comments in WT Docket No. 05-7 (filed Mar. 25, 2005) (Qualcomm Reply)

<sup>27</sup> Joint Comments and Informal Objection of the Association for Maximum Service Television, Inc. and the National Association of Broadcasters to the Petition for Declaratory Ruling of Qualcomm Incorporated in WT Docket No. 05-7 (filed Mar. 10, 2005) (MSTV/NAB Comments), Comments of Cox Broadcasting, Inc. in WT Docket No. 05-7 (filed Mar. 10, 2005) (Cox Comments); Comments of Flarion Technologies, Inc. in WT Docket No. 05-7 (filed Mar. 10, 2005); Comments of Pappas Southern California License, L.L.C. in WT Docket No. 05-7 (filed Mar. 10, 2005) (Pappas Comments) Joint Reply Comments of the Association for Maximum Service Television, Inc. and the National Association of Broadcasters to the Petition for Declaratory Ruling of Qualcomm Incorporated in WT Docket No. 05-7 (filed Mar. 25, 2005) (MSTV/NAB Reply Comments), Reply Comments of the Association of Public Television Stations (APTS) in WT Docket No. 05-7 (filed Mar. 23, 2005) (APTS Reply Comments), Reply Comments of Media General, Inc. in WT Docket No. 05-7 (filed Mar. 25, 2005) (Media General Reply Comments); Reply Comments of Pappas Southern California License, L.L.C. in WT Docket No. 05-7 (filed Mar. 25, 2005) (Pappas Reply Comments), Reply Comments of WWWB-TV, Inc. to the Petition for Declaratory Ruling of Qualcomm Incorporated in WT Docket No. 05-7 (filed Mar. 25, 2005) (WWWB-TV Reply Comments) We note that on January 24, 2006, Flarion Technologies, Inc. withdrew its comments on the Petition, which had focused on the application of OET-69 to services outside the scope of relief sought by Qualcomm Letter from Henry Goldberg, Counsel for Flarion Technologies, Inc. to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket No. 05-7 (filed Jan. 24, 2006)

<sup>28</sup> See Deficit Reduction Act of 2005, Pub. L. No. 109-171, 120 Stat. 4 (2006) (DTV Act) Title III of the DTV Act establishes the DTV transition dates

<sup>29</sup> See 47 C.F.R. § 27.60(b)(1)(iii)

<sup>30</sup> Qualcomm Petition at 12

<sup>31</sup> *Id.* at 13

“noise-like” technologies occupying 6 MHz of bandwidth, and are transmit-only systems<sup>32</sup> Accordingly, Qualcomm argues, since OET-69 is appropriate to measure interference between DTV stations, it should likewise be deemed generally appropriate for measuring interference from MediaFLO to broadcast television stations<sup>33</sup> Qualcomm acknowledges that certain adjustments are necessary to account for application of OET-69 in the Part 27 context Specifically, Qualcomm proposes to (1) apply the more conservative Part 27 D/U ratios to the OET-69 methodology, rather than the Part 73 D/U ratios, and (2) include an analysis of the impact of multiple MediaFLO transmitters on co-channel and/or adjacent channel stations, noting that TV-to-TV station OET-69 studies usually assess the impact of a single transmitter on existing stations<sup>34</sup>

12 Comments Opposing commenters argue that OET-69 is not, by design, an appropriate engineering methodology to demonstrate compliance with section 27.60 MSTV/NAB argue that the Commission should reject Qualcomm’s request for a declaration that 700 MHz entrants may use OET-69 to demonstrate MediaFLO compliance with the D/U requirements of section 27.60, stating that the rule does not allow use of OET-69 which, in MSTV/NAB’s view, is “solely a tool for measuring digital television source interference”<sup>35</sup> MSTV/NAB further argue that, whenever the Commission provides for the use of OET-69 to make interference calculations, the Commission’s rules make explicit reference to OET-69, whereas section 27.60 does not<sup>36</sup> MSTV/NAB believe that OET-69 would fail to measure interference from MediaFLO operations because it (1) is a broadcaster-to-broadcaster standard that is fundamentally designed to measure interference between broadcasters when neither is operating within the Grade B contour of the other,<sup>37</sup> (2) does not consider aggregate interference from operation of multiple stations by a 700 MHz licensee,<sup>38</sup> (3) assumes vertical elevation patterns that likely will differ

<sup>32</sup> Qualcomm Reply at 9 Aloha Partners, L P (Aloha) argues that the MediaFLO technology is similar to LPTV, noting that the broadcast community uses OET-69 to evaluate interference *vis-à-vis* digital LPTV and TV translator station applications Aloha Comments at 3 Qualcomm notes that the engineering methodologies used by Access Spectrum and Aloha in their respective requests for waiver are based on the 1986 Stanks Report for analysis of substantially narrower channel bandwidths than Qualcomm’s proposed wider bandwidth MediaFLO technology Qualcomm Petition at 14 n 26

<sup>33</sup> Qualcomm Reply at 9

<sup>34</sup> Qualcomm Petition at 16 The Part 27 D/U ratios for protection of broadcast television service are set forth in section 27.60(a) of the rules, 47 C F R § 26.60(a) The minimum co-channel D/U ratios for Part 27 operation at the edge of a TV station’s service contour are 40 dB for analog stations, 23 dB for DTV stations in channels in the range 52-59, and 17 dB for DTV stations on channels in the range 60-68 The minimum adjacent channel D/U ratios for Part 27 operation at the edge of a TV station’s service contour are 0 dB for analog stations and -23 dB for DTV stations The Part 73 D/U ratios for DTV-to-other TV interference are set forth in section 73.623(c) of the rules, 47 C F R § 73.623(c) The minimum co-channel ratios for modified DTV operations at the edge of a TV station’s service area are 34 dB for protection of analog stations and 15 dB for protection of DTV stations The minimum adjacent channel ratios for modified DTV operations at the edge of a TV station’s service area are -14 dB (lower adjacent channel) and -17 dB (upper adjacent channel) for protection of analog stations and -28 dB (lower adjacent channel) and -26 dB (upper adjacent channel) for protection of DTV stations

<sup>35</sup> MSTV/NAB Comments at 13

<sup>36</sup> *Id.*, citing 47 C F R §§ 73.613, 73.622, 73.623, 73.683, 74.703, 74.705, 74.707 and 74.710

<sup>37</sup> *Id.* at 14 In an Engineering Statement attached to MSTV/NAB’s comments, Cohen, Dippell and Everist (CD&E) (CD&E Engineering Statement) asserts that “OET-69 was designed to predict interference resulting from the introduction of digital television service into the existing analog [television] environment” MSTV/NAB Comments, CD&E Engineering Statement at 4

<sup>38</sup> MSTV/NAB Comments at 16

from the vertical pattern(s) of a 700 MHz licensee's antenna(s),<sup>39</sup> (4) incorporates a propagation model that does not "translate well" to dense urban areas and does not consider service outside a station's protected service contour,<sup>40</sup> and (5) in areas where the desired signal level is equal or greater than the DTV strong signal level, OET-69 should be modified to ignore the receive antenna gain adjustment in the interference calculation<sup>41</sup>

13 Pappas Southern California License, L L C (Pappas) similarly argues that OET-69 was not designed to measure interference from several transmitters inside a television station's service area, and adds that section 27.60 itself establishes D/U ratios for evaluation at the boundary, rather than inside, a television station's service area.<sup>42</sup> Cox Broadcasting, Inc (Cox) and Pappas note that OET-69 is designed to compute signal loss due to distance and natural terrain only, and includes no provision for losses caused by man-made structures.<sup>43</sup> Pappas further argues that OET-69 could also fail to predict interference to a cable television system's headend, which Pappas finds especially significant because Qualcomm is arguing that the effects of MediaFLO would be minimized by the fact that most viewers receive their broadcast signals via cable or satellite.<sup>44</sup> According to Pappas, high signal strength (*i e*, produced by an effective radiated power level up to 50 kW) on Qualcomm's Channel 55 could degrade a

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<sup>39</sup> *Id* MSTV/NAB also predict that Qualcomm's proposal would effectively reduce the protection ratios in section 27.60 by up to 14 dB through the inappropriate use of a receive antenna factor built into OET-69. In its engineering statement submitted with MSTV/NAB's comments, CD&E notes that the vertical antenna pattern employed by Qualcomm's transmitters could be significantly different from the standard vertical antenna pattern used by TV stations. CD&E claims that using a vertical pattern different from the TV station pattern would significantly underestimate interference levels to the public's television service from Qualcomm's service. MSTV/NAB Comments, CD&E Engineering Statement at 9.

<sup>40</sup> MSTV/NAB Comments at 16-17. In particular, they contend that Qualcomm "would have free reign in interfering with viewers outside the contour, thus harming rural viewers who often reside in such areas." *Id.* at 17. CD&E asserts that "OET-69 was not designed to compute interference under strong signal conditions and lacks the appropriate parameters (D/U ratios) to correctly predict interference from co-located or nearby interferers." CD&E contends that the D/U ratios employed in OET-69 are applicable to computing interference at the outer edge of a TV station's service area (the Grade B contour for analog TV, the noise-limited contour for DTV) where weak signal conditions exist, and that those ratios are not adequate to predict interference within the service contour where strong signal conditions predominate. It further argues that using the section 27.60 D/U ratios, which are also based on weak signal conditions at the service area periphery, will lead to erroneous results. MSTV/NAB Comments, CD&E Engineering Statement at 4-6.

<sup>41</sup> MSTV/NAB Comments, CD&E Engineering Statement at 3, Letter from David L. Donovan, President, Association for Maximum Service Television, Inc. to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket No. 05-7, Presentation at 3 (filed Mar. 31, 2006) (MSTV/NAB Mar. 31 *Ex Parte*).

<sup>42</sup> Pappas Reply Comments, attached Engineering Statement prepared by Khanna and Guill, Inc. (K&H Engineering Statement) at 2-3. *See also* MSTV/NAB Comments at 17. Pappas also notes that the Commission recently applied a different engineering methodology (including the "Stanks Report") to a similar case involving a 700 MHz licensee, such that a straight application of OET-69 there would have yielded significantly different results. Pappas Reply Comments, K&G Engineering Statement at 3-4, citing, *e.g.*, Aloha Partners, L.P. Request for Waiver of Section 27.60, *Memorandum Opinion and Order*, 20 FCC Rcd 3744 (2005) (*Aloha Order*) (Application for Review pending).

<sup>43</sup> Cox Comments, CD&E Engineering Statement at 3, Pappas Comments, Khanna and Guill, Inc. (K&G) Engineering Statement at 4.

<sup>44</sup> Pappas Comments at 12-13.

cable headend's ability to receive and discriminate in favor of the broadcaster's signal, resulting in degradation when it is retransmitted to cable subscribers<sup>45</sup>

14 Qualcomm addresses these concerns that OET-69 cannot adequately measure interference under strong signal conditions, including interference from 700 MHz entrants within the Grade B contour of a broadcast station, by noting that the Commission has used OET-69 in granting full service and low power TV broadcast applications seeking authority to place adjacent-channel transmitters within the protected contour of another station<sup>46</sup> Those applications, Qualcomm notes, have used OET-69 analyses relying on the very D/U ratios that MSTV/NAB argue are only applicable along the distant Grade B contour of a broadcaster<sup>47</sup> Concerning the criticism that OET-69 does not account for interference from multiple stations inside an analog TV Grade B or a DTV noise-limited service contour, Qualcomm argues that its solution of using a Root-Sum-Square (RSS) calculation properly accounts for the fact that the overwhelming majority of multiple undesired signals will be uncorrelated due to path diversity and MediaFLO's "noise-like" quality<sup>48</sup> In an *ex parte* submission of March 31, 2006, MSTV submits that while a straight voltage addition of all the interfering signals is a proper technique, it depicts the situation where the signals transmitted from the MediaFLO transmitters are correlated and that an RSS value could be used if these transmitters' signals are determined to be uncorrelated<sup>49</sup> As for the vertical antenna patterns that Qualcomm will actually use, compared with the default vertical antenna patterns inherent in the OET-69 methodology, Qualcomm asserts that it re-computed its sample analyses using the actual MediaFLO antenna patterns and the results are identical under either condition Qualcomm therefore argues that MSTV/NAB's concern is unwarranted<sup>50</sup> With regard to the concern that OET-69 was not

<sup>45</sup> *Id* at 13

<sup>46</sup> Qualcomm Reply at 10 Qualcomm observes that in the Notice of Proposed Rulemaking in the digital low power TV proceeding, the Commission stated that "[o]ur DTV prediction methods and computer model have been used for several years in the processing of applications for DTV and NTSC facilities" See 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 Rules for Digital Class A Television Stations, MB Docket No 03-185, *Notice of Proposed Rulemaking*, 18 FCC Rcd 18365, 18386 ¶ 45 (2003) Qualcomm points to several examples where the Commission evaluated LPTV applications for facilities located within the Grade B contour of an adjacent channel full service TV station, but not co-located with the adjacent channel stations, relying on OET-69 analyses See *Mediacasting, LLC*, Application File No BPTTL - 20030307 ABS (Mar 8, 2004); *MS Communications, LLC*, Application File No BNPTTL - 20000831 CD1 (Apr 24, 2003); and *Cayo Hueso Networks, LLC*, Application File No BMPTTL - 20030627 ABN (Sept 15, 2003) Qualcomm further cites several instances where the Commission evaluated applications for full service stations located within the Grade B contour of an adjacent channel full service station relying on OET-69 analyses See *KNTV License, Inc, Letter*, 19 FCC Rcd 15479 (2004); Amendment of Section 73 622(b), Green Bay, Wisconsin, *Report and Order*, 19 FCC Rcd 19719 (2004); Amendment of Section 73 622(b), Las Vegas, Nevada, *Notice of Proposed Rulemaking*, 14 FCC Rcd 11579 (1999)

<sup>47</sup> Qualcomm Reply at 10

<sup>48</sup> *Id* at 11-12 The RSS method first squares the signal strength levels of the individual signals to be aggregated, adds those values, and takes the square root of the sum Correlation describes the case where the waveform patterns of two or more signals are the same, or essentially the same, and at the instant when they appear at the receive antenna are synchronized or very closely synchronized such that they add together algebraically

<sup>49</sup> MSTV/NAB Mar 31 *Ex Parte*, Presentation at 6 n 9 When signals are correlated, the peaks, lows, and intermediate levels of the individual signals will always coincide and so will add together to be a higher value on a continuous basis The higher resultant signal level in this case is described by the simple linear addition method

<sup>50</sup> Qualcomm Reply at 12-13 In these re-computations, Qualcomm used a Dielectric model TLP12A antenna system with one degree of electrical beam tilt The results of this re-computation are described in the Qualcomm Reply, Attachment A

designed to measure interference outside the analog TV Grade B contour and DTV noise-limited service contour in distant, often rural areas, Qualcomm argues that consideration of such areas is irrelevant within the context of an engineering study filed pursuant to section 27.60, and that Qualcomm only intends to use OET-69 for calculations inside the Grade B contour.<sup>51</sup> Qualcomm argues that the potential for interference to cable headends could be predicted using OET-69 if the location of cable headend receive antennas were known - acknowledging that OET 69 software does not identify cable headend locations - and promises to work with any impacted station to resolve any such interference problem.<sup>52</sup> In a subsequent *ex parte* submission, MSTV argues that it is not true that low power TV stations have been allowed to use the existing D/U ratios and points out that digital low power TV stations must meet a D/U ratio of -12 dB or better, which is significantly more than the D/U ratios specified for TV stations in Part 73 or for 700 MHz licensees in Part 27.<sup>53</sup>

15 Supporting commenters do not advocate the exclusive use of OET-69 for purposes of complying with section 27.60. Corr Wireless Communications, L L C (Corr) views Qualcomm's request as not excluding the use of a different methodology.<sup>54</sup> Aloha and Motorola, Inc (Motorola) argue that the Commission should also sanction compliance with the D/U ratios in the Stanks Report as being sufficient for demonstrating compliance with section 27.60.<sup>55</sup>

16 *Discussion* The Commission adopted section 27.60(b)(1)(iii) in its 2000 *Upper 700 MHz Report and Order*.<sup>56</sup> This rule section was modeled after rule section 90.545(c)(1)(ii),<sup>57</sup> which was adopted in the Commission's 1998 *Public Safety Service Rules Order*<sup>58</sup> and also provides for the submission of an engineering study based on the actual parameters of potentially affected broadcast stations to show compliance with the TV/DTV interference protection criteria for 700 MHz public safety licensees. In the *Lower 700 MHz Report and Order*, the Commission maintained the section 27.60(b)(1)(iii) alternative engineering showing option for licensees, and the protection criteria for analog broadcast stations, while amending certain of the DTV interference protection criteria.<sup>59</sup>

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<sup>51</sup> *Id* at 13-14

<sup>52</sup> *Id* at 15-16

<sup>53</sup> Letter from David L. Donovan, President, Association for Maximum Service Television, Inc. to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket No. 05-7 (filed June 13, 2006)

<sup>54</sup> Corr Comments at 2

<sup>55</sup> Aloha Comments at 3, Motorola Comments at 4. MSTV/NAB criticize the applicability of the Stanks Report in that it is only designed to measure interference from a narrowband signal simulated from a land mobile station to an analog TV receiver. MSTV/NAB Reply Comments at 13. Additionally, they argue that the Stanks Report is outdated as it was based on pre-DTV-era equipment standards. *Id*

<sup>56</sup> See Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *First Report and Order*, 15 FCC Rcd 476 (2000) (*Upper 700 MHz Report and Order*)

<sup>57</sup> 47 C.F.R. § 90.545(c)(1)(ii)

<sup>58</sup> See Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communications Requirements Through the Year 2010, *First Report and Order and Third Notice of Proposed Rulemaking*, 14 FCC Rcd 152, 224 ¶¶ 158 (1998) (*Public Safety Service Rules Order*)

<sup>59</sup> See *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1046-48 ¶¶ 54-57

17 We recognize that section 27.60 does not specify an engineering methodology to be used in studies supporting alternative submissions pursuant to section 27.60(b)(1)(iii), rather, it allows licensees to select the engineering methodology for such studies subject to a determination of acceptability by the Commission. In this regard, we disagree with MSTV/NAB's argument that section 27.60 does not allow use of OET-69 and that any reference to OET-69 must be found in the rule. To the contrary, based upon a careful review of the record and as discussed below, we take this opportunity to clarify that OET-69, with the adjustments proposed by Qualcomm, is an appropriate methodology for making an alternative showing for Qualcomm's MediaFLO system pursuant to section 27.60(b)(1)(iii) to demonstrate compliance with the section 27.60 protection criteria. As Qualcomm observes, OET-69 is an established engineering methodology for making radio field strength predictions relating to the broadcast television service and the Commission and its licensees have substantial experience with its implementation, particularly as it relates to predicting interference to television service from transmitters located both outside and inside of another station's service contour. Given the particular characteristics of MediaFLO signals, which share many similarities to broadcast digital television signals, including a noise-like signature and 6 megahertz bandwidth, we find that use of OET-69 is generally appropriate when analyzing specific applications in markets where Qualcomm seeks to operate during the DTV transition and to demonstrate, pursuant to section 27.60(b)(1)(iii), that it will comply with the applicable D/U ratios set forth in section 27.60.

18 We find that the modifications Qualcomm suggests making to the OET-69 methodology (e.g., reliance on the Part 27 D/U ratios, rather than the Part 73 D/U ratios, and analysis of the impact of multiple MediaFLO transmitters on co-channel and/or adjacent channel stations) will adequately address the differences between MediaFLO and DTV operations. We specifically clarify that to be acceptable for section 27.60(b)(1)(iii) showings for MediaFLO operations, the OET-69 methodology must be modified to incorporate the more conservative D/U ratios set forth in section 27.60, rather than those specified in the standard OET-69 method (which correspond to the D/U ratios for DTV-to-DTV and DTV-to-analog TV protection in section 73.623 of the rules) and to take into account the effects of deployment of multiple transmitters on the incumbent broadcaster.<sup>60</sup> We agree with Qualcomm that it is appropriate to represent the aggregate effect from multiple transmitters (*i.e.*, an increased potential for interference due to the stronger combined signal level of the individual transmissions) using the RSS method. This method is appropriate for combining signals from independent sources that exhibit uncorrelated noise-like signal qualities, such as the MediaFLO transmissions.<sup>61</sup> As MSTV/NAB and Pappas observe, our existing software implementing the OET-69 methodology does not account for the accumulated signals of multiple potential interfering sources. However, Qualcomm has demonstrated modifications to the OET-69 software that allow signals from multiple MediaFLO sources, combined using the RSS method, to be included in the analysis.

19 We are not persuaded by the arguments of MSTV/NAB and Pappas that OET-69 does not provide adequate predictions in situations where the potential interfering signals are located within a station's analog Grade B or digital noise limited contour. It has been known since the start of the DTV transition that DTV receivers are more likely to be susceptible to adjacent channel interference when

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<sup>60</sup> See 47 C.F.R. § 73.623.

<sup>61</sup> Given that the MediaFLO transmitters will generally be located at different distances from receive TV antennas and the fact that there will be differences in the transmitters' operations such that their signals will not be fully synchronized, there should be no correlation of their signals. With uncorrelated signals, the instantaneous power in the signals is not synchronized. In such cases, the peaks, lows, and intermediate levels of the individual signals will add together to be a higher value when both signals are at high levels and cancel each other when one is at a high level and the other is at a low level. The RSS method is appropriate for determining the combined signal level in such cases.

receiving strong signals then they are when receiving weak signals. This is due primarily to the increase in the noise floor of the desired channel caused by the nonlinear distortion generated by all adjacent channel signals appearing at the receiver. MSTV proposes that we evaluate planned MediaFLO operations using adjacent channel D/U ratios for DTV protection that are 3 dB and 5 dB higher than the current value of -23 dB (lower and upper adjacent channel increases in D/U ratio, respectively) at the edge of a station's service contour and 11 dB and 13 dB higher in its strong signal areas.<sup>62</sup> In considering this issue, we first observe that use of OET-69 methodology is an accepted practice for analyses involving interference from other TV transmitters within a station's service contour. In this regard, OET-69 is used in analyzing the interference from adjacent channel full service television stations<sup>63</sup> and from low power television operations.<sup>64</sup> While the adjacent channel D/U ratios used to evaluate potential interference from digital low power TV stations are indeed more restrictive than those applicable to DTV stations, as MSTV observes, those ratios were set by the Commission based on its decision to allow digital low power stations to elect to use one of two out-of-band emission masks, both of which are less restrictive than the mask for full service DTV stations, and to provide additional interference protection for the expected widespread use of co-located LPTV station operations on adjacent channels.<sup>65</sup>

20 We also believe there is merit in Qualcomm's position that there is a large protective margin in the interference that MediaFLO is predicted to cause using the Part 27 D/U ratios and in the additional conservative operational restrictions that will apply to MediaFLO transmitters.<sup>66</sup> In this regard, Qualcomm states that (1) MediaFLO will meet the Part 27 D/U ratios, which are up to 17 dB more protective of TV and DTV stations than the Part 73 D/U ratios, (2) the Part 27 emission mask produces a first adjacent channel side-band power level that is 17 dB below that of a comparable full service DTV signal (up to 8 dB more protective than the DTV-to-DTV requirements), and (3) MediaFLO will use emissions that are even more conservative than the Part 27 emission mask, and (4) MediaFLO will operate with a signal strength that is 3 dB less than the signal assumed in the engineering exhibits to its Petition.<sup>67</sup> We find that the conservative protection margin afforded by the factors Qualcomm mentions will offset most, if not all, of any additional predicted interference impact that would appear if the variable D/U standards suggested by MSTV were used. We similarly find no merit in the arguments of Cox, MSTV/NAB, and Pappas that OET-69 is not suitable for predicting interference in urban areas.

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<sup>62</sup> See MSTV/NAB Mar. 31 *Ex Parte*. The D/U values that MSTV suggests are based on the guidelines in the Advanced Television System Committee's (ATSC) "ATSC Recommended Practice: Receiver Guidelines," Doc. A/74, 18 (June 18, 2004) (ATSC Receiver Guidelines), with an additional 5 dB added to adjust for the differences between the MediaFLO and ATSC transmission technologies and a sliding scale of adjustment from weak to strong levels. We note that the ATSC Receiver Guidelines specify D/U values for weak, moderate, and strong signal levels, and use the same D/U value for the weak and moderate levels (-33 dBm) and a higher value for the strong level (-20 dBm).

<sup>63</sup> See 47 C.F.R. § 73.623.

<sup>64</sup> See 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 Rules for Digital Class A Television Stations, MB Docket No. 03-185, *Report and Order*, 19 FCC Rcd 19331, 19367-68 ¶¶ 102-105 (2004); see also 47 C.F.R. §§ 74.703, 74.705, 74.707.

<sup>65</sup> In this regard, the Commission specified use of the section 73.623(c) D/U ratios for protection of digital low power stations from analog low power stations.

<sup>66</sup> Qualcomm Petition at 16, Letter from Dean R. Brenner, Vice President, Government Affairs, Qualcomm Incorporated to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket No. 05-7 at 3 (filed June 20, 2006).

<sup>67</sup> Qualcomm also claims that MediaFLO will use an emission mask that is even more conservative than the Part 27 emission mask. However, it did not provide any specific technical information about the MediaFLO mask.

because it does not include provisions for losses caused by man-made structures. While there are limitations to the Longley-Rice model used in the OET-69 method, including the fact that it does not specifically account for man-made structures and other urban features, it has nonetheless proven to be a satisfactory model for predicting TV interference in various situations as discussed above. Moreover, these parties have not suggested any alternative approach that might provide improved estimates for urban areas.

21 While we recognize that analysis based on an antenna with a vertical pattern that is different from the standard TV vertical pattern could potentially predict different interference levels, Qualcomm has demonstrated that the difference in practice between the standard assumed vertical pattern in OET-69 and the pattern of the antennas Qualcomm intends to use is not significant and, based upon Qualcomm's further analyses, it appears that the predicted extent of interference using either pattern is virtually identical. We also note that the standard TV vertical antenna pattern used in OET-69 does not represent a specific broadcast TV transmit antenna that stations are expected to use. Rather, the OET-69 vertical pattern represents the patterns of antennas typically used by TV and DTV stations.

22 We find without merit MSTV/NAB's position that the D/U ratios should not be effectively reduced by attenuating the undesired signal due to receive antenna directivity factor in moderate and strong signal conditions.<sup>68</sup> In this case, OET-69 assumes that the receive antenna provides 10 dB of gain to signals in its main beam, *i.e.*, in the direction of desired signals, and provides angular discrimination that reduces this gain for signals that are not in the antenna's main beam, *i.e.*, signals that are to either side or behind the main beam.<sup>69</sup> MSTV/NAB argues that using OET-69 would effectively reduce the section 27.60 protection ratios by up to 14 dB for strong and moderate signal conditions.<sup>70</sup> In its reply comments, Qualcomm observes that a receive signal rejection factor is included in the existing OET-69 methodology for reducing the strength of television signals not in the main beam of a receive antenna. It argues that this assumed receiving antenna discrimination factor should be included in any analysis using the existing methodology irrespective of the interfering source location (either outside or inside of a TV station's service contour) and that this feature of the existing methodology should not be modified for analyzing Qualcomm transmitters.<sup>71</sup> In a later submission, MSTV argues that in TV strong signal areas, the OET-69 methodology should be modified to ignore the receive antenna performance in the interference calculation.<sup>72</sup> It contends that under strong signal levels, indoor reception is likely and the use of an outdoor antenna to compute interference would most likely underestimate the interference caused by Qualcomm transmitters. In a responding *ex parte* submission, Qualcomm argues that MSTV is re-stating an old issue and that Qualcomm's earlier position on this issue is still valid.<sup>73</sup>

23 We are not persuaded to ignore the discrimination characteristics of the assumed standard receive antenna in OET 69 as MSTV suggests. Rather, we conclude that the Qualcomm transmitters should be analyzed in the same manner as a potentially interfering full service DTV station or digital LPTV station for purposes of determining the received interfering signal level. While we understand that

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<sup>68</sup> MSTV/NAB Comments, CD&E Engineering Statement at 7.

<sup>69</sup> OET-69 at 9.

<sup>70</sup> MSTV/NAB Comments, CD&E Engineering Statement at 7.

<sup>71</sup> Qualcomm Reply at 14.

<sup>72</sup> MSTV/NAB Mar. 31 *Ex Parte* at 3.

<sup>73</sup> Letter from Dean R. Brenner, Vice President, Government Affairs, Qualcomm Incorporated to Marlene H. Dortch, Secretary, FCC, *Ex Parte* in WT Docket No. 05-7 at 3, 4 (filed Apr. 3, 2006).

many households in strong signal areas do use an indoor antenna, the indoor antennas they use typically provide some modest level of gain and angular discrimination and many other households in those areas will in fact use an outdoor antenna as assumed in the TV service model<sup>74</sup> In any case, we believe that the conservative operational restrictions of Part 27 and Qualcomm's proposed plan for MediaFLO operation will be sufficient to ensure that OET-69 does not underestimate the potential for interference to DTV service from MediaFLO transmitters resulting from viewer use of less directional antennas in strong signal areas Finally, with respect to Pappas' contention that Qualcomm's use of OET-69 to predict interference will fail to account for interference to cable headends, we note that Qualcomm promises to work with any impacted station to resolve any such problem<sup>75</sup>

## B Creation of a *De Minimis* Interference Threshold

24 *Petition and Comments* Qualcomm requests the Commission to declare that interference to up to two percent of the households within the Grade B contour of a TV broadcast station or noise-limited service contour of a DTV station is *de minimis* and therefore acceptable Qualcomm asserts that despite any nominal interference its proposal may cause, the disruption is temporary, while the effect is to hasten the deployment of 700 MHz services as well as the end of the DTV transition<sup>76</sup> Qualcomm also maintains, together with supporting commenters, that households receiving TV/DTV broadcasts via cable and satellite, rather than over-the-air, should be viewed as reducing the actual impact of the two percent *de minimis* threshold to one-half percent or less of households<sup>77</sup> Additionally, Aloha contends that similar *de minimis* standards have been applied broadly and are more the norm than the exception<sup>78</sup>

25 Opposing commenters argue that a two percent *de minimis* interference threshold should not be available to commercial 700 MHz licensees MSTV/NAB disagree with Qualcomm's reliance on section 73 623(c) to establish that the rule's two percent threshold for DTV source interference should also apply under section 27 60 for commercial spectrum in the 700 MHz Band They argue that the existing two percent *de minimis* standard for DTV source interference was narrowly tailored to promote the DTV transition, and does not apply to other services<sup>79</sup> For example, they note, the Commission's Media Bureau denied a TV station's request to discontinue analog operations even though a mere quarter-percent of the station's viewers receive it over-the-air<sup>80</sup> Additionally, they argue that section 73 623 was

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<sup>74</sup> For example, the typical "rabbit-ear" tunable set-top TV antenna provides gain of 1 to 5 dB See R G Fitzgerald, "Indoor Television Antenna Performance," NTIA Rep 79/28, NBS-9104386 Rep , 1979, see also 47 C F R § 73 686

<sup>75</sup> See *supra* ¶ 14, ¶ 14 n 52

<sup>76</sup> Qualcomm Reply at 21 Qualcomm asserts that its proposal is consistent with the goals stated in a recent report from the Wireless Broadband Access Task Force *Id* at 21-22

<sup>77</sup> Aloha Comments at 4, Corr Comments at 3; 700 MHz Coalition Comments at 8, Qualcomm Reply at 20 Corr further contends that households receiving a protected station via cable or satellite should be removed from interference consideration *vis-à-vis* the protected station, though the burden should be upon the 700 MHz entrant to show that the discounted households do not receive the station over-the-air Corr Comments at 3

<sup>78</sup> Aloha Reply Comments at 3, citing An Inquiry Into the Use of the Bands 825-845 MHz and 870-890 MHz for Cellular Communications Systems, and Amendment of Parts 2 and 22 of the Commission's Rules Relative to Cellular Communications Systems, CC Docket No 79-318, *Memorandum Opinion and Order on Reconsideration*, 89 FCC 2d 58 (1982)

<sup>79</sup> MSTV/NAB Comments at 10-11 See also Pappas Comments at 7

promulgated via a notice-and-comment rulemaking, whereas Qualcomm seeks relief without a rulemaking<sup>81</sup>

26 Opposing commenters also disagree with Qualcomm's argument that the *de minimis* interference threshold can be reduced in practical effect because most viewers subscribe to cable or satellite. They argue that, even so, the routine assumptions of 85 and even 90 percent cable and satellite penetration are often overstated when applied to specific markets.<sup>82</sup> MSTV/NAB note that in some markets, homes not connected to cable or satellite services may reach as high as 40 percent, and over 10 million households that do subscribe to cable have at least one TV set that is not connected to cable.<sup>83</sup> MSTV/NAB additionally argue that whatever cable and satellite penetration may exist today, households cannot be deprived of the ability to cancel subscription services yet still be counted for their interest in over-the-air programming.<sup>84</sup> Cox adds that cable and satellite do not guarantee access to DTV signals because the Commission recently refrained from creating must-carry rights until the DTV transition ends.<sup>85</sup>

27 *Discussion* Qualcomm seeks a Commission declaratory ruling establishing a *de minimis* threshold applicable to all commercial 700 MHz licensees subject to section 27.60. After reviewing the record, we find it more appropriate to analyze Qualcomm's request pursuant to the waiver standard set forth in section 1.925(b)(3).<sup>86</sup> Under this standard, we may grant a waiver if it is shown that "(i) The underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest, or (ii) In view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative."<sup>87</sup> We note that, in the *Public Safety Service Rules Order*, the Commission discussed the purpose of permitting the submission of engineering studies by rule, rather than waiver, under section 90.545 (the rule upon which section 27.60 is based), and stated "[w]e remain concerned, however, that limiting TV/land mobile

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<sup>80</sup> Pappas Comments at 8-9, citing Letter from W. Kenneth Ferree, Chief, Media Bureau to Barry A. Friedman, Counsel for KJLA(TV), Ventura, CA, 20 FCC Rcd 2389 (rel. Feb. 9, 2005). See also Media General Reply Comments at 4.

<sup>81</sup> MSTV/NAB Comments at 9.

<sup>82</sup> For example, according to APTS, the often-cited statistic that 15 percent of U.S. households rely on over-the-air TV reception is actually closer to 19 percent nationwide. APTS Reply Comments at 3, citing *Federal Communications Commission Media Bureau Staff Report Concerning Over-the-Air Broadcast Television Viewers*, 2005 FCC LEXIS 1332, ¶ 7 (2005); Statement of Mark L. Goldstein, United States Government Accountability Office, Testimony Before the Subcommittee on Telecommunications and the Internet, Committee on Energy and Commerce, House of Representatives at 7 (Feb. 17, 2005). For its part, APTS contends that "broadcast-dependent households are more likely than not to be frequent public television viewers." APTS Reply Comments at 4.

<sup>83</sup> MSTV/NAB Comments at 20. See also MSTV/NAB Reply Comments at 7 n. 19.

<sup>84</sup> MSTV/NAB Reply Comments at 9.

<sup>85</sup> Cox Comments at 8, citing Carriage of Digital Television Broadcast Signals: Amendments to Part 76 of the Commission's Rules, CS Docket No. 98-120, *Second Report and Order and First Order on Reconsideration*, 20 FCC Rcd 4516 (2005). As a specific example, Cox notes that its affiliate in Oakland, CA, KTVU-DT, cannot rely on the fact that its full digital signal will be carried on cable. Cox Comments, Engineering Statement at 5. See also MSTV/NAB Comments at 20 n. 56, and accompanying text.

<sup>86</sup> 47 C.F.R. § 1.925(b)(3).

<sup>87</sup> *Id.*

separation to distances specified in a table may prevent public safety entities from fully utilizing this spectrum in a number of major metropolitan areas until after the transition period ends. We believe that it is necessary to provide alternative methods that will give flexibility to public safety entities to locate base stations closer than the distance specified in the separation table without causing excessive interference to TV/DTV stations. Therefore, we conclude that public safety applicants should be allowed to submit engineering studies showing how they propose to meet the appropriate D/U signal ratio at the existing or applied for Grade B service contour. This would permit public safety applicants to take into account intervening terrain and engineering techniques such as directional and down-tilt antennas in determining the necessary separation to provide the required protection.<sup>88</sup> Given the Commission's purpose in permitting the filing of alternative engineering studies to demonstrate rule compliance, we find that Qualcomm requires a waiver to the extent its engineering studies filed pursuant to section 27.60(b)(1)(iii) indicate that its proposed operations do not meet the established section 27.60 distance separations and/or D/U ratios for protecting incumbent broadcasters.

28. After reviewing the record, we find that a waiver of section 27.60 is appropriate for Qualcomm, and we will apply this measured *de minimis* exception to the rule's interference protection requirements in circumstances where Qualcomm files a modification application under a geographic area authorization which provides site-specific technical parameters and a supporting engineering study consistent with the terms of this order. Under section 1.925, we may grant a waiver if it is shown that the standards of either section 1.925(b)(3)(i) or (ii) are met. In this case, we find that Qualcomm has satisfied the first waiver standard of section 1.925. As discussed below, we base this decision on both a public interest analysis of the benefits it will provide and an assessment of the predictive nature of TV/DTV protection requirements. First, we find it in the public interest for this innovative new service offering to be available to consumers. MediaFLO promises to enhance the traditional provision of over-the-air broadcasting with features that include mobility, time-shifting of content, and ubiquitous access to sports and news content including storm warnings and emergency alerts. The MediaFLO technology itself, including broadcast-type transmission of content to multiple receivers simultaneously, may be more cost-effective and spectrum efficient than existing mobile video technologies that rely on a high-speed data stream. Additionally, we recognize that it is in the public interest generally to effect forward-looking policy that drives toward the end-point of the DTV transition, when the 700 MHz Band is cleared of legacy analog TV technology and newer, more efficient and robust applications are available as primary services.

29. We also find, under the first waiver standard, that the underlying purpose of section 27.60 would be frustrated by a strict application of the rule where Qualcomm is able to demonstrate that it would only cause *de minimis* interference to broadcast operations as set forth below. Section 27.60, by its terms, requires 700 MHz licensees to operate in accordance with the rules "to reduce the potential for interference to public reception of the signals of existing TV and DTV broadcast stations"<sup>89</sup>. While opposing commenters argue that broadcast incumbents are entitled to full protection during the DTV transition with certainty that there will be no interference in all circumstances, we note that the applicable interference protection rule section 27.60 (and rule section 90.545 applicable to 700 MHz public safety operation) rely upon required separation distances and D/U ratios that in turn are based upon application of *predictive* engineering models. We further note that although Part 27 does not provide for a specific *de minimis* interference exception,<sup>90</sup> such thresholds have been applied in the broadcast context. For

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<sup>88</sup> *Public Safety Service Rules Order*, 14 FCC Rcd at 224 ¶ 158.

<sup>89</sup> 47 C.F.R. § 27.60.

<sup>90</sup> The Bureau has on two occasions, however, waived section 27.60 to allow for *de minimis* predicted interference to specific television stations by 700 MHz commercial licensees, because there would be either no loss of service, or very little loss of service coupled with a condition that the licensee must cure any actual interference. See (continued )

example, where DTV applicants seek certain technical changes (e.g., replication/maximization), section 73.623 allows for predicted interference from a DTV station of not more than two percent of the population served by another TV/DTV broadcast station, so long as the protected station is not, or will not be, receiving interference in excess of ten percent of its population from all combined interfering stations.<sup>91</sup> In addition, applicants seeking facilities modifications of full-service NTSC (analog TV) stations are permitted to cause a 0.5 percent reduction in service population to DTV service to account for rounding and calculation tolerances. Within the channel allotment process for developing a post-transition DTV allotment table, a DTV station may add interference by as much as 0.1 percent of the population served by another station.<sup>92</sup> These examples demonstrate that the Commission repeatedly has recognized the predictive nature of the interference protection requirements resulting in the possibility of *de minimis* interference.

30. While we conclude that a waiver is appropriate, we also find that a measured approach to granting Qualcomm a waiver of section 27.60 is preferable, whereby the percentage of permissible interference increases each year from the release of this order until the end of the DTV transition. Accordingly, for the first full year after the release of this *Order*, we will consider interference from Qualcomm stations affecting a protected TV/DTV station of up to 0.5 percent of the population within the Grade B contour of a protected TV station or DTV noise-limited service contour, without discounting for cable and satellite penetration, to be *de minimis* and therefore acceptable. For the second year, the *de minimis* exception will be increased to 1.0 percent, and it will be further increased to 1.5 percent for the remainder of the DTV transition. Consistent with the measured approach we have taken in our Part 73 rules where broadcast licensees petition to modify a channel allotment or modify a station assigned to such an allotment, Qualcomm will not be permitted under this waiver to cause new interference to any broadcast facility entitled to protection that already experiences interference to ten percent or more of its

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Access Spectrum, LLC Request for Waiver of Section 27.60, *Memorandum Opinion and Order*, 19 FCC Rcd 15545 (2004) (“*Access Spectrum Waiver Order*”); *Aloha Order*, 20 FCC Rcd 3744. We also note that a 700 MHz licensee may obtain the written concurrence from a broadcaster accepting increased levels of interference, subject to Commission approval. See 47 C.F.R. § 27.60(b)(1)(iv). Qualcomm received such approval for service in Chicago, Illinois. See Letter from Barbara A. Kreisman, Chief, Video Division, Media Bureau, FCC and Roger S. Noel, Chief, Mobility Division, Wireless Telecommunications Bureau, FCC to Jennifer M. McCarthy, Vice President, Regulatory and Market Development, Qualcomm Incorporated (WPZA238, Chicago, IL, ULS File No. 0002395142), 21 FCC Rcd 4093 (rel. April 18, 2006).

<sup>91</sup> 47 C.F.R. § 73.623(c)(2); Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, MM Docket No. 87-268, *Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order*, 13 FCC Rcd 7418, 7450 ¶ 79 (1998). Similarly, DTV stations can cause up to a 0.5 percent reduction in service population to a Class A TV station. See Establishment of a Class A Television Service, MM Docket No. 00-10, *Report and Order*, 15 FCC Rcd 6355, 6387-88 ¶ 78 (2000).

<sup>92</sup> Second Periodic Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television, MB Docket No. 03-15, *Report and Order*, 19 FCC Rcd 18279, 18298-99 ¶ 46 n. 97 (2004). Recently, the Commission indicated that digital LPTV stations could provide predicted interference to full-power TV stations up to a predicted threshold of 0.5 percent (for rounding and calculation tolerance), while noting that digital LPTV stations are secondary to TV/DTV stations and must cure any actual interference. See 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 Rules for Digital Class A Television Stations, MB Docket No. 03-185, *Report and Order*, 19 FCC Rcd 19331, 19367 ¶ 103 (2004).

analog TV Grade B or protected DTV service population or that would result in a station receiving interference in excess of ten percent of its analog Grade B or DTV service population<sup>93</sup>

31 By taking this incremental approach, we balance the public interest benefits of an accelerated deployment in the 700 MHz Band against the importance of sustaining a minimally disruptive transition to DTV for consumers. We note that the DTV transition itself contains among its objectives the freeing up of valuable spectrum resources for innovative new services like MediaFLO. Furthermore, in another context the Commission evinced a forward-looking preference toward those services that are the end-points of the DTV transition, when granting a two percent threshold to DTV stations, while limiting existing legacy analog TV and secondary LPTV stations to a 0.5 percent threshold.

32 With the enactment of a statutory “hard date” setting the end of the DTV transition on February 17, 2009, we find it reasonable to assume that *de minimis* interference from Qualcomm’s operations to analog TV channels 54, 55 and 56 will diminish even further as consumers migrate onto the DTV channels in much greater numbers than we see today. With regard to any digital broadcasts on channels 54, 55 and 56, we note that many if not most DTV stations will continue to simulcast similar or identical analog content on other channels that are not subject to any co-channel or adjacent channel interference from Qualcomm. Accordingly, the potential loss to consumers of a DTV channel may be mitigated by the continued availability of analog programming during the transition. We believe that all of the above supports the incremental application of a *de minimis* exception, which is sufficient for Qualcomm to deploy MediaFLO in many of its target markets prior to the end of the DTV transition.

### C Streamlined Processing of Engineering Studies Filed Pursuant to Section 27.60(b)(1)(iii)

33 *Petition* Qualcomm and its supporting commenters argue that the Commission should adopt streamlined procedures for processing OET-69 interference protection showings. Qualcomm argues that the opposing concerns are overstated, because streamlined procedures would not apply whenever a broadcaster timely opposes the 700 MHz entrant’s request for waiver.<sup>94</sup>

34 *Comments* Corr views the proposal for streamlined processing as consistent with the basic virtue and the proven success of geographic area licensing, which by default does not require site-by-site licensing.<sup>95</sup> This benefit, Corr argues, is effectively lost if the Commission must review and approve each proposed operation on a case-by-case basis.<sup>96</sup> Corr asks the Commission to verify that pre-operational approval is not necessary when a 700 MHz entrant meets the TV/DTV protection standards in section 27.60(b)(1)(i), (ii) or (iv) (*i.e.*, minimum geographic separation, compliance with the minimum D/U ratio, or concurrence from the broadcaster, respectively). Corr concedes that the Commission must assess any showing filed pursuant to section 27.60(b)(1)(iii), but even so, believes that the streamlined procedure will expedite movement of the application and quickly identify valid objections, resulting in a prompt resolution for deployment of service. With respect to streamlined procedures as an accepted practice, Motorola notes that for the Upper 700 MHz Band, the Commission created a presumption that voluntary clearing arrangements are in the public interest if new wireless services are made available to consumers.

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<sup>93</sup> We note that Qualcomm acknowledges that any Part 27 proposal would be further evaluated to determine that the cumulative interference caused to a full service TV or DTV station could not increase if it already receives more than 10% calculated interference. Engineering Exhibit in Support of Petition at 4.

<sup>94</sup> Qualcomm Reply at 23-24.

<sup>95</sup> Corr Comments at 4.

<sup>96</sup> *Id.* at 4-5.

and local communities, who in turn will not lose any broadcast service of some primary or unique nature<sup>97</sup>

35 Opposing commenters argue that the Commission should not establish any streamlined processing procedures for engineering showings from commercial 700 MHz licensees. MSTV/NAB note that the Commission sought comment on streamlining generally for the Lower 700 MHz Band, but declined to adopt forbearance procedures there<sup>98</sup>. They also note that the streamlining sought by Qualcomm would truncate the period within which objections to a 700 MHz entrant's application could be filed, from 30 to 14 days<sup>99</sup>. Pappas argues that shifting the burden to broadcast stations through a rebuttable presumption of *de minimis* interference would be inappropriate, because (1) MediaFLO is a new service, (2) only Qualcomm has full knowledge of the details of its technology, and (3) broadcasters would be forced to use the flawed OET-69 methodology to meet their burden<sup>100</sup>. Pappas counter-proposes a procedure whereby a 700 MHz entrant must, before deploying service, notify any potentially affected broadcast station within the same market at least 60 days before submitting an application to the Commission<sup>101</sup>. If ensuing good-faith negotiations would not resolve a dispute over potential interference, after 30 days the 700 MHz entrant could submit its application (and waiver request, if applicable), and the affected broadcaster could submit its objection to the Commission<sup>102</sup>. The 700 MHz Advancement Coalition, which supports Qualcomm's Petition, similarly contends that 700 MHz entrants should be required, at a minimum, to serve affected broadcast stations with notice, following negotiations that presumably will have occurred well before the filing of an engineering study<sup>103</sup>.

36 *Discussion* Because we resolve Qualcomm's request for a *de minimis* interference exception to section 27.60 through waiver, rather than declaratory ruling, we find adoption of a streamlined process applicable to all filers to be unnecessary. Accordingly, we deny Qualcomm's request for a declaratory

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<sup>97</sup> Motorola Comments at 5

<sup>98</sup> MSTV/NAB Comments at 18, citing Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), GN Docket 01-74, *Report and Order*, 17 FCC Rcd 1022, 1081-1082 ¶¶ 158-160. MSTV/NAB note that no party petitioned the Commission for reconsideration of that decision. MSTV/NAB Comments at 18.

<sup>99</sup> MSTV/NAB Reply Comments at 14, citing 47 C.F.R. § 1.939 (petition to deny may be filed "no later than 30 days after the date of the Public Notice listing the application or major amendment to the application as accepted for filing")

<sup>100</sup> Pappas Comments at 14-17. Pappas also argues that Qualcomm's reliance on forbearance precedent is inapposite to the streamlining that Qualcomm requests. *Id.* at 15-16, citing Federal Communications Bar Association's Petition for Forbearance from Section 310(d) of the Communications Act Regarding Non-Substantial Assignments of Wireless Licenses and Transfers of Control Involving Telecommunications Carriers, and Personal Communications Industry Association's Broadband Personal Communications Services Alliance's Petition for Forbearance for Broadband Personal Communications Services, *Memorandum Opinion and Order*, 13 FCC Rcd 6293 (1998) (*Forbearance Order*). According to Pappas, the streamlining affirmed by the *Forbearance Order* applied to *pro forma* assignments of licenses and transfers of control of licenses, which have no correlation to reviewing complex engineering submissions and assessing real harm to quality of service for broadcasters that are not undergoing assignments or transfers of control. *Id.*

<sup>101</sup> Pappas Comments at 16. Qualcomm disagrees with Pappas's counter-proposal requiring good-faith negotiations before the filing of an application, arguing that such discussions are inevitable and a requirement would be unnecessarily dilatory. Qualcomm Reply at 24.

<sup>102</sup> Pappas Comments at 16-17.

<sup>103</sup> 700 MHz Coalition Comments at 7.

ruling regarding streamlined processing of engineering studies filed pursuant to section 27.60(b)(1)(iii). Because we are granting a waiver to Qualcomm today establishing a *de minimis* interference exception for all such applications, subsequent waiver requests would be duplicative and unnecessary. However, as indicated above, to the extent that Qualcomm seeks to operate within the *de minimis* thresholds established in this order, it will be required to file a Form 601 modification application and appropriate engineering study,<sup>104</sup> which will be placed on Public Notice for comment. We anticipate, however, that any objection to a Qualcomm application and engineering study will focus on whether Qualcomm meets the interference protection requirements, within the *de minimis* thresholds established herein, rather than whether such *de minimis* thresholds are appropriate.

#### D Procedural Ability for the Commission to Grant the Petition for Declaratory Ruling

37 *Comments*. Opposing commenters argue that the Commission cannot grant the requested relief in a declaratory ruling but can only act by notice-and-comment rulemaking. MSTV/NAB argue that granting Qualcomm's Petition would violate Section 553(b) of the Administrative Procedure Act (APA), which requires a notice-and-comment rulemaking to amend an agency's "legislative rule."<sup>105</sup> Section 27.60, they assert, is one such legislative rule, as it was promulgated pursuant to the Commission's general legislative power in 47 U.S.C. § 303.<sup>106</sup> As discussed above, NAB/MSTV argue that section 27.60 does not allow the use of OET-69 which, they contend, is "solely a tool for measuring digital television source interference" and therefore "[i]f the Commission were to grant Qualcomm's request to so use OET-69, it would amend Section 27.60 without proper notice and comment."<sup>107</sup> MSTV and NAB also argue that the Qualcomm Petition seeks to change section 27.60 to allow for up to two percent interference when it currently disallows any interference,<sup>108</sup> and that streamlined processing procedures would substantively amend the existing procedures set forth in section 27.60.<sup>109</sup> Cox argues that the Petition is procedurally flawed and simply amounts to a petition for reconsideration of the service rules initially created for the Lower 700 MHz Band, where Qualcomm had the opportunity to contest the details of section 27.60, but did not.<sup>110</sup>

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<sup>104</sup> In its pleadings, Qualcomm anticipated that, consistent with Commission precedent, a waiver would be necessary anytime the proposed operation would fail to meet the D/U ratios in section 27.60, independent of its engineering showing. See Qualcomm Reply at 22-23.

<sup>105</sup> MSTV/NAB Comments at 5-6, citing 5 U.S.C. § 553(b). MSTV/NAB also note that the Public Notice seeking comment on Qualcomm's Petition was not published in the Federal Register. MSTV/NAB Comments at 7, MSTV/NAB Reply Comments at 20. They point to a recent judicial decision where the D.C. Circuit affirmed the principle that a change to a legislative rule is valid only if it satisfies the notice-and-comment requirements of the Administrative Procedure Act (APA), including publication of notice in the Federal Register. MSTV/NAB Reply Comments at 16, citing *USTA v. FCC*, 400 F.3d 29 (D.C. Cir. 2005).

<sup>106</sup> MSTV/NAB Comments at 6.

<sup>107</sup> *Id.* at 13.

<sup>108</sup> *Id.* at 7. According to MSTV/NAB, this would create a "new right" for Qualcomm and other 700 MHz entrants just as a legislative rule "creates new law or imposes new rights or duties," as explained in *Hobbs v. U.S.*, 947 F.2d 941 (1991). *Id.* at 7 n.17.

<sup>109</sup> *Id.* at 7.

<sup>110</sup> Cox Comments at 5. Cox asserts that no party opposed the provision of full protection to Lower 700 MHz Band television stations during the creation of service rules. *Id.*, citing Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), GN Docket No. 01-74, *Notice of Proposed Rulemaking*, 16 FCC Rcd 7278, 7303 ¶ 52 (2001). APTS and Media General, Inc. also argue that Qualcomm's Petition is (continued )

38 Qualcomm argues that the Commission can grant the requested relief in a declaratory ruling, without a notice-and-comment rulemaking. Qualcomm argues that it is merely seeking clarification that the engineering methodology of OET-69 satisfies the rule, rather than seeking a substantive change to the rule.<sup>111</sup> Qualcomm argues that it is only seeking an interpretation of section 27.60(b)(1)(iii)'s provision for an engineering study to justify any proposed separations that otherwise do not comply with the rule's explicit geographic spacing requirements.<sup>112</sup> According to Qualcomm, if the Commission merely were to declare that an interference threshold of two percent is *de minimis* for the purpose of evaluating such an engineering study, the APA does not require a notice-and-comment rulemaking.<sup>113</sup> Qualcomm argues that streamlined processing would merely amount to a change in "agency organization, procedure or practice" that does not require a rulemaking under section 553(b)(3)(A) of the APA.<sup>114</sup>

39 *Discussion*. We reject opposing commenters' arguments that section 27.60 prohibits use of any particular engineering methodology to demonstrate rule compliance, or that the Commission is without authority to declare that a particular engineering model is acceptable to demonstrate such compliance. We note that section 27.60(b)(1)(iii) provides that 700 MHz band licensees may demonstrate compliance with the Commission's TV/DTV protection criteria by submitting an engineering study justifying geographic separations that are less than the rule otherwise requires based upon the authorized or applied for parameters of the broadcast station and the actual parameters of the land mobile station (emphasis added). Applying NAB/MSTV's reasoning, the submission of any engineering study to demonstrate compliance would be violative because the rule does not identify a specific model as appropriate. Rather than amending section 27.60, we merely interpret the rule to clarify that Qualcomm may use an engineering study based on OET-69 for its MediaFLO system, with the modifications discussed above, to fulfill the engineering study requirement in section 27.60(b)(1)(iii).

40 Additionally, we need not address the parties' arguments that any Commission issuance of a declaratory ruling establishing a *de minimis* interference exception is in violation of the APA, as we address Qualcomm's request for relief in the waiver context. Similarly, we need not address opposing commenters' procedural arguments regarding streamlined processing because we are denying Qualcomm's request for a declaratory ruling establishing such procedures.

#### IV ORDERING CLAUSES

41 Accordingly, IT IS ORDERED that, pursuant to the authority in sections 1, 2, 4(i) and 4(j) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i) and 154(j), and section 1.2 of the Commission's rules, 47 C.F.R. § 1.2, the request for declaratory ruling by Qualcomm Incorporated IS GRANTED IN PART AND DENIED IN PART, subject to the conditions set forth herein.

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procedurally flawed, on the general principle that the Petition seeks a legislative rule change, where a notice-and-comment rulemaking would be the proper avenue for relief. APTS Reply Comments at 2, Media General Reply Comments at 2.

<sup>111</sup> Qualcomm Reply at 4.

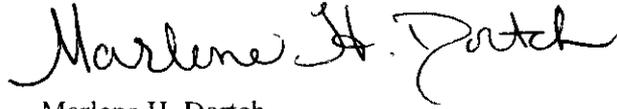
<sup>112</sup> *Id.* at 19.

<sup>113</sup> *Id.*

<sup>114</sup> *Id.* at 22, citing 5 U.S.C. § 553(b)(3)(A). Aloha also contends that there would be no procedural flaw in granting the Petition. See Aloha Reply Comments at 2-3, citing *Radio Athens, Inc. (WATH) v. FCC*, 401 F.2d 398, 404 (D.C. Cir. 1968).

42 IT IS FURTHER ORDERED that, pursuant to the authority in sections 1, 2, 4(i) and 4(j) of the Communications Act of 1934, as amended, 47 U S C §§ 151, 152, 154(i) and 154(j), and section 1 925(b)(3)(i) of the Commission's rules, 47 C F R § 1 925(b)(3)(i), Qualcomm Incorporated IS GRANTED a waiver of section 27 60, 47 C F R § 27 60, subject to the conditions set forth herein

FEDERAL COMMUNICATIONS COMMISSION

A handwritten signature in cursive script that reads "Marlene H. Dortch". The signature is written in black ink and is positioned above the printed name and title.

Marlene H Dortch  
Secretary

**STATEMENT OF  
CHAIRMAN KEVIN J. MARTIN**

*Re Qualcomm Incorporated Petition for Declaratory Ruling (WT Docket No. 05-7)*

This item carefully balances the Commission's goal of furthering wireless broadband deployment and minimizing disruption to broadcasters during the transition to digital television. It allows for the broader deployment of a network that promises to deliver next-generation, live video streams to mobile phones in a nationwide network, and will provide consumers with the potential to experience live video whenever, wherever and however they want it. Our action also promotes efficient and effective use of our valuable spectrum resources that would otherwise lay fallow during the digital transition. At the same time, we limit the potential for interference to incumbent broadcast stations using a measured approach to relief. I am pleased we are able to provide appropriate regulatory relief to encourage the growth of this wireless broadband network and the deployment of an enhanced video service for consumers.

**STATEMENT OF  
COMMISSIONER MICHAEL J COPPS**

*Re Qualcomm Incorporated Petition for Declaratory Ruling (WT Docket No 05-7)*

Let me begin by saying I agree with the Bureau's conclusion that OET-69, with certain modifications, is an acceptable methodology for demonstrating compliance with incumbent broadcaster protection requirements. The modifications strike me as reasonable and appropriate.

The proceeding raised another difficult issue that troubled me. It is the level of permissible predicted interference with broadcasters currently operating in the 700 MHz band. Certainly, I want to take all appropriate steps to enable the petitioner in the above-captioned item to provide its innovative subscription-based mobile video service in advance of the DTV transition. At the same time, we must ensure that this new service does not materially interfere with the ability of broadcasters to provide free, over-the-air programming to their customers (including Spanish language programming in at least one large market). Though I would have preferred stronger protections for broadcasters currently operating in the 700 MHz band, I believe today's decision represents a reasonable compromise that reflects the unique importance of free, over-the-air broadcasting in American life. I especially appreciate the willingness of the Chairman and my colleagues to work with me to reach this result. Thanks to the Bureau and also to OET for helping us sort through this complex issue.