

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

In the Matter of	)	
	)	
Commonwealth of Massachusetts and Sprint Nextel Corporation	)	WT Docket No. 02-55
	)	
Mediation No. TAM-12058	)	

**MEMORANDUM OPINION AND ORDER**

**Adopted: February 3, 2011**

**Released: February 3, 2011**

By the Deputy Chief, Policy Division, Public Safety and Homeland Security Bureau:

**I. INTRODUCTION**

1. In this *Memorandum Opinion and Order*, we address a case referred to us for *de novo* review from Wave 1, Stage 2 mediation by the 800 MHz Transition Administrator (TA). The case involves a dispute between the Commonwealth of Massachusetts (the Commonwealth) and Sprint Nextel Corporation (Sprint) (collectively, the Parties) over the Commonwealth's claim for costs related to the narrowbanding of numerous bi-directional amplifiers (BDAs) located within its Metropolitan Highway System (MHS) tunnels. Based on our *de novo* review of the mediation record, the Recommended Resolution submitted by the TA-appointed mediator (TA Mediator) in this case,<sup>1</sup> and the Parties' position statements, we find in Sprint's favor.

**II. BACKGROUND**

2. The Massachusetts system consists of 52 fixed sites and 16,000 subscriber units serving over 100 agencies throughout the Commonwealth.<sup>2</sup> The *800 MHz Report and Order* and subsequent orders in this docket require Sprint to negotiate a frequency reconfiguration agreement (FRA) with each 800 MHz licensee that is subject to rebanding.<sup>3</sup> Prior to negotiations for an FRA, some licensees first enter into a Planning Funding Agreement (PFA) with Sprint to identify the costs of various rebanding services and equipment, which costs serve as the basis for FRA negotiations.<sup>4</sup> The Commonwealth and Sprint reached a PFA and submitted it to the TA on December 14, 2006. After numerous extensions of the planning period, the Commonwealth submitted a reconfiguration cost estimate to Sprint on December

<sup>1</sup> Recommended Resolution, Mediation No. TAM-12058, June 15, 2009 (RR).

<sup>2</sup> See Proposed Resolution Memorandum of the Commonwealth of Massachusetts, Department of State Police, TAM-12058, May 26, 2009 (Commonwealth PRM).

<sup>3</sup> See Improving Public Safety Communications in the 800 MHz Band, WT Docket 02-55, *Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order*, 19 FCC Rcd 14969, 15021-45, 15069 ¶¶ 88-141, 189 (2004) (*800 MHz Report and Order*); *Supplemental Order and Order on Reconsideration*, 19 FCC Rcd 25120 (2004) (*800 MHz Supplemental Order*); *Memorandum Opinion and Order*, 20 FCC Rcd 16015 (2005) (*800 MHz MO&O*); *Second Memorandum Opinion and Order*, 22 FCC Rcd 10467 (2007); *Third Memorandum Opinion and Order*, 22 FCC Rcd 17209 (2007).

<sup>4</sup> See generally [http://www.800ta.org/content/resources/RFPF\\_Instructions.pdf](http://www.800ta.org/content/resources/RFPF_Instructions.pdf).

8, 2008. After the TA mediator determined that the Commonwealth's cost estimates were not sufficiently complete to serve as the starting point for good faith negotiations, the Commonwealth filed a revised cost estimate on January 7, 2009. The TA Mediator then issued a Notice of Commencement of Negotiation for an FRA on January 14, 2009.<sup>5</sup>

3. Although the Parties' negotiations for an FRA successfully resolved most disputed issues,<sup>6</sup> it became apparent to the TA mediator, after several conferences with the Parties, that they had reached an impasse on the issue of narrowbanding bi-directional amplifiers (BDAs) installed in the Commonwealth's vehicular tunnels as discussed *infra*. The TA Mediator therefore directed the Parties to file Proposed Resolution Memoranda (PRMs).<sup>7</sup> On June 15, 2009, the TA Mediator forwarded the record and a Recommended Resolution to the Public Safety and Homeland Security Bureau (Bureau) for *de novo* review.<sup>8</sup> The Commonwealth and Sprint filed Statements of Position on June 29, 2009.<sup>9</sup>

### III. DISCUSSION

#### A. Standard of Review

4. The Commission's orders in this docket assign the Commonwealth the burden of proving that the funding it has requested is reasonable, prudent, and the "minimum necessary to provide facilities comparable to those presently in use" (Minimum Cost Standard).<sup>10</sup> The Commission subsequently clarified that the term "minimum necessary cost" does not mean the absolute lowest cost under any circumstances, but the "minimum cost necessary to accomplish rebanding in a reasonable, prudent, and timely manner."<sup>11</sup> The Minimum Cost Standard thus takes into account not only cost, but all of the objectives of the proceeding, including completing the rebanding process in a timely and efficient manner, minimizing the burden that rebanding imposes on public safety licensees, and facilitating a seamless transition that preserves public safety's ability to operate during the transition.<sup>12</sup>

#### B. Narrowbanding of Bi-Directional Amplifiers

5. The Commonwealth claims that its BDAs are the only practical means of providing full coverage from its system in the MHS tunnels. As presently configured, the BDAs operate on a "wideband" basis, *i.e.*, they receive, amplify, and retransmit all 800 MHz band signals. The Commonwealth asserts that it will be provided with comparable facilities, post-rebanding, only if Sprint pays for the installation of narrowband filters for the BDAs so that the devices pass only public safety

<sup>5</sup> See Fifth Recommended Resolution and Renewed Request for Waiver, February 2, 2009, at 2-3.

<sup>6</sup> Disputed costs related to the replacement of subscriber units were initially subject to mediation. However, the Parties resolved that issue prior to the end of the pleading cycle. See RR at 3.

<sup>7</sup> See Commonwealth PRM; Proposed Resolution Memorandum of Nextel Communications, Inc., TAM-12058, May 15, 2009, (Sprint PRM); Reply of Nextel Communications, Inc. to the Proposed Resolution Memorandum of the Commonwealth of Massachusetts, TAM-12058, June 3, 2009, (Sprint Reply).

<sup>8</sup> RR at 3.

<sup>9</sup> Request for *De Novo* Review and Statement of Position of the Commonwealth of Massachusetts, TAM-12058, June 29, 2009 (Commonwealth SOP); Statement of Position of Nextel Communications, Inc., TAM-12058, June 29, 2009 (Sprint SOP).

<sup>10</sup> *800 MHz Report and Order*, 19 FCC Rcd at 15074 ¶ 198; *800 MHz Supplemental Order*, 19 FCC Rcd at 25152 ¶ 71 (2004).

<sup>11</sup> *Improving Public Safety Communications in the 800 MHz Band*, WT Docket 02-55, *Memorandum Opinion and Order*, 22 FCC Rcd 9818, 9820 ¶ 6 (2007).

<sup>12</sup> *Id.* at 9820 ¶ 8.

frequencies. The estimated cost of acquiring and installing the filters is \$142,000. Sprint contends that the Commission's established comparability standards do not require it to pay this cost.<sup>13</sup>

6. *Sprint Position* Sprint contends that the Commonwealth has "... an imprecise understanding of the goal of 800 MHz reconfiguration. While the overall goal of the program is to reduce interference to public safety communications operating in the 800 MHz band, the program does not require [Sprint] to upgrade a licensee's facilities merely because providing that upgrade would reduce potential interference."<sup>14</sup> Sprint asserts that the Commission's reconfiguration orders only require it to ensure that licensees have comparable facilities once re-located to new frequencies.<sup>15</sup> Additionally, Sprint states that the Commonwealth has used the wrong time benchmark in its comparable facilities arguments. Thus, while the Commonwealth argues that Sprint must restore the interference environment that existed before commercial cell phone service was initiated in the tunnels in November, 2008, Sprint contends that, under the Commission's comparability standards, it is not responsible for remedying problems of potential interference that existed pre-reconfiguration. Rather, Sprint claims that, if the BDAs passed all 800 MHz frequencies before band reconfiguration, and pass all 800 MHz frequencies after band reconfiguration, the pre- and post-reconfiguration facilities are "comparable" within the Commission's definition of comparable facilities.<sup>16</sup>

7. Sprint further contends that the interference concerns expressed by the Commonwealth are hypothetical and that the record lacks any evidence of actual interference.<sup>17</sup> It discounts the report provided by the Andrew Corporation – "Interference Analysis for Central Artery Tunnel Wireless Communications System." (Andrew Report) – because it only addresses recommendations for reducing interference in the event it occurs in the future.<sup>18</sup> Sprint similarly discounts the Commonwealth's in-house study – "800 MHz Rebanding -Metropolitan Highway System Tunnel RF Boosters" (White Paper) – because it forecasts interference to occur only under a "worst case" catastrophic scenario.<sup>19</sup>

8. Sprint also argues that that it is not required to pay for narrowband filters to mitigate potential interference from its cellular-architecture system to the Commonwealth's BDAs, because the Commission's interference mitigation rules are couched in terms of "actual," not theoretical, interference.<sup>20</sup> Sprint also claims that the potential for interference will lessen, post-reconfiguration, because Sprint's operations in the interleaved portion of the 800 MHz band will be relocated to the upper ESMR band - which is spectrally separated from the Commonwealth's post-reconfiguration frequencies. Finally, Sprint argues that interference to the Commonwealth's system is unlikely because the Commission's rules make Sprint subject to strict out-of-band emission limitations and interference abatement procedures.<sup>21</sup>

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<sup>13</sup> *Id.* at 3-4.

<sup>14</sup> *See* Sprint PRM at 11-12.

<sup>15</sup> *See* Sprint Reply at 2-3.

<sup>16</sup> *Id.* at 5-7.

<sup>17</sup> *Id.* at 7-9.

<sup>18</sup> *Id.* at 11-13.

<sup>19</sup> *Id.* at 12-13.

<sup>20</sup> *See* Sprint SOP at 9-11.

<sup>21</sup> *See* Sprint PRM at 12-13.

9. *The Commonwealth's Position.* The Commonwealth contends that a significant change in the interference environment occurred when cellular service began in the tunnels in November 2008, "severely challenging" the ability of public safety personnel to communicate within the tunnels.<sup>22</sup> In support of this contention, the Commonwealth cites the Andrew Report and the White Paper *supra*. The Andrew Report theorizes that cellular operation in the tunnels will result in intermodulation interference because strong cellular carrier signals will "overdrive" the BDAs.<sup>23</sup> According to the Commonwealth, the White Paper "portrays the real environment during an emergency where cell phone traffic spikes and how the public safety signal will be dangerously attenuated. This can create dead spots at various locations along the BDA network where public safety radios are unusable."<sup>24</sup> The Commonwealth asserts that the TA mediator and Sprint have both neglected to give proper consideration to the Commonwealth's technical interference showings. It argues that the Commission must "examine relevant data and analysis and state a satisfactory explanation between the facts found and the decision made."<sup>25</sup>

10. Asserting that it has sufficiently established that unacceptable interference will exist post-reconfiguration, the Commonwealth then argues that the Commission's interference mitigation rules mandate that Sprint pay for narrowband filters for the tunnel BDA equipment.<sup>26</sup> It contends that Sprint cannot meet its obligations by simply ensuring that the Commonwealth has the same BDA capability pre- and post- rebanding. Rather, it argues that comparability will be achieved only if Sprint pays for reestablishment of the interference environment that existed before cellular service was implemented in the tunnels. The Commonwealth considers this requirement implicit in the Commission's Orders directing that licensees be provided with "comparable technological and operational capability." The Commonwealth argues that it is not sufficient to rely on the interference reporting and mitigation mechanisms that will be in place after its system is reconfigured, stating that Sprint is required to "protect public safety systems during the transition period and to fund the necessary improvements."<sup>27</sup>

11. *Mediator Recommendation.* The TA Mediator determines that Sprint has met its burden of proof under the TA's Alternative Dispute Resolution Plan by demonstrating that Sprint's rebanding proposal, which does not include narrowbanding of the tunnel BDAs, would provide the Commonwealth with comparable facilities post-reconfiguration.<sup>28</sup> In making this determination, the Mediator notes that the Commonwealth has shown only that, "post-reconfiguration, it *may* experience interference from the cellular systems operating in the tunnels, especially Sprint Nextel's."<sup>29</sup> The TA Mediator rejects the Commonwealth's claim that narrowband filters are necessary because of the "strict responsibility" imposed on commercial carriers by the Commission's Rules to abate interference" and, instead, finds the matter governed by the Commission's comparability standard. The TA Mediator also notes that the

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<sup>22</sup> See Commonwealth PRM at 19.

<sup>23</sup> *Id.* at 20.

<sup>24</sup> *Id.* at 20-21.

<sup>25</sup> See Commonwealth SOP at 4.

<sup>26</sup> See Commonwealth PRM at 25-26.

<sup>27</sup> *Id.* at 24-26.

<sup>28</sup> RR at 8.

<sup>29</sup> *Id.* at 9, emphasis in original.

Commonwealth concedes that the potential for interference that it complains of “exists today,” *i.e.*, pre-rebanding.<sup>30</sup> The TA mediator thus concludes that:

Contrary to the Licensee’s claims, the appropriate time frame for purposes of determining comparability is not the period before November 2008 (*i.e.*, prior to the time that cellular operators began operations in the tunnels). Rather, comparability must be assessed by reference to the licensee’s current environment, in which the cellular providers are operating in the tunnels. The Commission’s comparable facilities standard does not permit a licensee to select an arbitrary point in time in the past by which to determine comparability.<sup>31</sup>

The TA Mediator also points out that rebanding, itself, which relocates Sprint facilities to the upper portion of the band, and away from the Commonwealth’s facilities, should alleviate much of the Commonwealth’s concern about potential interference. Finally, the TA Mediator notes that, if interference were to occur, the Commonwealth may avail itself of the various interference safeguards and procedures in the Commission’s rules.<sup>32</sup>

#### IV. DECISION

12. We agree with the Mediator’s recommendation. Whatever increase in potential interference may have occurred when cellular operation began in the tunnels was an event unrelated to rebanding. Accordingly, we find both the Andrew Report and the White Paper irrelevant to our decision because: (a) the changed “interference environment” they predict pre-dates rebanding of the Commonwealth’s 800 MHz system and will not change – except likely for the better<sup>33</sup> – post-rebanding; and (b) both reports concern themselves with potential, not actual, interference.

13. It may be, that installation of narrowband filters would improve the interference environment in the tunnels as the Commonwealth asserts. It has failed to show, however, why the cost responsibility for those filters resides with Sprint under the Commission’s comparable facilities standard.<sup>34</sup> There being no nexus between the initiation of cellular operation in the tunnels and rebanding of the Commonwealth’s system, any responsibility for installing narrowband filters in its BDAs rests with the Commonwealth, which, we note, has not yet found it necessary to do so even though its studies predicted that interference would occur when cellular operations began in the tunnels in 2008.<sup>35</sup>

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<sup>30</sup> *Id.* at 9.

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

<sup>32</sup> *Id.* at 10.

<sup>33</sup> *See infra* para. 15.

<sup>34</sup> Comparable facilities are those that will provide the same level of service as the incumbent’s existing facilities, with transition to the new facilities as transparent as possible to the end user. Specifically, (1) equivalent channel capacity; (2) equivalent signaling capability, baud rate and access time; (3) coextensive geographic coverage; and (4) operating costs. *See 800 MHz Report and Order*, 19 FCC Rcd at 15077 ¶ 201. *See also*, 47 C.F.R. § 90.699(d).

<sup>35</sup> The Commission addressed the issue of unacceptable interference at length in the 800 MHz rebanding orders. *See 800 MHz Report and Order*, 19 FCC Rcd at 15021-15045 ¶¶ 88 -141; *800 MHz Supplemental Order*, 19 FCC Rcd at 25136-25143 ¶¶ 37-50; *800 MHz MO&O*, 20 FCC Rcd at 16037- 16040 ¶¶ 50-58. It codified the procedures for measuring and resolving interference in the rules. *See* 47 C.F.R. §§ 22.970, 22.972, 90.672-90.674. The determination of interference is based upon measurements made pursuant to very specific procedures. *See 800 MHz* (continued....)

14. In claiming that Sprint is obligated to provide narrowband filters for the BDAs, the Commonwealth has confused: (a) Sprint's obligation to remedy unacceptable interference when it actually occurs, with (b) Sprint's obligation to provide rebanded facilities that are comparable from an interference susceptibility standpoint. As to the former, if unacceptable interference occurs, the Commonwealth may report it to the web site maintained by cellular architecture carriers, and the offending carrier must remedy the interference within a time certain.<sup>36</sup> As to the latter, Sprint has no obligation to provide licensees with a better interference environment post-rebanding than they had pre-rebanding, which is essentially the relief the Commonwealth seeks here, *i.e.*, an "upgrade" to its BDA units so that they have better interference immunity than currently.<sup>37</sup>

15. We also agree with the Mediator that rebanding of the Commonwealth's system will render it less susceptible to interference in the tunnels from Sprint and other cellular-architecture carriers. The Commonwealth is further protected against unacceptable interference by the Commission's rules that place responsibility for remedying such interference on the source. Should the Commonwealth, however, believe that it requires even more protection against interference through use of narrowband filters, the Commission's comparable facilities standard dictates that the Commonwealth must look to its own resources to do so. Accordingly, we resolve the narrowband filter issue in Sprint's favor and hold that the Commonwealth has not met its burden of showing that the narrowband filters are necessary to provide it with comparable facilities after reconfiguration of its 800 MHz system.

## V. CONCLUSION

16. Our decision today follows the Commission's mandate that 800 MHz band reconfiguration must be accomplished at the minimum necessary cost consistent with providing licensees with comparable facilities. We direct the Transition Administrator to convene a meeting between The Commonwealth and Sprint within seven business days of the release date hereof to conclude an FRA consistent with our finding that Sprint is not responsible for the cost of narrowband filters for the Commonwealth's BDAs.

## VI. ORDERING CLAUSES

17. Accordingly, pursuant to the authority of Section 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i) and Section 90.677 of the Commission's Rules, 47 C.F.R. § 90.677, IT IS ORDERED that the issues submitted by the Transition Administrator are resolved as discussed above.

18. IT IS FURTHER ORDERED that the Transition Administrator shall convene a meeting of the Parties within seven business days of the release date of this *Memorandum Opinion and Order* for

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*Report and Order*, 19 FCC Rcd at 15025-15031 ¶¶ 95-108. Neither of the Commonwealth's reports addresses the Commission's threshold interference criteria, let alone shows that they have been or will be exceeded.

<sup>36</sup> See 47 C.F.R. §§ 90.674(a)(2)-(3).

<sup>37</sup> See, *e.g.*, 800 MHz SMR 2nd R&O, 12 FCC Rcd at 19112 ¶ 89. (Definition of "comparable facilities" does not comprehend requiring Sprint to upgrade an incumbent's facilities.)

the purpose of negotiating a Frequency Reconfiguration Agreement consistent with the resolution of the issues set forth herein.

19. This action is taken under delegated authority pursuant to Sections 0.191 and 0.392 of the Commission's rules, 47 C.F.R. §§ 0.191, 0.392.

FEDERAL COMMUNICATIONS COMMISSION

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