

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

In the Matter of)	
)	
City of Boston, Massachusetts)	
and Sprint Nextel)	WT Docket No. 02-55
)	
Mediation No. TAM-11155)	

MEMORANDUM OPINION AND ORDER

Adopted: December 20, 2006

Released: December 20, 2006

By the Associate Chief, Public Safety and Homeland Security Bureau:

I. INTRODUCTION

1. In this *Memorandum Opinion and Order*, we address two cases referred to us for *de novo* review from Wave 1, Phase 1 mediation by the 800 MHz Transition Administrator (TA) involving disputes between the City of Boston (Boston) and Sprint Nextel Corporation (Sprint). The first case concerns the reconfiguration of the 800 MHz communications system of the Boston Police Department (BPD system). The second case concerns the reconfiguration of Boston's 800 MHz Trunking and Transportation System (BTT system). In both cases, the parties dispute the need for and reimbursability of third-party proprietary software developed by MCM Technology LLC (MCM) for management and tracking of mobile and portable radios involved in the reconfiguration process.¹ In the BTT system case, the parties also dispute contractual language governing the change order process.

2. We have consolidated the two cases into a single order. Based on our *de novo* review of the mediation records, we find that in both the BPD and BTT system cases, Boston has not demonstrated that the amount of funding it seeks for the purchase of the MCM software and associated installation and training is reasonable, prudent, and the "minimum necessary to provide facilities comparable to those presently in use." With respect to the contractual language dispute in the BTT system case, we direct the parties to adopt the same language on this issue agreed to by the parties in the BPD system case.

II. BACKGROUND

3. The *800 MHz R&O* and subsequent orders in this docket require Sprint to negotiate a Frequency Relocation Agreement (FRA) with each 800 MHz licensee that is subject to rebanding.² The FRA must provide for relocation of the licensee's system to its new channel assignment(s) at Sprint's

¹ The software at issue is MCM's "Real Time™ 800 MHz Recording, Reporting and Reconciliation Rebanding System© Software" (hereinafter, "MCM software").

² See Improving Public Safety Communications in the 800 MHz Band, *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) as amended by Erratum, 19 FCC Rcd 19651 (2004), and Erratum, 19 FCC Rcd 21818 (2004) (*800 MHz R&O*); Improving Public Safety Communications in the 800 MHz Band, *Supplemental Order and Order on Reconsideration*, 19 FCC Rcd 25120 (2004) (*800 MHz Supplemental Order*); and Improving Public Safety Communications in the 800 MHz Band, *Memorandum Opinion and Order*, 20 FCC Rcd 16015 (2005) as amended by Erratum, DA 05-3061 rel. Nov. 25, 2005 (*800 MHz MO&O*).

expense, including the expense of retuning or replacing the licensee's equipment as required.³ Sprint must provide the relocating licensee with "comparable facilities" on the new channel(s), and must provide for a seamless transition to enable licensee operations to continue without interruption during the relocation process.⁴

4. To facilitate FRA negotiations, the Commission established a three-month voluntary negotiation period and a three-month mandatory negotiation period for Sprint to negotiate with each relocating licensee.⁵ If a licensee and Sprint are unable to negotiate a FRA by the end of the mandatory negotiation period, they must enter into mediation under the auspices of a TA-appointed mediator. If the parties do not reach agreement by the end of the mediation period, the mediator forwards the mediation record and a recommended resolution to the Commission's Public Safety and Homeland Security Bureau (PSHSB).⁶ Within ten business days of the mediator's submission of the record and recommended resolution, the parties may file position statements. Position statements may not, however, raise issues not presented during mediation.⁷ Thereafter, PSHSB conducts a *de novo* review of the mediation record, evaluates the parties' position statements and the mediator's recommended resolution, and issues an order disposing of all disputed issues.⁸

5. The BPD system (licensed under call signs WQBA899, WQBB424, WNGY708, WFFF631, WFFF645, and WPHY940) consists of a number of fixed sites and 419 mobile units.⁹ The BTT system (licensed under call signs KNJA565, KKR520, WPYH902 and WQDU213) consists of two separate systems: the Trunked System, a three-site simulcast, fourteen-channel trunked radio network, and the Transportation System, a single-site, two channel, conventional system which supports 1414 portable units and 789 mobile units.¹⁰ The TA's Regional Prioritization Plan calls for relocation of the BPD system during Wave 1, Stage 1 of the multi-phased reconfiguration process.¹¹ Relocation of the BTT system will occur in two stages: Stations KKR520 and KNJA565 are to be relocated in Wave 1, Stage 1

³ The channel change(s) are commonly referred to as a "retuning" of the system. In some instances, however, a channel change requires that equipment must be replaced rather than retuned. For convenience, unless the context requires otherwise, "retuning" as used herein also encompasses equipment replacement if existing equipment cannot be retuned.

⁴ 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. The standards for comparable facilities are: (1) equivalent channel capacity; (2) equivalent signaling capability, baud rate and access time; (3) coextensive geographic coverage; and (4) operating costs. *800 MHz R&O*, 19 FCC Rcd at 15077 ¶ 201.

⁵ Wireless Telecommunications Bureau Approves the Basic Reconfiguration Schedule Put Forth in the Transition Administrator's 800 MHz Regional Prioritization Plan, *Public Notice*, 20 FCC Rcd 5159, 5160 (2005).

⁶ Originally, the mediator was to forward the mediation record and a recommended resolution to the Chief of the Public Safety and Critical Infrastructure Division (PSCID) of the Commission's Wireless Telecommunications Bureau. See Wireless Telecommunications Bureau Announces Procedures For De Novo Review in the 800 MHz Public Safety Proceeding, *Public Notice*, 21 FCC Rcd 258 (WTB 2006) (*De Novo Procedures PN*). See also 47 C.F.R. § 90.677(d) (2005). However, on September 25, 2006, the Commission delegated this authority to the Public Safety and Homeland Security Bureau. See Establishment of Public Safety and Homeland Security Bureau, *Order*, 21 FCC Rcd 10867 (2006).

⁷ *De Novo Procedures PN*, 21 FCC Rcd at 258 ¶ 4.

⁸ *Id.* at 258-59 ¶¶ 4, 10.

⁹ Recommended Resolution, filed July 31, 2006 by the Transition Administrator (BPD RR) at 6 n.27.

¹⁰ Recommended Resolution, filed October 10, 2006 by the Transition Administrator (BTT RR) at 2 and City of Boston Trunking and Transportation System, 800 MHz Reconfiguration Cost Estimate-Certified Request (BTT Schedule C) at 4-5. We note that our licensing database shows that the license for WQDU213 has expired.

¹¹ BPD RR. at 1.

and Stations WPYH902 and WQDU213 are to be relocated in Wave 1, Stage 2.¹²

6. In negotiations and mediation, Boston and Sprint agreed on all issues relating to relocation of the BPD and BTT systems, except for 1) whether Sprint should pay for the purchase of MCM's third-party software and associated installation and training costs, and 2) contractual provisions relating to change orders for the BTT system. After negotiation and mediation proved unsuccessful on these issues, they were referred to us by the mediator for *de novo* review and resolution.¹³ On July 31, 2006, the mediator forwarded the record of the BPD system mediation and a Recommended Resolution to PSCID.¹⁴ On October 10, 2006, the mediator forwarded the record of the BTT system mediation and a Recommended Resolution to PSHSB.¹⁵

A. MCM Software Issue—Parties' Positions and Mediator Recommendations

7. *Boston Position.* Boston states that it needs to deploy and use the MCM software package in support of its rebanding efforts.¹⁶ Although Boston does not explicitly set out the cost of the software package in its pleadings, the certified cost estimates for the two systems show that MCM proposes to charge \$159,825 for the software and ancillary services for the combined systems.¹⁷ Boston argues that the cost of the MCM software and associated training is a reimbursable expense because the software is necessary to manage the reconfiguration process as well as to account for the internal time and materials it will expend in reconfiguring its 800 MHz system.¹⁸ Boston claims that it has considered alternatives to purchasing the software package and found them to be either too costly or inadequate to meet its needs.

8. *Sprint Position.* Sprint argues that the MCM software is an unnecessary and excessive expense, and that Boston can meet its project management needs without the use of the software.¹⁹ Sprint contends that the MCM software has capabilities far in excess of those required to accomplish band reconfiguration of Boston's systems, and that neither the BPD nor the BTT systems is of the size or complexity to require the use of specialized software such as MCM's. Sprint contends that Boston could use off-the-shelf software for project management and inventory tracking at far lower cost.²⁰ At one point during the mediation over the BPD system, Sprint offered Boston \$345.50 per radio to cover internal costs, including an allowance of \$20 per radio to cover project management and auditing functions.²¹

9. *Mediator Recommendations.* The mediator issued separate recommendations for the BPD and BTT cases, and recommended different results in the two cases. In the BPD system case, the

¹² BTT RR at 2.

¹³ The voluntary mediation period began on June 27, 2005, and ended on September 26, 2005, and the mandatory negotiation period began on September 28, 2005, and ended on December 26, 2005. The parties entered into mediation on December 27, 2005, and the BPD and BTT System mediations were referred to a common mediator.

¹⁴ BPD RR at 22.

¹⁵ See generally BTT RR.

¹⁶ See City of Boston Statement of Position, filed October 24, 2006 at 3 (Boston BTT SOP).

¹⁷ See ¶ 24 *infra*.

¹⁸ See Proposed Resolution Memorandum of City of Boston Police Department, dated July 13, 2006 at 2 (Boston BPD PRM).

¹⁹ See Statement of Position of Nextel Communications, Inc., dated August 14, 2006 at 3 (Sprint BPD SOP) and Statement of Position of Nextel Communications, Inc., dated October 24, 2006 at 3-4 (Sprint BTT SOP).

²⁰ See Proposed Resolution Memorandum of Nextel Communications, Inc., dated July 17, 2006 at 3 (Sprint BPD PRM).

²¹ Sprint BPD SOP at 3. Sprint did not make a similar offer for the BTT system.

mediator recommended finding in favor of Sprint on the MCM software issue.²² The mediator concluded that purchase of the MCM software was not a recoverable expense under the facts contained in the record with respect to the BPD system. The mediator found that in light of the BPD system's small size and lack of complexity, the cost of the MCM software far exceeds the minimum necessary to fulfill the licensee's legitimate needs and constitutes an upgrade that Sprint should not be required to pay for.²³ The mediator recommended that Boston receive \$18,525 from Sprint for the development of a spreadsheet and database to aid in project management and accounting tasks related to the reconfiguring of the BPD system.²⁴

10. In the BTT system case, the mediator found that Boston had justified the use of the MCM software, and recommended that Boston receive compensation for the software and associated services.²⁵ The mediator distinguished its recommendation in the BTT case from its contrary recommendation in the BPD case based on the larger size and complexity of the BTT system. The mediator found that in light of these factors, the MCM software was a justifiable expense in the BTT case and not an unjustifiable upgrade. The mediator recommended that the Commission award Boston compensation totaling \$76,945.00 for the purchase of MCM software and associated services.²⁶

B. Contractual Language Issue —Parties' Positions and Mediator Recommendation

11. *Boston Position.* Boston proposes an amendment to the Change Notice section of the BTT FRA that would allow Boston to cease performance under the terms of the FRA if Nextel fails to participate in the Change Notice process in a timely fashion.²⁷ Boston contends that this change is necessary to protect the City from being contractually obligated to move forward with rebanding in the event that it is unsettled whether the activities in dispute would be subject to payment by Sprint.²⁸

12. *Sprint Position.* Sprint acknowledges Boston's concern but does not agree with Boston's proposed language. Sprint contends that the language is overbroad because it suggests that a dispute over any change notice would allow Boston to cease performance of completely unrelated tasks.²⁹

13. *Mediator Recommendation.* The mediator recommended finding in favor of Sprint on this issue. The mediator concluded that the language governing change orders contained in the BPD FRA, which was accepted by Boston in that case, is also sufficient for the BTT FRA.³⁰

C. Burden of Proof

14. Under the Commission's orders in this proceeding, Boston bears the burden of proving that the funding it has requested for relocation is reasonable, prudent, and the "minimum necessary to provide

²² BPD RR at 11-12.

²³ *Id.* at 9.

²⁴ *Id.* at 11-12.

²⁵ BTT RR at 11-18.

²⁶ BTT RR at 12-13. Although the mediator's recommendation in the BTT case was in Boston's favor, Boston contends that it is illogical for the mediator to recommend that the MCM software only be used for the BTT system when Boston intends to use the software for all of its rebanding efforts. Thus, Boston reiterates its position that Sprint should pay the full cost of the MCM package to manage the reconfiguration of both the BPD and BTT systems, not the partial cost recommended by the mediator. Boston BTT SOP at 2-3.

²⁷ Boston BTT SOP at 6.

²⁸ *Id.*

²⁹ See Proposed Resolution Memorandum Of Nextel Communications, Inc. on the Terms and Conditions of the Frequency Reconfiguration Agreement, filed September 28, 2006 at 3.

³⁰ BTT RR at 18-19.

facilities comparable to those presently in use.”³¹ The Commission’s orders allow Boston to be compensated for both “hard costs,” which include the price of equipment and the labor necessary to install, tune, and test the equipment, as well as reasonable “transaction costs,” which include staff administrative time and, when necessary, attorney and consultant fees required to plan for reconfiguration and negotiate the FRA. The Commission further requires us to give a “particularly hard look to any request involving transaction costs that exceed two percent” of the hard costs involved in system relocation, stating that in the vast majority of such cases, the party requesting transaction costs will have to meet a “high burden” of justification.³²

III. DISCUSSION

A. Rebanding Software

1. Introduction

15. As a threshold matter, we agree with Boston that it is entitled to compensation for reasonable expenses incurred to undertake the following project management tasks:

- Overall supervision of the rebanding process including work performed by vendors;
- Recording internal costs that are related to rebanding;
- Identification of all radio units;
- Scheduling and dispatching personnel and units to locations for the purpose of rebanding;
- Tracking each affected vehicle, radio, and crew to avoid duplication of effort and to protect the public safety by assuring adequate fleet strength and personnel availability in each location, precinct, and neighborhood; and
- Assuring the rebanded system is fully comparable with the existing system.

We also agree with Boston that incumbents must provide accurate documentation of these tasks to support reconciliation and a future audit by the TA. Therefore, if Boston proves that its current practices and personnel are insufficient to the task, Boston is entitled to compensation for the reasonable cost of acquiring software and hiring or training personnel necessary to generate such documentation.

16. We disagree, however, with Boston’s contention that it cannot accomplish these project management and accounting tasks except through the acquisition and use of the specific MCM software package proposed in this case. As discussed below, Boston has not demonstrated that the MCM software is operationally necessary in order for Boston to perform project management tasks associated with rebanding. We also find that Boston has not met its burden of showing that the proposed expenditure of \$159,825 for the MCM software and related costs represents the most cost-effective means of carrying out these tasks. The record shows that the MCM software and the associated staff training would provide Boston with significant non-rebanding benefits based on its utility for other inventory and project management tasks. Boston has not taken the excess value of this asset into account in its cost estimates. Although we do not foreclose Boston or any other licensee from using the MCM software in connection with retuning 800 MHz systems, we conclude that Sprint is not responsible for paying for features or services that are not essential to the band reconfiguration process, particularly when the licensee benefits from the ability to use the product or service for applications unrelated to band reconfiguration.

2. Operational Need for MCM Software

17. Boston has not presented sufficient evidence in the record to show that the MCM software

³¹ *800 MHz R&O* 19 FCC Rcd at 15074 ¶ 198; *800 MHz Supplemental Order*, 19 FCC Rcd at 25152 ¶ 71; *De Novo Procedures PN*, 21 FCC Rcd at 259 ¶ 9.

³² *800 MHz Supplemental Order*, 19 FCC Rcd at 25151 ¶ 70.

package and associated services are operationally necessary in order for Boston to perform project management tasks associated with rebanding.

18. *System Size and Complexity.* System size and complexity may be relevant considerations in determining what is operationally necessary for rebanding project management and accounting. However, the record does not indicate that the BPD and BTT systems are unusually large or complex. The BPD system is a relatively small system with fewer than 500 mobiles. The BTT system is somewhat larger, but with approximately 2200 mobiles and portables, it is still smaller than many public safety systems that provide service to large urban areas or on a statewide basis.³³ Nor does the record indicate that either system is unusually complex from a technical standpoint, covers a large geographic area, or has complex interoperability needs. Although Boston mentions that it has interoperability with the State of Massachusetts, the record is silent as to the number of interoperable units or the level of interoperability.³⁴

19. The record does not support a finding that Boston needs more sophisticated project management software due the number of systems it operates or the number of agencies that use its systems. Boston argues that it needs the ability to track assets and personnel in “real time” to ensure that fleet strength and personnel availability are not impacted by the rebanding process.³⁵ However, even in the absence of rebanding, Boston must make fleet strength and personnel availability assessments for all of its public safety systems on a daily basis to accommodate regular personnel issues (*e.g.*, vacation and sick leave) and fleet issues (*e.g.*, mechanical breakdowns, regular maintenance of vehicles). In fact, much of the scheduling necessary to provide for retuning and replacement of radios can be planned in advance, unlike many other issues that may affect fleet and personnel availability. It is also significant that the BTT and BPD systems represent only a small percentage of Boston’s overall public safety operations. A search of the Commission’s licensing database shows that the City of Boston and associated public safety entities (*e.g.*, Boston Fire Department) have 131 active licenses, for both 800 MHz and UHF/VHF systems. The BPD and BTT systems account for only ten of these 131 licenses. Given that Boston has not previously required sophisticated software of the type provided by MCM to perform these tasks for all of its systems, Boston has failed to show why such software is necessary to support the rebanding process for two systems that represent only 7.6 percent of its licensed operations.

20. *Number of “Touches” Per Radio.* Boston asserts that the MCM software is necessary to enable it to schedule and track the activities of city personnel in retuning each mobile and portable radio. However, we find that this assertion rests on a mistaken assumption about the minimum number of times that each radio will need to be “touched” during the rebanding process, and an overestimation of the personnel resources required to accomplish each touch.

21. With respect to the first issue, Boston contends that its personnel must touch each radio at least twice during rebanding, first to program in the new 800 MHz channels that the system will use after rebanding, and then a second time to remove the pre-rebanding channels from the radio once the system has begun operation on the new channels.³⁶ In fact, the Commission’s rebanding orders do not mandate a “second touch” to remove pre-rebanding channels from mobiles and portables because such a step is unnecessary to the rebanding process. The process contemplates that each mobile and portable in an 800

³³ The TA estimates that there are over thirty 800 MHz public safety systems with more than 10,000 radios, and over one-hundred more with between 4,000 and 10,000 radios. Boston notes that the State of Utah also uses MCM software to manage its statewide system. *See* Boston BPD PRM at Appendix B. However, Sprint notes that Utah’s system is almost seven times larger than the BPD and BTT systems combined. Sprint BTT SOP at 12.

³⁴ Boston BPD PRM at 10. There is a similar lack of showing with regard to the radios operating on the BTT system that belong to the County of Suffolk and the City of Cambridge. BTT Schedule C at 7.

³⁵ Boston BPD PRM at 7.

³⁶ *Id.* at 6.

MHz system will be touched once to program in new channels,³⁷ with the old channels being kept in the radio so that it can continue to operate until the transition to the new channels has occurred.³⁸ However, once a system has been retuned, and the base stations are operating on their new channels, there will no longer be any base stations operating on the old channels through which the mobile and portable radios can communicate. Thus, the ability of the radios to tune to channels that are no longer in use poses no operational impediment to the licensee's operation of its system.³⁹ Because removal of the old channels from mobiles and portables is not operationally necessary to 800 MHz rebanding, it was not contemplated by the *800 MHz R&O*. However, if for any reason a licensee wished to remove the old channels from its radios, it could do so at its own expense any time after 800 MHz band reconfiguration is complete in its area. For example, the licensee could remove the channels as part of routine radio maintenance, adding slight, if any, incremental cost to the maintenance procedures.

22. The record also indicates that Boston has overestimated the number of personnel involved in each touch of a radio. Boston claims that each touch of a portable or mobile will involve 5.5 city personnel, but its own cost schedule identifies only 3.5 people (*i.e.*, 1.5 public safety personnel, a radio technician, and a supervisor/dispatcher) associated with each mobile radio touch.⁴⁰ Boston does not distinguish retuning of mobile units from portable units in its schedule, even though retuning portable units would involve fewer personnel than mobiles.⁴¹ Taking all of these factors into account, we find that the actual number of "personnel events" supported by the record that Boston will need to track is perhaps one-third of its estimate of 27,500. This significantly reduces Boston's need for the sophisticated tracking capability offered by the MCM software

3. Software Costs and Related Expenses

23. We also find that Boston has not met its burden of showing that the proposed expenditures for the MCM software package and related costs represent the most cost-effective means of performing project management and accounting tasks associated with rebanding.

24. MCM proposes to charge Boston \$112,495 for the rebanding software package, which consists of a backbone system (MCM Real Time™ 800 MHz Recording, Reporting and Reconciliation Rebanding System ©, Large Systems Multiple Licenses), two copies of asset management software (MCM Real-Time Asset Management Software), two copies of report writing software (Report Writer, Run-Time License) and two copies of Microsoft SQL.⁴² Boston will receive a license for use of the software package during the rebanding period, up to and including a future TA audit, after which the

³⁷ In some systems, more than one touch may be necessary to make radios fully operable on the new channels, *e.g.*, in cases where a replacement radio is installed in a vehicle and subsequently programmed with the new channels and relevant talk groups. However, there is no indication in the record of this case that more than one touch is required to make the BPD and BTT radios operable on the new channels.

³⁸ A similar process applies to radios that are replaced rather than retuned. Replacement radios will include both new and old channels so that they can operate on the old channels until the system is switched to the new channels.

³⁹ It is possible that public safety personnel could inadvertently attempt to use the old channels for mobile-to-mobile communications. However this remote possibility does not justify the added burden and cost of touching the radios a second time. Personnel can readily be instructed to use only authorized channels.

⁴⁰ Boston BPD PRM at 7. Boston derives its estimate of 1.5 public safety personnel by noting that mobile units are operated in vehicles that have either one or two persons. Assuming this calculation to be valid, we do not believe that—in addition to the 1.5 public safety personnel—retuning a mobile radio requires more than a single radio technician and a single supervisor/dispatcher. Thus, a touch of a mobile radio should not require more than an average of 3.5 personnel.

⁴¹ *Id.* Unlike mobile units, which may be used by two people in a vehicle, portable units are hand-held and thus retuning these units only requires a single officer or other user of the radio to be present.

⁴² See Boston BPD PRM, Appendix A-1.

license expires.⁴³ MCM proposes to charge an additional \$71,080 to provide data conversion, user training, engineering, and other support services,⁴⁴ resulting in a total proposed cost of \$183,575. However, because BPD and BTT would be purchasing separate software modules, MCM has offered to reduce the total price by \$23,750 as an “inter-agency discount,” resulting in a final estimated cost of \$159,825.⁴⁵ The record shows that excluding the software costs in dispute, the parties have agreed to an estimated cost to reconfigure the BPD and BTT systems of \$1,140,068.⁴⁶ Thus, even at the discounted price, the MCM software package and associated MCM service charges represent over twelve percent of the proposed total cost associated with retuning the Boston systems—and represent a significant expenditure over and above Boston’s own internal personnel costs. As the Commission has made clear, transactional expenses of this magnitude—well in excess of two percent of the hard cost of relocation—require us take a “particularly hard look” at the request and require Boston to meet a “high burden” of justification.⁴⁷

25. We deny Boston’s request for several reasons. First, Boston has not demonstrated why it needs to purchase separate software and associated services for BPD and BTT, when the MCM software package is reportedly designed to accommodate multiple systems and track multiple users. Because both the BPD and BTT systems are managed by the City of Boston, more centralized management of the rebanding process appears possible than what has been proposed, which could reduce both software and associated training and installation costs. Indeed, Boston states that it intends to utilize MCM software to manage the rebanding of “the Trunking system, police department, fire department and public works radio systems”⁴⁸ but offers no details as to whether it has factored any cost savings into any cost proposals for those radio systems that are not part of the BPD and BTT systems.⁴⁹ We are concerned that Boston’s proposal would lead to unnecessary duplication of costs. For example, it appears that Boston did not centralize administrative costs associated with rebanding of its various systems where reasonably possible.

26. Second, Boston’s cost estimates appear to be based on questionable assumptions about how much time is needed to perform certain project management tasks. Boston claims to have considered and rejected a variety of costlier alternatives to the MCM software package, including developing customized software, which Boston contends would cost in excess of \$250,000. Yet Boston’s cost projection for this alternative includes over \$167,000 for anticipated data review, eliminating duplicative entries, and other data correction, which Boston calculates will require nearly an hour per radio.⁵⁰ Boston further projects

⁴³ *Id.* at 17.

⁴⁴ *Id.*, Appendix A-1.

⁴⁵ *Id.*

⁴⁶ *See id.*, Appendix C and Schedule C: 800 MHz Reconfiguration Cost Estimate-Certified Request City of Boston Trunking and Transportation System. This reflects the combined estimated costs of \$ 1,288,687 less the cost of the rebanding software and the five percent contingency fee associated with the rebanding software built into the contract.

⁴⁷ *800 MHz Supplemental Order*, 19 FCC Rcd at 25151 ¶ 70.

⁴⁸ Boston BTT SOP at 3. However, Boston’s public works system is included in the description of the BTT system. *See* BTT RR at 13.

⁴⁹ In addition to the BTT and BPD systems, the City of Boston is reconfiguring three additional 800 MHz systems in Stage 2 of Wave 1. These include the City of Boston Fire Department system, the City of Boston Public Health Commission system and another system operated by the Police Department.

⁵⁰ Boston originally claimed that its cost to produce an off-the-shelf software solution to manage the reconfiguration of the PD system would be \$88,970. *See* Supplement to Proposed Resolution Memorandum of City of Boston Police Department, dated July 21, 2006, at 4-10 (Boston BPD SPRM). However, in its Proposed Resolution Memorandum with regard the BTT system, Boston asserted (without any supporting documentation) that the future

an additional cost of \$59,000 to capture anticipated overtime charges. Boston provides no data to support these projections, which assume an extremely poor data-entry performance. We do not find these estimates to be supported by the record.

27. Similarly, Boston contends that it rejected the alternative of retaining a third-party contractor such as an accounting firm to perform management and tracking tasks because this would entail a lengthy and expensive procurement process.⁵¹ However, under Massachusetts law Boston can enter into a contract for up to \$24,999 (which is greater than the \$23,725 Boston estimates it would spend in developing and testing an off-the-shelf software system on its own) via a relatively simple process that only requires it to seek three quotes before determining the best value-offer.⁵² The record is silent as to whether Boston considered this option.

28. The record also is not sufficient to support Boston's contention that less costly conventional spreadsheet and database programs could not adequately serve Boston's purpose.⁵³ Boston has not shown that its current means of tracking its radios and managing its systems—presumably a computerized process—cannot be used to manage rebanding tasks. While we do not require Boston to use an off-the-shelf program, the record does not demonstrate that using off-the-shelf software would hamper Boston's ability to manage the project or would raise data accuracy and security issues. As noted in paragraph 21 above, the fact that radios will not need to be touched twice reduces the complexity of the project management task that software is needed to support, particularly for systems such as Boston's that are not unusually large. In addition, most off-the-shelf spreadsheet and database programs have some data conversion and validation mechanisms that would reduce opportunities for data entry error.⁵⁴ These features would also meet Boston's need to automatically standardize its data and provide additional security that would prevent a data-entry error from corrupting the entire database. Similarly, we note that while a spreadsheet solution would not allow real-time uploading of data into a central database from multiple locations across the city, off-the-shelf software typically has the ability to merge spreadsheets or database files with similar record fields into a single file. This would allow City employees to enter the necessary data into password-protected files at multiple locations across the city and then upload these files via secure server or encrypted e-mails. It is also possible to designate a single computer as the

costs of an off-the-shelf software solution for the BTT system would be three times that of the future costs of the PD system. *See Proposed Resolution Memorandum of City of Boston*, dated August 30, 2006 (Boston BTT PRM) at 3 n.4; thus based on the record, the estimated cost for some aspects of the implementation of an off-the-shelf software project management system is four times that of the PD system. Pursuant to these figures, Boston projects costs of \$38,925 (approximately \$14.60 per radio) to develop and test a database and train personnel on how to use the database; it foresees incurring "future costs" of \$167,400 (approximately \$60 per radio) and \$59,081 (approximately \$19 per radio) to "capture estimated overtime charges. Boston defines "future costs" as costs involved with the manual review of records (1000 hours or over twenty-two minutes per radio) responses to errors, questions and problems associated with faulty input of data (400 hours or about nine minutes per radio), eliminating duplicative entries (320 hours or about seven minutes per radio), tracking the effect of and response to the aforementioned errors (400 hours or about nine minutes per radio), and tracking costs/time/personnel (160 hours or about 3.5 minutes per radio). Thus, Boston anticipates spending over fifty-one minutes per radio correcting data entry errors. When the additional \$19,200 of supervisory costs is added in, the \$167,400 cost of this data correction is almost \$63 per radio.

⁵¹ Boston BPD SPRM at 15-19.

⁵² *See* Municipal, County, District, and Local Authority Procurement of Supplies, Services, and Real Property, Legal Requirements, Recommended Practices and Sources of Assistance, Office of the Inspector General of the Commonwealth of Massachusetts, Aug. 2006 edition at 25-30. This document can be found electronically at <http://www.mass.gov/ig/publ/30bmanl.pdf>. This five-step procedure is intend to obtain "quotes that are flexible, straightforward, and well suited to making small purchases rapidly without getting bogged down in paperwork." *Id.* at 25.

⁵³ *See generally* City of Boston, Massachusetts Statement of Position, dated August 14, 2006 at 5-9.

⁵⁴ *See, e.g.*, <http://office.microsoft.com/en-us/assistance/HA010872281033.aspx>

repository of the master file and password protect both the file and the computer, thus obviating another of Boston's concerns.⁵⁵ In light of these factors, we find that Boston has not met its burden of showing that the MCM software package represents the least-cost alternative available to it.

4. Non-Rebanding Benefits of MCM Software Package

29. Finally, the record indicates that if Boston were to acquire the MCM software package and associated training, it would receive benefits and capabilities beyond those necessary to support the rebanding effort. MCM software provides significant capabilities for tracking and managing of system assets that have led some large public safety systems to use it on an ongoing basis without regard to rebanding, both for radio and non-radio assets.⁵⁶ The software package offered by MCM for rebanding purposes is essentially an upgrade of MCM's pre-existing program with certain features specifically tailored to the rebanding process. Thus, licensees that choose to acquire the software package and receive software training to support rebanding will have the ability to use it for non-rebanding as well as rebanding purposes during the rebanding period, and a significant incentive to continue using the software in the post-rebanding environment. Indeed, Sprint presents evidence that MCM at one point explicitly marketed the software package with this incentive in mind, encouraging licensees to acquire the initial package at Sprint's expense and offering to renew the software license at a lower price upon the conclusion of rebanding.⁵⁷

30. It is understandable that licensees would seek to acquire software packages like MCM's for rebanding purposes and to make continued use of it after rebanding. However, we also find that as a result of the capabilities of the software and the associated installation and training that is offered, the MCM software confers distinct non-rebanding benefits in addition to rebanding-related benefits. We recognize that MCM would charge Boston an additional renewal fee for post-rebanding use of the MCM software. However, the existence of a separate charge for renewal is not dispositive of whether the full amount charged for the initial software package is attributable to rebanding. The renewal fee is a fraction of the initial product cost and merely allows Boston to extend the use of software and training capabilities that it has obtained as part of the initial package. Moreover, the fact that Sprint will pay rebanding expenses creates an incentive to "frontload" the initial software cost in the expectation that the licensee will be able to recover the cost from Sprint. Accordingly, based on the record presented in this case, it would be inappropriate and inconsistent with the Commission's orders for Sprint to be compelled to bear the full cost of the initial software package.

B. Change Order Language

31. We find that the language governing change orders in the BPD FRA provides Boston with sufficient protection and should be incorporated into the BTT FRA. Therefore, we find in Sprint's favor on this issue. In the BPD case, Boston and Sprint informed the mediator that they had agreed on all

⁵⁵ Boston BPD Statement of Position at 6 n.4.

⁵⁶ MCM asserts that its software will allow a licensee to track assets ranging from furniture, to vehicles, to firearms, to computer hardware, and complex tower locations from acquisition, to disposition and every step in between. *See* <http://www.mcmtechnology.com/content.asp?id=96697>. MCM also reports that the City of Long Beach, California, JCS/Tel-Link, City of Seattle, Washington, County of Monroe, New York, County of Maricopa, Arizona use MCM software for asset management and work flow solutions for some of their radio systems. *See* <http://www.mcmtechnology.com/studies.asp>.

⁵⁷ *See* Sprint BPD PRM at 11-12. The statement noted by Sprint has since been deleted from MCM's website, but the page does describe the general function of the software including the ability to assist in the inventory and tracking of assets, assist in the development of cost estimates and statements of work and assist in managing workload tracking functions. MCM's website contains no pricing information. *See* <http://www.mcmtechnology.com/content.asp?id=96700>.

relevant portions of the FRA with the exception of the MCM software issue discussed above.⁵⁸ In the BTT case, however, Boston seeks to add a sentence to the Change Notice procedure that would allow the party submitting a change notice to cease performance under the FRA if the other party rejects the notice or a mutually agreeable amendment is not approved by the TA within thirty days.⁵⁹ Sprint contends that because the parties agreed to language governing the change order process in the BPD case, that language should bind Boston with regard to the BTT system as well.⁶⁰

32. We conclude that the previously agreed-upon language in the BPD agreement is sufficient to address Boston's concern. That language provides that if a party objects to a change notice, the parties have twenty business days to negotiate a good faith resolution.⁶¹ In the BTT case, Boston seeks language that would give either party unilateral authority to cease all performance under the FRA in the event that the other party disputes a change order request. We believe this language is overbroad. By allowing either party to unilaterally cease all performance, this language could lead to unnecessary escalation of relatively minor disputes over change orders and thereby cause inordinate delay in the rebanding process. We conclude that this would frustrate the Commission's directive to accomplish band reconfiguration in a timely fashion.

IV. ORDERING CLAUSE

33. Accordingly, pursuant to the authority of Sections 0.131 and 0.331 of the Commission's rules, 47 C.F.R. §§ 0.131, 0.331; 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.

FEDERAL COMMUNICATIONS COMMISSION

David L. Furth
Associate Bureau Chief
Public Safety and Homeland Security Bureau

⁵⁸ See BTT RR at 18.

⁵⁹ Boston BTT SOP at 6.

⁶⁰ Sprint BTT SOP at 16.

⁶¹ See BTT RR at 19 *citing* Licensee Template PRM, Appendix at 6.