

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

In the Matter of)	
)	
Improving Public Safety Communications in)	WT Docket No. 02-55
the 800 MHz Band)	
)	
Use of TA Cost Metrics)	

PETITION FOR DECLARATORY RULING

Carl Robert Aron
Executive Vice President
RCC Consultants, Inc.
580 Park Avenue
New York, NY 10065
(212) 752 9526
Representing New Jersey Transit Corporation

Shelley R. Smith
City Solicitor
Michael C. Athay
Chief Deputy City Solicitor
Law Department
City of Philadelphia
1515 Arch Street, 17th Floor
Philadelphia, PA 19102

James R. Hobson
Miller & Van Eaton, PLLC
1155 Connecticut Avenue, N.W., #1000
Washington, D.C. 20036
(202) 785-0600
Representing Montgomery County, MD

Carl Robert Aron
Executive Vice President
RCC Consultants, Inc.
580 Park Avenue
New York, NY 10065
(212) 752 9526

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The undersigned 800 MHz public safety radio licensees and consultants (the “Petitioners”),¹ all of which have been or will be affected by the application of the Transition Administrator’s (“TA’s”) cost metrics² to their estimated costs of rebanding, hereby request the FCC to rule in line with the Summary below.

Summary

- The cost metrics do not provide a reliable and proper basis from which to draw inferences respecting the system reconfiguration costs proposed by an 800 MHz licensee to be recovered from Sprint Nextel Corporation (“Nextel”);³
- The metrics do not provide any sound basis for raising the burden of proof upon 800 MHz licensees to establish the reasonableness of their estimated system reconfiguration costs, where those costs exceed levels purportedly drawn from the cost metrics; and
- No reliance of any kind upon cost metrics shall be proper unless the concerned 800 MHz licensee is afforded full and free access to all information necessary or useful in analyzing whether and how that licensee’s 800 MHz radio system is different from the systems included in the metrics.⁴

¹ New Jersey Transit Corporation; City of Philadelphia, Pennsylvania; Montgomery County, Maryland; RCC Consultants, Inc.

² See, generally, <http://www.800ta.org/content/reporting/metrics.asp#fra>.

³ None of the petitioners has executed with Nextel an unchallenged Frequency Reconfiguration Agreement (“FRA”). The petition is limited to FRAs, although its reasoning applies as well to Planning Funding Agreements (“PFAs”). See, Letter of May 16, 2007 in this docket from Carl Robert. Aron, Executive Vice President of RCC.

⁴ APCO and other public safety associations recently have called for disclosure of underlying TA metrics data. Letter of Richard Mirgon, Harlin McEwen, and Alan Caldwell to James A.

Interests of Petitioners.

The Frequency Reconfiguration Agreements (“FRAs”) of New Jersey Transit, City of Philadelphia and Montgomery County are pending in various stages of negotiation with Nextel, and are subject to the cost metrics regimen described in this Petition. RCC Consultants, Inc. (“RCC”), is a technical advisor to each of the petitioning 800 MHz public safety licensees, and RCC’s consulting fees are also subject to evaluation against TA metrics.

Background.

Nearly three years ago, the FCC determined, over Nextel’s objections, to allow licensees to share information from their completed PFAs and FRAs. That decision was grounded in considerations of both efficiency and fairness:

Thus, we anticipate increasing both the efficiency and speed of the rebanding process by eliminating the need for each licensee to negotiate every issue without the benefit of information from prior negotiations.

* * *

Another characteristic of the rebanding negotiation process is that it inherently creates an information imbalance between Sprint and individual public safety licensees because Sprint has access to information regarding all of its negotiations and mediations whereas each public safety licensee is limited to the information provided in the individual negotiations that it participates in.⁵

In the same order (¶9), the FCC asked the TA to

publish aggregated information regarding median costs for the key common elements of PFAs and FRAs that it has approved, broken down by the size and complexity of the public safety system. We anticipate that this information will provide a baseline for all cost negotiations and thereby help to speed resolution of cost issues.

Barnett, Jr., Chief of the Public Safety and Homeland Security Bureau, FCC, November 5, 2009. (“[W]e believe that licensees should be able to request and receive information regarding the FRAs in any relevant cost metric subcategory that can be reasonably compiled by the Transition Administrator.”)

⁵ Order, DA 07-27, released January 8, 2007, ¶¶ 5, 6.

The FCC cautioned that

While information derived from other negotiations will allow licensees to craft more accurate determinations of their rebanding costs, such information is not, by itself, dispositive of the reasonableness of a licensee's claimed services and costs.

Accordingly, the TA's periodic publication of this data, now occurring monthly, has carried the disclaimer that the cost metrics are "for informational purposes only."⁶

Until recently, it appeared that cost metrics were used for purposes of guidance and suggestion, but not determination of outcomes. FCC orders resolving disputed costs reminded licensees that estimates well above the medians or 75th percentiles for their size classifications warranted "special scrutiny" and applied these hard looks accordingly, but stressed that the metrics were not outcome-determinative.⁷ Roughly nine months ago, the TA began to apply the metrics more closely by ranking an individual licensee's opening cost estimate and its final offer by specific percentage comparisons with the total of executed FRAs and with licensees having purportedly comparable numbers of subscribers, sites, and repeaters.⁸ Under current TA practice, the licensee is also ranked on its estimates for 18 sub-categories of work or reimbursable expense.⁹ These refinements made it look as if the needle were beginning to swing from cost metrics as purely informational to cost metrics as quasi-outcome-determinative.

⁶ See note 2, *supra*.

⁷ Manassas, DA 07-1999, released May 4, 2007, ¶6; Washoe, DA 07-2955, released July 3, 2007, ¶ 5; Vacaville, DA 07-2949, released July 3, 2007, ¶ 9; Chesapeake, DA 07-3288, released July 18, 2007, ¶ 7; Chester, DA 07-3287, released July 18, 2007, ¶ 7; Irving, DA 07-3861, released September 7, 2007, ¶ 7; Suffolk, DA 07-3883, released September 10, 2007, ¶ 5; Charles, DA 07-3881, released September 10, 2007, ¶ 6; Calvert, DA 07-3882, released September 10, 2007, ¶ 6.

⁸ In certain instances where licenses have asked for data underlying their profiles, systems claimed by the TA to be comparable were not even remotely so.

⁹ According to the TA's dispute resolution manual, TA Mediators request these profiles and the management side of the TA duly supplies them.
http://www.800ta.org/content/resources/ADR_Plan.pdf, version 1.7, dated September 17, 2009,

In the Charles County order,¹⁰ the needle moved dramatically toward cost metrics as dispositive. The order said, among other statements:

[T]he further a licensee's proposed costs for services and equipment exceed the TA Metrics, the higher the licensee's burden to justify those costs with record evidence. (¶ 5)

* * *

The TA Metrics are based on a large body of historical information on system retuning costs. Although they are not a limit or "cap" on a licensee's expenses, they establish a presumptively valid cost unless the licensee establishes that its system is materially different from the systems from which the metrics were derived. (¶ 45) (emphases supplied)

Arguments about the meaning and direction of the Charles County order are on the FCC record in the County's Application for Review and Reply, as well as Nextel's Opposition and the intervention briefs of State of Connecticut. The Petitioners do not here reiterate or incorporate the arguments made in the review of the Charles County order. Rather, the arguments raised by the Petitioners herein are directed to the fundamental defects in the costs metrics and the injustice involved in their use to limit cost recovery by 800 MHz licensees.. Thus, the arguments of the Petitioners serve to illustrate the need for the Commission to exercise its discretion and to remove uncertainty, outside the context of any particular dispute, over the future use of cost metrics. 47 C.F.R. §1.2.

Without the elimination of uncertainty respecting the use of the cost metrics and without complete access by licensees to information respecting the system configurations of other licensees, the estimated reconfiguration costs of which are included in the cost metrics, the 800 MHz public safety licensees that have not reached FRAs are subject to substantial injustice and to their being deprived of the due process of law. They risk loss of proper reimbursement of

15, 18. In practice, it appears that TA management often supplies the profiles with or without a Mediator's request.

¹⁰ Memorandum Opinion and Order, DA 09-2252, released October 19, 2009. ("Charles County Order")

reconfiguration costs, which becomes, in effect, a rebanding tax. The uncertainty should be removed by restoring and limiting the use of cost metrics to their original informational purposes.

I. The FRA cost metrics do not provide a reliable and proper basis from which to draw inferences respecting the system reconfiguration costs proposed to be recovered from Nextel.

The use of the FRA cost metrics in order to test the reasonableness of the reconfiguration costs of a particular 800 MHz licensee involves drawing inferences from statistics. Neither the TA nor the PSHSB nor the Commission itself has ever publicly examined whether drawing inferences from the metrics and applying these to a particular licensee is proper.¹¹ The use to which the TA and the PSHSB have applied the FRA cost metrics involves two fundamental flaws: (i) methodological abuse and (ii) sample bias and lack of representativeness

A. Methodological Abuse

The TA and the PSHSB have used improper statistical methods by seeking to draw inferences about the propriety of a particular licensee's estimated reconfiguration costs from statistics based upon a sample of multiple licensees' historic cost estimates.

¹¹ Nextel has argued that "it is not apparent how a rulemaking on the TA's Cost Metrics could even proceed" because "the numbers are what they are." Nextel's Opposition of 11/24/09 to State of Connecticut Petition for Reconsideration of Charles County Order, note 9 *supra*, at p. 8, line 3. This argument is absurd on its face and rests upon assumptions that are unsustainable. This argument rests upon the following assumptions, each of which is challenged and disproven in this Petition: (i) "the TA simply compiles and publishes the data" (*Ibid.*, p. 8, lines 2-3); (ii) the TA Metrics are "not subject to dispute or comment" (*Ibid.*, p. 8, line 3; and (iii) the TA Metrics "consist solely of objective and impartial data." (*Ibid.*, p. 8, line 8) As this Petition demonstrates, consideration of the TA metrics would involve, among other analyses, the following: (i) whether the use to which the cost metrics have been harnessed involves a fundamental methodological fault; and (ii) whether a fundamental sampling flaw undermines the utility of the cost metrics.

The approach of the TA and the PSHSB is methodologically unsound because inferences from a sample should be drawn about the larger population, not about a particular member thereof. This methodological fault can be illustrated as follows: Imagine a herd of 1,000 cows and a random selection of 100 of those cows that are weighed and measured. The data collected respecting that random sample would provide a weight and measure distribution for the measured randomly chosen members of the herd, and that weight and measure distribution could be quite wide. That distribution might properly be used to draw inferences about the weight and measure distribution of the group of the 900 un-weighed and unmeasured cows as a whole. That weight and measure distribution of the randomly selected 100 cows would not, however, be a proper basis for inferences about the particular weight and measurements of any one particular cow from among the group of the 900 un-weighed and unmeasured cows.

When the TA and the PSHSB seek to determine the proper level of a particular licensee's estimated reconfiguration costs by reference to the FRA metrics, they are, in effect, saying what some particular cow from the herd of 1,000 cows should weigh and measure based upon a wide distribution of weights and measures for the 100 cows randomly selected. (Obviously, still further problems would be presented if the 100 cows were not randomly selected. Petitioners demonstrate below that the FRA metrics are clearly biased, not based on random sampling and assuredly not representative.)

B. The Effect of Sample Bias and the Requirement of Representativeness

The approach of the TA and the PSHSB to the use of the cost metrics is also flawed because of reliance upon an improper sample. The FRA metrics include only data points that reflect the agreement and assent of Nextel. The cost metrics, by their very name, establish that the only included data is data from FRAs to which Nextel chose to be a party. For this reason,

the FRA cost metrics are plainly biased. In addition, the metrics are clearly not representative of licensees not included therein.

The authorities writing on inferential statistics are very clear: sampling bias undermines the reliability of statistics; and lack of representativeness undermines the utility of statistics.¹²

The problems of biased and non-representative samples can be illustrated as follows. Imagine a herd composed (probably contrary to good animal husbandry practice) of 900 Jersey cows and 100 Aberdeen Angus bulls. Further imagine that only 500 Jersey cows are weighed and measured. The data collected respecting that sample would provide a weight and measure distribution for weighed and measured Jersey cows. That weight and measure distribution could not properly be used to draw inferences about the weight and measure distribution of the group of the 100 un-weighed and unmeasured Aberdeen Angus bulls because the sample is biased (not randomly selected from the 1,000-animal herd) and unrepresentative of Aberdeen Angus bulls (because the sample included only Jersey cows).

That weight and measure distribution of the non-randomly selected 500 Jersey cows from the herd of Jersey cows and Aberdeen Angus bulls could never properly be used to draw inferences about (i) the herd as a whole, (ii) the particular weight and measurements of any one particular Jersey cow from among the group of the 400 un-weighed and unmeasured Jersey cows, (iii) the 100 un-weighed and unmeasured Aberdeen Angus bulls as a group, or (iv) the particular weight and measurements of any particular Aberdeen Angus bull in the herd.

When the TA and the PSHSB seek to determine the proper level of a particular licensee's estimated reconfiguration costs by reference to the FRA metrics, they are, in effect, saying what

¹² A brief summary of relevant authorities is provided in Attachment A hereto.

some particular Aberdeen Angus bull or Jersey cow should weigh and measure based upon the distribution of weights and measures for the 500 Jersey cows.

1. The clear and fundamental bias incorporated in the FRA metrics

Because the FRA cost metrics include only data points that reflect the agreement and assent of Nextel, Nextel has had utter and complete control of the entry of data into those cost metrics. The bias implicit in this data selection method is transparent and transforms seemingly serious claims of a licensee's cost estimate's being higher than the levels indicated in the FRA cost metrics into the essentially trivial observation that Nextel thinks the licensee's cost estimate is too high because they are higher than other costs with which Nextel has agreed.

2. The untenable assumption of the random nature of the FRA metrics

It is clear that the FRA cost metrics could be meaningful in assessing the proposed reconfiguration costs of an 800 MHz public safety licensee if and only if:

- The sample on which the metrics are based were developed as a result of random sampling; and
- The sample on which the metrics are based were not biased.

Neither of those essential conditions is fulfilled by the FRA cost metrics as now collected and organized.

The "large body of historical information"¹³ upon which the metrics are based is not a sample from which any useful or reliable inferences at all can be drawn about the reconfiguration cost estimates of any licensee because sampling supports inferences, if any, only about the larger unmeasured population as a whole and not about any particular member thereof.

¹³ Charles County Order, at ¶45.

- The method of sample development of the FRA cost metrics excluded the critical element of randomness and substituted a collection methodology based upon an interested party's ability to skew the cost metrics in its favor;
- The sample on which the FRA cost metrics are based contains a fundamental bias which cannot be denied and cannot reasonably be ignored; and
- The metrics are not a source of impartial truth, but, rather, function as a shield for Nextel against increased financial exposure.

3. *The clear lack of representativeness of the FRA metrics: problem of categories*

The FRA cost metrics package the collected data under two or three categories:

- The number of subscriber units; and
- The number of repeaters; and
- Sometimes, the number of sites.

Those categories are far too broad to be representative and fail to make critical distinctions that have direct bearing upon costs. With respect to subscriber units:

- Subscriber units installed in buses involve very different reconfiguration costs from the same number of portable units;
- Subscriber units in the hands of first responders who cannot be released during their tours to wait as their radios are retuned involve very different reconfiguration costs from units in the hands of less critical personnel who can take time to await retuning;
- 20-year-old radios subjected to hard use involve very different reconfiguration costs from relatively new radios in very good condition; and
- Subscriber units spread over 1,000 square miles involve very different reconfiguration costs from subscriber units spread over 100 square miles.

In each of those examples, the costs in the latter cases are not representative of the costs in the former cases (and vice versa). There has been no effort by the TA or the PSHSB to determine

whether the FRA cost metrics, and their broad undifferentiated categories, assure representativeness on the basis of number of subscribers alone, and they most assuredly do not.

The number of repeaters is far too broad a category to be representative and fails to make critical distinctions that have direct bearing upon costs. With respect to infrastructure:

- Repeaters installed at 100 sites involve very different reconfiguration costs from the same number of repeaters installed at 10 sites;
- Repeaters installed at 10 transmit/receive sites involve very different reconfiguration costs from repeaters installed at 10 transmit/sites plus 5 receive only sites and 10 bi-directional amplifier sites in tunnels and buildings;
- Repeaters at any one site where the capacity required is high and the capacity available is low involve very different reconfiguration costs from repeaters installed at any one site where the capacity required is low and the capacity available is high;
- Repeaters in a system with extremely heavy traffic involve very different reconfiguration costs from many repeaters in a system with relatively low traffic levels;
- Repeaters in a trunked simulcast system involve very different reconfiguration costs from repeaters in a conventional radio system; and
- Repeaters spread over 1,000 square miles involve very different reconfiguration costs from repeaters spread over 100 square miles.

In each of those examples, the costs in the latter cases are not representative of the costs in the former cases (and vice versa). There has been no effort by the TA or the PSHSB to assess whether FRA cost metrics, and their broad undifferentiated categories, are representative on the basis of number of repeaters alone, and they most assuredly are not.

4. *The clear lack of representativeness of the FRA metrics: the problem of system differentiation*

The TA FRA Metrics do not differentiate among widely differing systems and operating requirements that have a very significant bearing upon reconfiguration costs. By way of examples (and many more could be provided):

- A twenty or more year old first generation non-standardized Motorola SmartNet System involves very different reconfiguration challenges and costs from a very modern SmartNet System;
- A single system involves very different reconfiguration challenges and costs from a reconfiguration involving multiple systems networked together and enabling roaming between them;
- A radio system in an area regularly subject to hurricanes has operating requirements (and related reconfiguration costs) that are very different from those of a radio system that operates in a generally benign environmental hazard environment;
- A radio system in an area that includes high-profile terrorist targets has operating requirements (and related reconfiguration costs) that are very different from those of a radio system that operates in a lower-profile terrorist target area;
- A radio system that has required very strict operating and maintenance practices has operating requirements (and related reconfiguration costs) that are very different from those of a radio system that has been forgiving and easy to operate and maintain; and
- A radio system that operates in a signal-intensive environment presents reconfiguration challenges (as a result of the increased potential for interference from inter-modulation and otherwise) and related costs that are very different from those of a radio system that operates in relative radio isolation.

In each of those examples, the costs in the latter cases are not representative of the costs in the former cases. There has been no effort by the TA or the PSHSB to assure that these and similar substantive distinctions material to reconfiguration costs are reflected in the FRA cost metrics as applied to particular licensees.

5. *The clear lack of representativeness of the FRA metrics: the problem of the “simple retune”*

It has been the consistent position of Nextel that all 800MHz radio systems (with the exception of conventional systems for which back-to-back repeaters are required to maintain old and new NPSPAC Mutual Aid Channels temporarily in simultaneous operation) should proceed by the use of a reconfiguration methodology referred to as a “simple retune.” A simple retune is

a system reconfiguration methodology that involves no material elements of redundancy or upgrading of infrastructure equipment.

The Petitioners are aware of no case in which Nextel has expressly accepted reconfiguration costs that were not based upon the assumption of a simple retune. Accordingly, the FRA cost metrics reflect entirely (or nearly entirely) the costs of reconfiguring system infrastructure by means of a simple retune methodology. To the Petitioners' knowledge, several of the unsettled Stage 2 cases involve claims by licensees that their systems cannot be safely and effectively reconfigured by means of a simple retune.

The FRA cost metrics are not representative of the reconfiguration costs of licensees' systems for which a "simple retuning" methodology is not appropriate. There has been no effort by the TA or the PSHSB to address the lack of representativeness of the FRA cost metrics as applied to the reconfiguration costs of licensees' systems for which a "simple retuning" methodology is not appropriate.

6. *The problem of Nextel's control over certain costs*

The metrics include statistics on FRA preparation (non-legal) and legal costs. Both of those cost categories are substantially dependent upon the resistance of Nextel to entering into an FRA. A particular licensee's FRA preparation (non-legal) and legal costs for a case in which an FRA has not been reached after lengthy negotiations with Nextel -- during which Nextel may have propounded multiple sets of questions and offered multiple alternatives to that licensee's reconfiguration plan -- cannot be in any sense similar to or properly represented by FRA preparation (non-legal) and legal costs of licensees that have quickly concluded FRAs with Nextel.

7. *The problem of the use of percentiles*

The FRA cost metrics are presented in terms of the 25th, 50th, and 75th percentiles of reconfiguration costs. The practice of the PSHSB has been to focus upon the 50th and 75th percentiles of estimated reconfiguration costs reflected in the FRA cost metrics and to apply those particular estimated cost ranges to a particular licensee. The presentation format of the cost metrics and the method of the application by the PSHSB appear to exclude the possibility that the estimated reconfiguration costs of a particular licensee could quite properly be higher than the 75th percentile of estimated reconfiguration costs and as high as or higher than the 100th percentile of estimated reconfiguration costs.

The aggregate metrics provide no estimated reconfiguration costs for the 100th percentile of such costs.¹⁴ Obviously, some licensees' estimated reconfiguration costs are in the 100th percentile of such costs, but neither the TA nor the PSHSB seems to contemplate the possibility that the estimated reconfiguration costs of the licensee with costs under review could also be in the 100th percentile of all such costs or even establish a new level for the 100th percentile of such costs.

When the TA and the PSHSB examine the estimated reconfiguration costs of a particular licensee, they appear to assume, wholly without basis, that the costs associated with the 50th or 75th percentile of estimated reconfiguration costs are representative of the costs of a particular licensee and reflective of the proper level thereof. This assumption is simply unsupportable because, at best, the metrics could provide some cost level probability information (if the FRA metrics were not biased and unrepresentative). However, even if, contrary to fact, the metrics

¹⁴ More recently, individual licensee profiles have used the 100th percentile. It is not clear whether that percentile includes both licensees between 99 and 100% and those more than 100%, or whether the ceiling is automatically adjusted to account for highest cost estimates.

provided some reliable cost level probability information, those statistics would provide no information on a particular licensee's proper level of estimated reconfiguration costs. In a coin toss, the probability of a head or a tail is 50% when viewed over a significant number of tosses, but there can be no assurance that any particular toss will be a head or a tail.

II. The FRA metrics are not based upon actual system reconfiguration costs.

The Charles County Order implies that the FRA cost metrics are based upon actual "system retuning costs." In fact, however, the cost metrics are based upon estimated not actual reconfiguration costs. This conclusion follows from the basing of the FRA cost metrics upon FRAs that include estimates of reconfiguration costs made before the physical reconfiguration process has been undertaken. The use of reconfiguration cost estimates rather than actual reconfiguration costs is fraught with problems, among which are:

- Estimates are just estimates, and there is no indication that the metrics reflect change orders and true-ups to transform the estimates into actual costs; and
- The use of estimates implies, without basis, that the physical reconfiguration undertaken pursuant to agreement on a cost estimate was safely and effectively completed.

The use of reconfiguration cost estimates in the FRA cost metrics to test the reasonableness of the costs of a particular licensee has no rational basis because the estimates are apparently not validated in either of two fundamental senses:

- The estimates are not amended to reflect actual costs; and
- The estimates are not tested to determine whether a safe and effective reconfiguration was achieved for those estimated costs.¹⁵

¹⁵ The November 30, 2009 version of the TA FRA Metrics explains that "reconfiguration costs are extracted from the Cost Estimates presented in Schedule C of the FRA." The 789 agreements said to be covered "include[e] amendments where applicable."

The use of reconfiguration cost estimates in the FRA cost metrics to test the reasonableness of the costs of a particular licensee is also unreliable because such estimates:

- Reflect the estimating and negotiating skills of the licensee and Nextel and not the real costs of system reconfiguration;
- Reflect the relative financial strength and determination of the negotiating parties, neither of which factors has any bearing on required actual reconfiguration costs; and
- Indiscriminately include FRAs arrived at with the assistance of skilled counsel and technical support and FRAs arrived at by unsupported licensees which may be unaware of or unable effectively to protect and exercise their rights.

The implication that the FRA cost metrics are based upon actual “system retuning costs” is improper and inaccurate. The use of reconfiguration costs other than actual costs is unsupportable.

III. The FRA cost metrics do not provide any sound basis for raising of the burden of proof upon licensees whose system reconfiguration costs exceed purported indications drawn from this data.

The PSHSB asserted in the Charles County Order (§ 45) that the FRA metrics “establish a presumptively valid cost unless the licensee establishes that its system is materially different from the systems from which the metrics were derived.” The presumption of the validity of the implications of the FRA cost metrics has the effect of increasing the burden of proof upon a licensee because, in addition to establishing the reasonableness and necessity of that licensee’s claimed reconfiguration costs, the licensee must also establish that its system is materially different from the systems from which the FRA cost metrics were derived. The critical questions about the raising of the burden of proof are two:

- Whether there is any basis for the presumption of the validity of the implications of the metrics; and
- Whether the metrics properly effectively establish a standard, the variance from which must be supported by substantial proof.

The presumption of the validity of the implications of the FRA cost metrics erected in the Charles County MO&O cannot survive the recognition that:

- The use of the FRA cost metrics to draw inferences about particular licensees is methodologically unsupportable;
- The FRA cost metrics are fundamentally flawed as a result of bias;
- The FRA cost metrics are flawed as a result of lack of representativeness; and
- The FRA cost metrics do not reflect actual reconfiguration costs.

In these circumstances, there is no basis for the conclusion that the FRA cost metrics properly establish what is, in effect, a standard variance from which must be supported by substantial proof. The raising of the burden of proof upon licensees whose costs exceed the “applicable” FRA cost metrics is inappropriate and without a sound basis.

IV. Licensees must be afforded full and free access to all information necessary or useful in analyzing whether their 800 MHz radio systems are different from the systems included in the FRA cost metrics.

Even if, contrary to fact, there were a sound basis for the presumption of the validity of the implications of the FRA cost metrics and for the use of those metrics as a standard (variance from which must be supported by substantial proof), those conclusions would deny due process of law if licensees do not have access to the information required to enable them to establish that their systems are materially different from the systems from which the FRA cost metrics were derived. The Charles County Order assumes that licensees can examine whether their systems are different from the systems included in the TA metrics either because licensees have that information or because there is a process for them to gain access to that information. In the experience of Petitioners:

- It has not been easy or generally possible for licensees to:

- Identify the licensees which have their estimated reconfiguration costs included in the FRA cost metrics claimed to be applicable;
 - Obtain substantial substantive information respecting the systems of the licensees which have their estimated reconfiguration costs included in the metrics claimed to be applicable; or
 - Obtain substantial substantive information respecting the reconfiguration plans of the licensees which have their estimated reconfiguration costs included in the metrics claimed to be applicable; and
- Licensees do not generally themselves have substantive information respecting:
 - The systems of the licensees which have their estimated reconfiguration costs included in the FRA cost metrics claimed to be applicable; or
 - The reconfiguration plans of the licensees which have their estimated reconfiguration costs included in the FRA cost metrics claimed to be applicable.

In the Charles County Order, the PSHSB did not attempt to establish or even consider the reasonableness of its assumption that licensees have access to the information necessary to meet the burden of overcoming the effect of the FRA cost metrics. The FRA cost metrics have their origin in an order of the FCC¹⁶ that gave recognition to an information imbalance between 800 MHz licensees and Nextel and provided the means to redress that imbalance. In that order, the Commission first overthrew the regime of confidentiality agreements established by Nextel that prohibited licensees from sharing information with each other, and second, provided for the development of what became the cost metrics.

Clearly, the FCC was well-intentioned in seeking to remedy the information imbalance, but did not anticipate that the cost metrics would create as many or more problems than the metrics were intended to solve. The FCC apparently did not understand that by asking the TA to prepare statistics based upon FRAs, the FCC was incorporating a bias into the statistics because all data comes from FRAs, *i.e.*, agreements reflecting only estimated reconfiguration costs to which Sprint Nextel has consented. In addition, the FCC appears to assume in the Charles

¹⁶ Note 5, *supra*

County Order that the FRA cost metrics provide all the information that licensees require to test whether their systems are materially different from the systems from which those metrics were derived. There is no basis for that assumption.

The assumption that licensees can examine whether their systems are different from the systems included in the FRA cost metrics either because those licensees have that information or because there is a process for such licensees to gain access to that information is either simply wrong or unreasonably optimistic.

V. Recent extensions of the use of FRA metrics run beyond “informational.”

The TA has not strictly adhered to its own indication that the FRA cost metrics are “for informational purposes only.” The TA clearly treats the metrics as evidence and requires its inclusion in the record of mediation. In a section of the most recent edition of the TA FRA Metrics entitled “Use of Cost Metrics Reports in negotiations and mediation,” the TA indicates that:

- As part of a recently adopted procedure designed to facilitate negotiations (note 7, *supra*), the TA prepares a Cost Metrics Report when a licensee submits its cost estimate. The TA mediator will provide the Cost Metrics Report to the licensee and Sprint Nextel when a Notice of Commencement of Negotiations is issued at the onset of negotiations.
- If negotiations and mediation between the licensee and Sprint Nextel do not result in an agreement, and there are cost issues in dispute, the TA will generate Final Cost Metrics Reports comparing the final offers of the parties to the TA Cost Metrics.
- The Final Cost Metrics Reports will be made part of the mediation record. The parties will have five days to comment on the Final Cost Metrics Reports. The TA mediator may consider the Final Cost Metrics Reports and the parties' comments as part of the Recommended Resolution. (“RR”).
- Additional information about the use of Cost Metrics Reports in mediation can be found in the TA's Alternative Dispute Resolution (ADR) Plan.

The TA's above-quoted process for developing a Cost Metrics Report and a Final Cost Metrics Report, and making the Final Cost Metrics Report part of the mediation record, goes far beyond the use of the FRA cost metrics for informational purposes only. This insertion of the TA into the development of the mediation record is highly problematic for a number of reasons:

- First, the TA has never examined the metrics from the standpoint of their methodologically improper use or from the standpoint of their biased and unrepresentative character;
- Second, the TA provides no information respecting the process of the development of a Cost Metrics Report and a Final Cost Metrics Report or information respecting the method of selection of data from the more comprehensive TA FRA Metrics for inclusion in a Cost Metrics Report and a Final Cost Metrics Report; and
- Third, the insertion of a Final Cost Metrics Report into the mediation record cannot be viewed as having no effect upon the mediator in his or her development of an RR. To the contrary, insertion of the TA into the mediation process violates, or creates the appearance of violating, the prohibition in the TA's ADR Plan against TA management acting as mediators because of their business relationships with Nextel.¹⁷

CONCLUSION AND REQUEST FOR RELIEF

Under the Charles County Order and the practices of the TA, the FRA cost metrics have a very material and potentially outcome-determinative effect upon the resolution of disputes between 800 MHz public safety licensees and Nextel in relation to estimated reconfiguration costs and have been allowed that effect despite:

- Inferences from the FRA cost metrics against particular licensees are methodologically improper;
- The authorities writing on inferential statistics are very clear: (i) Sampling bias undermines the reliability of statistics; and (ii) Lack of representativeness undermines the utility of statistics;

¹⁷ ADR Plan §8: "Representatives, principals, and employees of Deloitte Consulting LLP and Baseline Telecom, Inc. shall not serve as TA Mediators."

- Inferences from the FRA cost metrics against particular licensees are also improper because the metrics are biased and not based upon a random sample (or any sample having even a remote relationship to a random one);
- Inferences from the FRA cost metrics against particular licensees are improper because, even if those metrics were not biased, they are surely not clearly representative in any particular case;
- Inferences from the FRA cost metrics against particular licensees are improper because, even if those metrics were not biased and even if they were truly representative, they are not reflective of actual reconfiguration costs after the physical rebanding process has been safely concluded and a proper accounting completed;
- The practice of utilizing the costs of the 50th and 75th percentiles of estimated reconfiguration costs is arbitrary and capricious;
- The FRA cost metrics provide no basis for imposing or raising any burden of proof upon licensees;
- The information imbalance between Nextel and 800 MHz licensees remains, and that imbalance has material due process implications; and
- Under the TA's own policy and practice, the TA (i) chooses from among clearly unrepresentative statistics that are plainly biased in favor of Nextel; (ii) inserts that selected data into the record of a mediation in which Nextel, with which the relevant TA constituents have or have had a business relationship, is a party; (iii) invites methodologically improper use of those selected statistics; and (iv) thus intrudes in a potentially outcome-determinative manner in the process of resolving disputes in that mediation in which the TA is prohibited from acting as a mediator by its own rules.

The continued use of the FRA cost metrics in the manner practiced by the TA and the PSHSB is clearly a source of substantial potential injustice to the Petitioners and other 800 MHz public safety licensees that have not reached FRAs with Nextel or have been or could be influenced by the effect of the current pattern of use of the FRA cost metrics in their negotiation of FRAs with Nextel upon terms and conditions less favorable to those licensees than could have been obtained if the FRA cost metrics had not been improperly employed.

The Commission should return the FRA cost metrics to their original informational purpose, which will be enhanced by making the data public upon licensee request, as urged by Petitioners and by APCO and other public safety organizations.¹⁸

Respectfully submitted,

NEW JERSEY TRANSIT CORPORATION

By _____

Carl Robert Aron

For New Jersey Transit Corporation

Executive Vice President

RCC Consultants, Inc.

580 Park Avenue

New York, NY 10065

(212) 752 9526

CITY OF PHILADELPHIA, PA

By _____

Shelley R. Smith, City Solicitor

Michael Athay

Chief Deputy City Solicitor

City of Philadelphia Law Department

1515 Arch Street, 17th Floor

Philadelphia, PA 19102

MONTGOMERY COUNTY, MD

By _____

James R. Hobson

Miller & Van Eaton, PLLC

1155 Connecticut Avenue, N.W., #1000

Washington, D.C. 20036

(202) 785-0600

RCC CONSULTANTS, INC.

By _____

Carl Robert Aron

Executive Vice President

RCC Consultants, Inc.

580 Park Avenue

New York, NY 10065

(212) 752 9526

January 20, 2010

¹⁸ See note 4, *supra*.

- Sampling bias undermines the reliability of statistics; and
- Lack of representativeness undermines the utility of statistics.

“Inferential statistical procedures will produce accurate inferences only when they are based upon random samples. The reason is that all inferential procedures depend on probability theory, which, in turn, requires random samples in order to work. “**A random sample** is one that has been obtained in such a way that each observation in the population has an equal chance of being included in the sample. “In contrast, **a biased sample** is selected from a population in such a way that some scores are more likely to be chosen than others. A biased sample is unlikely to be representative of its population.”¹⁹

“The reliability of a poll or study depends on a number of things, but principally it is important that the sample that has been surveyed or tested in some way is representative of the group about which a conclusion will be drawn, and that the way that sample has been measured [what is said about it] is free of bias.”²⁰

“One of the mainstays of logical persuasion is the use of **statistics**. We tend to believe statistics without questioning them simply because they seem specific and well researched. But we ought to ask several questions when statistical evidence is offered. First, ‘Is the sample from which the statistics are drawn a representative one?’ In other words, is the sample selected in a way that might bias the results? Or is it a reliable representation of the larger population? We might want to know how the sample was selected.”²¹

“The need to avoid sample bias is well-known. The mistake is widespread nevertheless.”²²

Other authorities are to the same effect.²³

¹⁹ Glenberg, Arthur M., *Learning from Data, An Introduction to Statistical Reasoning* (Second Edition) (Mahwah 1996), pp. 100-101

²⁰ Tindale, Christopher W., *Fallacies and Argument Appraisal* (Cambridge 2007), p. 159

²¹ Larson, Charles U., *Persuasion: Perception and Responsibility* (12th Edition) (Boston 2007), pp. 216-217

²² Whyte, Jamie, *Crimes Against Logic: Exposing the Bogus Arguments of Politicians, Priests, Journalists, and Other Serial Offenders* (New York 2004), p. 140

²³ Chapter 8, “Inductive Errors, Biases, and Fallacies,” in Watson Douglass, *Informal Logic: A Pragmatic Approach* (2nd Edition) (Cambridge 2008); and Chapter 3, “The Frame and the Elements of a Sampling Plan,” in Deming, Edward W., *Sample Design in Business Research* (1960) (Reprinted 1990 by Wiley Interscience, Hoboken)