

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

In the Matter of )
METRO TELECOM, INC. )
Request for Waiver of Section 22.805 of the ) FCC File No. 0000770835
Commission's Rules to Operate Private Land )
Mobile Radio Systems in the New York )
Metropolitan Area on Frequencies Offset from )
Airborne Mobile Frequencies Allocated to the Air- )
Ground Radiotelephone Service )

ORDER

Adopted: July 21, 2003

Released: July 22, 2003

By the Chief, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau:

I. INTRODUCTION

1. In this Order, we address the above-captioned application and waiver request (Request)1 of Metro Telecom, Inc. (Metro Telecom).2 Metro Telecom requests a waiver of Section 22.805 of the Commission's Rules3 to allow it to operate private land mobile radio (PLMR) systems on frequencies that are offset 12.5 kHz from frequencies allotted to the Air-Ground Radiotelephone Service. For the reasons discussed below, we grant the Request.

II. BACKGROUND

2. Metro Telecom provides two-way radio communications services for a variety of carriers and other airport-related activities at the three major airports in the New York metropolitan area: LaGuardia Airport, JFK International Airport, and Newark International Airport.4 Metro Telecom states that it provides radio services within a two-mile radius of the perimeter of each of these facilities for use by entities such as security companies engaged by individual airlines, courier companies, caterers, rental car operations, other transportation and ground services, and a variety of other organizations engaged in activities supporting the airline industry.5 In this connection, Metro Telecom reports that the volume of

1 FCC File No. 0000770835, filed February 13, 2002, and amended on December 11, 2002. See also Request for Waiver (Request) included as an attachment to the above-captioned application. Id.

2 Metro Telecom describes itself as engaged in the design, construction, and operation of large trunked, conventional, digital microwave, and other voice and data radio communications systems in the New York metropolitan area. See Request at 1.

3 47 C.F.R. § 22.805.

4 Request at 1.

5 Id. at 1-2. Metro Telecom states that end users include the following entities: Kennedy Medical Center (provides emergency medical care and ambulance service to JFK Airport, including airside operations), Haynes Security, Inc. (under contract with the Port Authority of NY & NJ to provide gate/airport access control to airside airport operations (continued....))

users on its systems, as well as general spectrum efficiency consideration, demands operation in the trunked mode.<sup>6</sup> However, Metro Telecom states that it is virtually impossible in the New York metropolitan area to obtain 450 MHz band Part 90 frequencies for trunking on an exclusive basis, *i.e.*, exempt from co-channel monitoring/sharing requirements.<sup>7</sup> As such, Metro Telecom states that it attempted to operate a trunked system using shared channels on which all licensees are required to monitor for co-channel traffic before transmitting.<sup>8</sup> Metro Telecom reports that it experienced ongoing, destructive interference on the base-to-mobile path of its system from numerous, co-channel systems—operating at significantly higher sites and power levels—that presumably could not hear Metro Telecom’s deliberately geographically confined (*i.e.*, low power, low antenna height) transmissions.<sup>9</sup> As for other alternatives within the rules, Metro Telecom contends that its narrowly defined service requirements (the three airports) effectively precludes it from competing for geographic area licenses at auction.<sup>10</sup> In addition, Metro Telecom states that it would be economically impractical to pursue geographic partitioning options with a New York area auction winner, because protecting Metro Telecom’s systems at the three airports would effectively eliminate the geographic licensee’s ability to use the spectrum in the core New York City area.<sup>11</sup>

3. On February 13, 2002, Metro Telecom filed the above-captioned application to modify Station WPMB478 by replacing its currently authorized base frequencies, *i.e.*, its 450 MHz band Part 90 frequencies, at Jamaica, New York, Newark, New Jersey, and Flushing, New York, with seven frequencies using the following centers: 459.7375 MHz, 459.8625 MHz, 459.8875 MHz, 459.9125 MHz, 459.9375 MHz, 459.9625 MHz, and 459.9875 MHz. Six of the seven frequencies that Metro Telecom proposes to use are offset 12.5 kHz from the center frequencies of two 459 MHz band Airborne Mobile frequencies allotted to the general aviation Air-Ground service. The seventh frequency is offset 12.5 kHz from one Airborne Mobile frequency.<sup>12</sup> A total of eight Airborne Mobile frequencies are affected by the above-captioned application.<sup>13</sup>

4. Metro Telecom requests a waiver of Section 22.805 of the Commission’s Rules, which governs the designation of frequencies for the general aviation Air-Ground service. Metro Telecom states

(...continued from previous page)

for JFK Airport), Adelis Int’l Security, North American Airlines, Varig Brazilian Airlines, LaGuardia Air Park, New York Air Courier Corp., Air-Rail Transit Consortium at JFK, Nippon Cargo Airlines, Hertz Rent-A-Car, Avis Rent-A-Car, and TCE Systems, Inc. *Id.* at 2 n.1.

<sup>6</sup> Request at 7.

<sup>7</sup> Metro Telecom explains that it is not practical to license 450 MHz channels on an exclusive basis in metropolitan New York because of the presence of numerous co-channel and adjacent channel incumbents that are entitled to inference protection. *Id.* citing 47 C.F.R. § 90.187.

<sup>8</sup> *Id.* at 7 citing *Public Notice*, Private Land Mobile Radio – Monitoring Requirements for Non-Exempt Trunked Systems on Channels Between 150-512 MHz, 16 FCC Rcd 21421 (WTB PSPWD 2001).

<sup>9</sup> Request at 7. Metro Telecom states that co-channel licensees, particularly those operating from high sites in Manhattan, transmitted on top of and routinely disrupted its customers’ communications in progress. *Id.*

<sup>10</sup> Metro Telecom notes that exclusive Part 90 channels in the New York area are available in the 470-512 MHz, 800 MHz, and 900 MHz bands. In this connection, Metro Telecom states that because its coverage areas and customer base are geographically very narrowly defined, it cannot value a frequency as would an operator who intended to operate over the very extensive population base of the New York metropolitan area. *Id.* at 8-9.

<sup>11</sup> *Id.*

<sup>12</sup> The frequency 459.9875 MHz is offset 12.5 kHz from an Airborne Mobile frequency and separated 25 kHz from the frequency 460.0125 MHz, which is allocated to the Part 90 Public Safety Pool. See 47 C.F.R. § 90.20(c).

<sup>13</sup> The eight Part 22 frequencies affected by the captioned application are: 459.725 MHz, 459.750 MHz, 459.850 MHz, 459.875 MHz, 459.900 MHz, 459.925 MHz, 459.950 MHz, and 459.975 MHz.

that it meets the criteria for a waiver because it has “no reasonable alternative,” *i.e.*, as described above, its low power and low antenna height effectively precludes its use of shared Part 90 spectrum<sup>14</sup> and other alternatives are economically impracticable. Moreover, Metro Telecom states that its proposed use would not interfere with any licensee or potential licensee in the Air-Ground Service.<sup>15</sup> In support, Metro Telecom submitted a detailed engineering analysis that concludes that its proposed system would not cause harmful interference to Air-Ground Service operators.<sup>16</sup> Metro Telecom also states that it received no interference complaints during the two years (1999-2001) that it used the Part 22 frequencies, as proposed herein, under an experimental license.<sup>17</sup> In addition, Metro Telecom asserts that because the Commission’s minimum-distance separation rules preclude new Air-Ground Service assignments in the areas relevant to Metro Telecom’s proposed service areas, a grant of its application will not impact new Air-Ground applicants.<sup>18</sup>

5. On December 12, 2002, the Commission released a public notice requesting comment on Metro Telecom’s proposal.<sup>19</sup> Comments opposing the Request were filed by SkyTel Corp.<sup>20</sup> and Stratophone, LLC,<sup>21</sup> both of which hold licenses to operate in the Air-Ground frequency band. These commenters argue that granting the instant Request would “result in increased interference and a degradation of the Air-Ground band in New York City and the surrounding metropolitan areas.”<sup>22</sup> Stratophone further alleges that granting the instant Request would interfere with its intention to propose a new Air-Ground system architecture or to supplement its existing service in the future.<sup>23</sup> In response, Metro Telecom filed reply comments that include an engineering study demonstrating that no interference would occur.<sup>24</sup>

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<sup>14</sup> Request at 6-7 (stating that due to adjacent and co-channel spectrum congestion in the New York metropolitan area, there are no PLMR frequencies available for licensing that would support the trunked communications system that Metro Telecom is seeking).

<sup>15</sup> Request at 10-13.

<sup>16</sup> See Request at Attachment 2; Metro Telecom Reply at Attachment 2, Declaration of Charles L. Vavruska, P.E., Attachment 2(a), and Exhibits A-E (Vavruska Declaration).

<sup>17</sup> Request at 10-11 (“Metro’s Experimental Authorization Has Operated Entirely Without Interference”). During 1999-2001, Metro Telecom was authorized to use six of the seven offset Air-Ground frequencies requested in the captioned application under an experimental authorization. Request at 4 and Attachment 1 (copy of Experimental Radio Station Construction Permit and License, Call Sign WB2XAB, FCC File No. 0008-EX-PL-1998, effective June 18, 1999, and expired on July 1, 2001). In December 2001, the Commission’s Office of Engineering and Technology (OET) dismissed Metro Telecom’s application to renew WB2XAB because it was “beyond the scope of operations authorized under Part 5 of the Commission’s Rules” and advised Metro Telecom to seek authority from the Wireless Telecommunications Bureau. Letter dated Dec. 4, 2001 from James R. Burtle, Chief, Experimental Licensing Branch, OET, FCC, to Gary G. Schumacher, Metro Telecom, Inc. (*recon. pending, see* Metro Telecom, Inc., Reply Comments, filed Jan. 30, 2003, at 2 n.2 (Metro Telecom Reply)).

<sup>18</sup> Request at 10-12; *see also* 47 C.F.R. § 22.813.

<sup>19</sup> Wireless Telecommunications Bureau Seeks Comment on Request for Waiver of Section 22.805 of the Commission’s Rules by Metro Telecom, Inc. to Operate Private Land Mobile Radio Systems in the New York City Metropolitan Area on Frequencies Offset From Those Allocated to the Air-Ground Radiotelephone Service, DA 02-3417, *Public Notice*, Dec. 12, 2002.

<sup>20</sup> SkyTel Corp. Comments, filed Jan. 10, 2003 (SkyTel Comments).

<sup>21</sup> Stratophone, LLC Comments, filed Jan. 10, 2003 (Stratophone Comments).

<sup>22</sup> Stratophone Comments at 3; SkyTel Comments at 2.

<sup>23</sup> Stratophone Comments at 6.

<sup>24</sup> Metro Telecom Reply, note 17, *supra*.

### III. DISCUSSION

6. Section 1.925 of the Commission's Rules provides that a waiver of the Commission's Rules may be granted if it is shown that the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest. It also provides that a waiver may be granted if it is shown in view of unique or unusual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest or the applicant has no reasonable alternative.<sup>25</sup>

7. Based on the record before us, we conclude that granting the instant Request would serve the public interest by promoting efficient use of the spectrum.<sup>26</sup> In this connection, we find that the Request meets the first prong of the Commission's waiver standard because the underlying purpose of Section 22.805, which is to allot frequencies for the general aviation Air-Ground service and prevent interference to such operations from ineligible services,<sup>27</sup> would not be served by application to the instant case. Specifically, we credit Metro Telecom's statement that it received no interference complaints during the two years it operated under experimental authority.<sup>28</sup> While the commenters believe that Metro Telecom's experimental operation interfered with their Air-Ground Service operations, both concede that they are unable to determine the origin of the interference they experienced.<sup>29</sup>

8. The commenters also state that the Request "presents no technical evidence" that there will be no interference to Air-Ground Service operations.<sup>30</sup> We note, however, that in response thereto Metro Telecom subsequently filed an engineering study. In this connection, we find that the engineering study demonstrates persuasively that Metro Telecom's proposed operations—at three fixed locations more than 150 miles from the commenters' base stations—would not interfere with the reception of airborne mobile transmissions by Air-Ground base facilities tuned to the Air-Mobile frequencies. Our conclusion is premised largely upon the much stronger line-of-sight signals from airborne mobiles.<sup>31</sup> In sum, we concur with Metro Telecom's assertion that its "transmit signal is so substantially below the Air-Ground

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<sup>25</sup> 47 C.F.R. § 1.925.

<sup>26</sup> In this regard, we note that Metro Telecom's use of the subject frequencies comports with the Commission's overall spectrum utilization goals as outlined in the recent Spectrum Policy Task Force Report. *See, e.g., Spectrum Policy Task Force Report*, ET Docket No. 02-135 at 15 (Nov. 2002) ("it is important that the Commission continue to optimize and facilitate access to and use of the radio spectrum"). *Id.*

<sup>27</sup> 47 C.F.R. § 22.805.

<sup>28</sup> *See* note 17, *supra*, and accompanying text. The captioned application specifies station coordinates that are three, five, and seven miles from the coordinates of the three locations authorized under the experimental license. The captioned application also requests a seventh offset frequency that was not authorized under the experimental license. We find these variations to be insignificant—relative to Metro Telecom's statement that it received no interference complaints concerning its experimental operation—because the experimental and proposed systems both involve: (1) relatively low power, directionalized base stations at the same three airports and (2) the same eight "affected" Part 22 frequencies.

<sup>29</sup> For example, SkyTel states that Air-Ground "users may not have been able to readily discern the nature, magnitude or origin of any interference they encountered." SkyTel Comments at 4.

<sup>30</sup> Stratophone Comments at 4; SkyTel Comments at 5.

<sup>31</sup> In particular, Metro Telecom also notes that its system is 12.5 kHz offset from Air-Ground stations, operates at much lower power, and is located at least 157 miles away from any Air-Ground base station receivers. Metro Telecom Reply at 7.

base stations receiver sensitivity at the receiver location that the signal would be invisible under normal tropospheric operating conditions.”<sup>32</sup>

9. SkyTel’s reliance on *Schlumberger Technology Corp.*,<sup>33</sup> wherein we denied a waiver request to operate a PLMR system on frequencies not available for use under Part 90, is misplaced. In that case, the applicant requested a waiver to operate up to 500 low power, temporary fixed transmitters on some 200-300 frequencies in the VHF-low band including spectrum allocated to TV Channels 4 and 5.<sup>34</sup> We denied this request after finding that Schlumberger Technology had not “adequately analyzed the interference potential associated with its proposed operations,” which “involve[d] a transformation in how radio spectrum is used generally in the acquisition of land seismic data . . . .”<sup>35</sup> In this connection, we found that a rule making proceeding, rather than a waiver, would be the appropriate vehicle for accommodating the “industry trends regarding the use and needs of radio spectrum . . . .”<sup>36</sup> By contrast, Metro Telecom’s engineering analyses sufficiently demonstrates that Air-Ground Service operations will be protected from harmful interference. Moreover, the captioned application, which proposes to use seven frequencies at three fixed locations, is clearly distinguishable from the hundreds of frequencies and sites proposed in *Schlumberger Technology Corp.*<sup>37</sup>

10. We also agree with Metro Telecom that the eight Air-Mobile frequencies that are affected by the above-captioned application are not available for assignment to new Air-Ground service applicants in the New York City area. Section 22.813 of the Commission’s Rules requires that co-channel Air-Ground stations be separated by “at least 800 kilometers (497 miles).”<sup>38</sup> Given that incumbent Air-Ground stations are licensed on the eight frequencies affected by the captioned application<sup>39</sup> at locations less than 497 miles from New York City, no new Air-Ground stations can be authorized to operate near the areas proposed in the above-captioned application.<sup>40</sup> In this connection, as noted above, we find that granting the Request serves the public interest by facilitating the efficient and effective utilization of the spectrum. In this regard, Stratophone’s stated intention to propose a new Air-Ground system architecture, or to supplement its existing service in the future, is insufficient to warrant denial of the instant Request.<sup>41</sup> We

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<sup>32</sup> Metro Telecom Reply at 8 citing Vavruska Declaration. Metro Telecom states that its engineering analyses were prepared using a program developed by Contact Telecommunications Engineering, Ltd., *The Transmission Loss Predictions for Tropospheric Circuits*, which complies with Technical Note 101, Reference AD 687-820, National Technical Information Service, U.S. Dept. of Commerce. See Metro Telecom Reply at 8. Moreover, the engineering analyses was performed on a “worst case” basis—as though Metro Telecom’s transmissions were omnidirectional and co-channel—even though they are directional and offset from the airborne frequencies by 12.5 kHz, which results in even greater signal attenuation at the protected sites and also assumed a conservative -117.5 dBm receiver sensitivity for the air ground stations. See *id.*

<sup>33</sup> SkyTel Comments at 3-4 citing *Schlumberger Technology Corp., Order*, 14 FCC Rcd 2988 (WTB PSPWD 1999) (*Schlumberger Order*).

<sup>34</sup> *Schlumberger Order*, 14 FCC Rcd at 2989 ¶ 3.

<sup>35</sup> *Id.*, 14 FCC Rcd at 2990 ¶ 7.

<sup>36</sup> *Id.*

<sup>37</sup> Additionally, in the *Schlumberger Order*, we found that a rule making proceeding, rather than a waiver, was appropriate after noting that “the Commission generally has permitted non-broadcast operations on a regular basis in TV bands only after going through a notice and comment rulemaking proceeding.” *Schlumberger Order*, 14 FCC Rcd at 2990 ¶ 7. By comparison, the captioned application does not request spectrum in the TV bands.

<sup>38</sup> 47 C.F.R. § 22.813.

<sup>39</sup> See note 13, *supra*, and accompanying text.

<sup>40</sup> Request at 11-12.

<sup>41</sup> Stratophone Comments at 6.

are, however, mindful that the spectrum at issue is allotted for Air-Ground operations and of the commenters' statements regarding the importance of such operations to aircraft safety.<sup>42</sup> Consequently, our action today is conditioned upon Metro Telecom's continued protection of Air-Ground systems from harmful interference.

11. Finally, we believe that additional channel monitoring requirements are necessary because Metro Telecom will be using non-standard channel pairs, *i.e.*, Part 22 frequencies for base transmissions instead of the standard Part 90 "base-side" frequencies (461-464 MHz range) exactly five megahertz below each Part 90 "mobile-side" frequency (466-469 MHz range) that Metro Telecom uses.<sup>43</sup> In this connection, Metro Telecom states that it will satisfy the monitoring requirements of Section 90.187(b) by using a carrier operated relay (COR) input on its trunking controller.<sup>44</sup> Metro Telecom explains that the COR input takes the output from the discriminator audio signal from a monitor receiver programmed to monitor the 461-464 MHz "base-side" frequencies routinely paired, under Part 90, with Metro Telecom's "mobile-side" transmit frequencies.<sup>45</sup> "When a signal is detected, the system is automatically inhibited from transmitting."<sup>46</sup> We believe this approach is sufficient under the circumstances presented.

#### IV. CONCLUSION

12. In light of Metro Telecom's detailed interference analysis and the fact that the commenters admit that the source of interference they are experiencing "is difficult to ascertain," we find that the Request makes an adequate showing of no interference to Air-Ground Radiotelephone Service licensees.<sup>47</sup> We also believe that grant of the instant Request serves the public interest by making efficient use of the subject spectrum.

#### V. ORDERING CLAUSES

13. Accordingly, IT IS ORDERED that, pursuant to Sections 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), and Section 1.925 of the Commission's Rules, 47 C.F.R. § 1.925, the Request for Waiver associated with the above-captioned application, FCC File No. 0000770835, filed by Metro Telecom, Inc. on February 13, 2002, as amended, IS GRANTED subject to the following CONDITIONS: (1) Metro Telecom will be authorized on a secondary, non-interference basis to Air-Ground Service operations and (2) Metro Telecom must monitor Part 90 "base-side" transmissions as described in paragraph 11, *supra*.

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<sup>42</sup> See Stratophone Comments at 3; See SkyTel Comments at 2.

<sup>43</sup> In a typical paired trunked system, the mobiles monitor the transmission signals of the base station before the mobiles themselves transmit. If there is no signal detected from the base station, then the channel is available. Under Metro Telecom's proposal, however, the base station transmissions that the mobiles would monitor will be in the Air-Ground Service. Should Metro Telecom monitor only these base station transmissions, it would be missing activity on the Part 90 base channels and consequently, its mobile operations could adversely impact Part 90 mobile communications.

<sup>44</sup> Metro Telecom, Inc. Supplemental Comments at 2, filed April 23, 2003.

<sup>45</sup> *Id.* at 2.

<sup>46</sup> *Id.* Metro Telecom notes that this is a method of monitoring commonly used by decentralized trunked systems.

<sup>47</sup> Stratophone Comments at 4.

14. IT IS FURTHER ORDERED that, pursuant to Section 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), that the Licensing and Technical Analysis Branch SHALL PROCESS File No. 0000770835 consistent with this Order and the Commission's Rules.

15. This action is taken under delegated authority pursuant to Sections 0.131 and 0.331 of the Commission's Rules, 47 C.F.R. §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

D'wana R. Terry  
Chief, Public Safety and Private Wireless Division  
Wireless Telecommunications Bureau