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Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

FCC MAIL SECTION

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FCC 94-304

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In the Matter of	) GEN Docket No. 90-314
	)
Amendment of the Commission's	) PP-4, PP-16, PP-42,
Rules to Establish New Personal	) PP-45, PP-51, PP-54,
Communications Services	) PP-68, PP-73

**MEMORANDUM OPINION AND ORDER**

Adopted: December 2, 1994;

Released: December 2, 1994

By the Commission: Chairman Hundt and Commissioner Chong not participating.

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## INTRODUCTION

1. By this action, the Commission addresses eight petitions for reconsideration of the Third Report and Order (Third R&O) in this proceeding.<sup>1</sup> Specifically, we affirm our denials of pioneer's preferences to petitioners. The recent passage of legislation regarding the General Agreement on Tariffs and Trade (GATT)<sup>2</sup> rendered moot any further Commission action on the three 2 GHz broadband personal communications services (PCS) pioneer's preferences granted in the Third R&O. Accordingly, we are not addressing those portions of the petitions that pertain to the grants and the petitions will be dismissed in part for this reason.

## BACKGROUND

2. The Commission's pioneer's preference rules provide a means of extending preferential treatment in its licensing process to parties that demonstrate their responsibility for developing new communications services and technologies.<sup>3</sup> These rules are intended to foster

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<sup>1</sup> See Establishment of New Personal Communications Services, Third Report and Order, GEN Docket No. 90-314, 9 FCC Rcd 1337 (1994), appeals remanded sub nom. Pacific Bell v. FCC, No. 94-1148 (D.C. Cir., July 26, 1994, remanded). See also Memorandum Opinion and Order on Remand, ET Docket No. 93-266 and GEN Docket No. 90-314, 9 FCC Rcd 4055 (1994); appeal pending sub nom. American Personal Communications v. FCC, No. 94-1549 (D.C. Cir. filed August 10, 1994). The petitions for reconsideration were filed by Advanced Cordless Technologies, Inc. (ACT); Advanced MobileComm Technologies, Inc. and Digital Spread Spectrum Technologies, Inc. (AMT/DSST); Ameritech; Corporate Technology Partners (CTP); Nextel Communications, Inc. (Nextel); Personal Communications Network Services of New York, Inc. (PCNS-NY); Qualcomm Incorporated (Qualcomm); and Spatial Communications Inc. (SCI).

<sup>2</sup> Congress completed passage of the GATT legislation on December 1. The President has made clear that he intends to sign the legislation. See Uruguay Round Agreements Act, H.R. 5110 and S. 2467, 103d Cong., 2d Sess. title VIII (1994).

<sup>3</sup> The pioneer's preference regulations are codified at 47 C.F.R. §§ 1.402, 1.403, 5.207 (1993). See Establishment of Procedures to Provide a Preference, Report and Order, 6 FCC Rcd 3488 (1991) (Pioneer's Preference Report and Order); recon. granted in part, Memorandum Opinion and Order, 7 FCC Rcd 1808 (1992) (Pioneer's Preference Recon. Order); further recon. denied, Memorandum Opinion and Order, 8 FCC Rcd 1659 (1993) (Pioneer's Preference Further Recon. Order). We are reviewing our pioneer's preference rules to assess the effect of Congressional authority to assign licenses by competitive bidding, see Review of the Pioneer's Preference Rules, ET Docket No. 93-266, Notice of Proposed Rule Making, 8 FCC Rcd 7692 (1993); First Report and Order, 9 FCC Rcd 605 (1994), on remand, on recon Memorandum Opinion and Order, FCC 94-276, released October 24, 1994.

development of new services and improve existing services by reducing the delays and risks innovators otherwise would face with the Commission's licensing process.

3. We do not grant preferences casually; indeed, we have stated that: "An applicant for a pioneer's preference [has] a significant burden to persuade the Commission that its proposal has sufficient merit."<sup>4</sup> The purpose of our pioneer's preference rules is to encourage the development of new technologies and services, rather than merely to implement existing technologies in different bands. Accordingly, our rules require that an entity must show that its innovative technology was developed specifically for the advancement of a particular service, in conjunction with a particular rule making before the Commission addressing this service.<sup>5</sup> Otherwise, an entity that had developed a technology useful in a variety of different services would be eligible for a preference in any new service established by the Commission. We believe that allowing such blanket eligibility for preferences would defeat the intent of our rules.

4. To be granted a pioneer's preference, therefore, an applicant must demonstrate that it has developed a new service or technology; that is, that it has developed the capabilities or possibilities of the service or technology or has brought the service or technology to a more

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In our most recent decision, we required that recipients of pioneer's preferences in proceedings in which tentative decisions on preference requests had been made at the time Congress enacted auction legislation pay for their licenses. This decision applies to three proceedings -- broadband PCS (GEN Docket No. 90-314); 28 GHz local multipoint distribution service (CC Docket No. 92-297); and low-Earth orbit satellites above 1 GHz (ET Docket No. 92-28). With respect to broadband PCS -- the only one of the three proceedings in which a final pioneer's preference decision has been made -- we required that pioneers, who will receive Channel Block A (1850-1865 and 1930-1945 MHz bands) in a Major Trading Area (MTA), see note 15 infra, pay either 90 percent of the winning competitive bid for Channel Block B (1870-1885 and 1950-1965 MHz bands) in their MTA or 90 percent of the adjusted value of the license, calculated based upon the average per population price established by competitive bidding for Channel Blocks A and B in the top ten MTAs. See Memorandum Opinion and Order on Remand, supra note 1. The GATT legislation changed the payment formula to 85 percent of the adjusted value of the license, calculated based upon the average per population price established by competitive bidding for Channel Blocks A and B in the twenty largest MTAs that do not include MTAs awarded to pioneers. This legislation mooted any challenges to the grants made and the payment required.

<sup>4</sup> Pioneer's Preference Report and Order, supra note 3 at para. 48.

<sup>5</sup> Id. at para. 37.

advanced or effective state.<sup>6</sup> The applicant also must demonstrate the technical feasibility of the new service or technology, either by submitting a technical feasibility showing or having submitted at least preliminary results of an experiment. Finally, a preference will be granted only if the rules adopted are a reasonable outgrowth of the proposal and lend themselves to grant of a preference.<sup>7</sup> In the Pioneer's Preference Report and Order, we stated: "[I]t will be our general policy to award a preference to any otherwise qualified innovator meeting our standard even if the Commission's final rules for the service are not identical to the innovator's original proposal. However, if the modifications are so significant that the particular innovator does not meet the eligibility standard, we will not award a preference to that innovator." We further stated that "any pioneer's preference would become final (and its scope determined) if final rules are adopted that are generally similar to the innovator's proposal."<sup>8</sup> An applicant meeting the pioneer's preference standard will be placed on a pioneer's preference track, will not be subject to competing applications, and if otherwise qualified will receive a license. Other applicants will compete for additional licenses on a separate track.<sup>9</sup>

5. The first pioneer's preference was awarded to Volunteers in Technical Assistance (VITA) for having developed and demonstrated the feasibility of using a low-Earth orbit satellite system on VHF/UHF frequencies for civilian digital message communications purposes.<sup>10</sup> The second award was made to Mobile Telecommunication Technologies Corporation (Mtel) for developing and testing an innovative new 900 MHz narrowband PCS technology that will increase spectrum efficiency.<sup>11</sup>

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<sup>6</sup> Our rules require that the new service or technology already be developed in a concrete, demonstrated fashion. Promises of future development are insufficient. [See Adams Telcom, Inc. v. FCC, Slip Op., No. 93-1103 (D.C. Cir. October 28, 1994).]

<sup>7</sup> See 47 C.F.R. § 1.402.

<sup>8</sup> See Pioneer's Preference Report and Order, *supra* note 3, 6 FCC Rcd at 3495, 3497.

<sup>9</sup> See Pioneer's Preference Further Recon. Order, *supra* note 3, 8 FCC Rcd at 1659.

<sup>10</sup> See Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum for Fixed and Mobile Satellite Services for Low-Earth Orbit Satellites, Report and Order, ET Docket No. 91-280, 8 FCC Rcd 1812 (1993) (award to VITA).

<sup>11</sup> See First Report and Order (First R&O), GEN Docket No. 90-314 and ET Docket No. 92-100, 8 FCC Rcd 7162 (1993), *on recon.* Memorandum Opinion and Order, 9 FCC Rcd 1309 (1994) (award to Mtel), *further recon.*, Second Memorandum Opinion and Order, 9 FCC Rcd 4519 (1994), *appeals pending sub nom.* BellSouth Corp. v. FCC, No. 93-1518 (D.C. Cir. filed August 20, 1993).

6. In this proceeding, we received pioneer's preference requests related to broadband PCS from 89 applicants, of which 50 were accepted for consideration.<sup>12</sup> In October 1992, we tentatively found that American Personal Communications (APC), Cox Enterprises, Inc. (Cox), and Omnipoint Communications, Inc. (Omnipoint) merited preferences and that the remaining 47 requests relating to broadband PCS tentatively did not merit preferences.<sup>13</sup> In December 1993, in the Third R&O, we concluded that APC, Cox, and Omnipoint (Grantees) met the pioneer's preference standard and therefore merited award of preferences, and that the remaining requests did not meet this standard and therefore did not merit award of preferences.<sup>14</sup> APC was granted a preference for having developed and demonstrated technologies that facilitate spectrum sharing by mobile PCS and fixed microwave systems at 2 GHz; Cox was granted a preference for having developed and demonstrated the feasibility of innovatively using cable television facilities as part of the PCS infrastructure; and Omnipoint was granted a preference for having designed and manufactured a 2 GHz spread spectrum handset and associated base station equipment.<sup>15</sup>

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<sup>12</sup> The other 39 requests related to broadband PCS were incomplete and dismissed for failing to provide basic information required by the Commission's rules. Several of these dismissals were appealed and the Commission's staff decision was affirmed. See Adams Telcom, Inc. v. FCC, supra note 6.

<sup>13</sup> See Tentative Decision and Memorandum Opinion and Order (Tentative Decision), GEN Docket No. 90-314, 7 FCC Rcd 7794, 7809-13 (1992). Six pioneer's requests relating to 900 MHz narrowband PCS also were tentatively denied in the Tentative Decision. These six requests were denied in the First R&O in GEN Docket No. 90-314 and ET Docket No. 92-100, supra note 11.

<sup>14</sup> See Third R&O, supra note 1, 9 FCC Rcd at 1339.

<sup>15</sup> As a result of receiving pioneer's preferences, APC, Cox, and Omnipoint will not be subject to competing license applications within Channel Block A in their designated MTAs. Specifically, if otherwise qualified, APC will receive Channel Block A in the Washington-Baltimore MTA; Cox will receive Channel Block A in the Los Angeles-San Diego MTA; and Omnipoint will receive Channel Block A in the New York MTA. To ensure the integrity of our pioneer's preference policies, we directed the relevant licensing bureau to condition each broadband PCS license obtained through the pioneer's preference process upon the licensee building a system that substantially uses the design and technologies upon which its preference award is based. We stated that this condition would apply in the service area for which the preference was granted and for the initial required five year build-out period specified in the rules for broadband PCS adopted in this docket. Additionally, we required the licensing bureau to condition the grant of broadband PCS licenses awarded under our pioneer's preference rules on the licensee holding the license for a minimum of three years or until the construction requirements applicable to the five-year build-out period have been satisfied, whichever is earlier. See Third R&O, supra note 1.

## PETITIONS FOR RECONSIDERATION

### Advanced Cordless Technologies, Inc (PP-4)

7. In its petition for reconsideration filed on March 7, 1994, ACT requests that we reconsider the Third R&O "insofar as the Commission there . . . failed to award a pioneer's preference to ACT."<sup>16</sup> The decision to deny ACT's 900 MHz PCS pioneer's preference request was made in the First R&O (released July 23, 1993), not in the Third R&O.<sup>17</sup> Other 900 MHz PCS pioneer's preference requests were also decided in the First R&O.<sup>18</sup> On November 22, 1993, ACT filed a petition for reconsideration of the First R&O "insofar as the Commission there denied ACT's request for a pioneer's preference."<sup>19</sup> On March 4, 1994, the Commission dismissed that petition as late-filed, and no appeal was taken.<sup>20</sup> There is no decision with respect to ACT's pioneer's preference request in the Third R&O now under reconsideration. Thus, ACT's instant March 7, 1994 petition is merely again seeking reconsideration of the denial of its preference in the First R&O. Under Section 405 of the Communications Act, 47 U.S.C. § 405, such petitions were due on or before September 10, 1993, which was 30 days after Federal Register publication. See 47 C.F.R. 1.4 (b). The petition is thus five months late. We have no discretion to accept the subject late-filed petition as it relates to decisions made in the First R&O.<sup>21</sup> Accordingly, insofar as the petition requests reconsideration of the denial of a pioneer's preference to ACT, it will be dismissed as untimely. Insofar as ACT's petition relates to the pioneer's preference grants made in the Third R&O, it will be dismissed as moot.

### Advanced MobileComm Technologies, Inc. and Digital Spread Spectrum Technologies, Inc. (PP-42)

8. In their joint petition for reconsideration, AMT/DSST claim that the Commission erred in its conclusions regarding the compatibility of their proposed spectrum scheme with

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<sup>16</sup> ACT Petition at 1.

<sup>17</sup> See First R&O, supra note 11, 8 FCC Rcd at 7176 ("We deny ACT's pioneer's preference request for the reasons stated."); see also 58 Fed. Reg. 42681, 42683 (August 11, 1993).

<sup>18</sup> Id. at 7175-84; see note 13, supra.

<sup>19</sup> ACT Petition for Reconsideration at 1 (filed November 22, 1993).

<sup>20</sup> See Memorandum Opinion and Order, supra note 11, 9 FCC Rcd 1309, 1317 (1994).

<sup>21</sup> See Virgin Islands Telephone Corp. v. FCC, 989 F. 2d 1231 (D.C. Cir. 1993); Reuters Ltd. v. FCC, 781 F.2d 946 (D.C. Cir. 1986); Mary Kupris, 5 FCC Rcd 5142 (1990) (subsequent history omitted).

the plan adopted in the Second Report and Order (Second R&O) in this proceeding,<sup>22</sup> and regarding an AMT/DSST demonstration of the technical feasibility of their broadband PCS equipment. In their jointly filed pioneer's preference request, AMT/DSST claimed to have demonstrated that their proposed "open network architecture" (ONA) scheme would work within a 10, 20, or 30 MHz bandwidth. Under this scheme, a licensee would build and operate a broadband PCS service in a portion of its spectrum and be required to offer the remaining spectrum to other operators, in a manner similar to a "carrier's carrier" approach. Access to this remaining spectrum would be on a first-come, first served demand basis for all parties including the licensee, provided that the demand for its services exceeded its exclusive spectrum. Under this proposal a licensee would be assigned a spectrum block of, for example, 30 MHz. The licensee would be required to operate and build a system that operated on 5 MHz. On the remaining 25 MHz, the licensee would be required to build and make facilities available to other PCS providers on an unbundled, non-discriminatory contractual basis.

9. In the Tentative Decision, we tentatively denied AMT/DSST's request because: 1) AMT had just begun to initiate preliminary tests of British equipment and DSST had performed only computer simulations and spectrum studies, and neither party had developed 2 GHz PCS technology to the point of field testing; and 2) the regulatory scheme proposed in the NPRM-TD was substantially different from the AMT/DSST open entry architecture proposal. In comments to the Tentative Decision AMT and DSST asserted that they had commercially available spread spectrum equipment that operates in the 900 MHz, 2.4 GHz, and 5.7 GHz Industrial, Scientific, and Medical (ISM) bands. DSST indicated that it was still developing its synchronous code division multiple access (S-CDMA) technology that would operate in the 2 GHz band, but stated that the technology would be similar to that being commercially used at 900 MHz and 2.4 GHz. AMT and DSST also asserted that their open entry proposal was compatible with the plan proposed in the NPRM-TD. They contended that S-CDMA would function well within other licensing regimes and that the Commission was penalizing them because they requested a 5 megahertz frequency assignment rather than a 30 megahertz assignment.

10. In the Second R&O, we did not adopt an open architecture spectrum plan, but instead adopted a plan with only one license per spectrum block per service area. In the Third R&O, we found AMT/DSST's open architecture proposal incompatible with the adopted rules and further found that AMT/DSST had not demonstrated the technical feasibility of their proposed equipment or made significant modifications to their technology to provide PCS at 2 GHz since the Tentative Decision. Accordingly, we denied AMT/DSST's pioneer's preference request.

11. In their petition for reconsideration, AMT/DSST argue that the Commission erred in its conclusion regarding the compatibility of their proposal with the adopted 2 GHz

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<sup>22</sup> See 8 FCC Rcd 7700 (1993). The Memorandum Opinion and Order (MO&O) in this proceeding modified the spectrum plan adopted in the Second R&O; see 9 FCC Rcd 5947 (1994).

broadband spectrum plan, stating that their open network architecture is compatible with the plan. Additionally, they argue that in the Third R&O the Commission erroneously elevated field testing of broadband PCS equipment to a separate pioneer's preference criterion of decisional significance. Finally, AMT/DSST argue that they have demonstrated the technical feasibility of their proposal, citing the work of DSST's parent company, Cylink, with commercial ISM equipment that uses spread spectrum technology.

12 We reaffirm our finding that AMT/DSST's proposal to require ONA is incompatible with our adopted 2 GHz broadband PCS rules. Their proposal requires a specific set-aside of designated spectrum for open network architecture that we declined to adopt either in the Second R&O or on reconsideration.<sup>23</sup> While voluntary resale agreements or joint ventures are permissible to facilitate parties' access to spectrum, the Commission prohibited the disaggregation of spectrum blocks and found that the record was inadequate to support the complex technical and operational issues involved in developing ONA for broadband PCS. Broadband PCS licensees in blocks A, B, and C are entitled to operate in the entire 30 megahertz allocated under current rules and AMT/DSST's proposal is thus incompatible with the plan adopted by the Commission.

13. Further, in the Third R&O we found that AMT/DSST had not demonstrated technical feasibility. AMT/DSST are incorrect in stating that we have elevated field testing to a separate pioneer's preference criterion of decisional significance. The Tentative Decision and Third R&O made clear that AMT/DSST's preliminary tests that employed existing British equipment, computer simulations, and spectrum studies were inadequate to show technical feasibility. The Commission, in its Tentative Decision, suggested that field testing might be a way to supplement AMT/DSST's preliminary tests that were inadequate in this case to demonstrate technical feasibility. We did not establish field testing as a separate pioneer's preference criterion.<sup>24</sup>

14. With respect to AMT/DSST's argument that the development of commercial ISM spread spectrum equipment by DSST's parent Cylink is evidence of the technical feasibility of their proposed broadband PCS equipment, we find this argument inconsistent with their previous assertions that they were developing new broadband PCS equipment.<sup>25</sup> Cylink's ISM spread spectrum equipment does not pertain to broadband PCS. Therefore, if AMT/DSST's proposed system is based on Cylink's equipment, it does not qualify as an innovation worthy of a broadband PCS pioneer's preference. Accordingly, we affirm our decision to deny AMT/DSST's pioneer's preference request.

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<sup>23</sup> See MO&O, supra note 22 at para. 69. See also, Third Memorandum Opinion and Order, GEN Docket No. 90-314, FCC 94-265 at para. 90, released October 19, 1994.

<sup>24</sup> See Third R&O, supra note 1, at para. 166.

<sup>25</sup> In the Third R&O, we did not deny AMT/DSST's request based on Cylink's previous work because the request indicated that AMT/DSST were developing new technology specifically for broadband PCS.

Ameritech (PP-45)

15. In its petition for reconsideration, Ameritech argues that it satisfied all of the requirements for a pioneer's preference award in its preference request and that its request and experimental trial demonstrate a level of innovation equal to or greater than that shown by the three broadband PCS preference recipients. In its pioneer's preference request, Ameritech stated that its broadband PCS trial was based upon a unique open network interface between the Public Switched Telephone Network (PSTN) and a broadband PCS provider. Ameritech argues that this interface demonstrates innovation because it is independent of transmission technology, employs intelligent handset/base station interaction, and offers the provider a range of features to offer their customers. In its petition for reconsideration, Ameritech states that it is scheduled to receive a U.S. patent for this interface, and that the forthcoming grant of the patent contradicts the Commission's conclusion that "Ameritech has not demonstrated how its ... development of an open network interface differs from the capabilities of the existing PSTN."<sup>26</sup>

16. In the Third R&O, we denied Ameritech's request for a pioneer's preference based upon our conclusion that Ameritech had demonstrated neither the employment of other than existing technology for its system nor its responsibility for a specific innovation. Essentially, we found that Ameritech had not justified its claim of having developed innovations. In its petition for reconsideration, Ameritech fails to provide any new information that contradicts the Commission's original conclusions. Regarding Ameritech's statement that its innovation is comparable to that of the Grantees, we note that APC, Cox, and Omnipoint each clearly demonstrated what is new and innovative about their respective proposals, provided technical details, and documented experiments demonstrating the innovativeness of its technology, whereas Ameritech did not provide such details. The Commission does not simply accept Ameritech's conclusory statement that its innovation is comparable to those receiving a preference. Rather, Ameritech must clearly demonstrate the details of the innovation.

17. That Ameritech may receive a U.S. patent for its open network architecture interface in itself does not qualify for a pioneer's preference.<sup>27</sup> Broadband PCS systems are likely to vary widely, and each may have unique components that are patentable; however, our decisions to award pioneer's preferences are based upon showings of substantial innovation and complete system design. We addressed the relevance of patents in the Pioneer's Preference Report and Order establishing the pioneer's preference rules, where we stated that "while portions of a broad-based radio service may be patentable, including both equipment and specific services, such as call protocols, the entire broad-based service would not be."<sup>28</sup> Whether or not Ameritech warrants a patent is not dispositive of whether under our

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<sup>26</sup> See Third R&O, *supra* note 1, 9 FCC Rcd at 1360.

<sup>27</sup> We note that no patent has yet been awarded.

<sup>28</sup> Pioneer's Preference Report and Order, *supra* note 3, 6 FCC Rcd at 3490.

rules they merit a pioneer's preference for having developed a technically feasible new service or technology. By contrast, the achievements of APC, Cox, and Omnipoint were overall broadband PCS system innovations. Accordingly, we deny Ameritech's petition for reconsideration.

Corporate Technology Partners (PP-51)

18. We find CTP's petition for reconsideration deficient on procedural grounds because it was not filed with the Commission's Office of the Secretary until April 7, 1994, eight days after the statutory filing deadline in this proceeding. CTP subsequently filed a Motion for Acceptance of its petition, which presented its reason for failure timely to file; however, in accordance with 47 U.S.C. § 405, we lack discretion to accept the petition.<sup>29</sup> Accordingly, CTP's petition is dismissed.

Nextel Communications, Inc. (PP-54)

19. In its petition for reconsideration, Nextel argues that it warrants a pioneer's preference for its Digital Mobile technology. In its pioneer's preference request, Nextel proposed to use this technology to provide voice and data services using low-power base stations and handsets. It claimed that Digital Mobile technology provides six times the capacity of analog technology on a 25 kilohertz frequency, and is capable of increasing Specialized Mobile Radio capacity by at least 15 times. It contended that this technology represents advances in system capacity, power control for mobile and handheld units, frequency agility, subscriber assisted handoff, integration of disparate services, and seamless infrastructure. Further, Nextel argued that while the initial development and implementation of this technology is in the Enhanced Specialized Mobile Radio (ESMR) service, its full realization can be achieved in the broadband PCS service.

20. In its petition for reconsideration, Nextel asserts that the Commission's decision denying its pioneer's preference request was both arbitrary and internally inconsistent. It asserts that the Commission has inconsistently applied the pioneer's preference rules and has ignored the existence of Nextel's operating system, which demonstrates that Digital Mobile technology is both feasible and innovative and therefore merits a pioneer's preference. According to Nextel, the Commission found that Nextel did not propose specific PCS services, while stating that Nextel's proposed services are similar to those of other broadband PCS pioneer's preference applicants.

21. In the Third R&O, we found that Nextel's preference request described the technology and services it had designed and implemented within the ESMR service. We stated that Nextel had not explained or otherwise demonstrated how it planned to use Digital Mobile technology for broadband PCS in ways different from ESMR, or how its technology would result in different services. We stated that merely transferring essentially the same

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<sup>29</sup> See note 21, supra.

technology and infrastructure from 800 MHz to 2 GHz would not qualify Nextel for a broadband pioneer's preference.

22. Nextel argues that its Digital Mobile technology permits a customized integration of wireless communications services that can share spectrum with incumbent microwave operations. It contends that the Commission cannot legitimately grant APC a preference for its Frequency Agile Sharing Technology (FAST) without granting Nextel a preference for Digital Mobile technology, because the two technologies accomplish the same result. While Nextel concedes that Digital Mobile technology has been employed only at 800 MHz, it cites Bell Atlantic's contention that the basic principles of operation for a wireless communications system are the same at 2 GHz as at 800 MHz.<sup>30</sup> Nextel further argues that FAST has been used only in limited experimental trials, whereas Digital Mobile has been used commercially, and that Nextel's experience with Digital Mobile offers the primary evidence supporting the Commission's adoption of 10 MHz PCS channel assignments in the Second R&O.

23. Finally, Nextel asserts that denial of its request is inconsistent with the Commission's 1991 Waiver Order, which granted Fleet Call, Inc. a waiver of the Commission's construction requirements for its proposed wide-area SMR system.<sup>31</sup> Nextel argues that the Third R&O's finding that the Waiver Order is inapplicable to the instant proceeding is at odds with the Waiver Order's language, which stated that Digital Mobile technology is innovative and falls within Section 303 of the Communications Act, which directs the Commission to promote new uses of radio.

24. Nextel's claim that we have inconsistently applied our pioneer's preference rules and ignored evidence demonstrating that Nextel's Digital Mobile technology merits a preference is incorrect. Our initial evaluation of Nextel's request found that Nextel developed Digital Mobile technology for implementation of 800 MHz SMR services; after reviewing the record, including the existence of Nextel's operating system, we reaffirm this analysis. Although Digital Mobile technology may be used for broadband PCS, Nextel has failed to demonstrate any aspects of innovative technology that were developed for or that have unique relevance to 2 GHz broadband PCS. Further, the services that Nextel proposes for broadband PCS are similar to those it is already providing in SMR spectrum. Consequently, Nextel has not demonstrated that it has developed a new service or significantly enhanced an existing service, and merely relocating an existing service does not qualify as an innovation.

25. We also reject Nextel's assertion that its proposed services are a customized integration of wireless communications services that permit sharing similar to APC's proposed PCS system. While APC's system was designed for 2 GHz PCS and was extensively tested in the 2 GHz band, Nextel's system was not. Nextel's system was designed and is used commercially in the 800 MHz SMR band; however, the propagation and sharing environments

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<sup>30</sup> See Nextel Petition at 8.

<sup>31</sup> See Waiver Order, 6 FCC Rcd 1533; recon. denied, 6 FCC Rcd 6989 (1991). Fleet Call was Nextel's former name.

are significantly different in the 2 GHz band. In particular, Nextel has operated in a mobile environment at 800 MHz, whereas APC has specifically customized its system to operate in a fixed microwave environment at 2 GHz.

26. Further, in considering Nextel's argument that its experience with Digital Mobile technology constitutes the primary evidence supporting adoption of 10 MHz PCS channel assignments, the record does not support this assertion. It is true that Nextel's experience with narrowband channels was cited in the Second R&O; so was the experience of other entities that did not receive a pioneer's preference.<sup>32</sup> It was a combination of factors, not merely Nextel's experience, that led to the adoption of 10 MHz channels.<sup>33</sup>

27. Finally, while we found in the Waiver Order that Nextel's enhancements to SMR were innovative when compared to existing services, that finding was made three years ago and not pursuant to the standards developed specifically for pioneer's preferences. Nextel's broadband PCS proposal neither enhances its now existing SMR service nor proposes to apply it in an innovative manner to the 2 GHz band. Accordingly, for the above reasons, we deny Nextel's petition for reconsideration.

Personal Communications Network Services of New York, Inc. (PP-16)

28. In its petition for reconsideration, PCNS-NY requests that the Commission correct the Third R&O, as published in the FCC Record, by eliminating a reference to an opposition to its pioneer's preference request.<sup>34</sup> Prior to publication of the Third R&O in the FCC Record, the Commission released a version of the Third R&O that cited comments filed by Cox opposing PCNS-NY's pioneer's preference request. This version of the Third R&O failed to recognize that Cox had later filed a Request for Partial Dismissal of Opposition, which stated that Cox took no position on the merits of PCNS-NY's pioneer's preference request.<sup>35</sup> Accordingly, on March 14, 1994, the Commission's Chief Engineer issued an Erratum that noted Cox's Request for Partial Dismissal of Opposition.<sup>36</sup>

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<sup>32</sup> See Second R&O, *supra* note 22, at para. 57.

<sup>33</sup> We further note that Nextel did not support the adoption of 10 MHz channels, but rather supported 15 MHz and 30 MHz channels; *id.*, at para. 48.

<sup>34</sup> The Third R&O denied PCNS-NY's pioneer's preference request and PCNS-NY does not request reconsideration of this denial.

<sup>35</sup> See Cox at 1 (March 17, 1992).

<sup>36</sup> See Erratum, GEN Docket No. 90-314 (Chief Engineer, March 14, 1994). The Erratum was issued prior to publication of the Third R&O in the FCC Record; therefore the Third R&O as published in the FCC Record incorporated the correction made by the Erratum.

29. PCNS-NY contends that the Erratum fails adequately to correct the record because the Third R&O continues to cite Cox's original opposition to PCNS-NY's pioneer's preference request. PCNS-NY maintains that its reputation is undermined by the Third R&O's reference to Cox's initial opposition to PCNS-NY's preference request. PCNS-NY argues that it has spent millions of dollars in experimenting with broadband PCS, and the Commission's failure to eliminate the reference to Cox's initial opposition distorts PCNS-NY's contribution.

30. We disagree that the corrected Third R&O (as published in the FCC Record) is unfair to PCNS-NY. The corrected Third R&O sets forth the history of Cox's comments and makes clear that Cox's initial opposition to PCNS-NY's preference request was withdrawn. We see no reason why setting forth an accurate history should have a deleterious effect on PCNS-NY's reputation. Accordingly, we deny PCNS-NY's petition for reconsideration.

Qualcomm Incorporated (PP-68)

31. In its petition for reconsideration, Qualcomm asks that we grant its pioneer's preference request. Qualcomm claims that it has satisfied the Commission's pioneer's preference criteria and argues that our explanations for denial are confusing, inconsistent, and contradictory.

32. Qualcomm sought a preference for its development of a digital voice and data system using CDMA technology in 1.25 MHz channels.<sup>37</sup> It asserted that it was a pioneer in the development of advanced coding and signal processing subsystems, power control systems, and an advanced receiver. In the Third R&O, we found that Qualcomm had experimented with and proposed only three features specifically for broadband PCS: exclusion zones around microwave towers; the use of smaller cells; and the development of remote antennas. We concluded that each of these concepts had previously been developed by others. We also concluded that Qualcomm's narrowband CDMA system was essentially identical to the system which it already had developed for implementation of its 800 MHz digital cellular system. We therefore denied Qualcomm's pioneer's preference request.

33. In its petition for reconsideration, Qualcomm maintains that it is responsible for four baseband engineering developments, namely, coding and signal processing subsystems that incorporate spread spectrum wave form design, a power control system, a sophisticated handoff system, and an advanced receiver. It argues that the Commission is incorrect in concluding that it developed its CDMA technology for 800 MHz cellular operations. Qualcomm argues that cellular is only one application of its technology. It states that it began developing its CDMA technology in 1985 for satellite communications, but later realized that its technology could provide a variety of wireless communications such as cellular, wireless local loop, and broadband PCS. In addition, Qualcomm claims that it has demonstrated the technical feasibility of its system and that this claim is supported by other experiments, such

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<sup>37</sup> See Qualcomm Request for Pioneer's Preference (Request) (May 4, 1992).

as that of APC. Finally, Qualcomm argues that the rules adopted by the Commission are a reasonable outgrowth of Qualcomm's innovative work.

34. We repeat that the purpose of our pioneer's preference rules is to encourage the development of new technologies and services, rather than merely to implement existing technologies and services in different bands. Accordingly, our rules require that an entity must show that its innovative technology was developed specifically for the advancement of a particular service, in conjunction with a particular rule making before the Commission.<sup>38</sup> Otherwise, an entity that had developed a technology useful in a variety of different services would be eligible for a preference in each and every new service established by the Commission, a result inconsistent with the clear intent and language of our rules.

35. We reaffirm that Qualcomm has not made a showing of significant development of innovative broadband PCS technology. Further, it has not raised on reconsideration any new issue that was not fully addressed in the Third R&O. In that decision, we concluded that technical developments associated with Qualcomm's proposal -- including the coding and signal processing subsystems that incorporate its spread spectrum wave form design, power control system, handoff system, and receiver -- were developed for implementation of its 800 MHz digital cellular system and did not appear to have a nexus to any new or innovative technology directly connected to broadband PCS at 2 GHz. Qualcomm acknowledges that it has been developing its CDMA technology since 1985. It stated in its original preference request that its CDMA technology had been validated for 800 MHz digital cellular systems in field tests that began in November 1989 and that this technology was under consideration as a standard for the 800 MHz cellular bands.<sup>39</sup> Additionally, Qualcomm states that its CDMA system design was developed for digital cellular applications and that the system is a candidate for the second generation of cellular systems.<sup>40</sup> It is also clear that Qualcomm designed its CDMA equipment to use a 1.25 MHz bandwidth so that it could be easily accommodated in the cellular bands.<sup>41</sup> There are no particular new developments that appear to have been designed to provide 2 GHz broadband PCS service. Accordingly, we affirm our decision in the Third R&O and deny Qualcomm's pioneer's preference request.

Spatial Communications Inc. (PP-73)

36. In its petition for reconsideration, SCI requests that we reconsider our denial of its pioneer's preference request for its work in developing "Spatial Division Multiple Access" (SDMA) technology. SCI bases its argument for reconsideration solely on the fact that the Commission did not consider an experimental report filed by SCI's parent company,

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<sup>38</sup> Pioneer's Preference Report and Order, *supra* note 3 at para. 37.

<sup>39</sup> See Request at 2.

<sup>40</sup> Id., Appendix A at 1.

<sup>41</sup> Id. at 6.

ArrayComm, Inc. (ArrayComm), on September 13, 1993. SCI contends that this report conclusively establishes SCI's pioneering work in SDMA technology, which warrants a pioneer's preference.

37. In its pioneer's preference request, SCI states that SDMA technology uses "smart" antennas to track mobile units and selectively direct radio frequency energy toward them. SCI claims that SDMA can increase spectrum efficiency by up to a factor of ten by reducing the transmitter power needed for provision of high-quality communications and can offer position-location features that can be used for enhanced emergency (911) services. Four parties commented on SCI's preference request, but none stated that SCI's proposal warranted a preference.

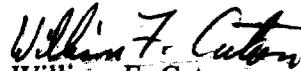
38. In the Tentative Decision, we proposed to deny SCI's request for a preference because it had neither demonstrated that its technology was feasible nor that it had developed the capabilities or possibilities of a specific, identifiable PCS technology or service nor that it had brought the technology or service to a more advanced or effective state. SCI did not respond to the Tentative Decision. Accordingly, we denied its preference request in the Third R&O.

39. SCI now contends that ArrayComm's September 13, 1993 experimental report was a response to the Tentative Decision and should have been considered by the Commission in the Third R&O in our evaluation of SCI's pioneer's preference request. However, ArrayComm's report did not reference SCI's pioneer's preference request and was filed under a special temporary authorization that relates to cellular frequencies (824-849/869-894 MHz), not 2 GHz PCS frequencies. Further, ArrayComm did not request that its experimental report be associated with SCI's pioneer's preference request. Thus, since the report was not filed in the name of the real party in interest, was filed over a year later than the original request, and was not appropriately referenced, we had no reason to consider this report in evaluating SCI's pioneer's preference request. In any event, we have now reviewed the contents of the report and since the report does not relate to 2 GHz PCS frequencies, it is insufficient to justify a pioneer's preference award to SCI. Accordingly, we affirm our denial of SCI's pioneer's preference request and deny its petition for reconsideration.

## ORDERING CLAUSE

40. Accordingly, IT IS ORDERED that the petitions for reconsideration filed by Advanced Cordless Technologies, Inc. and Corporate Technology Partners ARE DISMISSED; and that the petitions for reconsideration filed by Advanced MobileComm Technologies, Inc. and Digital Spread Spectrum Technologies, Inc.; Ameritech; Nextel Communications, Inc.; Personal Communications Network Services of New York, Inc; Qualcomm Incorporated; and Spatial Communications Inc. ARE DENIED IN PART and DISMISSED IN PART.

FEDERAL COMMUNICATIONS COMMISSION

  
William F. Caton  
Acting Secretary