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BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of	)	
	)	
Amendment of the Commission's Rules Regarding the 37.0 - 38.6 GHz and 38.6 - 40.0 GHz Bands	)	ET Docket No. 95-183 RM-8553
	)	
Implementation of Section 309(j) of the Communications Act -- Competitive Bidding	)	PP Docket No. 93-253

To: The Commission

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COMMENTS OF MILLIWAVE LIMITED PARTNERSHIP

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Table of Contents

Summary ii

I. Introduction and Summary 2

II. Milliwave Supports Many of the Tentative Conclusions Reached by the Commission in the NPRM 6

III. The Commission Needs to Reassess Several Aspects of the Proposed Rules 11

A. All Licensees Should Be Subject to the Same Regulatory Treatment 12

B. The Commission Should Impose a "Substantial Service" Construction Obligation Requirement on All Licensees 17

C. The Commission Should Not Dictate Efficiency Standards 23

D. Other Proposals Requiring Modification 26

IV. Conclusion 33

Summary

Milliwave, which is pioneering the development and deployment of new technologies and services in a portion of the spectrum that has long been fallow, would be substantially and adversely affected by the Commission's proposals. While Milliwave generally applauds the Commission's efforts to license these bands efficiently and expeditiously, certain proposals contained in the NPRM strike Milliwave as being punitive in nature. If adopted, the proposed rules would stifle if not end Milliwave's efforts to deliver competitive services in this spectrum. These proposals undermine important Commission policies and objectives and appear to be intended solely to recapture spectrum for auctioning.

Milliwave is particularly concerned with three specific proposals in the NPRM:

- **Disparate regulatory treatment which unfairly discriminates between lawfully licensed parties.** In addition to lacking any economic efficiency and public interest basis, the incumbent licensee construction obligation and technical proposals are unlawful in that there is no record evidence to justify the proposed disparate treatment. If it is adopted, the potential delay in deploying service caused by substantial legal challenge will further adversely affect the public interest.

- **Unnecessary and unachievable construction requirements.** The construction obligation which the Commission proposes to impose on incumbent licensees is so excessive as to suggest a punitive attempt to force current authorizations to be surrendered for auction. If followed, it would impede, rather than promote, the public interest. In any event, construction requirements based on some notion of "substantial service" rather than arbitrary quantitative benchmarks would better serve the public.

- **Spectrum efficiency standards.** As the Commission acknowledges in the NPRM, only minimal technical standards -- related to interference control -- are desirable for a new service such as that developing at 39 GHz. Accordingly, the Commission should broaden its notion of "spectrum efficiency" to go beyond information density and antenna radiation criteria, so as to balance the costs of a range of factors which collectively impact the public interest.

The new rules being crafted for the 37 and 39 GHz bands ultimately will play a critical role in the development of wireless competitive access and other communications services. Market forces and technology, not agency micromanagement, should guide this development. Milliwave urges the Commission to consider more carefully the impact of 39 GHz rule changes on sincere, legitimate operators like Milliwave, and to adopt rules that are consistent with the public interest and the Commission's statutory obligations.

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COMMENTS OF MILLIWAVE LIMITED PARTNERSHIP

Milliwave Limited Partnership ("Milliwave"), by its attorneys and pursuant to the Commission's Order Extending Time, DA 96-15, released January 16, 1996, and Order, DC 96-144, released February 9, 1996, hereby submits its comments in response to the Notice of Proposed Rule Making ("NPRM") in the above-captioned proceeding proposing new rules governing fixed terrestrial microwave operations in the 37,000 - 38,600 MHz ("37 GHz") and 38,600 - 40,000 MHz ("39 GHz") frequency bands.[1/] The following is respectfully shown:

[1/] Notice of Proposed Rule Making and Order, FCC 95-500, adopted December 15, 1995.

I. Introduction and Summary

1. Milliwave holds Commission authorizations to construct and operate point-to-point microwave radio facilities on a discrete 39 GHz channel pair in 84 geographic areas throughout the United States, including 45 of the top 50 markets, and has pending applications for authorizations in an additional 28 markets.[2/] Using state-of-the-art millimeter wave technology, Milliwave is developing a variety of point-to-point communications services as an alternative, and as enhancements, to existing and future landline, fiber optic, and wireless networks. Milliwave, a privately-held, entrepreneurial start-up business, is pursuing an aggressive service rollout, placing facilities in operation in approximately one-half of its markets this year (including 34 markets in the next six months), with the balance becoming operational in 1997.

2. Milliwave's commitment to provide competitive wireless service is supported by substantial financial and management resources. Thomas Domencich, the President of Milliwave's General Partner,[3/] is an experienced

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[2/] Only 16 of the pending applications are mutually exclusive and thus subject to the processing freeze announced on December 15, 1995. The remainder are cut-off and uncontested and eligible for grant.

[3/] Mr. Domencich initially filed applications in his own name for 39 GHz channels in 33 markets. On October 18, 1994, he amended these applications in response to the Commission's Public Notice, "Common Carrier Bureau (continued...)

telecommunications professional who has been licensed by the Commission to provide a diverse array of voice, data, and video wireless services.[4] Mr. Domencich also is a telecommunications consultant who advises major communications companies seeking to start, acquire, or sell wireless and other telecommunications businesses.

3. Mr. Domencich recently has been joined at Milliwave by two individuals well known to the Commission: Dennis Patrick and Alex Felker.[5] Both of these individuals previously were officers of Time Warner Telecommunications;[6] Mr. Patrick served as President and C.E.O. and Mr. Felker as Senior Vice President. In

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[3](...continued)
Established Policy Governing the Assignment of Frequencies in the 38 GHz and Other Bands to Be Used in Conjunction with PCS Support Communications," Mimeo No. 44787, released September 16, 1994. The Commission granted these applications, finding them to be in full compliance with all applicable rules and policies. Mr. Domencich and Milliwave, to which Mr. Domencich was granted consent to effectuate a pro forma assignment of his authorizations, subsequently filed additional applications, most of which also have been granted.

[4] Mr. Domencich has been actively engaged in the cellular telephone, specialized mobile radio and MMDS businesses for over ten years.

[5] Mssrs. Patrick and Felker have become investors and limited partners of Milliwave and as such will provide guidance in the affairs of the business.

[6] Time Warner Telecommunications was a division of Time Warner Inc. engaged in the acquisition and development of telecommunications businesses and new telecommunications technologies. Mr. Patrick's and Mr. Felker's limited partnership interests are held by them personally; Time Warner has no interest in Milliwave, L.P., its licenses or applications.

addition, both have held positions at the FCC: Patrick served both as Commissioner (between 1983 and 1987) and as Chairman (1987-1989). Mr. Felker held several engineering and policy positions at the agency, including that of Mass Media Bureau Chief from 1987-1989.

4. As owners, Messrs. Domencich, Patrick and Felker bring substantial industry expertise and financial resources to the business. Even more importantly, their standing in the communications industry enables them to attract customers and capital necessary to market, build and operate 39 GHz facilities on a broad scale.

5. In sum, Milliwave is a leading participant in the emerging 39 GHz business and is well qualified to comment meaningfully on the Commission's licensing proposals.[7]

6. Milliwave, which is pioneering the development and deployment of new technologies and services in a portion of the spectrum that has long been fallow, would be substantially and adversely affected by the Commission's proposals. While Milliwave generally applauds the Commission's efforts to license these bands efficiently and expeditiously, certain proposals contained in the NPRM strike Milliwave as being punitive in nature. If adopted,

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[7] Mr. Domencich also is well acquainted with the Commission's auction processes, having participated in the auction of A and B Block Personal Communications Services licenses.

the proposed rules would stifle if not end Milliwave's efforts to deliver competitive services in this spectrum. These proposals undermine important Commission policies and objectives and appear to be intended solely to recapture spectrum for auctioning.

7. Milliwave is particularly concerned with three specific proposals in the NPRM:

- **Disparate regulatory treatment which unfairly discriminates between lawfully licensed parties.** In addition to lacking any economic efficiency and public interest basis, the incumbent licensee construction and technical proposals are unlawful in that there is no record evidence to justify the proposed disparate treatment. If it is adopted, the potential delay in deploying service caused by substantial legal challenge will further adversely affect the public interest.

- **Unnecessary and unachievable construction requirements.** The construction obligation which the Commission proposes to impose on incumbent licensees is so excessive as to suggest a punitive attempt to force current authorizations to be surrendered for auction. If followed, it would impede, rather than promote, the public interest. In any event, construction requirements based on some notion of "substantial service" rather than arbitrary quantitative benchmarks would better serve the public.

- **Spectrum efficiency standards.** As the Commission acknowledges in the NPRM, only minimal technical standards -- related to interference control -- are desirable for a new service such as that developing at 39 GHz. Accordingly, the Commission should broaden its notion of "spectrum efficiency" to go beyond information density and antenna radiation criteria, so as to balance the costs of a range of factors which collectively impact the public interest.

8. The new rules being crafted for the 37 and 39 GHz bands ultimately will play a critical role in the development of wireless competitive access and other communications services. Market forces and technology, not

agency micromanagement, should guide this development. Milliwave urges the Commission to consider more carefully the impact of 39 GHz rule changes on sincere, legitimate operators like Milliwave, and to adopt rules that are consistent with the public interest and the Commission's statutory obligations.

II. Milliwave Supports Many of the Tentative Conclusions Reached by the Commission in the *NPRM*

9. Milliwave agrees with the Commission's finding[8] that the public interest will be served by making the 37 GHz band available for licensing. A significant portion of the 39 GHz band -- which has been allocated and available for years for point-to-point uses -- already has been licensed or applied for, particularly in major metropolitan areas. By allocating the 37 GHz band for similar purposes, additional spectrum will become available not only for the support of PCS and other mobile services, as the Commission envisions,[9] but for wireless local loop operations and other services as well.

10. The Commission's proposal to "harmonize" the rules for the 37 GHz and 39 GHz bands[10] is sound, and Milliwave supports the Commission's proposals to conform the

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[8] NPRM, para. 13.

[9] NPRM, paras. 1, 13.

[10] NPRM, para. 13.

channel plans, service areas, and technical rules for the two bands.

11. Likewise, adopting the channel plan originally proposed by the Telecommunications Industry Association ("TIA") will serve the public interest.[11] The TIA plan is consistent with the channel plan in place for the 39 GHz band. Given the substantial interdependency and technical similarity between the 37 and 39 GHz bands, there would be little sense in adopting dissimilar channel plans and technical rules for the two bands. And, a common plan will encourage a competitive equipment market to develop by making sufficient spectrum available with consistent technical standards to warrant equipment manufacturers to enter, and/or devote substantial developmental resources to, this market segment. The economics of providing service in the 37 and 39 GHz bands are such that per link equipment costs must decrease substantially over time in order for links provided in these bands to be cost competitive with alternatives.[12]

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[11] NPRM, para. 19. Milliwave opposes the revised TIA plan which calls for setting aside certain narrower bandwidths of spectrum for licensing on an individual link basis. There has been no showing that these needs cannot be met on alternate channels, by purchasing capacity from other carriers, or by reaching agreement with 37/39 GHz carriers to disaggregate their bandwidth.

[12] As is discussed in greater detail in Section III-D of these comments, the relevant market here is the full range of telecommunications access services, not just milliwave frequency wireless microwave links.

12. Milliwave also supports the Commission's proposal to auction 37 and new 39 GHz channels within 493 Commission-defined areas based on Rand-McNally's Basic Trading Areas ("BTAs").[13] Because all PCS allotments consist of one or more BTAs, licensing 37 and 39 GHz spectrum on a BTA basis will accommodate PCS licensees seeking to acquire microwave spectrum for backhaul support. And, because BTAs are developed to reflect common trading areas, they provide a useful market area even if licensees intend to provide services other than, or in addition to, PCS backhaul.

13. Like other wideband wireless service providers, 37 and 39 GHz licensees will require considerable time and ample capital expenditures to fully implement substantial service to the public.[14] In the past, the Commission has properly encouraged commitments of this nature by authorizing long license terms with a renewal expectancy.[15] Milliwave supports the Commission's proposal

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[13] NPRM, paras. 21, 104.

[14] Indeed, the NPRM itself refers to "five or seven years" as the period it might reasonably expect a licensee to take to build out a market, at which point a second licensing opportunity for unserved area might be explored. NPRM, para. 103.

[15] For example, the Commission generally authorizes ten-year license terms with an renewal expectancy for all Commercial Mobile Radio Services (see, e.g., 47 C.F.R. §§ 24.15, 24.16 (broadband PCS)). As the Commission has noted, "[t]his relatively long period and high renewal expectancy will provide a stable environment (continued...)

to do likewise for 37 and 39 GHz licenses,[16] and notes that the proposal is consistent with the Commission's adoption of a ten-year license term for all fixed microwave radio stations licensed under new Part 101 of the rules, which includes the 37 and 39 GHz bands.[17]

14. The NPRM acknowledges that the Commission, in 1994, considered and rejected the use of auctions to award common carrier point-to-point microwave licenses used in the provision of a continuous, end-to-end subscriber service, holding that auctioning such "intermediate links" would not satisfy the objectives stated in the Commission's statutory auction authority.[18] Milliwave agrees with the Commission that there has been a sufficient change in circumstances to revisit the earlier determination not to auction off

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[15] (...continued)
that is conducive to investment, and thereby will foster the rapid development" of service. GEN Docket No. 90-314, Second Report and Order, 8 FCC Rcd. 7700, 7753 (1993).

[16] NPRM, para. 97.

[17] WT Docket No. 94-148, Amendment of Part 21 of the Commission's Rules to Establish a New Part 101 Governing Terrestrial Microwave Fixed Radio Services, Report and Order, FCC 96-51, released February 29, 1996 (adopting new rule 47 C.F.R. § 101.67).

[18] NPRM, para. 27, citing Implementation of Section 309(j) of the Communications Act - Competitive Bidding, PP Docket No. 93-253, Notice of Proposed Rule Making, 8 FCC Rcd. 7635, 7639 (1993) and Second Report and Order, 9 FCC Rcd. 2348, 2355-2356 (1994).

microwave spectrum.[19] Consequently, Milliwave supports the proposal to issue both 37 GHz and new 39 GHz licenses by auction[20] when the Commission is presented with mutually exclusive applications for new initial licenses.[21]

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[19] NPRM, para. 28. However, in light of its past decision not to auction point-to-point microwave licenses, the Commission's attack (e.g., NPRM, para. 28) on individuals and entities who applied for such licenses to provide services on long-fallow spectrum following this decision, is inappropriate. As at least one Commissioner has noted in this proceeding, "many applications (if not most) come from entities with significant resources and communications experience. There is no indication of speculative activity by application mills of the type we have seen in some other services." Separate Statement of Commissioner Rachelle B. Chong, p. 2. To the extent the Commission has information otherwise, it should address the situation directly rather than attacking indiscriminately all licensees.

[20] NPRM, paras. 28, 104. Although Milliwave generally supports the auction proposal, it is concerned that the Commission may have prejudged the outcome of this proceeding, following only perfunctorily its Administrative Procedure Act obligations and without fully developing and considering public comment on its proposals. This concern arises from the Commission's January 25, 1996 News Release in which it announced a "Spectrum Auctions Forum" at which it will discuss services it "will auction" in 1996 -- including the 37 GHz band.

[21] Milliwave's principals have substantial experience in establishing and participating in auctions, and it generally agrees with the competitive bidding method and other auction-related proposals set out in the NPRM. See NPRM, paras. 29-60. Simultaneous multiple-round auctions, modeled on the auctions the Commission has used for PCS, SMR, MDS, and DBS, also are appropriate for the 37 and 39 GHz bands because the channels are fungible and interdependent. Milliwave also supports adoption of the Milgrom-Wilson activity rule and the proposal to give the Commission discretion with respect to bidding increments, stopping rules, and duration of bidding rounds during the course of the auction.

Auctions generally are the most efficient method of assuring that licenses are awarded to those who value them most highly, and that channels are put to the best use.[22]

III. The Commission Needs to Reassess Several Aspects of the Proposed Rules

15. While Milliwave generally applauds the Commission's efforts to license these bands efficiently and expeditiously, certain proposals contained in the NPRM strike Milliwave as being punitive in nature. If adopted, the proposed rules would stifle if not end Milliwave's efforts to deliver competitive services in this spectrum. These proposals undermine important Commission policies and objectives and appear to be intended solely to recapture spectrum for auctioning.

16. Milliwave is particularly concerned with three specific proposals in the NPRM:

- **Disparate regulatory treatment which unfairly discriminates between lawfully licensed parties.** In addition to lacking any economic efficiency and public interest basis, the incumbent licensee construction and technical proposals are unlawful in that there is no record evidence to justify the proposed disparate treatment. If it is adopted, the potential delay in deploying service caused by substantial legal challenge will further adversely affect the public interest.

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[22] To ensure it obtains adequate auction participation, however, the Commission should use care in establishing the value of the required upfront payment. Milliwave believes that the proposed value of $0.02/POP/MHz is probably too large by at least an order of magnitude. It may, in fact, exceed the total value of the spectrum resource.

- **Unnecessary and unachievable construction requirements.** The construction obligation which the Commission proposes to impose on incumbent licensees is so excessive as to suggest a punitive attempt to force current authorizations to be surrendered for auction. If followed, it would impede, rather than promote, the public interest. In any event, construction requirements based on some notion of "substantial service" rather than arbitrary quantitative benchmarks would better serve the public.

- **Spectrum efficiency standards.** As the Commission acknowledges in the NPRM, only minimal technical standards -- related to interference control -- are desirable for a new service such as that developing at 39 GHz. Accordingly, the Commission should broaden its notion of "spectrum efficiency" to go beyond information density and antenna radiation criteria, so as to balance the costs of a range of factors which collectively impact the public interest.

A. All Licensees Should Be Subject to the Same Regulatory Treatment

17. Milliwave finds substantial difficulties with the Commission's proposed construction and usage requirements, and these are dealt with in Sections III-B and III-C, infra. This section addresses the vastly different construction and usage obligations contemplated in the NPRM based on whether an entity acquired its license in accordance with present Part 21 of the Commission's rules, or acquires a license at a future auction. With regard to construction, the Commission proposes no specific requirement for auction winners, but instead seeks comment on whether a "substantial service" test is appropriate.[23] For incumbent licensees, however, the Commission proposes

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[23] NPRM, para. 98.

requiring -- at the risk of loss of license rights -- the construction, within 18 months of the adoption of a Report and Order in this proceeding, of four permanently installed and operating links per 100 square kilometers (approximately one link per ten square miles).[24]

18. Likewise, the Commission proposes no specific usage standard for auction winners. In contrast, it is proposed that entities who acquired their licenses lawfully pursuant to Part 21 of the Rules ("the incumbents") meet specific spectrum efficiency standards, including an information density (bit/Hz) specification and an antenna radiation standard.

19. As discussed below, there is no basis for making a distinction between licensees who obtain licenses through auction and those who have properly obtained authorizations for self-defined rectangular service areas on a first-come, first-served, basis pursuant to Commission rules then in place. Nor is there any basis for imposing different obligations on licensees in the 37 and 39 GHz bands. There should be a single regulatory paradigm for all licensees, including incumbents, applicants whose pending applications are granted after the adoption of the NPRM and Order, and license auction winners.

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[24] NPRM, para. 2.

20. Some may hold the view that, because one group acquired its licenses at auction, its members' behavior is more likely to serve the public interest than is the behavior of licensees who received their authorizations lawfully through the non-auction procedures in place previously.[25] In reality, however, the competitive nature of the 37/39 GHz marketplace will produce conditions which will induce all licensees (or at least those intending to be successful) to behave essentially the same, regardless of how each obtained its license initially. Milliwave submits, and there is no record evidence to the contrary, that upon receiving operating authority, all licensees' construction plans will be developed based on the financial returns expected from these facilities. Consider, for example, that in the cellular service the speed and degree to which systems were built out occurred independently of the manner (lottery, comparative hearing, or purchase in the after market) in which the license was awarded.

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[25] As discussed below, Milliwave supports the adoption of a construction standard for 37 and 39 GHz licensees as a means of complying with auction statute's requirements. The Commission's proposal, however, is a patently punitive measure which, if applied to auctioned licenses, would depress (or eliminate) bidding. Milliwave reluctantly concludes that this draconian proposal was designed to "recapture" spectrum that the Commission wishes, in hindsight, had been auctioned off in the first instance. This conclusion is buttressed by the dissenting statements of Chairman Hundt and Commissioner Ness who overtly opposed the processing of uncontested, non-mutually exclusive applications.

21. Likewise, as the Commission acknowledges in the NPRM, only minimal technical standards -- related to interference control -- are desirable for a new service such as that developing at 39 GHz. Rather than establish narrowly focused "spectrum efficiency" standards which mandate minimum information density criteria or antenna radiation characteristics, the Commission's objective in assigning scarce spectrum should be to encourage its optimal use, balancing a range of costs which collectively affect the public interest.

22. In addition to there being no public interest basis for distinguishing between 37/39 GHz licensees, such disparate treatment is also unlawful. In particular, the construction obligation proposed for incumbents -- or, for that matter, any disparate rules without record evidence to justify distinguishing between groups of licensees in terms of the public interest standard -- will be subject to serious legal challenge if, in violation of the auction statute, the Commission imposes unduly burdensome "transition" rules that are designed to recapture previously licensed spectrum for auction. Congress expressly limited the Commission's auction authority to applications for new stations,[26] and did not contemplate requiring licensees to buy again at auction operating rights previously granted. Nonetheless, the Commission proposes to place a material

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[26] 47 U.S.C. § 309(j)(1).

adverse condition on a license, without an opportunity for a hearing, the result of which is virtually certain to be a forfeiture of the authorization. This is not within the Commission's statutory mandate.

23. The Commission is not free to ignore Congress' directives. Southwestern Bell Corp. v. FCC, 43 F.3d 1515, 1519 (D.C. Cir. 1995). Yet, the combination of the proposed construction obligation and the subsequent auction of reclaimed spectrum plainly violates Section 309(j)(7)(A), which prohibits the Commission from acting solely to generate revenues, and must be rejected.

24. The proposed variant construction and usage obligations also violate the statutory prohibition on "convey[ing] any rights [to auction winners] ... that differ from the rights that apply to other licensees within the same service that were not issued pursuant to" auction. 47 U.S.C. § 309(j)(6)(D). The Commission expressly refers to the incumbent buildout requirements as a "right" that is intended to "accommodate incumbent operations,"[27] and the Commission states that "[t]he right to take advantage of" these requirements "would apply only to those entities holding valid licenses as of the date of adoption of the Report and Order."[28] Because the Commission has not

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[27] NPRM, para. 105.

[28] NPRM, para. 105.

proposed giving the same "right" to both incumbent licensees and to new licensees in the band, the proposal is unlawful.

B. The Commission Should Impose a "Substantial Service" Construction Requirement on All Licensees

25. Although there is no basis for imposing different construction obligations on the two categories of licensees in the 37 and 39 GHz bands, Milliwave acknowledges that the auction statute may obligate the Commission to establish some form of requirement in this area.[29] Accordingly, Milliwave supports a universal "substantial service" obligation for all licensees in the 37 and 39 GHz bands, incumbent and auctioned licensees alike, as the Commission proposes.[30]

26. To determine whether substantial service is being provided, the Commission should require a licensee to: (1) have at least one non-affiliated revenue-generating customer in each market as of the initial construction deadline established by the instant rule making; and, (2) demonstrate that it is providing substantial service to the service area as of the license renewal date. Substantial service should be defined as a reasonable minimum number of stations constructed and available for service, which could vary based on a number of relevant factors (e.g., the total market population).

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[29] See 47 U.S.C. § 309(j)(4)(B).

[30] NPRM, para. 98.

27. The substantial service standard was discussed at length in the Commission's proceeding adopting new service rules for 900 MHz SMR, and was adopted because the Commission recognized that a licensee in that service could establish a niche offering over a relatively small geographic area and still provide a beneficial public service.[31] For example, a specifically-designed wireless data service to be used by a particular category of business might only be needed at a few customer locations in the territory, but would meet a "substantial" service need. The same reasoning supports the use of a flexible substantial service standard in the 39 GHz band. The establishment of a ubiquitous 39 GHz backbone or backhaul network for PCS is only one possible use of 39 GHz. An equally important, and in Milliwave's view more promising, use will be to tailor the design of communications links for special categories of business users who require "bandwidth on demand". This business plan may not result in an immediate proliferation of links throughout the service territory, but will result in the provision of important and "substantial" service to the public.

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[31] PR Docket No. 89-553, Amendment of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and 935-940 MHz Bands, Second Report and Order and Second Further Notice of Proposed Rule Making, 10 FCC Rcd. 6884 (1995), para. 40.

28. Using the license renewal date as the date for measuring compliance with the Commission's substantial service requirement actually will end up giving incumbents considerably less than 10 years to build out their systems. Previously issued 39 GHz licenses are on a fixed renewal schedule which falls on February 1, 2001 for all incumbent licensees. This date roughly corresponds to the "five or seven years after licensing" cited as an appropriate period to provide a second licensing opportunity for fallow spectrum,[32] and is consistent with initial construction benchmarks in other new services.[33]

29. Milliwave agrees with the Commission that the nature of point-to-point fixed microwave services makes it inappropriate to base buildout requirements on service to a percentage of the population in the service area, as in the case of mobile services.[34] Milliwave does not agree with either the form, or the specifics, of the Commission's alternative approach which would designate a fixed minimum

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[32] NPRM, para. 103. Most 39 GHz licenses awarded to date were granted before February 1, 1996, i.e., more than five years before the renewal date.

[33] E.g., 47 C.F.R. § 24.103 (narrowband PCS); 47 C.F.R. § 24.203 (broadband PCS); 47 C.F.R. § 90.685 (wide-area 800 MHz SMR).

[34] NPRM, para. 98. For microwave and millimeter wave services, the construction of facilities in all portions of the authorized service area is not required in order to guarantee service to the public and fulfill common carrier obligations. This is a fundamental difference between fixed microwave services and mobile wireless services.

number of links which would be applied uniformly across all markets. Despite being relatively straightforward to administer, such an approach would not account for a variety of market specific factors, and is therefore both irrational and arbitrary. This scheme, for example, would require that **the same number of links be constructed in the Manhattan (New York) BTA as in the Manhattan, Kansas BTA -- even though the two regions differ in population by more than 18 million.**[35] Demand for services cannot be expected to develop in an identical manner in such dissimilar markets.

30. The Commission's unprecedented proposal to require incumbent licensees to certify within 18 months of the adoption of final rules in this proceeding that they have constructed a minimum average of four permanently installed and operating links per 100 square kilometers (1 link per 10 square miles)[36] further compounds the difficulty with this approach and clearly is contrary to the public interest. This proposal is excessive, is unsupported by any analysis or record evidence, and is likely to be incapable of being met by any licensee due to capital constraints and limited equipment supplies. Moreover, as discussed above, such an overt attempt to cancel outstanding licenses and auction off the previously licensed spectrum is

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[35] This approach obviously could encourage the construction of an inefficiently large number of links.

[36] NPRM, para. 105.

at complete odds with the statutory scheme which limits the use of auctions to new station proposals.[37]

31. The 18-month transition period proposed for compliance with the construction requirement[38] not only is unreasonably short, but it misperceives the nature of the 39 GHz business. In some services (for example, PCS) a licensee must build an initial system that serves a relatively broad area in order to have a competitively viable service to offer to the public. In such situations a "front-loaded" construction requirement may make sense. In contrast, a link business is built on an incremental basis around specific customer requirements. The first step is to market the service, followed by the construction of links to serve actual customer locations. As such, the construction itself comes later in the business development cycle. This being the case, a front-loaded construction requirement on a short deadline makes absolutely no sense.

32. Furthermore, the costs of complying with the proposed 1 link per 10 square miles within 18 months standard would be astronomical. A typical 39 GHz service area is comprised of a 50-mile radius surrounding a specified center point, resulting in a service territory of roughly 4,000 square miles. Milliwave has calculated that under the Commission's proposal, it would be forced to make

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[37] 47 U.S.C. § 309(j)(1).

[38] NPRM, para. 105.