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

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, 37.0-38.6 GHz and 38.6-40 GHz	)	PP Docket No. 93-253

To: The Commission

DOCKET FILE COPY ORIGINAL

COMMENTS

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OF THE TELECOMMUNICATIONS
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SUMMARY

In the captioned Notice of Proposed Rule Making and Order ("NPRM"), the Commission proposes amending its rules so that fixed point-to-point microwave service ("FS") licensees could use the 37.0-38.6 GHz band ("37 GHz band") and the 38.6-40.0 GHz band ("39 GHz band"). As detailed in its comments herein, and as summarized in the following chart, the Fixed Point-to-Point Communications Section, Network Equipment Division of the Telecommunications Industry Association ("TIA"), totally supports adoption of such rules, provided that the following recommendations are implemented:

Compatible Service Areas -- The Commission proposes licensing the entire 37-40 GHz band on a Basic Trading Area ("BTA") basis, except for any grandfathered 39 GHz band licensees meeting certain build-out requirements. TIA opposes this licensing framework because it would result in a patchwork quilt of service areas (i.e., BTAs, grandfathered 39 GHz band licensee Rectangular Service Areas or "RSAs," and cellular or SMR licensed areas). Instead, TIA proposes that: (i) the 37 GHz band must be licensed only on a BTA basis because there would be no conflict with existing licensees and because it would accommodate other wireless (e.g., cellular, SMR) or fixed user service areas; and (ii) the 39 GHz band must continue to be licensed only on a RSA basis, provided that any new RSA would be limited to BTA boundaries.

Existing 39 GHz Licensees -- In the 39 GHz band, the Commission has granted multi-channel licensees and has accepted license applications. However, to preserve spectrum in this band, to facilitate conforming 37 and 39 GHz band operations, and to increase the number of applications subject to auction, the Commission has frozen further licensing or license modification processing. This processing freeze prevents pending mutually exclusive ("MX") applicants from filing minor amendments to resolve frequency conflicts.

Further restrictions on 39 GHz band licensing are imposed by the Commission in the NPRM. It proposes grandfathering only those entities: (i) holding valid 39 GHz licenses as of the date when a

Report and Order in this proceeding has been adopted and (ii) meeting certain build-out requirements. Pending applicants would be excluded from being grandfathered in this manner.

TIA objects to how the Commission is treating 39 GHz applicants and licensees. After filing good faith license applications, these entities have been blindsided by the Commission's processing freeze. Instead of stopping 39 GHz band application processing, the Commission should make every effort to optimize opportunities for applicants to resolve their frequency conflicts and it should expedite processing those otherwise eligible 39 GHz band applications. Thus, TIA proposes that the Commission:

- Lift its application processing freeze on all 39 GHz band applications filed by the December 15, 1995, release date of the NPRM.
- Permit any mutually exclusive 39 GHz band applicants meeting this deadline to file amendments resolving frequency conflicts no later than 60 days after release of a Report and Order in this proceeding (the "Amendment Deadline").
- Promptly grant all eligible pending 39 GHz band applications, including those applications filed by the Amendment Deadline.
- Provide current 39 GHz band licensees, as well as the applicants granted licenses under TIA's plan, the opportunity to meet appropriate build-out requirements based upon service area population or population density.

Auctions -- The Commission proposes auctioning all channels in the 37-40 GHz band, except for a limited class of grandfathered 39 GHz licensees. TIA objects to auctioning intermediate FS links because it would violate Section 309(j) of the Communications Act of 1934, as amended (the "Act").

For the 37 GHz band, in particular, PCS licensees and private users must be exempted from any auction proposal to ensure availability of needed backbone networks for their services. Licensees of PCS systems, which already have expended sizeable funds for their licenses, must not be required to compete for backbone networks in a bidding contest. Nor should private FS licensees, such as utilities and public safety entities, be required to engage in a costly license pursuit. In the 37 GHz band, the Commission must set aside six (6) paired channel blocks for PCS licensees and one (1) paired channel block for private FS licensees. Under a hypothetical auction scenario, the PCS channel block would have to be exempted

from auctions until three (3) months after the last broadband PCS license is issued. The private FS channel pair would be exempted from auctions indefinitely. The remaining seven (7) paired channel blocks would be auctioned on a BTA-wide basis.

For the 39 GHz band, grandfathered licensees and applicants, which become licensed, would avoid auctions if they met applicable build-out requirements. Otherwise, any area, that is available when the rules adopted herein become effective, or any RSA that becomes available when the licensee fails to meet its build-out requirements, is subject to auction.

Build-out Requirements -- Appropriate build-out requirements for auctioned and for unauctioned microwave services in the 37 GHz and 39 GHz bands must be established. While TIA is sensitive to concerns regarding spectrum warehousing, the Commission must provide new licensees sufficient flexibility so they can respond to changing market conditions and priorities. The Commission's proposed single time-frame for build-out, applicable to all service areas and to all licensees, is inappropriate. Instead, the Commission must base its build-out requirements on service area population or population density. These criteria are appropriate because carriers typically make decisions on where and when to implement networks based upon where the most population is concentrated. It is axiomatic that areas with dense population will be built before areas with sparse population. Moreover, carriers need the revenue stream generated in heavily populated areas to support implementing service in sparsely populated areas.

At this time, TIA is deferring the submission of any specific build-out timetable for 37-40 GHz band licensees. It reserves the right to submit such a recommendation after review of the comments filed. However, TIA proposes requiring that private 37 GHz band FS licensees, which would not receive their license in an auction under the proposal herein, meet applicable system build-out requirements under the new Part 101.

Permissible Users -- TIA opposes permitting mobile users into the 37-40 GHz band because they would cause serious interference problems. TIA supports access by point-to-multipoint users, but

applicable technical standards first must be adopted. These standards could be addressed by the Commission after the rules proposed in the NPRM are adopted.

Technical Standards -- The Commission proposes adoption of minimal technical standards. TIA supports this proposal because it ensures licensee flexibility and availability of cost-effective equipment.

Government Band Sharing -- TIA proposes limiting the Government to sharing the single channel pair reserved for private FS users, provided Part 101 coordination requirements are satisfied. TIA opposes sharing the 37-40 GHz band with Government space research users because the proposed technical standards do not meet international criteria and would cause severe degradation to FS users.

TIA'S PROPOSED REVISIONS FOR THE 37-40 GHz BAND

BAND	SERVICE	AUCTION OR TRADITIONAL LICENSING	SERVICE AREA	BUILD-OUT REQUIREMENTS
37.0-38.6 GHz	All fixed point-to-point microwave	7 - 50 MHz paired channels = auction	BTA	Licensee must provide service to specified percentage of the BTA (based upon population criteria) within a time period to be determined. If BTA criteria not satisfied, the service area would be reduced accordingly.
37.0-38.6 GHz	PCS	6 - 50 MHz paired channels - traditional licensing (no auctions) until 3 months after last broadband PCS license issued -- then auctions	BTA	Licensee must provide service to specified percentage of the BTA (based upon population criteria) within a time period to be determined. If BTA criteria not satisfied, the service area would be reduced accordingly.
37.0-38.6 GHz	Private FS	1 - 50 MHz paired channel on link-per-link basis by traditional licensing (no auctions)	Link-per-link	Same as Part 101.
38.6-40.0 GHz	Grandfathered applicant/ licensee - all fixed point-to-point microwave	Traditional licensing (no auctions)	RSA of licensee/applicant	Licensee must meet specific build-out requirements based upon population criteria for its RSA within a time period to be determined. If build-out requirement not met, license canceled.
38.6-40.0 GHz	New applicants/surrendered licenses - all fixed point-to-point microwave	Auctions	FCC identifies unlicensed areas within BTAs/canceled RSA license	Licensee must provide service to specified percentage of the service area (based upon population criteria) within a time period to be determined. If criteria not satisfied, the service area would be reduced proportionately.

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To: The Commission

COMMENTS

Pursuant to Section 1.415 of the Commission's Rules,[1] the Fixed Point-to-Point Communications Section, Network Equipment Division of the Telecommunications Industry Association ("TIA"),[2] hereby comments on the above-captioned Notice of Proposed Rule Making and Order ("NPRM").[3] In the NPRM, the Commission proposes amending its rules to establish a channel plan, licensing requirements and technical rules for fixed point-to-point microwave service ("FS") operations in the 37.0-38.6 GHz

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[1]47 C.F.R. Section 1.415 (1996).

[2]TIA is the principal industry association representing fixed point-to-point microwave radio manufacturers. TIA members serve, among others, companies, including telephone carriers, utilities, railroads, state and local governments, and cellular carriers, licensed by the Commission to use private and common carrier bands for provision of important and essential telecommunications services. TIA has completed its June 1994 "Telecommunications Systems Bulletin No. 10-F, Interference Criteria for Microwave Systems" ("Bulletin 10-F"), which prescribes standards for implementing the new channel plan for the bands above 3 GHz and for establishing criteria regarding 2 GHz band PCS-to-microwave interference protection. As part of its ongoing standard-setting process, TIA is updating Bulletin 10-F, and Bulletin 10-G is in draft. Furthermore, TIA, along with the National Spectrum Managers Association, was responsible for most of the technical rule proposals recently adopted by the Commission in its consolidation of Parts 21 and 94 into new Part 101. See Reorganization and Revision of Parts 1, 2, 21, and 94 of the Rules to Establish a New Part 101 Governing Terrestrial Microwave Fixed Radio Services, Report and Order WT Dkt. No. 94-148 (FCC 96-51, released Feb. 29, 1996) ("Part 101 Order").

[3]The deadline for filing comments on the NPRM was extended to March 4, 1996. Order, DA 96-144 (released February 9, 1996).

band ("37 GHz band").[4] In addition, the Commission proposes amending its licensing and technical rules for FS operations in the 38.6-40.0 GHz band ("39 GHz band").[5] This NPRM is in response to TIA's September 1994 Petition for Rulemaking ("Petition"), which it amended on May 4, 1995 ("Petition Amendment").[6]

I. TIA SUPPORTS THE COMMISSION'S PROPOSALS IF NEEDED SAFEGUARDS ARE INCLUDED

A. Proposed Rules for 37 GHz Band.

By proposing channelization, licensing and technical rules, the Commission intends making the 37 GHz band, which already is allocated to FS on a co-primary basis for both Government and non-Government operations,[7]

> available for point-to-point microwave operations that would provide communications infrastructure such as "backhaul" and "backbone" communications links for services including broadband personal communications services (broadband PCS), cellular radio and other commercial and private mobile radio operations.[8]

B. Proposed Rules for 39 GHz Band.

Service rules and a channel plan already have been adopted for FS operations in the 39 GHz band. Multi-channel licenses have been granted for operation in this band. However, in an effort to protect the availability of spectrum for PCS and other wireless operators, in September 1994, the Commission's

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[4]NPRM at para. 1.

[5]NPRM at para. 2.

[6]NPRM at footnote 10.

[7]47 C.F.R. Section 2.106 (1996).

[8]NPRM at para. 1.

Common Carrier Bureau established criteria for justifying licensing of new frequencies.[9] Furthermore, in November 1995, the Common Carrier Bureau imposed a freeze on accepting applications for licensing new 39 GHz band assignments pending action in the captioned rule making proceeding.[10]

In the NPRM, the Commission attempts to conform operations in the 39 GHz band with its proposed framework for licensing in the 37 GHz band. Thus, it proposes using the same BTA service areas and licensing procedures in both frequency bands. Unfortunately, to make this match between 37 GHz band and 39 GHz band operations work, the Commission is intent on attempting to "shoehorn" 39 GHz band operations into 37 GHz band licensing procedures:

> [T]he unlicensed areas [would] be licensed using BTA service areas and . . . auctions [would] be employed should mutually exclusive applications be filed. In order to accommodate incumbent operations, we propose that licensees of rectangular service areas be given eighteen months from the adoption of a Report and Order in this proceeding to file with the Commission a certification that they have [met prescribed construction requirements] . . . . If a licensee meets these threshold construction and filing requirements, then the licensee would retain its entire rectangular service area. However, if a licensee does not meet these requirements, then the license would be automatically canceled nineteen months from the adoption of a Report and Order in this proceeding . . . . We also propose to modify the technical rules for the 39 GHz band to make them consistent with the technical rules we are proposing for the 37 GHz band.[11]

In addition to proposing BTA service areas for the entire 37-40 GHz band, the Commission seeks to maximize the number of systems that would be licensed by auction and it seeks to minimize technical requirements. Licenses to operate in the 37-40 GHz band would be awarded by competitive bidding for Basic Trading Areas ("BTAs") if mutually exclusive ("MX") FS applications are filed.[12] Minimal

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[9]Public Notice, "Common Carrier Bureau Established Policy Governing the Assignment of Frequencies in the 38 GHz and Other Bands to Be Used in Conjunction With PCS Support Communications," 75 Rad. Reg. (P&F) 2d 1341 (1994) ("September Public Notice").

[10]Order, RM-8553 (DA 95-2341, released November 13, 1995) ("Freeze Order").

[11]NPRM at para. 2.

[12]NPRM at paras. 27-28.

technical rules, including transmitter power limitations, frequency tolerance specifications, and antenna requirements,[13] would be adopted. Sharing of the 37-40 GHz band between Government and non-Government FS users would be permitted on a "first-come, first-served basis."[14]

C. TIA's Proposed Revisions are Necessary.

TIA fully supports the need to amend the Commission's rules so that the 37-40 GHz band would be available for FS operations. However, as detailed herein, TIA specifically urges the Commission to incorporate the following revisions in its final rules:

- Make service areas compatible so that the 37 GHz band contains only BTAs and the 39 GHz band contains only RSAs, provided that any new RSA would be limited to BTA boundaries;
- Protect 39 GHz licensees and applicants so that they are eligible for grandfathering and exempted from auctions if they meet applicable build-out requirements;
- Exempt PCS licensees in the 37 GHz band from auctions on six (6) channel pairs for a limited period and exempt private FS users in the 37 GHz band from auctions on one (1) channel pair indefinitely;
- Impose build-out requirements based upon service area population or population density;
- Limit initial channelization in the 37-40 GHz band to point-to-point microwave users; actively support adoption of applicable technical rules for point-to-multipoint users after adoption of the rules herein; and prohibit mobile users from using the 37-40 GHz band due to the significant threat of interference to fixed operations;
- Adopt minimum technical rules to increase licensee flexibility and decrease equipment costs; and
- Limit government band-sharing to a single channel pair, provided Part 101 coordination criteria are met, and prohibit space research government band-sharing.

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[13] NPRM at paras. 113-119.

[14] NPRM at para. 120.

II. MAKING THE 37-40 GHz BAND AVAILABLE FOR FS OPERATIONS IS IN THE PUBLIC INTEREST

Maximizing available spectrum for FS users clearly is in the public interest. It is well-established that private and common carrier FS users provide essential telecommunications services.

A. FS Users Provide Essential Services.

Public health and safety users depend upon reliable and available FS frequencies for delivery of their services to the public. Local exchange carriers and new Competitive Access Providers ("CAPs"), cellular telephone companies, utilities, railroads, petroleum companies, financial institutions, and federal, state and local governments use FS to support their network operations. Emerging wireless telecommunications, especially PCS, will rely upon FS users for spectrum to provide their services and will rely upon FS facilities in other bands to support their operations. These FS users frequently are the cornerstone of supervisory and operational programs designed to deliver essential products and services to the public. Thus, FS users serve specific industrial, public safety, and commercial requirements of many companies and public agencies that constitute much of this nation's infrastructure.

B. Inadequate Spectrum Is Available for FS Users.

Unfortunately, as demand for these essential FS services increases, available spectrum does not. First, FS users have been required to clear the 2 GHz band for PCS and to relocate in bands above 3 GHz.[15] The bands designated for the relocating 2 GHz FS users, primarily the 6 and 11 GHz bands, already are quite congested, and no relief is in sight.[16] Given the short-haul, wideband characteristics

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[15]Redevelopment of Spectrum to Encourage Innovation In the Use of New Telecommunications Technologies, Second Report and Order, ET Docket No. 92-9, 8 FCC Rcd 6495, 6519-20 (1993), modified, Memorandum Opinion and Order, 9 FCC Rcd 1943 (1994).

[16]These bands could become largely unusable since the upper 6 and 18 GHz bands recently were reallocated at WRC-95 so that FS users are co-primary with non-geostationary ("NGSO") mobile-satellite service ("MSS") feeder links. Final Acts of the World Radiocommunication Conference (WRC-95), Geneva, 1995 at Article 55. Needed relief from this spectrum congestion is not provided in other recent Commission allocation decisions. Conditions for FS users will deteriorate further if the Commission's proposal to reallocate portions of the 2 GHz band for MSS service links are adopted, because further

of the 37-40 GHz band, this spectrum should be quite useful for the microwave backbone of emerging PCS, cellular, SMR and other wireless networks.

In its Petition, TIA details the need for making the 37 GHz band available to FS users:

> In its petition as originally filed, TIA states that the 37 GHz band should be channelized to permit broadband PCS, cellular, and other common carrier and private operators to use the band to satisfy point-to-point communications needs. It argues that all of the available channel pairs in the 39 GHz band have already been assigned in major markets. TIA claims that if the 37 GHz band is not made available for licensing in a reasonable time frame, broadband PCS licensees will need to seek separate licenses for each link in other fixed service bands, such as 18 GHz and 23 GHz, to interconnect their cell sites. TIA expresses concern that, if it becomes necessary for broadband PCS licensees to obtain separate licenses for each link to every individual cell site, the Commission's administrative processes could be overwhelmed by license applications and the availability of broadband PCS to the public would be significantly delayed. TIA therefore argues that expedited action in this proceeding is necessary so that broadband PCS operators will have adequate spectrum available to them when they begin construction of their systems.

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relocations of the FS incumbents would be required. Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service, Notice of Proposed Rule Making, 10 FCC Rcd 3230, 3232 (1995). Newly available spectrum in the 4 GHz band from the federal government will not be allocated so that this band is feasible as a substitute for the FS users being migrated off the 2 GHz band. Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, First Report and Order and Second Notice of Proposed Rule Making, 10 FCC Rcd 4769 (1995). Availability of the 18 GHz band could be diminished as the result of the recent reallocation resulting in it being shared with government users. Amendment of Part 2 of the Commission's Rules to Allocate Spectrum for the Fixed-Satellite Service in the 17.8-20.2 GHz Band for Government Use, Memorandum Opinion and Order, 10 FCC Rcd 9931 (1995). Current plans to use the 18.8-19.3 GHz band for NGSO fixed satellite service are likely to decrease FS use of that band. Both the 23 GHz and 26 GHz bands are becoming much less available to FS users due to restrictive demands of Inter-Satellite Link and Data Relay Satellite Services. A currently pending proposal to channelize the 27.5-29.5 GHz band for the co-primary FS users is unlikely to be adopted because the Commission recently proposed reallocating the 28 GHz band only for LMDS systems, Fixed Satellite Service and MSS system feeder links. See Rulemaking to Amend Parts 1, 2, 21 and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, Third Notice of Proposed Rulemaking, CC Dkt. No. 92-297 (FCC 95-287, released July 28, 1995). A proposal to reallocate the bands above 40 GHz for FS is pending, but it is uncertain whether such allocations ever will be made. Amendment of Parts 2 and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications, Notice of Proposed Rule Making, 9 FCC Rcd 7078 (1994).

> TIA states that in addition to the interest demonstrated by broadband PCS licensees, cellular licensees have expressed interest in using the 39 GHz band to interconnect cell sites. It points out that cellular systems have continually increased capacity by adding cell sites placed closer together, which has required that cellular licensees obtain additional point-to-point links to interconnect their cells. It submits that as the distance between cell sites has decreased, the frequency band of choice to interconnect cell sites has shifted from 2 GHz to 18 GHz to 23 GHz. TIA expects that as cell sites continue to move closer together, cellular licensees will show substantial interest in the 39 GHz band. Further, it adds that a new group of local microwave common carriers is evolving to provide "last mile" services (short-haul communication links) to broadband PCS operators and to private companies that might need high-speed broad bandwidth links between offices, and that these new providers also will want to use the 37 GHz band. Therefore, TIA submits that the 39 GHz band will not be adequate to satisfy demand and requests that we channelize the 37 GHz band in the same manner as the 39 GHz band and harmonize the service rules for both bands so that channels throughout the combined 37-40 GHz band may be used seamlessly by broadband PCS and cellular licensees.[17]

C. The Shortage of Available FS Spectrum Makes 37-40 GHz Band Rules Necessary.

Unless the Commission adopts rules permitting FS operation in the 37 GHz band, growth of wireless services will be impeded significantly. Indeed, in the NPRM, the Commission agrees:

> We continue to believe that broadband PCS will provide a broad range of benefits and services and will be of vital importance to American business and consumers. Consequently, we believe it important that we provide every opportunity for broadband PCS to develop, including providing adequate spectrum to meet its infrastructure needs. We are concerned, however, that the current demand for spectrum in the 39 GHz band may preclude use of that band to provide adequate support spectrum for broadband PCS and that additional spectrum from the 37 GHz band will be needed to meet this demand. Further, in addition to providing spectrum for broadband PCS infrastructure, it appears that the 37 GHz band may be needed to support cellular and other commercial and private mobile radio operations. Therefore, we believe that the public interest will be served by developing service rules that will permit the use of the 37 GHz band -- in addition to the 39 GHz band -- for point-to-point operations. Accordingly, and consistent with TIA's proposal, we are proposing that the 37 GHz band be made available for use in point-to-point operations, such as those providing broadband PCS and cellular infrastructure links.[18]

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[17] NPRM at paras. 10-11 (footnote omitted).

[18] NPRM at para. 13 (footnotes omitted).

TIA enthusiastically supports achieving these Commission objectives. Nevertheless, the proposals made in the NPRM would not satisfy these objectives completely. Conflicting service areas would be created, resulting in wasted spectrum and reduced service availability. Numerous 39 GHz band licensees and applicants would be penalized despite their efforts to resolve frequency conflicts. Licensees in the PCS bands, which already have expended considerable funds in winning competitive bids for their systems, would be subjected to additional auctions. Private FS licensees, which provide essential telecommunications services, would be burdened with additional costs, which, in fact, would force them out of this band. New entrepreneurs in the 37-40 GHz band would be burdened with unreasonable system build-out requirements. The assaults on the upper frequency bands by other users would reach critical proportions if incompatible mobile users were permitted to use this band. Available spectrum would be reduced if the Government were allowed to share this band due to the unwieldy and time-consuming coordination procedures between non-Government and Government users. Thus, as detailed below, TIA recommends several changes to the proposals made by the Commission in the NPRM to ensure that its objectives are met and that the public interest is served.

III. SERVICE AREAS FOR THE 37-40 GHz BAND MUST BE COMPATIBLE

A. The Commission's Proposals for Service Areas Are In Conflict.

In its effort to conform licensing for new 37 GHz band users and for existing 39 GHz band users, the Commission threatens to create a Tower of Babel. For new 37 GHz band users, the Commission proposes BTA licensing areas, because they match PCS service areas. The Commission believes that this approach "will provide a more orderly structure for the licensing process than allowing each licensee to define its own service area, as is currently done in the 39 GHz band."[19] For 39 GHz band systems, a different service area could result. The 39 GHz band systems already primarily are licensed on a RSA

[19]NPRM at para. 22.

basis. However, the Commission seeks to license new systems using BTAs.[20] Problems associated with this conflict would be exacerbated by cellular, SMR, and other potential wireless users of the 37-40 GHz bands, which have altogether different service areas.

It is critical that the Commission formulate a plan for ensuring compatible service areas throughout the 37-40 GHz band. Otherwise, chaos could result and BTAs, where grandfathered 39 GHz licensee RSAs exist, could contain large amounts of unusable area. This problem could be solved easily by treating the 37 GHz band and the 39 GHz band service areas differently.

B. Service Areas for the 37 GHz Band Must Be Limited to BTAs.

TIA supports using only BTA service areas in the 37 GHz band. No prior licensed service areas exist, so no conflicts would result. Flexibility would be preserved because the BTA conforms to PCS service areas and could accommodate the needs of companies implementing networks to cover metropolitan and adjacent areas, including broadband PCS, cellular, SMR, CAPs and other network providers. Such service areas provide competitive market entry requirements to companies of all sizes, promote spectrum efficient frequency uses, and encourage rapid and wide deployment of new and innovative services. As TIA stated in its Petition Amendment, BTAs

> allow[ ] for deployment and operation of several individual links within these blocks, without the cost and time delay of individual licensing and traditional frequency coordination. This is particularly attractive for applications where a multitude of links may be required by a given operator.[21]

C. Service Areas for the 39 GHz Band Must Be Limited to RSAs.

Converting the 39 GHz band to BTAs is not justified by the Commission in the NPRM. A substantial number of RSA licensees would be grandfathered in this band. Under this scenario, large

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[20]NPRM at para. 104. Under existing licensing procedures, channels in the 39 GHz band "are assigned for use within a [RSA] that is described in the license application as bounded by maximum and minimum longitudes and latitudes." Id. at para. 4.

[21]Petition Amendment at 2.

portions of a BTA would be unavailable because an existing licensed RSA service would be located within its boundaries, or would cross BTA boundaries, and thus would be entitled to interference protection. Instead of creating this chaotic licensing scheme, TIA urges the Commission to forego imposing BTAs on the 39 GHz band and to maintain the status quo with only RSAs.

IV. THE COMMISSION MUST PROTECT 39 GHz BAND LICENSEES AND PENDING APPLICANTS

A. The Commission Unnecessarily Has Restricted 39 GHz Band Licensees and Applicants.

Flush with its success in raising substantial revenues from competitive bidding for PCS, Direct Broadcast Satellite, MDS and other services, the Commission appears eager to auction spectrum regardless of the consequences. In the NPRM, the Commission declares its intent

> to use auctions in awarding future licenses in the 39 GHz band. We believe that auctions place licenses in the hands of those who value them most and that using auctions would allow us to license the remainder of the 39 GHz band in the most expeditious manner. Accordingly, we propose to use the same procedures for the 39 GHz band as are proposed for the 37 GHz band. To do this requires that we clearly define exclusive service areas for the 39 GHz band. Consistent with our proposal for the 37 GHz band, we propose to use BTA service areas. We also propose that all 39 GHz BTA channel blocks not encumbered with previously licensed rectangular service areas be auctioned at the same time as the 37 GHz band. Those 39 GHz BTA channels that are encumbered will be auctioned at a later date to be determined after the resolution of the incumbency issue . . . .[22]

This proposal is in conflict with Section 309(j) of the Communications Act of 1934, as amended (the "Act").[23] First, the Commission is prohibited from deciding to apply auctions "solely or predominantly on the expectation of Federal revenues from the use of a system of competitive bidding . . . ."[24] Similarly, under Section 309(j)(6)(E) of the Act, the Commission explicitly is required to

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[22]NPRM at para. 104.

[23]47 U.S.C. Section 309(j) (1995).

[24]47 U.S.C. Section 309(j)(7)(B) (1995).

"continue to use engineering solutions, negotiation, threshold qualifications, service regulations, and other means in order to avoid mutual exclusivity in application and licensing proceedings . . . ."[25]

Inexplicably, the Commission has taken actions with respect to the 39 GHz band applicants which are in conflict with these statutory provisions. Indeed, the legality of this proposal under Section 309(j) of the Act has been questioned by two leading members of the U.S. Senate, Senator Larry Pressler (R.-S.D.), who is Chairman of the Senate Commerce Committee and the Telecommunications Subcommittee, and Senator Thomas A. Daschle (D.-S.D.), who is Senate Minority Leader:

> [O]ur concern is with the larger issue of Commission implementation of Congressionally-imposed responsibilities under the [Omnibus Budget Reconciliation Act of 1993] ("1993 Budget Act" or "'93 Act").
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> In considering the public interest to generate revenues under the '93 Act, Congress determined that the promotion of more competitive services for the public and more efficient use of spectrum were of paramount importance when compared to allocation by competitive bidding.
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> It therefore seems anomalous to the clearly expressed intent of Congress within the ['93 Act] that [39 GHz band] applicants who have completed the application process would subsequently be exposed to having to compete for that spectrum in auctions. Clarification of the Commission's reasoning and interpretation of [its] auction authority under the 1993 Budget Act would be appreciated.[26]

As detailed below, TIA herein proposes that the Commission take a different approach for licensing the 39 GHz band so that this statutory conflict would be eliminated.

First, TIA urges the Commission to lift its application processing freeze on all 39 GHz band applications filed by the December 15, 1995, release date of the NPRM. Second, the Commission must permit any mutually exclusive 39 GHz band applicants meeting this deadline to file amendments involving

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[25]47 U.S.C. Section 309(j)(6)(E) (1995).

[26]Letter, dated February 9, 1996, from Senators Pressler and Daschle to Chairman Hundt.

frequency conflicts no later than 60 days after release of a Report and Order in this proceeding (the "Amendment Deadline"). Third, the Commission promptly must grant all eligible pending 39 GHz band applications, including those applications filed by the Application Deadline. Fourth, the Commission must give current 39 GHz band licensees, as well as the applicants granted licenses under TIA's plan, an appropriate period of time to meet build-out requirements based upon service area population or population density. TIA is deferring any recommendation for a build-out timetable until it reviews other comments in this proceeding.

B. Commission Actions Regarding Processing 39 GHz Band Applications Are Contrary to the Public Interest.

Culminating with its decision in the NPRM to restrict processing of 39 GHz band applications and to create BTA service areas, the Commission has taken several actions that foreclose the possibility that licensees and applicants would be able to implement service promptly and would be able to avoid costly auctions. First, in the September Public Notice, the Commission ruled that "all current and future applicants seeking authority to use any spectrum in conjunction with PCS support communications" were required to provide the Commission with supplemental information to justify their application.[27] This policy has deterred filing of applications by CAPS and other end-to-end service providers.[28] Second, in the Freeze Order, the Commission decided not to accept any further applications for licensing new 39 GHz frequency assignments pending action in this rulemaking. In conjunction with this policy, the Commission has stopped processing any minor amendments filed by existing applicants to eliminate frequency conflicts.

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[27]This supplemental information includes: (i) consideration of non-RF solutions; (ii) clear and present need; and (iii) frequencies and efficiency. September Public Notice, 75 Rad. Reg. (P&F) 2d at 1341-42.

[28]See January 16, 1996, Petition for Reconsideration filed by Commco, L.L.C. et al. in this proceeding at 6, 16-18 ("Commco Petition").

Finally, in the NPRM, the Commission seriously threatens the ability of 39 GHz band applicants to continue pursuing their proposals. In what it calls an "interim policy," the Commission has taken the following action with respect to pending 39 GHz band applications:

> Pending applications will be processed if (1) they were not mutually exclusive with other applications at the time of the Bureau's [November 13, 1995, Freeze Order], and (2) the 60-day period for filing mutually exclusive applications expired prior to November 13, 1995. We conclude that processing pending applications against which no competing application has been timely filed will not impede the goals of this proceeding and can be accomplished without significant burden on Commission resources. We also propose to apply to all licenses granted under this procedure the same revised construction threshold and grandfathering requirements that we have proposed to apply to incumbent 39 GHz licensees who received license grants prior to this [NPRM].
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> With respect to all other pending applications (i.e., those that were subject to mutual exclusivity or still within the 60-day period as of November 13), we conclude that processing and disposition should be held in abeyance during the pendency of this proceeding. First, resolving mutually exclusive applications requires greater expenditure of Commission resources than processing uncontested applications. Second, we are concerned that attempting to award licenses in mutually exclusive situations under current rules could lead to results that are inconsistent with the objectives of this proceeding. Therefore, we will not process these applications (or any amendments thereto filed on or after November 13, 1995) at this time, but we intend to determine whether to process or return them, as appropriate, at the conclusion of this proceeding.
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> Also in regard to pending applications for 39 GHz licenses, amendments received on or after November 13, 1995 will be held in abeyance during the pendency of this proceeding. We will similarly hold in abeyance those applications for modification of existing 39 GHz licenses filed on or after November 13, 1995, or modification application amendments filed on or after that date, and will not accept for filing any additional such modification applications and amendments . . . .[29]

[29]NPRM at paras. 122-124 (footnotes omitted). The modification applications would be acceptable for filing if they do not involve any enlargement in any portion of the proposed area of operation and do not change (other than to delete) a frequency block. Id. at para. 124.

The Commission has ruled that only incumbent 39 GHz band licensees existing on the effective date of any Report and Order in this proceeding would be eligible to retain their authorizations. TIA opposes this Commission decision to alter 39 GHz band licensee and applicant rights by imposing artificial restraints on their ability to resolve MX situations. The Commission's decision to freeze 39 GHz band application processing will increase the number of applications subject to auction. Such action, which has been taken without any prior notice, is patently unfair and conflicts with Section 309(j) of the Act.[30]

The Commission must protect incumbent 39 GHz licensees. As TIA stated in its December 5, 1995, Ex Parte Comments on Petition for Rulemaking in RM-8553 ("Ex Parte Comments"):

> [TIA] and its member companies have made it a point to follow closely the applications and plans of those companies seeking to develop 39 GHz point-to-point networks in numerous metropolitan areas across the country. [TIA] believes there is a clear and immediate need for the services those companies are offering. [TIA] would observe that a vast majority of 39 GHz companies appear to have substantial backing and technical expertise. This is evidenced in part by investments of money, time, and expertise in prosecution of their 39 GHz applications and efforts to move forward with implementation of system[s].
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> Furthermore, over the last two years, these same companies have done a commendable job of resolving, on a purely voluntary basis, the vast majority of the existing cases of mutual exclusivity among their 39 GHz applications. These efforts only can be interpreted as an indicator of technical competence among these companies, as well as a confirmation of a willingness to speed the implementation of systems, the creation of new jobs, and the delivery of innovative new services to the public. As a result, it is only fair that these companies be awarded the requested 39 GHz authorizations. These authorizations are central to their business plans, and will result in the earliest possible availability to the public of new local wireless broadband services.[31]

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[30]In reliance upon their ability to file minor amendments as of right under Part 21 because they would resolve frequency conflicts, numerous "39 GHz applicants [in November 1995] filed hundreds of minor amendments . . . [which] either reduced proposed service areas and/or reduced pending channel requests . . . to resolve frequency conflicts with other pending 39 GHz applicants or licensees and did not create any new or additional frequency conflicts." Commco Petition at 6. Under the Freeze Order and the Commission's decision in the NPRM, however, these minor amendments will not be processed.

[31]Ex Parte Comments at 2.

TIA recommends expanding the group of eligible grandfathered licensees. It proposes that the Commission include all applicants, with applications pending as of the release of the NPRM, in the class eligible to be grandfathered. In addition, TIA proposes that any amendments resolving frequency conflicts filed by the Amendment Deadline (i.e., 60 days after release of the Report and Order in this proceeding) also would be subject to immediate processing. If these applications are not mutually exclusive with each other after Commission processing, and they are otherwise qualified, the Commission must grant the licenses and subject the licensees to the appropriate build-out requirements.[32]

V. IF AUCTIONS ARE ADOPTED, SPECTRUM NEEDS BY PCS AND PRIVATE FS LICENSEES MUST BE PROTECTED

A. Auctioning Intermediate FS Links Conflicts With Statutory Requirements.

When the Commission adopted competitive bidding rules under Section 309(j) of the Act, it decided not to auction intermediate links used in the provision of a continuous, end-to-end service.[33] Based upon the record of that proceeding, the Commission concluded that auctioning intermediate FS links would not be consistent with Section 309(j) of the Act:

> Before employing competitive bidding for intermediate links, we are still required to determine that mutual exclusivity exists and that such bidding would promote the objectives of Section 309(j)(3)(A) through (D). As to mutual exclusivity, we

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[32]The Commission also proposes replicating the requirements listed in the September Public Notice by continuing to impose similar constraints on 39 GHz band licensees which are not selected by auction. NPRM at para. 111. In particular, the Commission would require any applicant for channels in the 39 GHz band to demonstrate, inter alia, that it considered non-RF solutions and that all frequencies are loaded to a minimum equivalent digital efficiency rate of 1 bps/Hz. Id. TIA generally opposes subjecting 39 GHz band applicants to these requirements. There is no justification for discriminating against 39 GHz applicants in this manner. Not surprisingly, the Commission offers none in the NPRM. TIA also opposes the requirement that would force applicants to demonstrate that non-RF solutions are unacceptable. In this new age of wireless telecommunications, the Commission should not discourage RF solutions. Moreover, TIA fails to see how the 1 bps/Hz proposed efficiency rate would be computed over a wide area-based 50 MHz block. It would seem that frequency re-use capability would be a more realistic indicator of a fully utilized (or soon to be fully utilized) 50 MHz block.

[33]See Implementation of Section 309(j) of the Communications Act - Competitive Bidding, PP Docket No. 93-253, Second Report and Order, 9 FCC Rcd 2348, 2355-2356 (1994) ("Competitive Bidding Second Report and Order"). See also NPRM at paras. 27-28.

> note that on those types of frequencies most often utilized as intermediate links, mutual exclusivity is very rare because of frequency coordination efforts made prior to the time an application is filed. We are also concerned that auctioning intermediate links might lead to significant delays in the provision of services thus hindering the development and rapid deployment of new technologies, products and services for the benefit of the public. Further, such auctions would impose significant administrative costs on licensees and on the Commission, particularly relative to the likely value of these licenses. It is thus unclear whether using auctions to award licenses for intermediate links would promote the objectives in Section 309(j)(3)(C).[34]

Now, the Commission proposes reversing direction by auctioning off the FS frequencies in the 37-40 GHz band.[35] It claims that auctions of FS links are permissible because: (i) the anticipated use of these frequencies would be consistent with Section 309(j) of the Act; (ii) MX applications are likely to be filed in the BTA service areas; and (iii) delays in introducing new technologies would not result.[36]

TIA does not agree with the Commission that auctioning the 37-40 GHz band intermediate FS links would be permissible under Section 309(j) of the Act. Imposing auctions upon intermediate FS microwave links would be inappropriate and would contravene the public interest. Moreover, by freezing any processing of 39 GHz amendments designed to eliminate frequency conflicts, the Commission is creating a self-fulfilling prophecy because increased MX applications would result.

Regrettably, the Commission ignores the fact that PCS licensees relied upon the availability of FS spectrum in making their bidding decisions. These FS networks are significantly less expensive and significantly more reliable than landline or other alternative systems. Thus, it is not surprising that, in calculating the prices they would be willing to pay in the broadband auction, PCS bidders assumed that backhaul networks primarily would be licensed by FS users.

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[34]Competitive Bidding Second Report and Order, 9 FCC Rcd at 2355-56 (citations omitted).

[35]NPRM at para. 28.

[36]NPRM at para. 28.

Intermediate microwave links often are the most efficient, cost-effective and reliable backhaul systems for common carriers and private users. Deployment of microwave affords carriers with greater control over: (i) quality, performance, maintenance, security and repair; (ii) cost; (iii) timing of service initiation over both the microwave and carrier facilities; and (iv) independence from companies providing more costly, less reliable leased-line services. Microwave networks often are used to permit carriers more quickly to bring transmitters into service, thereby expanding or improving coverage areas. Indeed, the greatest benefit from using microwave is the speed at which it can be placed in service to meet demand. Imposing auctions would hinder a carrier's flexibility significantly.[37]

B. Spectrum Leasing or User Fees Should Be Considered As An Alternative to Auctions.

Even if auctions would be permissible, more appropriate options exist for this band. For example, the Commission could consider charging licensees spectrum lease/use fees. Charging these fees, instead of auctioning BTA licenses, would permit licensing on the more conventional link-per-link basis; would be less costly for each licensee; and, in the aggregate, likely would generate revenue comparable to what auctions would produce.

C. TIA Would Not Oppose Auctions If PCS and Private FS Users Are Protected.

Nevertheless, in the interest of promoting prompt availability of these frequencies for PCS and other wireless users, TIA would not oppose the use of auctions in this band provided certain safeguards are adopted. First, in the 37 GHz band, the Commission must exempt private FS licensees from auctions

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[37]For example, a common carrier must be permitted, without constraints, to determine and implement the most cost-efficient method of supplying end-to-end service. This is absolutely crucial in rural areas where unnecessary costs, added to the already higher costs of service provision, may threaten the availability of high-quality service. Most networks consist of numerous microwave paths. Under these circumstances, it is likely that each link in a particular network would be subject to a separate auction. Licenses could be granted at different times and different licensees for each separate link in the end-to-end network could exist. This scenario would result in the licensee being subject to multiple auctions simply to complete its system. Not only would this situation make network development and implementation exceedingly difficult, such "splintered" responsibility for maintenance of network microwave facilities likely would result in disabling or severely degrading operations.