COMSEARCH
Leadership and Diversity for Wireless

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April 1, 1996

HAND DELIVERED

Mr. William F. Caton
Office of the Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D. C. 20554

Re: In the matter of Amendment to the Commission's Rules regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, ET Docket No. 95-183 and Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz, PP Docket No. 93-253.

Dear Mr. Caton:

Enclosed herewith is one (1) original, and five (5) copies of our reply to the comments submitted to the above captioned Notice of Proposed Rulemaking.

Sincerely,

COMSEARCH

Christopher R. Hardy
Director, Microwave and Satellite Services
Enclosure

075

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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 38.6-40.0 GHz	)	PP Docket No. 93-253

To: The Commission

REPLY COMMENTS OF COMSEARCH

Comsearch hereby submits its reply in response to the comments filed to the Notice of Proposed Rulemaking (NPRM) in the above captioned proceeding. As an independent engineering firm specializing in spectrum management of terrestrial microwave, satellite, and mobile telecommunications systems, we feel that reply comments are warranted on the subjects of link-by-link licensing, the Commission's desire to impose minimal technical rules, and spectrum sharing among different services.

Individual Link-by-Link Licensing

Comsearch supports the comments of Pacific Telesis, PCIA, and TIA that the Commission should reserve at a minimum one 50 MHz channel pair for individual link-by-link licensing.[1] We agree

[1] See, comments of Pacific Telesis, page 5, PCIA, page 5, and TIA, page 19.

with the comments of TIA and PCIA that the channel pair to be identified under this licensing approach should be in the 37 GHz band. The use of traditional prior coordination and individual link-by-link licensing procedures will allow companies whose communications needs do not justify an area-wide license to utilize the 37-40 GHz spectrum. Prior coordination and licensing of individual links would also facilitate sharing the spectrum between non-Government and Government fixed point-to-point systems. TIA asserts that non-Government and Government users should be made subject to identical coordination criteria and recommends: " (i) limiting Government use of this band to the single channel pair TIA proposes for private FS users in the 37 GHz band: and (ii) permitting such access only if the Government users meet the applicable prior coordination procedures in Part 101." In our comments, we proposed a mechanism to achieve TIA's recommendations through the repacking of the nine existing Government links and the establishment of a Government contact point responsible to receive and distribute coordination notices in shared bands.[2]

Minimal Technical Rules to Allow Flexibility and Minimize Interference

Regarding technical rules for the 37 and 39 GHz bands, most commenters agreed with the Commission's tentative conclusion that licensees should be afforded operational flexibility subject to the provision that potential interference is minimized.[3] While we agree that operators should not be burdened with unnecessary rules, we maintain that the mandatory exchange of

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[2] See comments of Comsearch, pages 4-5.

[3] See comments of AT&T, page 9, Advanced Radio Telecom Corp, page 37, GHz Equipment Co.,INC, page 6, Winstar, page 60, Columbia Millimeter Communications, L.P., page 13,.

specific technical system information is necessary to minimize the potential for interference. Comments were received from potential operators of point-to-point, point-to-multipoint, satellite, and mobile systems for PCS and cellular interconnect, wireless local loop, private networks, etc. In the complex interference environment that could result, the exchange of this information cannot be left to the mutual interests of the companies involved. Such a wide variety of systems will necessarily have different interference protection needs, and neighboring companies will have different opinions on whether or not to voluntarily exchange information. In our comments we asserted that the Commission must *require* the exchange of specific technical information for coordination.[4] Thus we agree with AT&T that machine readable databases must be maintained and made available "to enable other parties to make determinations on whether deployment of specific facilities will or will not pose interference problems."[5] Applicants for links licensed individually as discussed above must have access to such database information in order to analyze the adjacent channel interference potential with neighboring area-licensed systems.

Spectrum Sharing Considerations

Comments were divided on the issue of sharing the 38 GHz spectrum between Government and non-Government, fixed use with mobile, and fixed use with satellite. TIA, for example, promotes sharing between Government and non Government fixed point-to-point systems under certain conditions, but opposes the proposal to allow sharing with Government Space Research.[6]

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[4] See comments of Comsearch, pages 7-8.
[5] See comments of AT&T, page 14.
[6] See comments of TIA, page 27 and 28.

As stated above, we agree with TIA that Government and non-Government users can share the spectrum with individual link prior coordination and licensing. We agree with TIA and PCIA that mobile operations cannot effectively share the spectrum with fixed users.[7]

We disagree in part with TIA and PCIA that satellite (space to earth operations) could not effectively share with terrestrial systems.[8] We agree that without appropriate interference criteria, satellite downlinks could pose a significant risk to the operations of fixed point-to-point systems. We also agree that the power flux density (PFD) limits proposed by the Commission in the NPRM may not be appropriate for co-primary fixed service operations in the 38 GHz band. The ITU Radio Regulations state in footnote 2582.1 that the limits "shall apply until such time as the CCIR has made a Recommendation as to the values of power flux-density limits which should apply in the frequency band". Thus the current PFD limits are only a benchmark and additional studies are needed prior to the formal adoption of PFD requirements in the 37.5 - 40.0 GHz bands. Unlike TIA and PCIA, we believe that with proper engineering, sharing is possible between satellite systems and terrestrial facilities in the 38 GHz band, but should be limited to channel blocks licensed on a link-by-link basis and only for limited earth station applications. As evidenced in the 4 GHz band, when there is a proliferation of satelllite earth station receive facilities, the ability to implement a terrestrial system becomes economically prohibitive due to interference concerns.

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[7] See comments of PCIA, page 4, and TIA, page 22.
[8] See comments of TIA, page 28, and PCIA, page 4.

Comsearch respectfully requests the Commission to consider the foregoing reply comments in adopting rules for the 37 and 39 GHz bands.

Respectfully Submitted,

COMSEARCH

Prepared By: _____

for

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CERTIFICATE OF SERVICE

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