

ANN SAVENDER*
JAMES A. CASEY
ANNE GOODWIN CRUMP*
VINCENT J. CURTIS, JR.
PAUL J. FELDMAN*
ERIC FISHMAN*
RICHARD HILDRETH
EDWARD W. HUMMERS, JR.
FRANK R. JAZZO
CHARLES H. KENNEDY*
KATHRYN A. KLEIMAN
PATRICIA A. MAHONEY
M. VERONICA PASTOR*
GEORGE PETRUTSAS
LEONARD R. RAISH
JAMES P. RILEY
MARVIN ROSENBERG
KATHLEEN VICTORY*
HOWARD M. WEISS

*NOT ADMITTED IN VIRGINIA

FLETCHER, HEALD & HILDRETH, P.L.C.

ATTORNEYS AT LAW
11th FLOOR, 1300 NORTH 17th STREET
ROSSLYN, VIRGINIA 22209

(703) 812-0400

TELECOPIER

(703) 812-0486

INTERNET

HILDRETH@ATTMAIL.COM

ROBERT L. HEALD
(1956-1983)
PAUL D.P. SPEARMAN
(1936-1982)
FRANK ROBERSON
(1936-1981)
RUSSELL ROWELL
(1948-1977)

RETIRED
EDWARD F. KENEHAN
FRANK U. FLETCHER

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

CONSULTANT FOR INTERNATIONAL AND
GOVERNMENTAL AFFAIRS
SHELDON J. KRYS
U.S. AMBASSADOR (ret.)

OF COUNSEL
EDWARD A. CAINE*

WRITER'S NUMBER
(703) 812-

0480

March 1, 1995

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

Re: ET Docket No. 94-124
RM-8308

Dear Mr. Caton:

On behalf of the Digital Microwave Corporation ("DMC"), we are filing an original and seven (7) copies of its Reply Comments in the above proceeding.

If additional information is needed, the Commission's staff is requested to communicate with us.

Very truly yours,

FLETCHER, HEALD & HILDRETH, P.L.C.



Leonard R. Raish
Counsel for Digital Microwave Corporation

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Enclosures

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BEFORE THE
Federal Communications Commission

WASHINGTON, D.C. 20554

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In the Matter of)
)
Amendment of Parts 2 and 15 of the)
Commission's Rules to Permit Use of Radio) ET Docket No. 94-124
Frequencies Above 40 GHz for New Radio) RM-8308
Applications)

To the Commission:

REPLY COMMENTS OF DIGITAL MICROWAVE CORPORATION

The Digital Microwave Corporation ("DMC") is pleased to submit the Reply Comments below in response to comments received on the Commission's Notice of Proposed Rulemaking ("Notice") in the above-captioned proceeding, released on December 28, 1994.

I. GENERAL

DMC is one of the largest suppliers of digital microwave equipment in the global market and the fourth largest supplier in the United States. Its customers include common carriers offering a variety of digital transmission services to their customers as well as private users and governmental agencies. Its corporate headquarters is located in San Jose, California.

As a supplier of microwave equipment, DMC is vitally interested in the Commission's regulations governing licensing and spectrum allocations. With the availability spectrum for terrestrial fixed microwave communications systems being reduced as the result of recent Commission reallocation decisions, it is highly important that the remaining microwave

frequencies be retained.

II. TIA COMMENTS SUPPORTED

In its Comments, TIA requests that the Commission:

- Reallocate the 48.5-51.4 GHz and the 55.2-58.2 GHz bands for exclusive use by private and common carrier fixed point-to-point microwave users to match existing or proposed international allocations.
- License these bands under the proposed part 101, and, consistent with clear statutory requirements, exempt these licenses from auction.
- Revise the proposed allocation of the 47.2-48.2 GHz band by: (i) eliminating the 47.2-47.4 GHz allocation for unlicensed vehicular radar systems and reallocating that 200 MHz to anywhere in the 45.0-47.0 GHz band; and (ii) moving the 800 MHz to be allocated for licensed use from 47.5-48.2 GHz to 47.2-48.0 GHz. These changes are required to provide a 500 MHz guardband between the proposed licensed uses and the proposed private and common carrier fixed point-to-point microwave allocation starting at 48.5 GHz
- Establish formal procedures to improve spectrum sharing between the government and the private sector, including, at a minimum, reducing the time needed to coordinate frequencies between government and private users from weeks to hours.

- Reallocate LMDS to the 40.5-42.5 GHz band and reallocate the 28 GHz band for fixed point-to-point microwave service.

DMC was a participant in the preparation of TIA's comments filed in this Docket, and was instrumental in underscoring the need to provide for LMDS services at 40 GHz in lieu of 28 GHz. Accordingly, DMC strongly supports all of the TIA comments. DMC adds its own emphasis through these Reply Comments to the TIA proposal to use the 40.5-42.5 GHz band for LMDS applications as a replacement for the 28 GHz band. The 40.5-42.5 GHz band is already recognized by the ITU (See ITU-R Recommendation 748 dated 8 March 1992) and an increasing number of European countries as a band well suited for LMDS (described as MVDS in Europe). The TIA discusses this in more detail on pages 7-10 of their comments. DMC assisted in the preparation of those comments and strongly endorses them through these Reply Comments.

In its conclusions, TIA urges the Commission to (a) "reallocate the 48.5-51.4 and 55.2-58.2 GHz bands for the fixed point-to-point microwave services" and (b) to reallocate the 40.5-42.5 GHz band for LMDS. This latter allocation is paired with the conclusion that the 28 GHz band should be retained for traditional fixed point-to-point use. DMC strongly supports the TIA conclusions.

Finally, as a general comment, DMC urges that before the Commission makes specific allocations for the bands above 40 GHz that consideration be given to establishing Rules for licensing.

III. USE OF AUCTIONS IN BANDS AVAILABLE FOR TERRESTRIAL FIXED MICROWAVE BANDS IS OPPOSED

In addition to the foregoing, the TIA Comments included a strong statement opposing the use of auctions in the 48.5-51.4 GHz and 55.2-58.2 GHz bands (By footnote, with which DMC concurs, TIA included the 28 GHz band as well). TIA stated inter alia:

"Unlike commercial common carrier systems, private carrier systems do not generate adequate revenue to justify engaging in competitive bidding for a license. Thus, if auctions are imposed for fixed point-to-point microwave systems in the bands above 40 GHz, all private users, including those responsible for public safety and emergency services, and those responsible for providing services for utilities, financial institutions, internal needs, or other applications, effectively would be foreclosed from these frequencies."

Pages 19-23 inclusive of the TIA Comments elaborates upon the above quoted statement.

Briefly put, DMC concurs with the quoted statement and related TIA comments in opposition to the use of auctions.

IV. SEVERAL OTHER COMMENTERS SUPPORT ALLOCATION OF 40 GHZ BAND FOR LMDS TYPE SERVICES

A review of the many Comments filed in this proceeding indicates that at least ten parties have addressed the "40 GHz band" as a substitute for the "28 GHz band" to accommodate LMDS operations. Virtually all of these parties pointed out one way or another to the need to coordinate FCC actions in both the 40 GHz and 28 GHz bands to maximize the overall public benefit. DMC also calls particular attention to the Comments filed by the Rockwell International Corporation that the Commission "license LMDS as a class of LMDS in the 40.5-42.5 GHz band or allocate the 40.5-42.5 GHz band directly to LMDS". DMC notes GE American Communications in Section II of their comments states LMDS is capable of using the 40 GHz

band and further that the Commission has observed in the Notice the allocation of 2 GHz within the 40 GHz band "will permit the development of short range wireless radio systems"

DMC also supports the view of GE American Communications that LMDS is encompassed within the aforementioned Commission observation.¹

**V. ECONOMIC BENEFITS TO U.S. MANUFACTURES
WOULD RESULT FROM ALLOCATION OF 40.5-42.5 GHZ
BAND FOR LMDS**

In its comments TIA advocated allocation of the 40.5-42.5 GHz band for LMDS and thereby free the 28 GHz band for "traditional" terrestrial fixed microwave and satellite communications as originally envisaged by the ITU. The ITU allocation of the 27.5-29.5 GHz band is for FIXED, FIXED-SATELLITE and MOBILE on a worldwide basis. American manufacturers producing equipment in this band can not only produce 28 GHz equipment for the U.S. domestic market but also export that equipment on a worldwide basis. With a solid domestic base, U.S. manufacturers would be in a good competitive position to market their products to other countries. This would apply to not only "traditional" terrestrial fixed microwave but also to satellite service suppliers. In the opinion of DMC, the Hewlett-Packard Co. stated the case for potential economic benefits very well and succinctly in Paragraph 2 of their Comments.

Not only would "traditional" terrestrial fixed microwave and fixed satellite services benefit from authorizations to operate in the 28 GHz band, but in parallel the manufacturers of

¹In addition to Rockwell International and GE American Communications other commenters advocating allocation of the 40.5-42.5 GHz band for LMDS include Hewlett-Packard, Hughes Communication Galaxy, Teledesic Corporation, Hughes Aircraft, Martin Marietta, Harris Corporation, End Gate, and TRW Inc.

LMDS equipment in the 40.5-42.5 GHz and would benefit as well. As has been pointed out throughout the debate on spectrum for LMDS, the European countries particularly are already implementing LMDS type systems in the 40.5-42.5 GHz band. As Hewlett-Packard points out in paragraph 3 of their comments, the European trend "creates an opportunity for an international market for U.S. manufactured equipment which might be developed for the domestic 40.5-42.5 GHz service."² DMC agrees and concurs with the further observation by Hewlett-Packard (see paragraph 3 of their comments) that "one of the chief advantages for millimeter wave transmission is the inherently high bandwidth capability it affords" [for LMDS type operations].

VI. CELLULARVISION VIEWS ARE OPPOSED

DMC simply does not concur with the views expressed by Cellularvision that LMDS is not viable in frequency bands above 40 GHz. Based on information available in the U.K., that LMDS (described as MVDS in the U.K.) can be expected to operate well at 40 GHz. The experience of DMC in the course of manufacturing antennas, transmitters, and receivers for 38 GHz relatively short path length microwave relay systems demonstrates there is no basis for the Cellularvision interests to claim that antenna side lobe and polarization performance is significantly degraded at the higher frequency bands.

VII. CONCLUSIONS

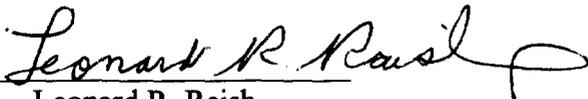
Noting the foregoing discussion, DMC

- (a) Strongly supports the Comments already filed and Reply Comments being filed in this Docket by TIA.

²Hughes Communications GALAXY makes the same points Sections IV and V of their comments; TIA does likewise on page 9 of their comments.

- (b) Opposes the use of auctions particularly as regards private carrier systems.
- (c) Notes that at least ten parties support accommodating wide band systems such as LMDS in the 40.5-42.5 GHz band in lieu of the 27.5-29.5 GHz band.
- (d) Positive economic benefits would accrue to the U.S. and U.S. manufactures by retaining "traditional" terrestrial fixed microwave services in the 27.5-29.5 GHz band and locating LMDS type services in the 40.5-42.5 GHz band.
- (e) Views expressed by Cellularvision that LMDS is not feasible above 40 GHz are not concurred in.

Respectfully submitted,
DIGITAL MICROWAVE CORP.

By: 
Leonard R. Raish

Its Attorney

FLETCHER, HEALD & HILDRETH, P.L.C.
1300 North 17th Street
11th Floor
Rosslyn, Virginia 22209
(703) 812-0400

Date: March 1, 1995

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