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ORIGINAL
FILE

Ms. Donna R. Searcy
Secretary
Federal Communications Commission
Room 222
1919 M Street, N.W.
Washington, D.C. 20554

Re: General Docket No. 90-314
ET Docket No. 92-100

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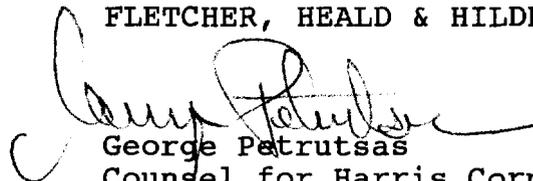
Dear Ms. Searcy:

On behalf of Harris Corporation - Farinon Division, we are filing an original and five (5) copies of its Comments in the above-referenced proceedings.

If there are any questions, please contact the undersigned counsel.

Respectfully submitted,

FLETCHER, HEALD & HILDRETH



George Petrutsas
Counsel for Harris Corporation -
Farinon Division

GP:cej
Enclosures

0 of 5

ORIGINAL

BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

In the Matter of)	
)	
Amendment of the Commission's)	General Docket 90-314
Rules to Establish New Personal)	ET Docket No. 92-100
Communications Services)	

COMMENTS OF HARRIS CORPORATION
FARINON DIVISION

Harris Corporation-Farinon Division ("Harris"), by counsel, files its Comments in response to the Commission's Notice of Proposed Rulemaking ("Notice") in the above-captioned proceedings.

Harris is a Florida corporation with its headquartered in Melbourne, Florida. Through its Farinon Division in San Carlos, California, Harris designs, develops, and manufactures microwave and multiplex equipment used by licensees in the terrestrial fixed microwave services. As a leading manufacturer of equipment used in the terrestrial fixed microwave services, Harris is interested in advancing the state of the art of microwave technology and in facilitating maximum use of the frequency bands allocated to the terrestrial fixed microwave service.

COMMENTS

Harris has expressed its views on the major policy issues in this and in related proceedings and will not burden the record with further discussion of those issues. Instead, Harris will confine its comments on the following technical matters.

A. The PCS spectrum blocks

Harris agrees with the proposed channelizations of the 1850-1990 MHz band for assignment to Personal Communications Service

("PCS") systems. The proposed three channel blocks (1850-1865/1930-1945, 1865-1880/1945-1960 MHz, and 1880-1995/1960-1975 MHz) are substantially consistent with the existing channelization and pairing of the 1850-1980 MHz band. Consistency with the Part 94 assignments will ease coordination problems and would lessen the potential for interference between PCS and fixed microwave systems. Harris also agrees that the 1910-1930 MHz portion of the band is appropriate for the proposed low power unlicensed PCS systems.

B. Migration of incumbent
fixed systems

Assuming that the Commission adopts its proposal in ET Docket No. 92-9 and reallocates the 1850-1990 MHz to PCS, Harris believes that the proposed plan for negotiated migration of existing users described in Paragraphs 40-47 is reasonable. Harris agrees that migration during a reasonable period of time should be voluntary and that marketplace forces should play a major role in determining initially the development of PCS and the relocation of existing microwave communications systems. Harris wishes to point out, however, that the proposal to reallocate the band to PCS nationwide and to prescribe the same migration path, also nationwide, is unnecessarily broad. It seems to Harris that the PCS services contemplated in this proceeding will develop primarily in urban areas. Accordingly, Harris believes that, in rural areas, microwave systems should be allowed to continue indefinitely on a co-equal basis and new systems should be authorized also on a co-equal basis.

In any event, in response to the Commission's request for comments in Paragraph 47 of the Notice, Harris submits that the negotiated migration program proposed by the Utilities Telecommunications Council ("UTC") outlined in Paragraph 47 is reasonable and should be adopted.

C. Protection of fixed microwave systems from PCS interference

It is, of course, essential that existing microwave systems must be protected from interference during the transition period. Microwave systems often serve critical functions and simply cannot tolerate interference. The Commission recognizes that need and has proposed a number of technical restrictions on PCS systems, such as power and antenna height limitation, and restrictions on the energy PCS operations may radiate into microwave receivers. Harris agrees with the proposed power/antenna height limits. Harris also agrees with the Commission that the interference criteria now specified in Part 94 and the method specified in EIA/TIA TSB10-E for applying those criteria are appropriate and should be used here as well. The Part 94 criteria are not overly conservative, as it has been suggested.¹ Indeed, since the channels to be assigned to PCS systems would overlay the channel assignments to existing microwave systems, the EIA/TIA TSB10-E criteria may very well need to be

¹ Harris is aware that a TIA committee is reviewing the existing standards looking into, among other things, adopting separate interference criteria for long and for short and medium paths in microwave systems. The Commission should incorporate that committee's conclusions in the fixed microwave/PCS coordination standards the Commission adopts.

strengthened to account for such overlay.

Harris agrees that in assessing the potential interference of a PCS system to an existing microwave system, the signal level from all co- and adjacent channel base as well as mobile units should be taken into account. The method described in Appendix F to the Notice for assessing the impact of base/mobile operations on fixed receivers is reasonable. It should be understood, however, that the methodology in Appendix F has limitations. One of them stems from the fact that the signal level from mobile and portable transmitters would vary from time to time. Therefore, Harris recommends that the Commission should err on the conservative side in adopting a method for calculating the PCS interference potential to microwave systems.

D. Unlicensed operations

The proposal to authorize unlicensed operation on a co-equal basis with existing microwave system is troublesome. First, as UTC has pointed out, it would be difficult to locate the source of interference from unlicensed systems. Also, Harris believes that the proposed technical requirements for unlicensed PCS systems and their location in the 1910-1930 MHz portion of the 1850-1990 MHz band would reduce but would not eliminate the interference potential of such systems. Harris, therefore, recommends that unlicensed systems should be authorized on secondary basis during a transition period, that the Part 94/TIA interference standards should apply to those systems, and that the negotiated migration plan proposed for licensed PCS operations should also be made

applicable to operators of such systems.

E. Support spectrum

Harris believes that PCS licensees will rely to a greater extent than existing cellular licensees on microwave frequencies not only for "backhaul links" but also to interconnect the large number of cells. Cellular is a heavy user of microwave frequencies for those purposes. The use of microwave frequencies for backhaul links and for microcell interconnection by PCS operators will facilitate the construction of PCS systems and will reduce the cost of system construction and operation. Therefore, Harris recommends that PCS operators should be given access to all the microwave bands for their point-to-point operations.

In addition, Harris recommends that the bands 27.5-29.5 GHz and 37.0-38.6 GHz should be channelized in accordance with outstanding CCIR recommendations and should be made available to PCS and other microwave users under Parts 21 and 94 of the Commission's Rules. These bands will be particularly useful and well suited for microcell interconnection because of their propagation characteristics. Harris disagrees with the Commission's tentative conclusion in Paragraph 55 of the Notice that the current microwave allocations will be sufficient to accommodate PCS support services, new common carrier and private microwave systems, as well as the migration of nearly 30,000 stations now occupying the 2 GHz bands and that it is unnecessary to make the above-mentioned two band available. Harris respectfully submits that the public interest would be served best

by channelizing and adding to the fixed allocation reservations the
27 and the 37 GHz bands.

Respectfully submitted,

HARRIS CORPORATION -- FARINON
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By: 
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Its Attorney

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Date: November 9, 1992

CEJ/GP/GP-10/HARRIS2