

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Amendment of Parts 2, 21, 25 and 94)
of the Commission's Rules to)
Accommodate Common Carrier)
and Private Op-Fixed Microwave)
Systems in Bands Above 3 GHz)

ORIGINAL
FILE

RM-8004

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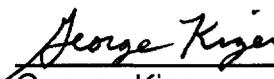
Comments of the
Telecommunications Industry Association
Fixed Point to Point Communications Section

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

The Telecommunications Industry Association ("TIA") is a membership organization representing over 500 manufacturers of equipment used by all sectors of the communications industry. The TIA Fixed Point to Point Communications Section is the major industry group representing fixed point to point microwave manufacturers. The TIA Fixed Point to Point Communications Section is pleased to submit these comments on behalf of its membership in the above-captioned Petition for Rule Making.

Respectfully submitted,


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**Comments of the
Telecommunications Industry Association
Fixed Point to Point Communications Section
Regarding RM-8004**

As the major industry association for fixed point to point microwave manufacturers, the membership of the TIA Fixed Point to Point Communications Section has a strong interest in the fair and equitable resolution of the 2 GHz spectrum redevelopment issue. We recognize the significant forces motivating the 2 GHz action: the availability of new wireless technologies, the worldwide reallocation of the 2 GHz band at WARC-92, and the desire of Congress and the FCC to maintain the competitive position of the U.S. telecommunications industry in world markets. We agree with the petitioner that the proposed 2 GHz relocation should not be treated as an isolated issue. It should be included as a part of a more comprehensive plan that addresses the changing requirements of the fixed point to point microwave industry. The Alcatel petition makes specific proposals for rule changes which would allow the existing and potential fixed point-to-point users to migrate to higher frequency bands. In general the Section agrees with that petition.

The following general comments are offered:

- Consideration should be given to the use of the 2.5 GHz band for emerging technologies.

- The emerging technologies (primarily PCS) will be metropolitan technologies. Consideration should be given to allowing fixed point to point microwave users to remain (co-) primary in rural areas.

- The point is made that Part 21 and Part 94 users are operationally and technically similar. With similar needs and technical characteristics, placing them together as co-primary users seems reasonable. A similar case could be made for Part 74 users.
- The petition addressed many issues which have built up over several years. The suggestions are well founded and rapid implementation is recommended. However, it is unclear what position would be taken regarding existing systems licensed under existing rules. The grand fathering of existing system routes (including radio system growth of existing paths) to allow reasonable expansion without excessive retuning should be allowed. Specifically, expansion of fragments of existing paths using existing frequency plans should be allowed without waiver after valid showing to the FCC. The expansions, however, would have to comply with the then current coordination standards and procedures.
- Currently Part 21 frequency plans are maintained by various industry sources. In general they are not readily available in cohesive form to the industry at large. Part 94 plans are clearly delineated in the Commission's Regulations. It is recommended that the frequency plans for all microwave users be placed in the Commission's Regulations.
- The petition suggests migrating the frequency bands toward more commonly used (world wide) channel bandwidths (e.g., 30.00 MHz versus 29.65 MHz or 40.00 MHz). This facilitates the reuse of modem technology at various bands with attendant cost savings to the end users. Likewise, it promotes the Commission's expressed goal of positioning the telecommunications industry to compete internationally.

- The petition drops the voice channel loading requirements and analog performance standards. This Section agrees with this approach. Fixed point to point microwave systems are rapidly converting to digital technology implementation. With current technology, digital systems can support voice traffic with digital rates as low as 8 kHz per voice channel. Voice channel requirements for digital radios are virtually meaningless. Part 94 specifies only analog coordination parameters yet the typical system is digital. The current TIA Bulletin 10 addresses analog coordination in considerable detail. NSMA has procedures for digital and mixed systems. The issue is adequately addressed within the industry.

The following specific comments are offered:

- Section 3.0 (Frequency Channelization Plans) - The various frequency plans correctly address the needs of the migrating 2 GHz users. Set channel pairings are outlined. Use of specific channel pairs is advantageous from both a manufactures and users point of view. However, practical frequency planning considerations sometimes preclude the use of a frequency channel on a particular path. Use of the preferred channel parings should be encouraged but occasional use of other channels should be allowed if needed for frequency coordination reasons.

- Sections 3.0 and 4.5 (Frequency Channelization Plans) - The proposed new narrow bandwidth channels solve a real need for migrating the existing 2 GHz users to the higher frequency bands. A limitation of the original frequency plans was their inflexibility regarding channel bandwidth. Advances in technology sometimes make wider bands useful. It is recommended that multiple channel

concatenation (merging of contiguous channels) be allowed up the largest channel bandwidth in the given band. However, the Regulations for each band segment would still have to be met.

Section 3.3 (4 GHz Band) - Ku band (11 GHz) has significant benefits for satellite systems when compared to C band (4 GHz). The 4 GHz band offers the best technical alternative to the users forced to move from 2 GHz. Satellite systems should be encouraged to migrate from 4 GHz to higher bands. The transition period should be a reasonable time period to allow recovery of cost from existing or currently planned systems.

- Section 4.4 (Antenna Characteristics) - Making the Part 21 and Part 94 antenna characteristics the same is recommended. The current state of the art exceeds the current Regulation standards. Consideration should be given to encouraging the appropriate group to review the standards and update them. The TIA is recommended for this activity.
- Section 4.5.2 - The need to preserve system gain is true for 10 GHz systems as well as 11 GHz systems. The minimum capacity requirements should apply to systems operating below 10 GHz. Although DS-1 and DS-3 are currently payload standards, these rates should be converted to a generic payload data rate (such as bits/second) to allow migration to other digital formats (E.g., SONET data formats such as VT or STS).
- Section 4.8.2 (Interference Criteria) - Currently Part 21 interference criteria are established by NSMA. Part 94 criteria are established by TIA. The Commission should recognize some method of coordinating this process.

- Section 4.11 (ATPC) - This highly effective method for maximizing frequency reuse has been used in Part 21 for some time but precluded from Part 94 use by the current Regulations. The petition is strongly endorsed on this issue.

Attempting the 2 GHz relocation without a comprehensive plan could severely disrupt the entire point-to-point microwave spectrum, creating operational problems and financial hardships for system operators and reducing the effectiveness of point to point microwave as a viable communications medium.

That plan should include appropriate Rules and Regulations as well as appropriate national standards. TIA is an ANSI accredited organization with significant experience in developing standards and recommendations to help meet the combined requirements of users, providers and manufacturers. TIA has played a key role in defining standards for the wealth of wireless communications offerings we enjoy in the U. S. As the Commission moves forward on this topic, TIA stands ready to assist the Commission in developing standards related to issues raised by this and related petitions.