

ORIGINAL

BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

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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 )

RM-8004

Federal Communications Commission  
Office of the Secretary

To: The Commission

ORIGINAL  
FILE

STATEMENT IN SUPPORT

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## SUMMARY

The American Petroleum Institute (API) does not favor reallocation of the band 1850-2200 MHz for emerging technologies. However, if the Commission does reallocate this band as proposed in ET Docket No. 92-9, API believes it is imperative that the bands above 3 GHz be rechannelized to accommodate affected private microwave communications systems.

API finds that the rule changes proposed by Alcatel Network Systems, Inc. (ANS) would provide a useful range of options for microwave system licensees. API agrees with ANS that the band 3600-3700 MHz should be made available to accommodate the needs of users who would otherwise use frequencies in the band 1850-2200 MHz. API is also supportive of ANS's concept for rechannelizing the frequency bands below 11700 MHz to accommodate low and medium density requirements.

Accordingly, API urges the Commission to proceed to rule making on the concepts proposed in ANS's Petition. API does not believe it is appropriate for the Commission to allocate spectrum for emerging technologies in the 1850-2200 MHz band until it has adequately addressed the reaccommodation issues presented in ANS's Petition for Rule Making.

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STATEMENT IN SUPPORT

The American Petroleum Institute (API), by its attorneys and pursuant to the Public Notice issued by the Federal Communications Commission on June 2, 1992, hereby submits this Statement in Support of the Petition for Rule Making filed by Alcatel Network Systems, Inc. (ANS) to amend Parts 2, 21, 25 and 94 of the Commission's rules.

I. PRELIMINARY STATEMENT

1. API is a national trade association representing over 200 companies involved in all aspects of the oil and gas industries, including exploration, production, refining, marketing and transportation of petroleum, petroleum products and natural gas. Among its many activities, API acts on behalf of its members as spokesperson before federal and state regulatory agencies. The API Telecommunications

Committee is one of the standing committees of the organization's general Committee on Transportation. The Committee evaluates and develops responses to state and federal proposals affecting telecommunications facilities used in the oil and gas industries.

2. API's member companies are authorized by the Commission to operate significant numbers of point-to-point microwave systems in the Private Operational-Fixed Microwave Service (OFS), including many facilities licensed in the 1850-2200 MHz band ("2 GHz band") now targeted for reallocation to emerging technologies in ET Docket No. 92-9.<sup>1/</sup> These systems are used to ensure the safe processing and refining of petroleum and natural gas, and to expedite the ultimate delivery of these products to commercial, industrial and residential customers. Accordingly, API is vitally concerned about the potential reallocation of this spectrum to emerging technologies in accordance with the proposals outlined in the Commission's Notice of Proposed Rule Making in ET Docket No. 92-9.

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<sup>1/</sup> Notice of Proposed Rule Making (FCC 92-90), adopted January 16, 1992, 7 FCC Rcd. 1542.

## II. BACKGROUND

3. ANS has expressed concern that, without fundamental changes in the regulatory structure for the microwave frequencies, the Commission will be unable to efficiently reaccommodate microwave systems that may be displaced by the possible allocation of 2 GHz spectrum for emerging technologies. The vast majority of the microwave systems currently licensed in the band 1850-2200 MHz employ bandwidths ranging from 800 kHz to 10 MHz. However, much of the spectrum above 3 GHz is channelized for either medium capacity systems (1.6 to 5 MHz bandwidths) or large capacity systems (10 to 30 MHz bandwidths). Since the spectrum above 3 GHz is not geared toward accommodating low capacity systems, ANS finds that the spectrum potentially available for reaccommodating displaced microwave systems, as currently channelized, represents an imperfect fit.

4. The focus of ANS's Petition, therefore, is to produce a channelization scheme above 3 GHz that will adequately accommodate all systems, whether low, medium or high capacity. ANS proposes to change the channelization, eligibility provisions and use of six discrete frequency bands, 3600-3700 MHz, 3700-4200 MHz, 5925-6425 MHz, 6525-6875 MHz, 10550-10680 MHz, and 10700-11700 MHz.

5. API continues to believe that the Commission should not reallocate the 2 GHz spectrum for new technologies. There are other spectrum alternatives available to the Commission which have not been adequately examined, and the existing 2 GHz allocation is now used for critical communications systems. Further, API believes that, from a technical standpoint, the targeted 2 GHz spectrum is not ideal for a technology such as PCS.

6. Nevertheless, API members are faced with the prospect of being forced to move to other spectrum to meet their critical communications requirements. In many instances, 6 GHz will not be an adequate or reliable substitute for 2 GHz paths. There are also many cases, however, where 6 GHz will satisfy the communications requirements of API's members. To ensure the efficient use of the bands designated as replacement spectrum, it is important that the Commission implement measures along the lines suggested by ANS.

7. In view of the current proposal to reallocate 1850-2200 MHz for emerging technologies, API submits that the effort to provide suitable replacement spectrum, with appropriate channelization, for displaced users represents

an especially urgent and compelling need. Accordingly, API believes that the measures proposed by ANS should be elevated to a priority commensurate with that assigned to the emerging technologies proceeding. The Commission should not, in any event, allocate spectrum for emerging technologies in the 1850-2200 MHz band until it has adequately addressed the reaccommodation issues. These include, as a beginning, the issues presented in ANS's Petition.

8. ANS suggests that the six frequency bands which are addressed in the Petition for Rule Making should be made available on an equal basis for both common carrier and private radio systems. The result, according to ANS, is that common carriers would have access to an additional 550 MHz of spectrum, and private systems would gain access to an additional 2,120 MHz of spectrum.

### III. STATEMENT

9. API's Comments in ET Docket No. 92-9, filed June 8, 1992, strongly disputed both the need for allocation of 1850-2200 MHz for emerging technologies and the amount of spectrum which the Commission has proposed to allocate for these new technologies. API continues to adhere to the view

that the band 1850-2200 MHz is best suited for terrestrial fixed microwave services, as currently allocated. While API maintains this view, it nevertheless recognizes that private microwave licensees may be forced to other frequency bands. Accordingly, API is supportive of both the underlying intent and specific measures proposed in ANS's Petition. Like ANS, API is concerned that the "blanket waiver" approach which the Commission discusses in the Notice of Proposed Rule Making in Docket No. 92-9 will not be particularly useful or efficient without fundamental changes in band channelization.

10. As a general rule, consistent with good engineering practices, API favors maximum flexibility for microwave system users in selecting the most efficient bandwidth and the specific frequency band best suited for their needs. API is persuaded that ANS's proposal both increases the flexibility available to microwave system licensees and provides a useful range of options for selecting the optimum bandwidth for microwave applications. API's more specific comments are set forth below.

A. Sharing of Common Carrier and Private Microwave Allocations

11. The Commission's traditional approach to allocation of the microwave spectrum has been to designate specific blocks of frequencies for each of the radio services requiring spectrum. In API's view, this traditional approach has worked well. However, API also recognizes that, if the Commission does allocate the band 1850-2200 MHz for emerging technologies, microwave licensees may no longer have the luxury of discrete allocations of frequencies for individual radio services.

12. The allocation proposed in ET Docket No. 92-9, if implemented, will place the Commission under intense pressure to find alternative spectrum suitable for accommodating essential point-to-point microwave systems now licensed in the band 1850-2200 MHz. Under such circumstances, the sharing of microwave frequencies between common carrier and private radio services represents an approach which deserves further exploration. API therefore supports this aspect of ANS's Petition.<sup>2/</sup>

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<sup>2/</sup> API desires to make it emphatically clear that its support for this aspect of ANS's Petition is motivated by a desire to make the best of what it fears will be an extremely difficult situation. If the Commission does reallocate the band 1850-2200 MHz for emerging technologies, microwave licensees who stand to be displaced from this band  
(continued...)

B. Access To The Frequencies At 3600-3700 MHz By Private Radio and Common Carrier Licensees

13. Many of the systems currently licensed in the band 1850-2200 MHz simply cannot be accommodated in the spectrum at 6 GHz and above. A large percentage of the systems which have been established at 2 GHz by petroleum and natural gas entities operate over paths that stretch for 40 miles or more.<sup>3/</sup> It is imperative that frequency bands below 6 GHz be made available to accommodate the long distance requirements of private operational-fixed microwave licensees.

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2/(...continued)  
must have flexibility in choosing available alternatives. ANS's Petition will certainly advance the discussion regarding measures that can be implemented to provide optimum flexibility in the frequency bands designated as replacement spectrum. API views the ANS Petition as a necessary complement to the actions proposed in Docket No. 92-9. Should the Commission decide not to reallocate the band 1850-2200 MHz for emerging technologies, however, this would dramatically alter API's reaction to certain elements of ANS's Petition. In particular, API would want to re-examine the advisability of making private microwave frequencies available for sharing by common carrier systems.

3/ See API Comments filed October 1, 1990 in GEN Docket No. 90-314. It is not uncommon for licensees to operate 2 GHz links that span distances in excess of 80 miles. To illustrate, one petroleum company uses a single hop licensed in the band 1850-1990 MHz to transmit for a distance of 93 miles. Another company, using frequencies in the band 2130-2150/2180-2200 MHz, transmits over a distance of 110 miles with a single link.

14. API agrees with ANS that the band 3600-3700 MHz should be made available to accommodate the needs of users who would otherwise use frequencies in the band 1850-2200 MHz. There simply is no substitute for frequencies capable of transmitting over the longer distances which are often required in the private microwave service. The band 3600-3700 MHz should be included as one element of the Commission's overall effort to provide meaningful relief for licensees who would otherwise use the 2 GHz band.

C. Rechannalization of Frequency Bands

15. API is supportive of ANS's concept for rechannalizing the frequency bands below 11700 MHz to accommodate both low and medium density requirements. As indicated above, the Commission's proposal merely to issue a "blanket waiver" of the bandwidth requirements and other technical specifications does not represent a useful approach. The Commission must aggressively seek to make the most efficient use of the frequency bands under 12 GHz which would remain available for use pursuant to Part 94. API believes that the channelization scheme proposed by ANS offers the potential for improving spectrum efficiency.

16. In particular, API endorses ANS's recommended approach toward rechannelization of the band edges at 3700-3740 MHz and 4160-4200 MHz. The 4 GHz band is potentially useful for reaccommodating displaced 2 GHz systems because the propagation characteristics of the two bands are very similar. There is a total of 500 MHz of spectrum available in the 4 GHz band. In 80 MHz of this spectrum, ANS proposes to create bandwidths ranging from 400 kHz to 5 MHz. These channels would then be available for common carrier and private radio fixed point-to-point requirements.<sup>4/</sup>

17. As presented by ANS, the rechannelization of 3700-3740 MHz and 4160-4200 MHz represents a very modest proposal, particularly since the conversion of this spectrum would occur over a 10-15 year period. Nonetheless, this proposal makes sense if the Commission is truly committed to providing spectrum, over the long term, for future users who might otherwise have used the 2 GHz band.

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<sup>4/</sup> To accomplish the conversion, ANS suggests: (1) the outer 40 MHz on each edge of the band 3700-4200 MHz be designated as primarily available for fixed terrestrial systems, and (2) over a 10-15 year period, all satellite transponders/earth stations which use these two 40 MHz segments be classified as secondary.

#### IV. CONCLUSION

18. In the instant Petition, ANS addresses very practical and useful measures for ensuring that there will be appropriate and adequate replacement spectrum, with equivalent reliability, for licensees who may be displaced from 2 GHz by the proposed allocation for emerging technologies. On balance, API finds that the Petition is well-conceived.

19. To the extent that the Commission has publicly discussed the reaccommodation of displaced users at all, the discussion to date has not been particularly refined or useful. In API's view, ANS's Petition elevates the reaccommodation discussion to an appropriate and necessary level of sophistication. API therefore urges the Commission to proceed to rule making on the concepts proposed in ANS's Petition.

20. Further, API does not believe it is appropriate for the Commission to take further action to allocate spectrum for emerging technologies until, at a minimum, the question of exactly how displaced users will be accommodated is resolved. ANS's Petition is a step in this direction and should be promptly addressed by the Commission.

**WHEREFORE, THE PREMISES CONSIDERED,** API supports the  
Petition for Rule Making filed by ANS and urges the  
Commission to proceed to rule making in this matter.

Respectfully submitted,

**AMERICAN PETROLEUM INSTITUTE**

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Dated: July 2, 1992

## CERTIFICATE OF SERVICE

I, Jacqueline Jenkins, a secretary in the law firm of Keller and Heckman, hereby certify that a copy of the foregoing Statement in Support, has been hand delivered to the following on this 2nd day of July, 1992.

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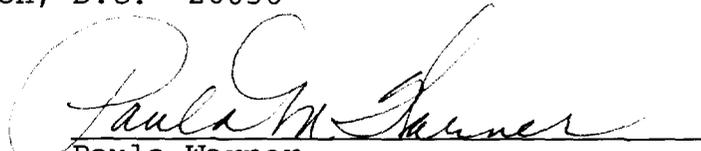
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