

fiber optics for existing microwave paths requires double and triple use of fiber to ensure reliability and proper transmission.<sup>30/</sup> Fiber optic cable is always susceptible to cuts resulting in potential disruption of critical systems. As recently as June 4, 1992, MCI experienced a fiber optic cable cut which shut down phone service in the southeastern section of Los Angeles for five hours.<sup>31/</sup> An API member company reports that in a seven month period it experienced three cuts in a major data transmission line operating over a fiber optics system. Users of critical microwave systems cannot risk such a halt in operation especially where those systems serve major petroleum and natural gas pipelines.<sup>32/</sup>

23. Similarly, satellite technology is not suitable for every function now served by 2 GHz facilities. As Edison Electric Institute and the American Public Power Association point out, satellite transmission does not provide real-time communications. Rather, some time delay is inherent in this type of transmission.<sup>33/</sup> The critical

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<sup>30/</sup> Id.

<sup>31/</sup> See Fiber Optics News June 15, 1992, Vol. 12, No. 24 at 8.

<sup>32/</sup> See generally, Comments of EPC.

<sup>33/</sup> See Comments of Edison Electric Institute at 14 and Comments of APPA at 4.

nature of some 2 GHz systems will not permit operation on a delayed basis. It is vital that many of these microwave systems have the ability to communicate on a real-time basis. Because delay in communications can result in unexpected disruption, satellites are not an across-the-board substitute for 2 GHz microwave.

## 2. Technical Rules are Necessary

24. An overwhelming number of commenters including proponents of the Commission's reallocation plan suggest that the Commission first promulgate new technical rules in the higher bands before relocating existing users.<sup>34/</sup> These commenters point out that POFS systems cannot co-exist with current operations at higher bands without an interference and coordination standard, re-channelization of the frequencies for point-to-point use and new loading rules.

25. The bands above 3 GHz are currently channelized for common carrier use. As such, these bands must be re-channelized before any migration of POFS users can occur. Also, the loading requirements for the common carrier bands

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<sup>34/</sup> See Comments of Telesciences, Inc. at 19-20, Alcatel at 26, Comments of NTIA at 16, Comments of the DOE at 2 and 6, Comments of GTE at 19.

are much higher than for spectrum allocated to private fixed microwave use. Under the current rules, POFS users would not be able to meet the loading requirements normally ascribed for common carrier usage. Accordingly, API agrees with other commenters that interference and coordination procedures need to be established before POFS users can be relocated to common carrier bands.

**E. The Purported Need for 2 GHz Spectrum Based on International Compatibility Requirements is Unjustified and Inconsistent with Commission Previous Position at WARC 1992**

26. In choosing the 2 GHz band as the spectrum home for emerging technologies, the Commission relies heavily on the purported need to allocate spectrum to PCS in the same bands as are being allocated to mobile uses by European and Pacific Rim governments. The Commission apparently believes that the United States must remain internationally compatible with other countries' spectrum choices. API agrees with AAR and LPPC that this position is surprisingly inconsistent with the Commission's decision at the World Administrative Radio Conference.<sup>35/</sup> In GEN Docket 89-554, the Commission noted that:

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<sup>35/</sup> See Comments of AAR at 31-34 and LPPC at 31-34.

We are not persuaded that a common worldwide exclusive allocation is required to implement either FPLMTS, PCS, or wireless LAN technologies and services. An allocation is only one factor that may affect the development of international compatibility standards to permit international roaming of both PCS and wireless LAN services. Most of the U.S. FPLMTS and wireless LAN user community will need to operate only domestically. The international compatibility standards that will permit the worldwide roaming of this equipment still need to be developed. We also note that other services that have common allocations did not develop common standards to permit roaming or common manufacturing. Nonetheless, many of the services have developed quite well. Therefore, we will proceed with our recommendation that no exclusive worldwide allocation be proposed for FPLMTS, PCS, or wireless LAN technologies and services.<sup>36/</sup>

27. Commenters, like Time Warner Telecommunications, Inc. and Motorola who agree with the Commission's international compatibility position have failed to provide any rationale as to why the U.S. must be internationally compatible.<sup>37/</sup> However, neither commenter can offer any analysis of the utility of being spectrum compatible with Europe. Moreover, the U.S. remains uncertain as to which specific frequency bands will be allocated for PCS, CT-2 or CT-3 technology. Until the Commission is certain of which

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<sup>36/</sup> Inquiry Relating to Preparation for International Telecommunication Union World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum, GEN Docket 89-554, 6 FCC Rcd 3900, 3904-3905 (1991) (emphasis added).

<sup>37/</sup> See Comments of Time Warner Telecommunications at 4. and Motorola at 5-6.

frequency bands in Europe or other continents will be allocated for each particular emerging technology, it cannot be sure that its proposed reallocation will be internationally compatible.

28. API agrees with other commenters that a reallocation compatible with other countries is unnecessary.<sup>38/</sup> Not only is interoperability unnecessary, it may also be unwise. In fact, GTE cautions the Commission not to follow the United Kingdom's example because providing a spectrum reserve will not guarantee successful deployment of emerging technologies. GTE warns that the CT-2 Telepoint service no longer exists in the UK because there was no demand for the new services.<sup>39/</sup> Moreover, spectrum allocation alone will not ensure U.S. dominance in any given technology. As API pointed out, similar frequency bands for radio devices are the least troublesome, most easily obviated problem, when attempting to implement any type of international compatibility in a given telecommunications service. Furthermore, API believes that alternative spectrum allocation choices, such as the 2.5 GHz band, are available that will meet any international spectrum

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<sup>38/</sup> See Comments of AAR and LPPC at 32-34.

<sup>39/</sup> See Comments of GTE at 6-8.

compatibility concerns. Duplicating overseas spectrum allocations alone will not ensure U.S. dominance in any given technology. Such a course seems particularly imprudent when taken at the expense of critical 2 GHz microwave operations.

**F. The Commission Has Failed to Meet its Public Interest Standard**

29. API agrees with AAR and LPPC that the Commission has predetermined that the 2 GHz band is the ideal spectrum home for emerging technologies,<sup>40/</sup> and proceeded to reinforce this preselection with its cursory OET study and the NPRM. However, many commenters have pointed out that the Commission has failed to meet its public interest standard prior to selecting the 2 GHz band for emerging technologies.<sup>41/</sup> First, the Commission failed to carefully evaluate all alternative bands as a spectrum home for emerging technologies. Many commenters agreed that the bands above 3 GHz are more suitable for emerging technologies. In fact, many commenters point to the fact that Motorola's data PCS operating 17 GHz, AT&T's proposal

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<sup>40/</sup> See Comments of AAR at 7-9 and LPPC at 7-9.

<sup>41/</sup> See Comments of API at 34-42, Comments of UTC at 4, Comments of MPC at 3, Comments of AEC at 5-7, Comments of NRECA at 8, Comments of INGAA at 6.

to offer PCS in bands above 3 GHz, and new proposals to offer PCS at 28 GHz suggest that emerging technologies may well operate in higher frequency bands with less disruption to existing users.<sup>42/</sup>

30. Second, the Commission has failed to consider all possible replacement spectrum for existing 2 GHz users if displaced. The federal government band, 1.7-2.2 GHz, has been suggested as the optimal choice by many commenters, including proponents of reallocation, for relocating displaced 2 GHz users.<sup>43/</sup> More importantly however, even NTIA expressed the view that fixed microwave users could possibly be relocated to this band. NTIA added that it was willing to work with the Commission in achieving its overall goal as well as to accommodate those 2 GHz licensees who cannot be moved to higher bands.<sup>44/</sup> API recommends that the Commission and NTIA resolve this issue prior to making any decision in this proceeding.

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<sup>42/</sup> See Comments of Coastal at 11 and Comment of TGT at 3-4.

<sup>43/</sup> See Comments of Motorola at 8, Apple Computer and ALLTEL at 5-6, and Southwestern Bell at 13.

<sup>44/</sup> See Comments of NTIA at 20.

**G. Emerging Technology Licensees Should Fully Compensate Displaced Licensees Based on Marketplace Negotiations**

31. Should the Commission move forward with its reallocation proposal, API seeks indefinite grandfathering of all existing 2 GHz private microwave systems. However, API member companies are willing to negotiate relocation with potential emerging technologies licensees upon identification of other suitably reliable 2 GHz spectrum substitutes. API seeks full compensation of all costs of relocation. API agrees with Rocky Mountain Telecommunications that a checklist of items subject to compensation should be compiled. The checklist should include compensation for new equipment, system design, new transmitter sites, frequency coordination, application and filing fees, legal and engineering fees and tests of new systems to ensure reliability.<sup>45/</sup>

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<sup>45/</sup> See Comments of Rocky Mountain at 18. The Commission's OET study reported that estimated costs to relocate existing microwave systems would range from \$125,000 to \$150,000. This estimate, according to Centel Corporation is grossly underestimated. Centel estimates that it will cost about \$9.75 million per system to relocate. See Comments of Centel at 16-17. The Commission must recognize a more realistic potential cost for relocation and factor this into the equation of whether other spectrum choices would be less burdensome on the American public and all parties involved.

32. API generally agrees that an arbitration process should be established to assure fairness in the negotiation process. The arbitration process should deter both parties from "holding out" to gain any unfair bargaining advantage. API remains indifferent whether the Commission, an ALJ or some independent third party should be the final arbiter.<sup>46/</sup>

33. Finally, API questions the Commission's authority to issue tax certificates to compensate POFS users who relocate to other bands. API believes that the Commission's authority to issue tax certificates does not extend beyond broadcast proceedings. Although in Telocator Network of America, 58 RR 2d 1443 (1982), the Commission determined that it had authority to issue tax certificates in non-broadcasting settings, this case has not been reviewed by the Court of Appeals, and the statutory authority for the Commission's decision in this case, at best, is open to debate. API is not confident that a court would uphold the Commission's authority in a non-broadcast transaction.

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<sup>46/</sup> API notes that, under the Commission's pilot program for Alternative Dispute Resolution (ADR) in common carrier enforcement matters, Commission staff members who have been specially trained to act as mediators are available to help settle disputes. API recognizes that the use of FCC ADR-trained personnel to determine appropriate compensation for displaced systems would be entirely voluntary on the part of the entities involved in a negotiation. Nonetheless, this process should help to expedite the resolution of disputes concerning the level of compensation to existing licensees.

34. In any event, should the Commission determine that it has authority to issue tax certificates, API believes that tax certificates will not greatly benefit its member companies. API agrees with the American Public Power Association that tax certificates will be beneficial to only a few existing 2 GHz licensees.<sup>47/</sup>

### III. CONCLUSION

35. The spectrum in the 1850-2200 MHz band has been used successfully for fixed microwave systems essential to protecting the public and environmental safety for many years. The Commission's proposal in the instant proceeding threatens this long-standing use. API believes the Commission has a statutory duty to base its allocation decisions on a thorough analysis of the facts and a clear showing that the decision reached will best serve the public interest, convenience, and necessity. Due to the serious public impact which the proposed allocation decision will

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<sup>47/</sup> See Comments of APPA at 18-19.

have, as well as a lack of evidence that new technologies cannot be accommodated in other spectrum bands, API believes a proposed reallocation is unwarranted. An overwhelming number of commenters agree with API's position, and believe that the critical operations of 2 GHz OFS licensees must not be disrupted. Based on the comments submitted, the Commission must protect existing 2 GHz licensees and examine all spectrum alternatives before there is a reallocation of the 2 GHz band for emerging technologies.

**WHEREFORE, THE PREMISES CONSIDERED,** the American Petroleum Institute submits the foregoing Reply Comments and respectfully requests the Federal Communications Commission to act in accordance with the views expressed herein.

Respectfully submitted,

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Dated: July 8, 1992

**CERTIFICATE OF SERVICE**

I, Terri Clegg Thomas, a secretary in the law firm of Keller and Heckman, hereby certify that a copy of the foregoing Reply Comments has been hand delivered to the following on this 8th day of July, 1992.

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