

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)
)
Allocation of Spectrum Below) ET Docket No. 94-32
4 GHz Transferred from)
Federal Government Use)

REPLY COMMENTS

AT&T Corp. ("AT&T") respectfully submits the following reply to comments filed in response to the Commission's Notice of Inquiry ("NOI"), FCC 94-97, released May 4, 1994. The NOI sought comment on uses for the 50 MHz of spectrum which the Secretary of Commerce has preliminarily recommended be made immediately available for reallocation from Federal Government use pursuant to the Omnibus Budget Reconciliation Act of 1993.¹ These Reply Comments focus on the 2402-2417 MHz band, one of the three segments comprising those 50 MHz.² That band is part of the 2400-2483.5 MHz band which is presently available to spread spectrum Part 15 devices.³

¹ Pub. L. No. 103-66, Title VI, 107 Stat. 379 (1993).

² The Appendix lists the Comments referenced in these Reply Comments and the abbreviations used to identify them.

³ The technical requirements are in § 15.247 of the Commission's Rules, 47 CFR § 15.247. Part 15 devices use this band on a secondary basis to government usage which will cease upon the reallocation, to Industrial, Scientific and Medical ("ISM") devices (47 CFR § 18.301) and to amateurs (47 CFR § 97.301).

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Commenters joined AT&T in describing important uses for spread spectrum Part 15 devices, and therefore in urging the Commission to take no action impairing the usefulness of the 2402-2417 MHz band for these devices. For example, the 2402-2417 MHz band is well suited to support wireless communications among the portable computers used by the increasingly mobile work force.⁴ Spread spectrum devices are widely used in retail, industrial and transportation applications, creating efficiencies reflected in lower prices and better service to consumers.⁵ Those devices offer a practical way to keep down the administrative expenses of the health care system.⁶ Beneficial uses of the 2400-2417 MHz band beyond the many described in the comments will emerge in the future because the great majority of new product development in the computer-communications industry is focused on the 2.4 GHz band.⁷

⁴ AT&T (p. 2). See also GEC Plessey.

⁵ Symbol (pp. 2-4); Southern (pp. 5-6).

⁶ Symbol (p. 5). WMC (p. 5) refers to use of its 2.4 GHz equipment by governments and educational institutions, as well as by businesses.

⁷ Apple, p. 2. The Coalition (p. 3) and InterDigital (p. 2) also note the increasing attractiveness of this band for future innovation because of declining costs for 2 GHz components.

Part 15 devices in the 2400-2417 MHz band contribute to the United States economy beyond the direct benefits produced by using such devices. Because frequencies in the 2.4 GHz band can be used in many other countries for wireless communications, permitting effective continuation of such usage in the United States enables manufacturers to develop products usable here and overseas, lowering costs and stimulating exports.⁸

Based on the information provided by commenters on the significant present and future usage of the 2402-2417 MHz band by spread spectrum Part 15 devices, Commission should avoid impairing the usefulness of that band for those purposes. Not permitting any new uses⁹ in that band would insure that the public retains all the benefits of the present allocation to Part 15 devices.¹⁰ As an alternative, the Commission could permit only those new services capable of operating effectively subject to rules comparable to the present spread spectrum rules, thereby reducing the

⁸ GEC Plessey. The Part 15 industry already employs tens of thousands of people (The Coalition, p. 3).

⁹ Spread spectrum Part 15 devices can continue to share the 2400-2417 MHz band with ISM devices and amateur operations, as the Commission's Rules presently require (AT&T, pp. 2-3).

¹⁰ AT&T (p. 3); Apple (p. 3); InterDigital (p. 3); Itron (p. 2); The Coalition (p. 4); Southern (p. 6); WMC (p. 6).

likelihood of harmful interference between such services and Part 15 devices.¹¹

While recognizing the important Part 15 use, possible other uses for the 2402-2417 MHz band should also be considered.¹² One such potential private use was addressed in response to footnote 21 of the NOI, which included for consideration a Petition for Rulemaking filed by COPE.¹³ That Petition seeks allocation of 75 MHz of spectrum below 3 GHz for an "Advanced Private Land Mobile Service" and maintains that spectrum reallocated from the government would be the most likely source for this 75 MHz.¹⁴

COPE's comments (pp. 7-8) noted "reservations" about the 2402-2417 MHz band for this new service because of interference from microwave ovens, but maintained that the band "might" be suitable for "certain types" of private systems operating "with technical parameters consistent with

¹¹ AT&T (pp. 3-4); GEC Plessey; Symbol (p. 9).

¹² Pacific recognized that "interference concerns severely limit the feasibility of new commercial services in this band" (p. 5). SBC concluded that the 2402-2417 MHz band is unsuitable for the wireless local loop application discussed in its comments (p. 10) and does not suggest any other application (p. 12).

¹³ COPE is a coalition of other associations, some of which commented on the NOI, as did COPE itself.

¹⁴ NOI, fn. 21.

the existing Part 15 systems."¹⁵ This possibility was also noted by API (p. 16),¹⁶ APCO (p. 6)¹⁷ and UTC (pp. 6-7), all of which are COPE members. ITA (p. 5) and NABER (p. 17), also COPE members, cautioned that the 2402-2417 MHz band would be of only very limited utility because of other existing usage.¹⁸ Finally, TIA (pp. 7-13) and Motorola (pp. 5-6), two non-COPE members who supported the thrust of the COPE Petition, explained that the 2402-2417 MHz band would not contribute to satisfying the spectrum need for the advanced private service proposed by COPE.¹⁹

¹⁵ As noted above, AT&T and some other Part 15 interests also suggested this possibility.

¹⁶ API cautioned (p. 16 and footnote 18) that any such usage not disrupt existing uses by Part 15 devices, which are important for the petroleum and natural gas industries.

¹⁷ CPRA (¶13) believes that the severe interference that would be experienced in the 2402-2417 MHz band would be "especially devastating" to critical public safety communications. The position of IACP (p. 5), Major Cities (pp. 3-4) and Orange County (p. 2) is that the reallocated spectrum will not provide the advanced technology tools needed by the law enforcement community.

¹⁸ FCCA saw a possibility that the band could have some use in sparsely populated areas (p. 2). This approach does not address the need to communicate between these areas and population centers. AASHTO wrote that some usage was possible but that major interference problems will exist in populated areas (p. 4).

¹⁹ ANS agrees with TIA (p. 3). GTE recognizes that the operational environment in the 2402-2417 MHz band poses serious questions and certainly limits the opportunities for private sector usage.

Although COPE and its supporters are not unanimous in their view of the possible usefulness of the 2402-2417 MHz band for their intended purpose, the consensus among those commenters is decidedly negative. If the Commission determines that the public interest justifies the new service proposed by COPE, further study appears necessary to determine whether the 2402-2417 MHz band could indeed help make that service a reality. The Commission should not, however, risk disrupting the important Part 15 uses by allocating that band for a new service for which that spectrum is not well-suited.

Other commenters described the possible use of the 2402-2417 MHz band for mobile satellite services ("MSS") uplinks and downlinks, although all agreed that further study is required. AMSC (p. 2) recognizes that the reallocated spectrum "has at most very limited utility" for MSS but is analyzing the value of this band for MSS downlinks and "hopes" to present the results in its July 15 comments in the WRC docket (IC Docket No. 94-31). AMSC already knows that the band is of no utility for MSS uplinks because of the presence of ISM devices and Part 15 devices (id.). On the other hand, LQP is of "the preliminary view" that the 2402-2117 MHz band could be used for MSS uplinks because those uplinks would not be substantially affected by ISM and Part 15 equipment (p. 5). LQP plans to conduct tests and provide further information when it is available (id.). Motorola (pp. 9-10) reserves judgment and notes the

need for further study of the feasibility of the reallocated spectrum for MSS, which study could occur in the context of preparing the United States position for WRC-95.

This issue is obviously not ripe for comment by present users of the 2402-2417 MHz band. If the results of the AMSC and LQP analyses, and of any further study undertaken as suggested by Motorola, appear to show that the 2402-2417 MHz band could be used for either or both of MSS uplinks and downlinks, the Commission should at that time afford present users of the band the opportunity for detailed comment.

CONCLUSION

Use of the 2402-2417 MHz band by spread spectrum Part 15 devices well serves important public interests. No case has yet been made that allocating that band to any new service would accomplish any worthwhile objective. Any

decision the Commission ultimately makes regarding the 2402-2417 MHz band should not impair its usefulness for the Part 15 devices.

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American Mobile Satellite Corporation - "AMSC"
American Petroleum Institute - "API"
Apple Computer, Inc. - "Apple"
Association of Public Safety Communications
Officials-International - "APCO"
California Public Safety Radio Association, Inc. - "CPRA"
Coalition of Private Users of Emergency Multimedia
Technologies - "COPE"
Forestry - Conservation Communications Association - "FCCA"
GEC Plessey Semiconductors, Inc. - "GEC Plessey"
GTE Service Corporation - "GTE"
Industrial Telecommunications Association - "ITA"
InterDigital Communications Corporation - "InterDigital"
International Association of Chiefs of Police - "IACP"
Itron, Inc. - "Itron"
Loral/QUALCOMM Partnership, L.P. - "LQP"
Major Cities Police Chiefs Association - "Major Cities"
Motorola, Inc. - "Motorola"
National Association of Business and Educational Radio, Inc. -
"NABER"
County of Orange, California - "Orange County"
Pacific Bell and Nevada Bell - "Pacific"
The Part 15 Coalition - "The Coalition"
The Southern Company - "Southern"
Southwestern Bell Corporation - "SBC"
Symbol Technologies, Inc. - "Symbol"
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Utilities Telecommunications Council - "UTC"
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